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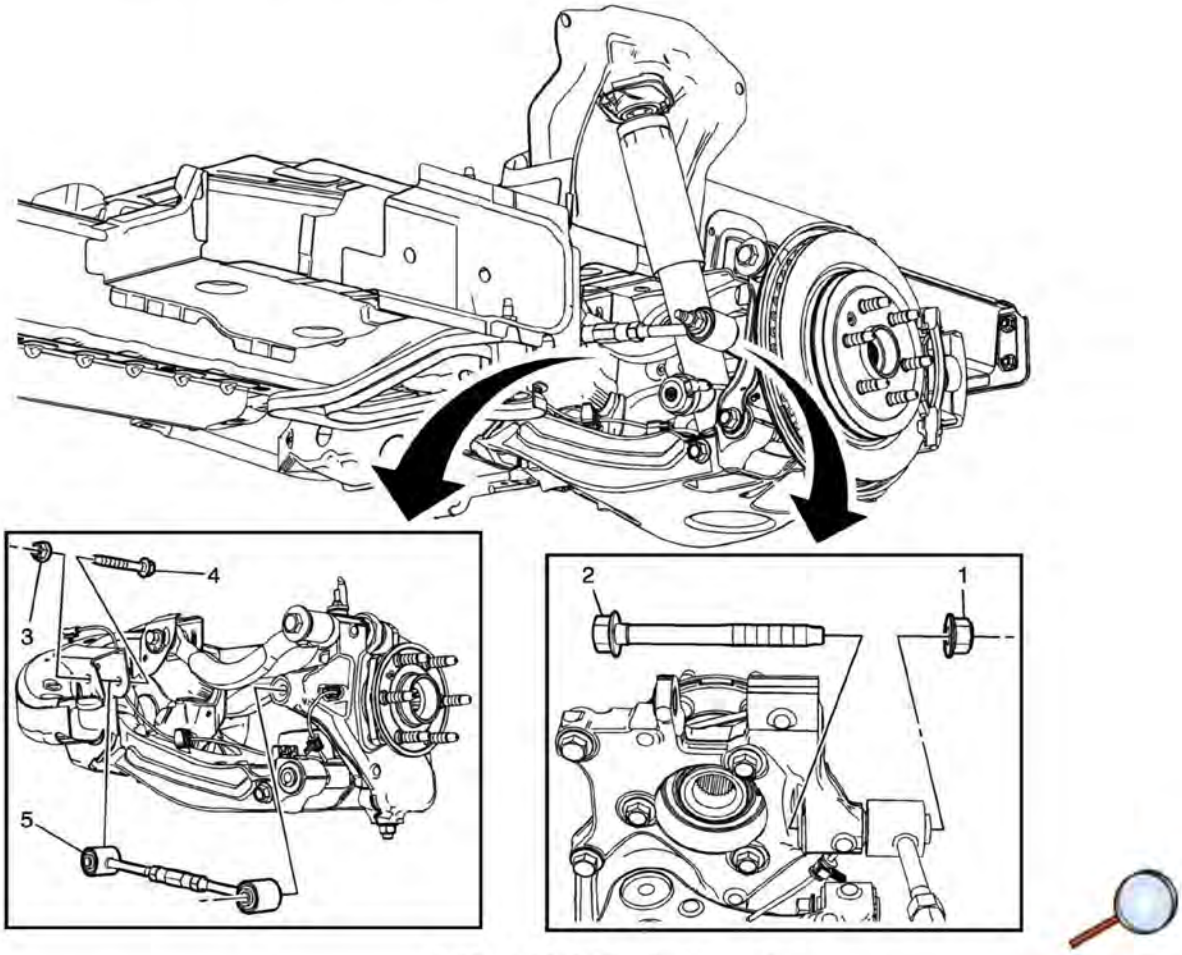
Adjust Link Replacement



Adjust Link Replacement

Callout	Component Name
Preliminary Procedure 1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle 2. Remove the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation	
1	Rear Suspension Adjust Link Nut **Caution:** Refer to Fastener Caution. **Note:** Use a suitable support to bring the lower control arm and suspension up to ride height level before proceeding to apply final torque. **Tighten** ▯ First Pass: **40** Y **(30 lb ft)** ▯ Final Pass: **110 degrees**

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Callout	Component Name
2	Rear Suspension Adjust Link Bolt Outer
3	Rear Suspension Adjust Link Nut Inner **Note:** Use a suitable support to bring the lower control arm and suspension up to ride height level before proceeding to apply final torque. **Tighten** ▯ First Pass: **60** Y **(44 lb ft)** ▯ Final Pass: **50 degrees**
4	Rear Suspension Adjust Link Bolt Inner
5	Rear Suspension Adjust Link **Procedure** 1. Remove the bolt from the upper control arm to the knuckle, if the vehicle is equipped with All Wheel Drive. Refer to Rear Axle Upper Control Arm Replacement 2. Separate the rear wheel drive shaft from the rear wheel bearing/hub. Refer to Rear Wheel Drive Shaft Replacement. 3. Adjust the toe. Refer to Rear Toe Adjustment

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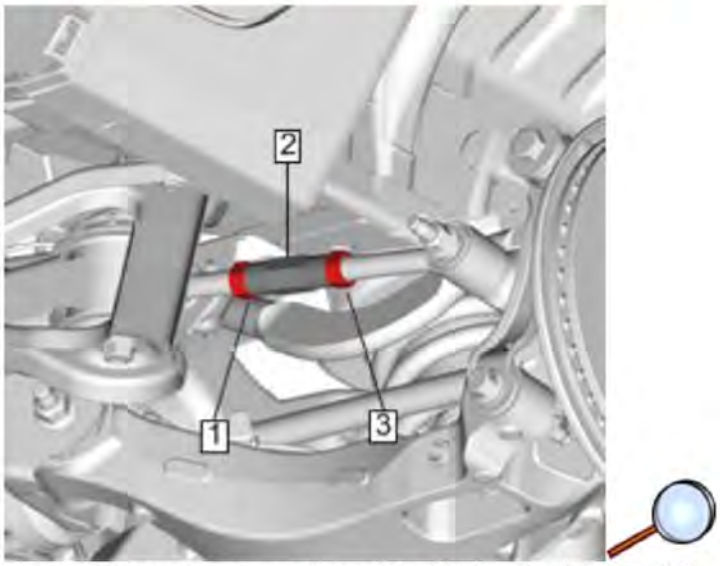
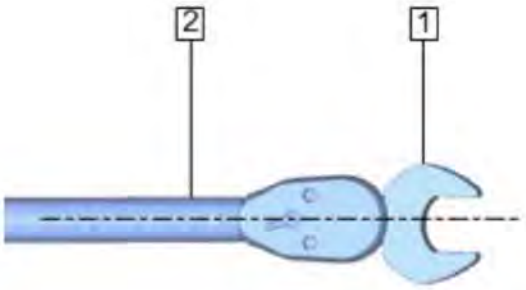
Rear Toe Adjustment

Note: Adjust the rear toe on each rear wheel separately.



1. Loosen the rear suspension adjust link nuts (1) and (3).
2. Adjust the toe by rotating the rear suspension adjust link (2) until the proper specification as been reached. Wheel Alignment Specifications



Note: The following steps use a 26 mm crows foot wrench attached to a torque wrench. The orientation of the crows foot to the torque wrench should be as close to in-line as possible to obtain accurate readings

3. Align the 26 mm crows foot wrench (1) to the torque wrench (2) as illustrated above.

Caution: Refer to Fastener Caution.

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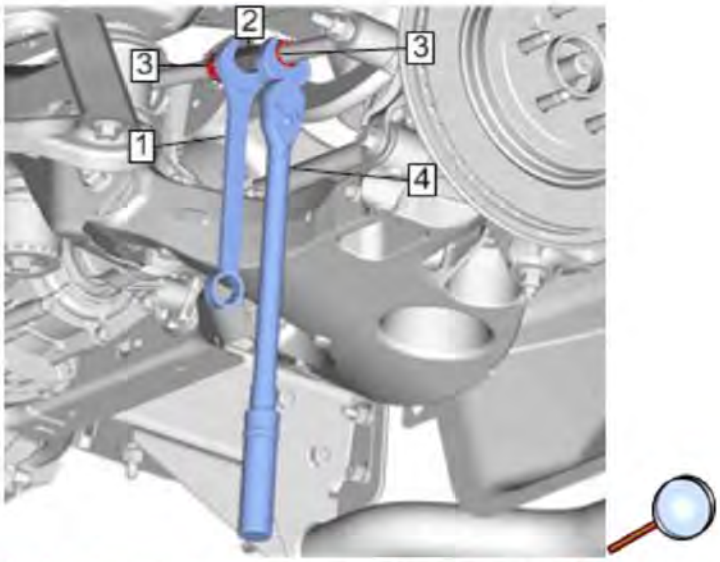

Note: Ensure the open end of the wrench (1) is on the adjust link (2) while the adjust link nuts (3) are checked with the torque wrench (4).

4. Using a backup wrench (1) to hold the rear suspension adjust link (2), tighten the rear suspension adjust link nuts (3) to **150** Y **(110 lb ft)**.
5. Recheck the toe setting.
6. If necessary, readjust the toe specifications.

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Wheel Alignment Specifications

Alignment Condition: Full tank of fuel, no passengers and placed on flat level surface.

Wheel Alignment Specifications

RPO Restriction	Wheels	Caster ±0.8°		Cross Caster ±0.8°	Camber ±0.8°		Cross Camber ±0.8°	Total Toe ±0.2°	Steering Wheel Angle ±3.5°	Thrust Angle ±0.3°
		Left	Right	(Left – Right)	Left	Right	(Left – Right)	(Left + Right)		(Left – Right)/2
All RPOs	Front	4.5°	4.5°	0.0°	−0.6°	−0.6°	0.0°	0.2°	0.0°	—
	Rear	—	—	—	−1.0°	−1.0°	—	0.2°	—	0.0°

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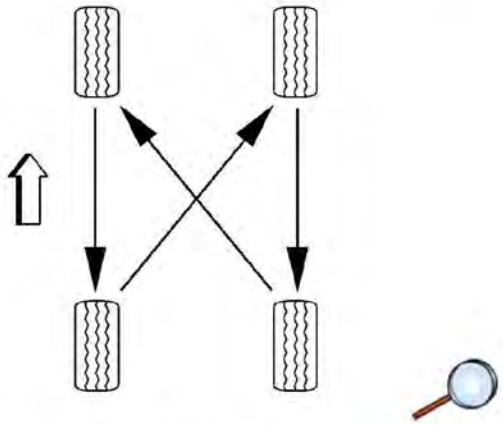
Tire Rotation

Rotate the tires and wheels at frequent intervals to equalize wear. Refer to Maintenance Schedule. In addition to scheduled rotation, rotate the tire and wheel whenever uneven tire wear is noticed.

Radial tires tend to wear faster in the shoulder area, particularly in front positions. Radial tires in non-drive locations may develop an irregular wear pattern that may increase tire noise. This makes regular rotation especially necessary.

Refer to Tire and Wheel Removal and Installation.



Always use a 4-wheel rotation. After rotation, check the wheel nuts for specified torque. Then, set the tire pressure.

After the tires have been rotated, the tire pressure sensors must be reset, if applicable.

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Tire and Wheel Removal and Installation

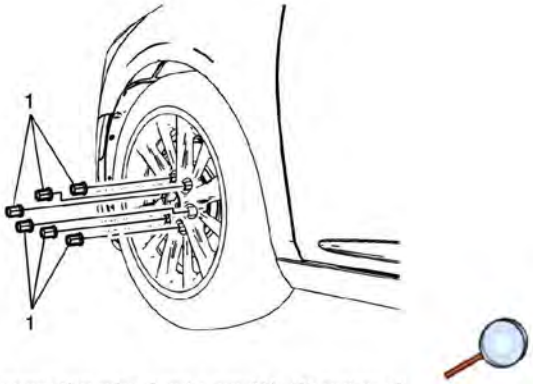
Special Tools

- *CH-41013* Rotor Resurfacing Kit
- *CH-42450-A* Wheel Hub Resurfacing Kit

For equivalent regional tools, refer to Special Tools.

Removal Procedure

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the wheel center cap, if equipped with a large center cap covering the wheel nuts. If equipped with a small center cap covering the middle of the hub, remove the cap once the wheel is removed, if necessary.



3. Remove the wheel nut caps (1), if equipped.

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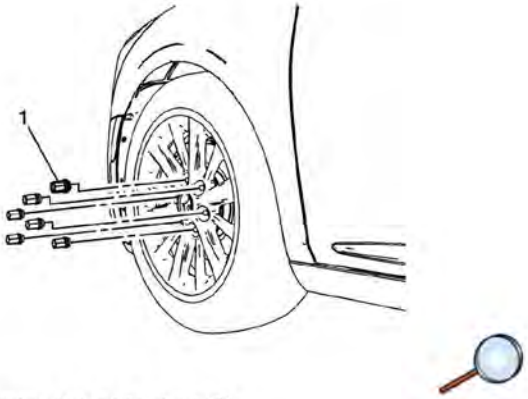
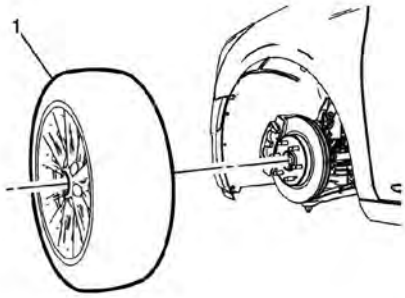


4. Remove the wheel nuts (1).



5. Remove the tire and wheel assembly (1).

Warning: If penetrating oil gets on the vertical surfaces between the wheel and the rotor or drum it could cause the wheel to work loose as the vehicle is driven, resulting in loss of control and an injury accident.

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Caution: Removing the wheel may be difficult because of foreign materials or a tight fit between the wheel and the hub/rotor. Slightly tap the tire side wall with a rubber mallet in order to remove the wheel. Failure to follow these instructions may result in damage to the wheel.

Caution: Never use heat to loosen a tight wheel bolt or nut. This can shorten the life of wheel and damage wheel bearings.

6. If the tire and wheel assembly is difficult to remove or cannot be removed, perform the following steps:
   - Hand install the wheel nuts.
   - Loosen the wheel nuts 2 complete turns.
   - Lower the vehicle.
   - Rock the vehicle from side to side.
   - Repeat the procedure if necessary.
7. When the tire and wheel assembly loosens, raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
8. Remove the wheel nuts.
9. Remove the tire and wheel assembly.

Installation Procedure

Warning: Before installing the wheels, remove any buildup of corrosion on the wheel mounting surface and brake drum or disc mounting surface. Installing wheels with poor metal-to-metal contact at the mounting surfaces can cause wheel nuts to loosen. This can cause a wheel to come off when the vehicle is moving, causing loss of control and possibly personal injury.

Note: Do not use power grinding tools to clean the brake rotor or drum to wheel mating surfaces.

1. Using a wire brush or wire wheel, clean the wheel to brake rotor or drum mating surface.
2. Using the *CH-41013* Rotor Resurfacing Kit, clean the rotor or drum to wheel contact area.
3. Using the *CH-42450-A* Wheel Hub Resurfacing Kit, clean the surfaces around the wheel studs.
4. Clean the threads of the wheel studs.
5. If the threads of the wheel stud are damaged, replace the wheel stud. Refer to Wheel Stud Replacement or Wheel Stud Replacement.
6. After cleaning all of the wheel and brake rotor or drum contact areas, use brake cleaner or denatured alcohol to remove any dirt and debris from the wheel nuts and the brake rotor or drum.
7. Inspect and clean the contact areas of the wheel. Refer to Wheel Mounting Surface Check.

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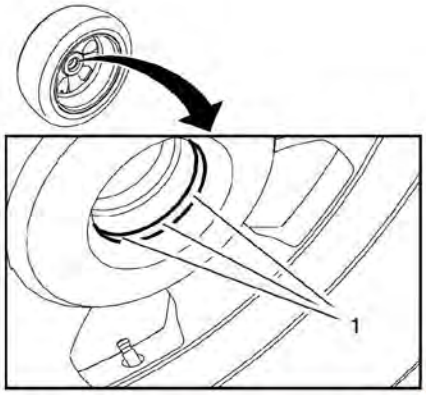
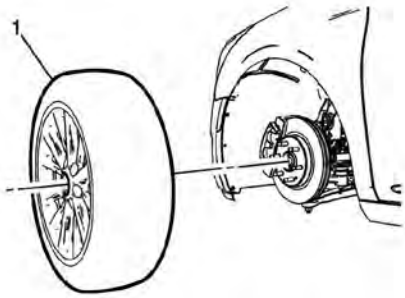


8. Apply a small amount of lubricant to the inner diameter of the wheel hub pilot hole (1) where it contacts the wheel hub flange. Refer to Adhesives, Fluids, Lubricants, and Sealers.



9. Install the tire and wheel assembly (1).

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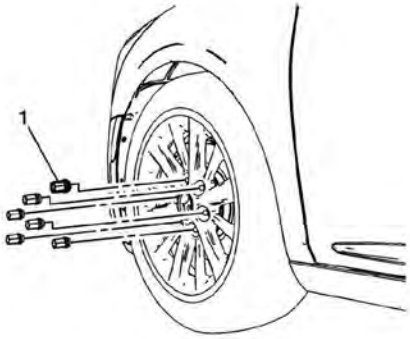
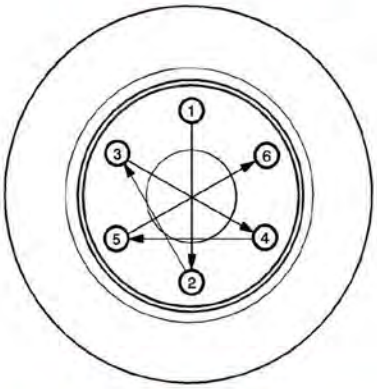


Warning: Never grease or lubricate wheel nuts, studs and mounting surfaces. Wheel nuts, studs, and mounting surfaces must be clean and dry. Tightening the lubricated parts can cause damage to the wheel studs. This can cause a wheel to come off when the vehicle is moving, causing loss of control and possibly personal injury.

10. Hand install the wheel nuts (1).



Caution: Improperly tightened wheel bolts or nuts can lead to brake pulsation and rotor damage. In order to avoid expensive brake repairs, evenly tighten the wheel bolts or nuts to the proper torque specification.

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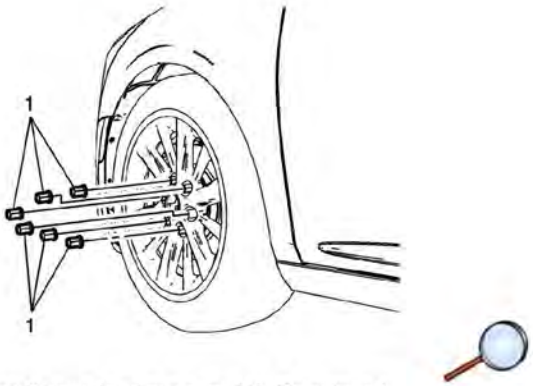
Caution: Refer to Fastener Caution.

11. Alternately and evenly tighten the wheel nuts to **190** Y **(140 lb ft)** in the sequence illustrated by using a torque wrench and the appropriate socket.



12. Install the wheel nut caps (1), if equipped.
13. Install the wheel center cap, if equipped.

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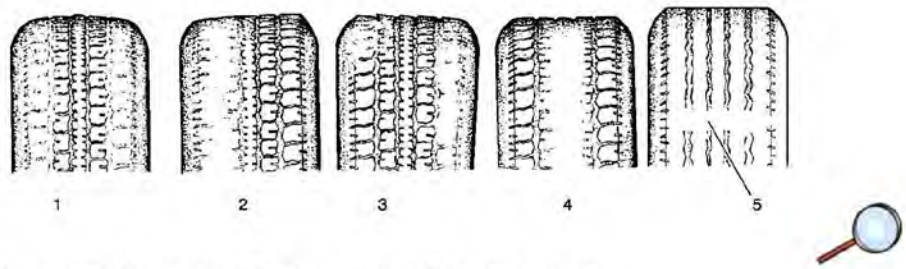
Tire Diagnosis - Irregular or Premature Wear

Tire Wear



(1) Under-Inflation, Hard Cornering, Lack of Regular Rotation
(2) Incorrect Wheel Alignment, Hard Cornering, Lack of Regular Rotation
(3) Incorrect Wheel Alignment
(4) Over-Inflation, Heavy Acceleration, Lack of Regular Rotation
(5) Normal Wear to the Wear Indicator

Inspection Procedure

1. Inspect the front tire wear.
2. Inspect the rear tire wear.
3. Rotate the tires if any of the following conditions exist:
   - The amount of time or mileage since the last tire rotation matches the maintenance schedule.
   - The outer tread blocks are worn more than the middle tread blocks (1).
   - The outer tread blocks are worn more than the inner tread blocks (2).
   - The middle tread blocks are worn more than the outer tread blocks (4).
4. Measure the wheel alignment if any of the following conditions exist:

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- The tread blocks have feathered edges (3).
- The outer tread blocks are worn more than the inner tread blocks (2).
- The inner tread blocks are worn more than the outer tread blocks (2).

5. Inspect the struts or the shock absorbers if the tire tread exhibits a cupped appearance (3).

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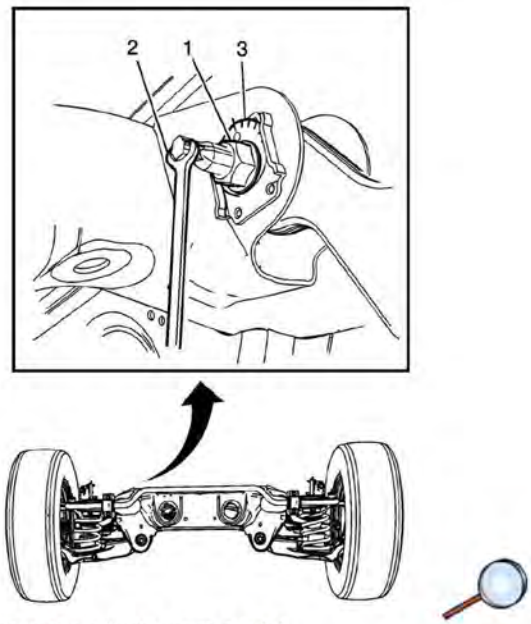
Rear Camber Adjustment



1. Loosen the adjuster cam nut (1).
2. Using a wrench to rotate the adjuster bolt (2), adjust the cam (3) to specifications.

   Caution: Refer to Fastener Caution.

   Note: Ensure that the camber settings have not changed after torquing the adjuster nut to specifications. Readjust if necessary.
3. Using a wrench to hold the adjuster bolt (2), tighten the adjuster nut (1) to:
   - First Pass: **70** Y **(52 lb ft)**
   - Final Pass: **plus 70 degrees**

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4. Check the toe alignment and adjust if required. Refer to Rear Toe Adjustment.
5. Test drive the vehicle.

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#05-03-07-009H: Wheel Alignment Specifications, Requirements and Recommendations for GM Vehicles - (Oct 2, 2015)

Subject: Wheel Alignment Specifications, Requirements and Recommendations for GM Vehicles

Models: 2016 and Prior GM Passenger Cars and Light Duty Trucks

This Bulletin has been revised to update information in the Wheel Alignment Job Card Questionnaire and remove sections Mileage Policy and Warranty Documentation Requirements. Please discard Corporate Bulletin Number 05-03-07-009G.

Purpose

The purpose of this bulletin is to provide retail, wholesale and fleet personnel with General Motors' recommendations for customer concerns related to wheel alignment. For your convenience, this bulletin updates and centralizes all of GM's Standard Wheel Alignment Service Procedures, and bulletins on wheel alignment warranty service.

Important: PLEASE FAMILIARIZE YOURSELF WITH THESE UPDATES BEFORE PERFORMING YOUR NEXT GM WHEEL ALIGNMENT SERVICE.

The following key steps are a summary of this bulletin and are REQUIRED in completing a successful wheel alignment service.

1. **Verify the vehicle is in an Original Equipment condition** for curb weight, tires, wheels, suspension and steering configurations. Vehicles modified in any of these areas are not covered for wheel alignment warranty.
2. **Review the customer concern relative to 'Normal Operation"** definitions.
3. **Document wheel alignment warranty claims** appropriately for labor operations 8070012 and 8070032. A copy of the alignment machine printout showing before and after alignment specifications must be attached to the job card. Please refer to Article 1.1.13 (1.4.19 Canada) of the Service Policies and Procedures for complete documentation requirements and labor operation restrictions for transactions involving wheel alignments, toe adjustments and wheel balancing.

Verify Original Equipment Condition of the Vehicle

- Verify that Original Equipment Tires and Wheels or Official GM Accessory Tires and Wheels are on the vehicle.
- Verify that aftermarket suspension "Lift" or "Lowering" Kits or other suspension alterations have NOT been done to the vehicle.
- Check for accidental damage to the vehicle; for example, severe pothole or curb impacts, collision damage that may have affected the wheel alignment of the vehicle; e.g., engine cradles, suspension control arms, axles, wheels, wheel covers, tires may show evidence of damage/impact.

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- Check to be sure vehicle has seen "Normal Use" rather than abuse; e.g., very aggressive driving may show up by looking at the tires and condition of the vehicle.
- Check for other additional equipment items that may significantly affect vehicle mass such as large tool boxes, campers, snow plow packages (without the snowplow RPO), etc., especially in trucks and cutaway/incomplete vehicles. Significant additional mass can affect trim height and wheel alignment of the vehicle and may necessitate a customer pay wheel alignment when placed semi-permanently in the vehicle (Upfitter instructions are to realign the vehicle after placement of these types of items. (This typically applies to trucks and incomplete vehicles that can be upfit with equipment such as the above.)

Customer Concerns and "Normal Operation" Conditions

Possible Concerns

The following are typical conditions that may require wheel alignment warranty service:

1. **Lead/Pull:** defined as "at a constant highway speed on a typical straight road, the amount of effort required at the steering wheel to maintain the vehicle's straight heading."

   Important: Please evaluate for the condition with hands-on the steering wheel. Follow the "Vehicle Leads/Pulls" diagnostic tree located in SI to determine the cause of a lead/pull concern. Lead/Pull concerns can be due to road crown or road slope, tires, wheel alignment or even in rare circumstances a steering gear issue. Lead/pull concerns due to road crown are considered "Normal Operation" and are NOT a warrantable condition -- the customer should be advised that this is "Normal Operation."

   Important: Some customers may comment on a "Lead/Pull" when they hold the steering wheel in a level condition. If so, this is more likely a "steering wheel angle" concern because the customer is "steering" the vehicle to obtain a "level" steering wheel.

2. **Steering wheel angle to the left or right** (counter-clockwise or clockwise, respectively): Defined as the steering wheel angle (clocking) deviation from "level" while maintaining a straight heading on a typical straight road.
3. **Irregular or Premature tire wear:** Slight to very slight "feathering" or "edge" wear on the shoulders of tires is NOT considered unusual and should even out with a tire rotation; if the customer is concerned about a "feathering" condition of the tires, the customer could be advised to rotate the tires earlier than the next scheduled mileage/maintenance interval (but no later than the next interval). Be sure to understand the customer's driving habits as this will also heavily influence the tire wear performance; tire wear from aggressive or abusive driving habits is NOT a warrantable condition.

   Important: Slight or mild feathering, cupping, edge or heel/toe wear of tire tread shoulders is "normal" and can show up very early in a tire/vehicle service mileage; in fact, some new tires can show evidence of feathering from the factory. These issues do NOT affect the overall performance and tread life of the tire. Dealer personnel should always check the customer's maintenance records to ensure that tire inflation pressure is being maintained to placard and that the tires are being rotated (modified-X pattern) at the proper mileage intervals. Wheel alignments are NOT to be performed for the types of "Normal" Tire Feathering shown in Figures 1-4 below.

Figure 1: Full Tread View – "NORMAL" Tire "Feathering" Wear on the Shoulder/Adjacent/Center Ribs

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Figure 2: Tire Shoulder View Example 1 - "NORMAL" Tire "Feathering" Wear on the Shoulder

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Figure 3: Tire Shoulder View Example 2 - "NORMAL" Tire "Feathering" Wear

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Figure 4: Detail Side View of Tire Shoulder Area - "NORMAL" Tire "Feathering" Wear

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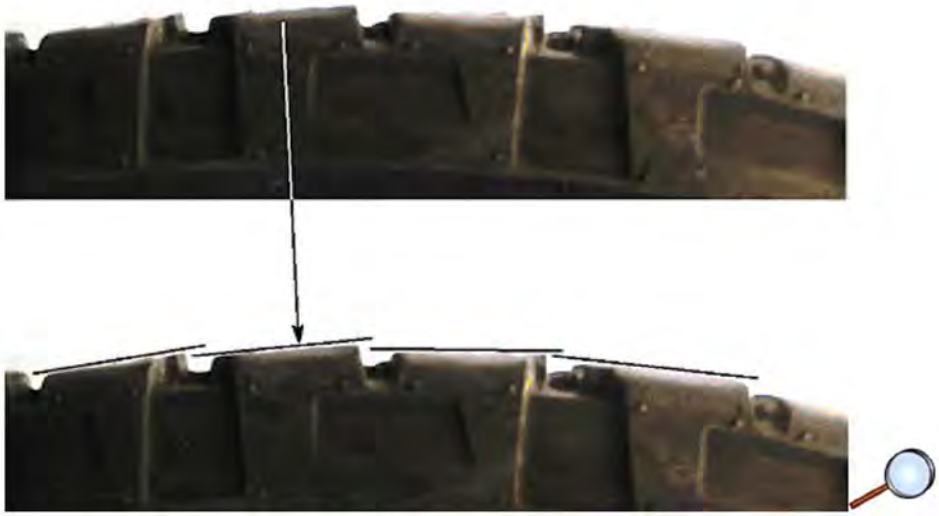

Important: When a wheel alignment is deemed necessary for tire wear, be sure to document on the repair order, in as much detail as possible, the severity and type of tire wear (e.g., severe center wear or severe inside or outside shoulder wear) and the position of the tire on the vehicle (RF, LF, LR, RR). Please note the customer's concern with the wear such as, noise, appearance, wear life, etc. A field product report with pictures of the tire wear condition is recommended. Refer to the latest version of Corporate Bulletin Numbers 02-00-89-002 (Canada, 10-00-89-006) and 07-00-89-036.

4. **Other repairs** that affect wheel alignment; e.g., certain component replacement such as suspension control arm replacement, engine cradle adjustment/replace, steering gear replacement, steering tie rod replace, suspension strut/shock, steering knuckle, etc. may require a wheel alignment.

   Important: If other components or repairs are identified as affecting the wheel alignment, policy calls for the wheel alignment labor time to be charged to the replaced/repaired component's labor operation time rather than the wheel alignment labor operations.

   Important: Vibration type customer concerns are generally NOT due to wheel alignment except in the rare cases; e.g., extreme diagonal wear across the tread. In general, wheel alignments are NOT to be performed as an investigation/correction for vibration concerns.

'Normal Operation" Conditions

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Vehicle Lead/Pull Due to Road Crown or Slope:

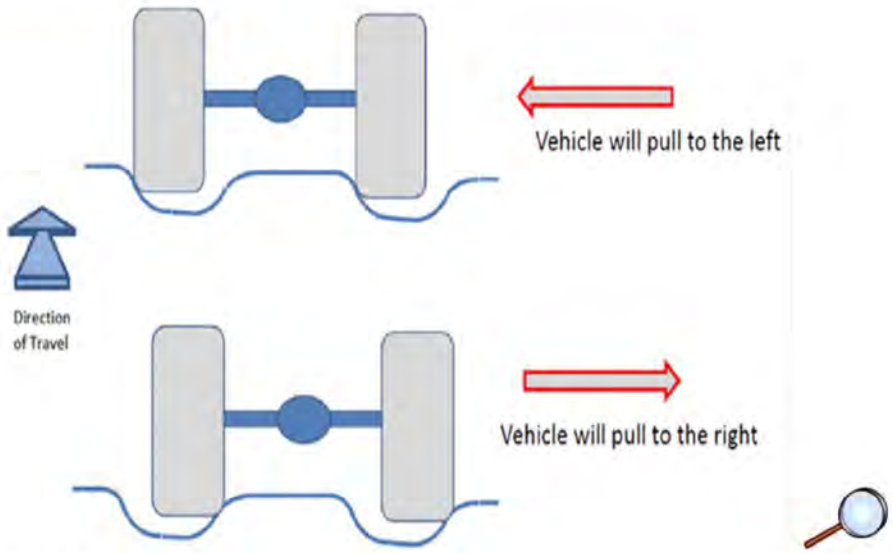
As part of "Normal Operation," vehicles will follow side-to-side or left to right road crown or slope. Be sure to verify from the customer the types of roads they are driving as they may not recognize the influence of road crown on vehicle lead/pull and steering wheel angle. If a vehicle requires significant steering effort to prevent it from "climbing" the road crown there may be an issue to be looked into further.

Important: A wheel alignment will generally NOT correct vehicles that follow the road crown since this is within "Normal Operation."

Trough Wander/Tramlining:

Some customers may comment about their vehicle having a tendency to pull left or right depending on road conditions. Typical descriptions may refer to the vehicle not tracking properly or that the car wanders. Additional comments may include that the car follows grooves or inconsistencies in the road to the extent that the vehicle must be steered or directed with additional force to overcome these roadway characteristics.

Trough Wander / Tramlining



What is Tramlining?

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"Tramlining" is an industry term used to describe a vehicle's tendency to follow the longitudinal ruts and/or grooves present in the road. (Also called "trough wander"). The name comes from the feeling on a tram or trolley as the vehicle follows along the tracks. Any vehicle can exhibit tramlining due to uneven pavement or severe rutting in the roads surface. All vehicles tramline to some degree, however vehicles equipped with low aspect ratio, wide tires tend to be more sensitive to this condition (e.g. Corvette, Camaro, CTS-V, Chevrolet SS).

Vehicles experiencing this condition can feel "pulled" in both directions depending on the positions of the tires in the trough (ruts).

If a similarly equipped vehicle experiences the same condition as the customer's car, the customer's car is most likely experiencing tramlining, which is a normal characteristic of a car with low aspect ratio, wide tires.

Important: It should be noted that adjusting alignment settings will NOT improve this condition.

Wheel Alignment Equipment and Process

Wheel alignments must be performed with a quality machine that will give accurate results when performing checks. "External Reference" (image-based camera technology) is preferred. Please refer to the latest version of Corporate Bulletin Number 05-00-89-029: General Motors Dealership Critical Equipment Requirements and Recommendations.

Requirements:

- Computerized four wheel alignment system.
- Computer capable of printing before and after alignment reports.
- Computer capable of time and date stamp printout.
- Racking system must have jacking capability.
- Racking system must be capable of level to 1.6 mm (1/16 in).
- Appropriate wheel stops and safety certification.
- Built-in turn plates and slip plates.
- Wheel clamps capable of attaching to 20" or larger wheels
- Racking capable of accepting any GM passenger car or light duty truck.
- Operator properly trained and ASE-certified (U.S. only) in wheel alignment.

Recommendations:

Racking should have front and rear jacking capability.

Equipment Maintenance and Calibration:

Alignment machines must be regularly calibrated in order to give correct information. Most manufacturers recommend the following:

- Alignment machines with "internal reference" sensors should be checked (and calibrated, if necessary) every six months.

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- Alignment machines with "external reference" (image-based camera technology) should be checked (and calibrated, if necessary) once a year.
- Racks must be kept level to within 1.6 mm (1/16 in).
- If any instrument that is part of the alignment machine is dropped or damaged in some way, check the calibration immediately.

Check with the manufacturer of your specific equipment for their recommended service/calibration schedule.

Wheel Alignment Process

When performing wheel alignment measurement and/or adjustment, the following steps should be taken:

Preliminary Steps:

1. Verify that the vehicle has a full tank of fuel (compensate as necessary).
2. Inspect the wheels and the tires for damage.
3. Inspect the tires for the proper inflation and irregular tire wear.
4. Inspect the wheel bearings for excessive play.
5. Inspect all suspension and steering parts for looseness, wear, or damage.
6. Inspect the steering wheel for excessive drag or poor return due to stiff or rusted linkage or suspension components.
7. Inspect the vehicle trim height.
8. Compensate for frame angle on targeted vehicles (refer to Wheel Alignment Specifications in SI).

Satisfactory vehicle operation may occur over a wide range of alignment angles. However, if the wheel alignment angles are not within the range of specifications, adjust the wheel alignment to the specifications. Refer to Wheel Alignment Specifications in SI. Give consideration to excess loads, such as tool boxes, sample cases, etc. Follow the wheel alignment equipment manufacturer's instructions.

Measure/Adjust:

Important: Prior to making any adjustments to wheel alignment on a vehicle, technicians must verify that the wheel alignment specifications loaded into their wheel alignment machine are up-to-date by comparing these to the wheel alignment specifications for the appropriate model and model year in SI. Using incorrect and/or outdated specifications may result in unnecessary adjustments, irregular and/or premature tire wear and repeat customer concerns.

Important: When performing adjustments to vehicles requiring a 4-wheel alignment, set the rear wheel alignment angles first in order to obtain proper front wheel alignment angles.

Perform the following steps in order to measure the front and rear alignment angles:

1. Install the alignment equipment according to the manufacturer's instructions.
2. Jounce the front and the rear bumpers 3 times prior to checking the wheel alignment.

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3. Measure the alignment angles and record the readings

If necessary, adjust the wheel alignment to vehicle specification and record the before and after measurements. Refer to Wheel Alignment Specifications in SI.

Important: Technicians must refer to SI for the correct wheel alignment specifications. SI is the only source of GM wheel alignment specifications that is kept up-to-date throughout the year.

Test drive the vehicle to ensure a proper repair.

Understanding the Effects of Wheel Alignment on a Vehicle vs. Customer Complaints (Quick Reference Section)

Note: Refer to SI for complete alignment specifications.

- Prior to any measurement on the alignment machine, you must confirm the current specifications and tolerances as listed in GM's Service Information System. Do *not* assume that numbers in the alignment machine are correct, as it may not have been recently updated.
- Always use the correct specifications for that vehicle based on *confirmed* vehicle option content.
- It is important to always include as much information as possible in the RO – including the *confirmed* customer complaint and the *complete before and after* alignment measurements on the vehicle.

Steering Wheel Angle Complaints:

A true steering wheel angle complaint can be diagnosed as a vehicle that goes straight down the road without extra steering input, but the steering wheel angle is clocked to one side or the other. Make sure to always note which direction the steering wheel is clocked on the Repair Order ("Left/CCW" or "Right/CW").

If a steering wheel angle complaint has been verified, it should be noted that front and rear toes are the only alignment values that affect the angle of the steering wheel.

Vehicle Pull Complaints:

Prior to any adjusts, the vehicle must be driven to confirm the customer complaint. Use this drive to verify that the vehicle does have a pull and it is not a steering wheel angle issue. Try and use same stretch of road for all drives so that you understand the different characteristics of that specific road.

A true vehicle pull only complaint will have the vehicle pull to one side or the other regardless of steering wheel angle. It may require more than normal effort to keep the vehicle going straight.

Important: It is possible for customers to confuse a steering wheel off angle issue as a vehicle pull, as they may be trying to hold the wheel centered (level) on a straight road which would be adding a slight steering input to the wheels. If this is the case, please note this on the Repair Order, including the direction the vehicle is pulling.

Please note the following on what can cause a vehicle pull:

- Tires

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- Alignment settings

Tires: If a pull complaint has been verified but all the alignment settings all are within specifications, the issue may be in the tires. Certain tire differences left to right may cause a vehicle pull. Swapping the front tires left to right and re-evaluating is a simple way to verify a tire issue.

Important: Always ensure tire pressures are set to correct specifications before and after evaluating a vehicle.

Important: Always note if tires are directional and not able to be permanently swapped side to side.

Alignment Information

Alignment Settings:	Positive Value	Negative Value
Front Cross Camber (LH minus RH)	Pulls Left	Pulls Right
Front Cross Caster (LH minus RH)	Pulls Right	Pulls Left
Front and Rear Toe	Does Not Cause Vehicle Pulls	Does Not Cause Vehicle Pulls

Important: Front or rear toe values being out of specifications do *not* cause a true vehicle pull. If only front or rear toe values are out of specification on a confirmed vehicle pull issue, something else is causing the pull.

Important: If Cross Camber and Cross Caster are within GM specifications listed in the Service Information System, it generally means they are not the reason for a vehicle pull complaint.

Note: Although not normally an adjustable setting on many vehicles, you should always verify the caster repair procedure in GM's Service Information System.

Road Slope:

It is important to always note road slope during a drive, high angles can cause a vehicle to drift one way or the other. As flat of road as possible should be used for evaluations.

Effect of Road Slope

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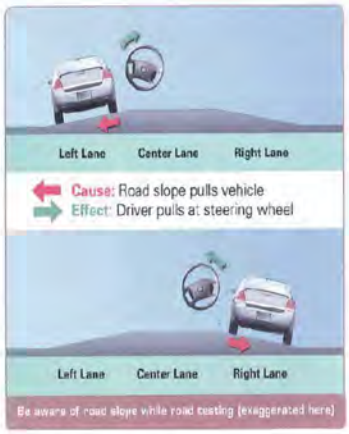

Trough Wander / Tramlining

Troughs or grooves in the road can pull a vehicle to either side depending on where in the groove the tire is. The tires will always want to pull the vehicle up the wall of the trough.

Trough Wander / Tramlining

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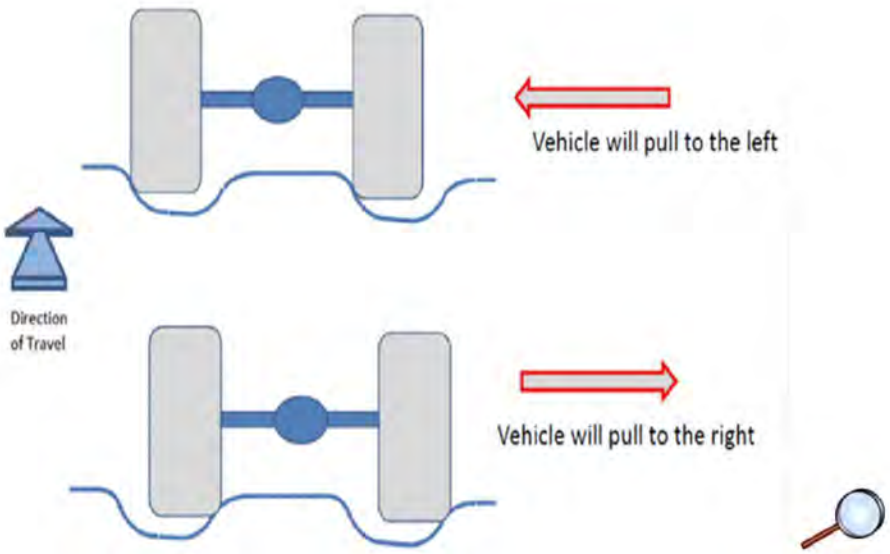

Wheel Alignment Job Card Questionnaire

Note: For vehicles with less than 500 miles (800 km) on the odometer, please fill in the blanks. Additional help can be found in the "Vehicle Lead/Pull Diagnostics" located in SI under Suspension – General Diagnosis. It is also recommended that the dealership complete a Field Product Report to notify GM of this condition. Refer to Bulletin Numbers 02-00-89-002 (Canada: 10-00-89-006) and 07-00-89-036 for more information on Field Product Reporting.

TAC Case # if applicable:

Vehicle Concern Information

Customer Concern:

Tire Wear____ Steering Wheel Off-Angle___
Lead/Pull____ Other _____

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Wheel Alignment Job Card Questionnaire

Was the customer concern duplicated? Yes___ No___
Is the tire pressure within +/- 3 psi (+/- 20 kPa) of the tire placard? Yes___ No___
If No, record the tire pressures (psi):
LF____ RF____ LR____ RR____

Tire Wear (If Applicable)
Please check all boxes that apply:
Left Front Tire:
Even Wear___ Inside Shoulder___
Center___ Outside Shoulder___ Cupping/Feathering___

Right Front Tire:
Even Wear___ Inside Shoulder___
Center___ Outside Shoulder___ Cupping/Feathering___

Left Rear Tire:
Even Wear___ Inside Shoulder___
Center___ Outside Shoulder___ Cupping/Feathering___

Right Rear Tire:
Even Wear___ Inside Shoulder___

Wheel Alignment Job Card Questionnaire
Center___ Outside Shoulder___ Cupping/Feathering___

Steering Wheel Off-Angle (If Applicable)
Which way was the steering wheel off angle?

Lead/Pull (If Applicable)

Which way does the vehicle lead or pull? Right___ Left___

Were the front tires swapped side to side? Yes___ No___

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Wheel Alignment Job Card Questionnaire
Was the vehicle checked for brake drag? Yes___ No___

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.

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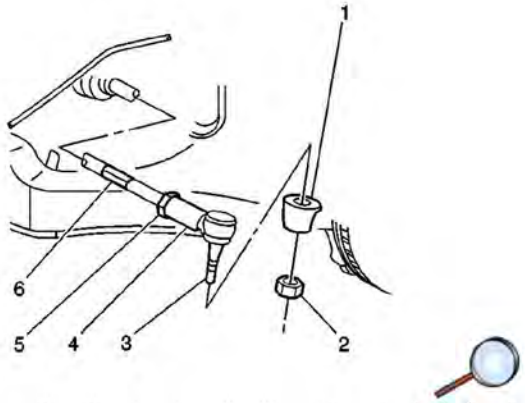
Wheel Alignment - Steering Wheel Angle and/or Front Toe Adjustment



1. Ensure that the steering wheel is set in a straight ahead position.
2. Loosen the tie rod jam nut (5).
3. Adjust the toe to specification by turning the adjuster (6). Refer to Wheel Alignment Specifications.
   Caution: Refer to Fastener Caution.
4. Install the tie rod jam nut (5) and tighten to **70** Y **(52 lb ft)**.

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This manual describes features that may or may not be on your specific vehicle either because they are options that you did not purchase or due to changes subsequent to the printing of this owner manual. Please refer to the purchase documentation relating to your specific vehicle to confirm each of the features found on your vehicle. For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Cadillac Motor Car Division wherever it appears in this manual.

Keep this manual in the vehicle for quick reference.

Canadian Vehicle Owners

Propriétaires Canadiens

A French language manual can be obtained from your dealer, at www.helminc.com, or from:

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire ou à l'adresse savant:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Litho in U.S.A.
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Using this Manual

To quickly locate information about the vehicle, use the Index in the back of the manual. It is an alphabetical list of what is in the manual and the page number where it can be found.

Danger, Warnings, and Cautions

Warning messages found on vehicle labels and in this manual describe hazards and what to do to avoid or reduce them.

Danger indicates a hazard with a high level of risk which will result in serious injury or death.

Warning or **Caution** indicates a hazard that could result in injury or death.

⚠ WARNING
These mean there is something that could hurt you or other people.

***Notice:* This means there is something that could result in property or vehicle damage. This would not be covered by the vehicle's warranty.**

A circle with a slash through it is a safety symbol which means "Do Not," "Do not do this," or "Do not let this happen."

Symbols

The vehicle has components and labels that use symbols instead of text. Symbols are shown along with the text describing the operation or information relating to a specific component, control, message, gauge, or indicator.

: This symbol is shown when you need to see your owner manual for additional instructions or information.

: This symbol is shown when you need to see a service manual for additional instructions or information.

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. For more information on the symbol, refer to the Index.

: Airbag Readiness Light

: Air Conditioning

: Antilock Brake System (ABS)

: Audio Steering Wheel Controls or OnStar®

: Brake System Warning Light

: Charging System

: Cruise Control

: Engine Coolant Temperature

: Exterior Lamps

: Fog Lamps

: Fuel Gauge

: Fuses

: Headlamp High/Low-Beam Changer

: Heated Steering Wheel

: LATCH System Child Restraints

: Malfunction Indicator Lamp

: Oil Pressure

: Outside Power Foldaway Mirrors

: Power

: Remote Vehicle Start

: Safety Belt Reminders

: Tire Pressure Monitor

: Traction Control/StabiliTrak®

: Windshield Washer Fluid

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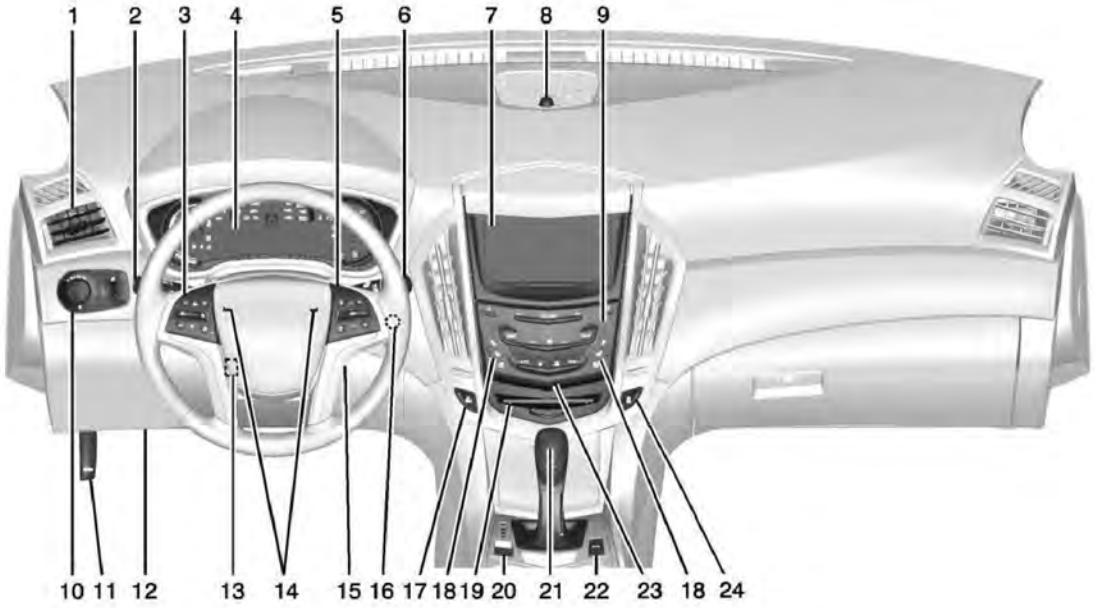
Instrument Panel



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2. Turn and Lane-Change Lever. See *Turn and Lane-Change Signals on page 6-5.*
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    Parking Assist (If Equipped). See *Driver Assistance Systems on page 9-46*.

    Economy Mode (If Equipped). See *Fuel Economy Mode on page 9-26*.

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Initial Drive Information

This section provides a brief overview about some of the important features that may or may not be on your specific vehicle.

For more detailed information, refer to each of the features which can be found later in this owner manual.

Remote Keyless Entry (RKE) System

The Remote Keyless Entry (RKE) transmitter may be used to lock and unlock the doors from up to 60 m (195 ft) away from the vehicle.

: Press to lock all doors.

: Press to unlock the driver door or all doors depending on the vehicle personalization settings.

Lock and unlock feedback can be personalized.

See "Remote Locking, Unlocking, Starting" under *Vehicle Personalization on page 5-40*.

: Press and release one time to initiate vehicle locator.

Press and hold for three seconds to sound the panic alarm.

Press again or start the vehicle to cancel the panic alarm.

: Press and hold to open or close the liftgate.

Press the key release button near the bottom of the transmitter to remove the key. The key can be used for the driver door and the glove box.

See *Keys on page 2-2* and *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Remote Vehicle Start

If available, this feature allows the engine to be started from outside of the vehicle.

Starting the Vehicle

1. Press and release on the RKE transmitter.
2. Immediately press and hold for at least two seconds until the turn signal lamps flash.

When the vehicle starts, the parking lamps will remain on as long as the engine is running. The doors will be locked and the climate control system may come on.

The engine will continue to run for 10 minutes. Repeat the steps for a 10-minute time extension. Remote start can be extended only once.

Canceling a Remote Start

To cancel a remote start, do any of the following:

- Press and hold until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

See *Remote Vehicle Start on page 2-9*.

Door Locks

Keyless Access

When the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door, pressing the lock/unlock button on that door handle will lock/unlock the doors. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Remote Keyless Entry (RKE)

To lock or unlock the doors from the outside, press 🔒 or 🔓 on the Remote Keyless Entry (RKE) transmitter. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Key

To lock or unlock the door, use the key in the driver door. Turn the key counterclockwise once to unlock the driver door; turning the key again will unlock the passenger doors.

Inside the Vehicle

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks

There is a power door lock switch on the front door panels.

🔒 : Press to lock the doors.

🔓 : Press to unlock the doors.

See *Power Door Locks on page 2-11*.

Liftgate

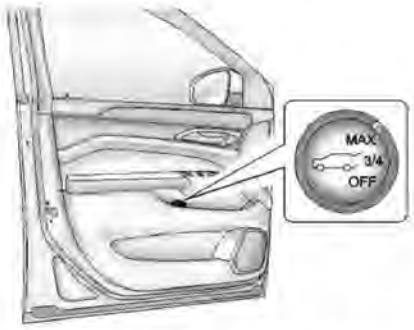
Manual Liftgate Operation

For vehicles without keyless access, unlock the vehicle before opening the liftgate.

Press the touch pad in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Power Liftgate Operation



On vehicles with a power liftgate, the switch is on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

Choose a power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position. Press the center of the switch.

The three modes are:

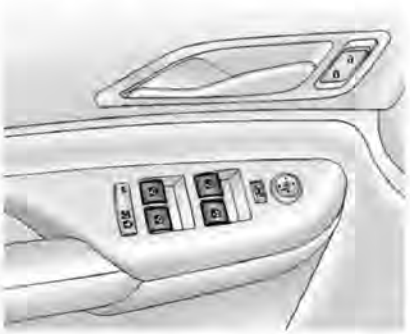
MAX: The liftgate opens to the full open height.

3/4: The liftgate opens to a reduced height that can be set by the vehicle operator in a range of approximately three-quarters open to full open.

OFF: The liftgate only operates manually in this position.

See *Liftgate on page 2-13*.

Windows



Press or pull the switch part of the way to open or close the window.

Fully press the front of the switch down and release it to express-down the window. Fully pull the switch up and release it to express-up the window.

Press to activate the window lockout on the rear doors.

See *Power Windows on page 2-22*.

Remote Window Operation

The vehicle may have remote operating windows that will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

See *Power Windows on page 2-22*.

Seat Adjustment

Manual Seats

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

To raise or recline the seatback, use the lever on the outboard side of the seat.

See *Seat Adjustment on page 3-4* and *Reclining Seatbacks on page 3-6*.

Power Seats

1. Seat Position Control
2. Seatback Adjustment Control
3. Lumbar Adjustment Control

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control (1) forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control (1) up or down.
- Raise or lower the entire seat by moving the rear of the control (1) up or down.

  See *Power Seat Adjustment on page 3-4*.
- Raise or recline the seatback by tilting control (2) forward or rearward.

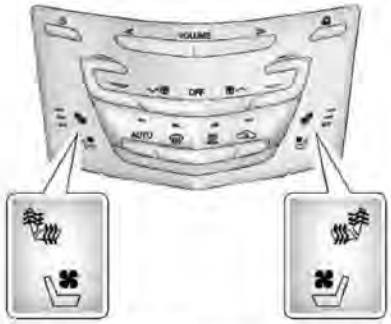
  See *Reclining Seatbacks on page 3-6*.
- Increase or decrease the lumbar support by pressing and holding the front or rear of control (3). See *Lumbar Adjustment on page 3-5*.

Memory Features

If equipped, the "1," "2," and MEM buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions.

See *Memory Seats on page 3-7* and *Vehicle Personalization on page 5-40*.

Heated and Ventilated Seats



Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the center stack. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights next to the buttons indicate three for the highest setting and one for the lowest. If the front heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

See *Heated and Ventilated Front Seats on page 3-9*.

The heated and ventilated front seats can also be programmed to come on during a remote start. See *Vehicle Personalization on page 5-40*.

Head Restraint Adjustment

Do not drive until the head restraints for all occupants are installed and adjusted properly.

To achieve a comfortable seating position, change the seatback recline angle as little as necessary while keeping the seat and the head restraint height in the proper position.

See *Head Restraints on page 3-2* and *Seat Adjustment on page 3-4*.

Safety Belts

Refer to the following sections for important information on how to use safety belts properly:

- *Safety Belts on page 3-13*.
- *How to Wear Safety Belts Properly on page 3-14*.
- *Lap-Shoulder Belt on page 3-15*.
- *Lower Anchors and Tethers for Children (LATCH System) on page 3-41*.

Passenger Sensing System

United States

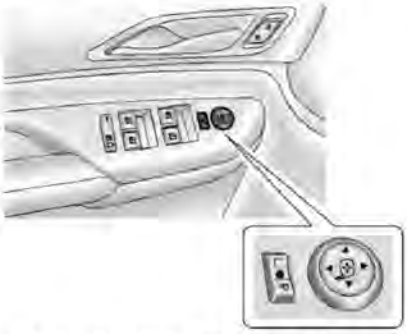
Canada and Mexico

The passenger sensing system will turn off the front outboard passenger frontal airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger airbag status indicator will be visible on the overhead console when the vehicle is started. See *Passenger Sensing System on page 3-27*.

Mirror Adjustment

Exterior



Manual Folding Mirrors Shown, Power Folding Similar

To adjust the mirror:

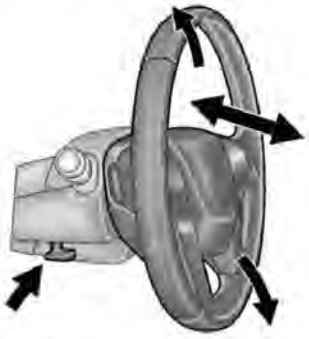
1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror to the desired position.
3. Return the selector switch to the center position.

See *Folding Mirrors on page 2-20*.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror and the inside rearview mirror automatically adjust for the glare of headlamps behind you. See *Automatic Dimming Mirror on page 2-21* or *Automatic Dimming Rearview Mirror on page 2-21*.

Steering Wheel Adjustment



To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Throttle and Brake Pedal Adjustment

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.

The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

See *Adjustable Throttle and Brake Pedal on page 9-15*.

Interior Lighting

Dome Lamps

The dome lamp controls are in the overhead console.

To change the dome lamp settings, press the following:

: Turns the lamp off, even when a door is open.

: The lamp comes on when a door is opened.

: Turns the dome lamp on.

Reading Lamps

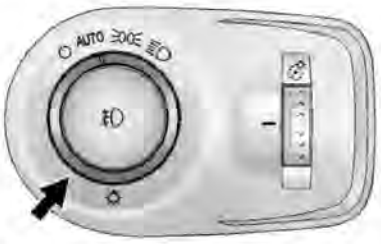
There are reading lamps on the overhead console and over the rear passenger doors. These lamps come on when any door is opened.

To manually turn the reading lamps on or off:

- For the overhead console reading lamps, press the or next to each lamp.
- For the rear passenger reading lamps, press the lamp lens.

For more information on interior lighting, see *Instrument Panel Illumination Control on page 6-6*.

Exterior Lighting



The exterior lamp control is on the instrument panel to the left of the steering column.

There are four positions:

⏻ : Briefly turn to this position to turn the automatic light control off or on again.

AUTO: Turns the headlamps on automatically at normal brightness, together with the parking lamps, taillamps, license plate lamps, and instrument panel lights.

: Turns the parking lamps on together with the taillamps, license plate lamps, and instrument panel lights.

: Turns the headlamps on together with the parking lamps, taillamps, license plate lamps, and instrument panel lights.

: For vehicles with fog lamps, press to turn the lamps on or off.

See:

- *Exterior Lamp Controls on page 6-1*
- *Daytime Running Lamps (DRL) on page 6-2*

Windshield Wiper/Washer

With the ignition in ACC/ ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI: Use for fast wipes.

LO: Use for slow wipes.

INT: Use for intermittent wipes. To adjust wipe frequency, turn the INT band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see the following Rainsense information.

OFF: Use to turn the wipers off.

: For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers.

Rainsense™

For vehicles with Rainsense:

INT: Move the windshield wiper lever to INT. Turn the INT band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON: Press the upper portion of the button for continuous rear window wipes.

OFF: The rear wiper turns off when the button is returned to the middle position.

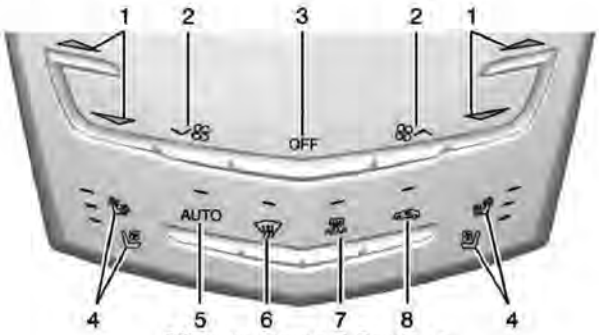
INT: Press the lower portion of the button to set a delay between wipes.

: Push the windshield wiper lever forward to spray washer fluid on the rear window.

See *Windshield Wiper/Washer on page 5-3* and *Rear Window Wiper/Washer on page 5-5*.

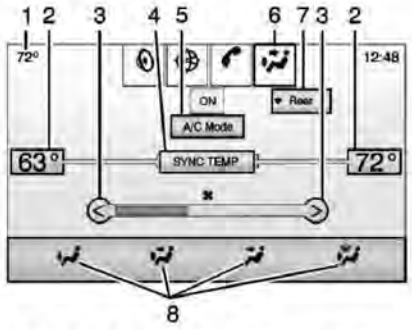
Climate Controls

The climate control buttons and the touch screen are used to adjust the heating, cooling, and ventilation.



Climate Control Buttons

1. Driver and Passenger Temperature Controls
2. Fan Control
3. OFF (Fan)
4. Driver and Passenger Heated and Ventilated Seats (If Equipped)
5. AUTO (Automatic Operation)
6. Defrost
7. Rear Window Defogger
8. Recirculation



Climate Touch Screen Controls

1. Outside Temperature Display
2. Driver and Passenger Temperature Displays
3. Fan Control
4. SYNC TEMP (Synchronized Temperature)
5. A/C Mode (Air Conditioning)
6. Climate Control Selection (Application Tray Button)
7. Rear (Rear Climate Control Touch Screen)
8. Air Delivery Mode Control

See *Dual Automatic Climate Control System on page 8-1* and *Rear Climate Control System on page 8-6* (If Equipped).

Transmission

Driver Shift Control (DSC)

Driver Shift Control (DSC) allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to Sport Mode.
2. To enter M (Manual Mode), press the shift lever forward (+) to upshift or rearward (−) to downshift.

See *Manual Mode on page 9-24*.

Vehicle Features

Steering Wheel Controls

For vehicles with audio steering wheel controls, some audio controls can be adjusted at the steering wheel.

: For vehicles with OnStar® or a Bluetooth® system, press to talk or interact with those systems. See *OnStar Overview on page 14-1* or "Bluetooth" in the separate infotainment manual.

: Press to decline an incoming call, or end a current call. Press to mute or unmute the infotainment system when not on a call.

< **or** **>**: Press to go to the previous or next menu option.

∧ or ∨ : Press the five-way control up or down to go to the next or previous selection.

SEL: Press to select a highlighted menu option.

△ or ▽ : Press to go to the next or previous favorite when listening to the radio. Press to go to the next or previous track when listening to a media source.

◁+ or ◁−: Press to increase or decrease the volume.

See *Steering Wheel Controls on page 5-2*.

Cruise Control

: Press to turn the system on and off. An indicator appears in the instrument cluster when turned on.

+RES: Move the control up briefly to resume to a previously set speed or to increase vehicle speed if the cruise control is already activated.

SET−: Move the control down briefly to set the speed and activate cruise control or to decrease vehicle speed if the cruise control is already activated.

: Press to disengage cruise control without erasing the set speed from memory.

See *Cruise Control on page 9-35* or *Adaptive Cruise Control on page 9-37* (if equipped).

Infotainment System

See the infotainment manual for information on the radio, audio players, phone, navigation system, and voice or speech recognition. It also includes information on settings and downloadable applications (if equipped).

Driver Information Center (DIC)

The DIC display is in the instrument cluster. It shows the status of many vehicle systems.

∧ or ∨: Move SEL up or down to go to the previous or next selection.

< or >: Press to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL: Press to open a menu or select a menu item. Press and hold to reset values on certain screens.

See *Driver Information Center (DIC) on page 5-27.*

Forward Collision Alert (FCA) System

FCA is intended to help avoid or reduce the harm caused by front-end crashes. FCA provides a green indicator when a vehicle is detected directly ahead. It provides a flashing visual alert and pulses the driver seat, or beeps, when approaching a vehicle directly ahead too quickly. FCA also provides a visual alert if following another vehicle much too closely.

See *Forward Collision Alert (FCA) System on page 9-50.*

Lane Departure Warning (LDW)

LDW is intended to help avoid unintentional lane departures at speeds of 56 km/h (35 mph) or greater. LDW uses a camera sensor to detect the lane markings. The LDW indicator, , appears green if a lane marking is detected. If the vehicle departs the lane, the indicator will change to amber and flash. In addition, the driver seat will pulse or beeps will sound.

See *Lane Departure Warning (LDW) on page 9-57.*

Side Blind Zone Alert (SBZA)

If equipped, SBZA will alert the driver to vehicles in the vehicle's side blind zone. When the system detects a vehicle in the side blind zone, the SBZA display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

See *Side Blind Zone Alert (SBZA) on page 9-55.*

Rear Vision Camera (RVC)

If equipped, RVC displays a view of the area behind the vehicle, on the center stack display, when the vehicle is shifted into R (Reverse).

See *Assistance Systems for Parking or Backing on page 9-46.*

Ultrasonic Parking Assist

URPA uses sensors on the rear bumper to assist with parking and avoiding objects while in R (Reverse). It operates at speeds less than 8 km/h (5 mph). URPA may display a warning triangle on the Rear Vision Camera screen and a graphic on the instrument cluster to provide the object distance. In addition, multiple beeps or pulses may occur if very close to an object.

The vehicle may also have the Front Parking Assist system, a higher speed Backing Warning System, and the Rear Automatic Braking system.

See *Driver Assistance Systems on page 9-46.*

Active Emergency Braking System

If the vehicle has Adaptive Cruise Control (ACC) it also has the Active Emergency Braking System, which includes Intelligent Brake Assist (IBA) and the Automatic Collision Preparation (ACP) System. These systems can provide a boost to braking or automatically brake the vehicle to help avoid crashes.

See *Active Emergency Braking System on page 9-53.*

Storage Compartments

The glove box is air conditioned and can be used to store items at a lower temperature. Move the slide control to open or close the opening to adjust the air flow. See *Glove Box on page 4-1.*

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle may have up to five accessory power outlets.

The accessory power outlets are:

- Below the climate control system inside the front storage bin.
- Inside the center floor console.
- On the rear of the center floor console. For vehicles with a rear climate control system, there will be two accessory power outlets on the rear of the center floor console.
- In the rear cargo area.

These are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

See *Power Outlets on page 5-7*.

Universal Remote System

If available, this system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Read the instructions completely before attempting to program the Universal Remote system. Because of the steps involved, it may be helpful to have another person available to assist you with programming the Universal Remote system.

See *Universal Remote System on page 5-45*.

Performance and Maintenance

Traction Control System (TCS)

The traction control system limits wheel spin. The system is on when the vehicle is started.

- To turn off traction control, press and release OFF on the center stack. illuminates in the instrument cluster. The Traction Control Off message is displayed in the DIC. See *Ride Control System Messages on page 5-37*.
- Press and release OFF again to turn traction control back on. goes out in the instrument cluster. The Traction Control On message is displayed in the DIC. See *Ride Control System Messages on page 5-37*.

See *Traction Control System (TCS) on page 9-31*.

StabiliTrak® System

The StabiliTrak system assists with directional control of the vehicle in difficult driving conditions. The system is on when the vehicle is started.

- To turn off both Traction Control and StabiliTrak, press and hold OFF on the center stack, until OFF and illuminate in the instrument cluster. The Traction Control Off message is displayed in the DIC. See *Ride Control System Messages on page 5-37*.
- Press OFF again to turn on both systems. OFF and go out in the instrument cluster. The Traction Control On message is displayed in the DIC. See *Ride Control System Messages on page 5-37*.

See *StabiliTrak® System on page 9-33*.

Tire Pressure Monitor

This vehicle may have a Tire Pressure Monitor System (TPMS).

The low tire pressure warning light alerts to a significant loss in pressure of one of the vehicle's tires. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-10*. The warning light will remain on until the tire pressure is corrected.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This may be an early indicator that the tire pressures are getting low and the tires need to be inflated to the proper pressure.

The TPMS does not replace normal monthly tire maintenance. Maintain the correct tire pressures.

See *Tire Pressure Monitor System on page 10-53*.

Tire Sealant and Compressor Kit

This vehicle may come with a spare tire and tire changing equipment or a tire sealant and compressor kit. The kit can be used to temporarily seal small punctures in the tread area of the tire. See *Tire Sealant and Compressor Kit on page 10-67*.

If the vehicle came with a spare tire and tire changing equipment, see *If a Tire Goes Flat on page 10-65*.

Engine Oil Life System

The engine oil life system calculates engine oil life based on vehicle use and displays the CHANGE ENGINE OIL SOON message when it is time to change the engine oil and filter. The oil life system should be reset to 100% only following an oil change.

Resetting the Oil Life System

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-27*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-33*.
2. Press SEL on the DIC controls and hold SEL down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

See *Engine Oil Life System on page 10-10*.

Fuel E85 (85% Ethanol)

Vehicles with a yellow fuel cap can use either unleaded gasoline or ethanol fuel containing up to 85% ethanol (E85). See *Fuel E85 (85% Ethanol) on page 9-61*. For all other vehicles, use only the unleaded gasoline described under *Recommended Fuel on page 9-59*.

Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tires properly inflated.
- Combine several trips into a single trip.
- Replace the vehicle's tires with the same TPC Spec number molded into the tire's sidewall near the size.
- Follow recommended scheduled maintenance.

Roadside Service

U.S.: 1-800-224-1400

Canada: 1-800-882-1112

TTY Users (U.S. Only): 1-888-889-2438

Mexico: 01-800-466-0805

New vehicles are automatically enrolled in the Roadside Service program.

See *Roadside Service (Mexico) on page 13-7* or *Roadside Service (U.S. and Canada) on page 13-11*.

OnStar®

If equipped, this vehicle has a comprehensive, in-vehicle system that can connect to a live Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services. See *OnStar Overview on page 14-1*.

✍ NOTES

Keys, Doors, and Windows

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Keys and Locks

Keys

⚠ WARNING

Leaving children in a vehicle with a Remote Keyless Entry (RKE) transmitter is dangerous and children or others could be seriously injured or killed. They could operate the power windows or other controls or make the vehicle move. The windows will function with the RKE transmitter in the vehicle, and children or others could be caught in the path of a closing window. Do not leave children in a vehicle with an RKE transmitter.

This key, located inside the Remote Keyless Entry (RKE) transmitter, is used for the driver door and glove box.

To remove the key, press the button near the bottom of the transmitter, and pull the key out. Never pull the key out without pressing the button.

If it becomes difficult to turn the key, inspect the key blade for debris.

See your dealer if a new key is needed.

Contact Roadside Service if locked out of the vehicle. See *Roadside Service (Mexico) on page 13-7* or *Roadside Service (U.S. and Canada) on page 13-11*.

With an active OnStar subscription, an OnStar Advisor may remotely unlock the vehicle. See *OnStar Overview on page 14-1*.

Remote Keyless Entry (RKE) System

See *Radio Frequency Statement on page 13-21* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

If there is a decrease in the RKE operating range:

- Check the distance. The transmitter may be too far from the vehicle.
- Check the location. Other vehicles or objects may be blocking the signal.
- Check the transmitter's battery. See "Battery Replacement" later in this section.
- If the transmitter is still not working correctly, see your dealer or a qualified technician for service.

Remote Keyless Entry (RKE) System Operation

The Remote Keyless Entry (RKE) transmitter functions may work up to 60 m (195 ft) away from the vehicle.

Keep in mind that other conditions, such as those previously stated, can impact the performance of the transmitter.

With Remote Start and Power Liftgate Shown, Without Similar

(Lock): Press to lock all doors. The turn signal indicators may flash and/or the horn may sound to indicate locking, see "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40*.

If the driver door is open when is pressed, all doors lock except the driver door, if Unlocked Door Anti Lock Out is enabled through the vehicle personalization. If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the theft-deterrent system. See *Vehicle Alarm System on page 2-17*.

(Unlock): Press to unlock the driver door or all doors. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40*. When remotely unlocking the vehicle at night the fog lamps and reverse lamps will come on for about 20 seconds to light your approach to the vehicle. The turn signal indicators may flash and/or the horn may sound to indicate unlocking. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40*.

Memory seat positions may be recalled when unlocking the vehicle. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40*.

Pressing will disarm the theft-deterrent system. See *Vehicle Alarm System on page 2-17*.

On some models, pressing and holding will open all of the windows.

(Remote Start): For vehicles with this feature, press and release and then press and hold for at least two seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 2-9* for additional information.

(Vehicle Locator/Panic Alarm): Press and release one time to initiate vehicle locator. The exterior lamps flash and the horn chirps three times. Press and hold for three seconds to sound the panic alarm. The horn sounds and the turn signal lamps flash for 30 seconds, or until is pressed again or the vehicle is started.

(Remote Liftgate Release): Press and hold to open or close the power liftgate.

Keyless Access Operation

With the keyless access system, you can lock and unlock the doors and access the hatch without removing the RKE transmitter from your pocket, purse, briefcase, etc. The RKE transmitter should be within 1 m (3 ft) of the door or hatch being opened.

The keyless access can be programmed to unlock all doors on the first lock/unlock press from the driver door. See *Vehicle Personalization on page 5-40*.

Keyless Unlocking/Locking from the Driver Door

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the driver door handle, pressing the lock/unlock button on the driver door handle will unlock the driver door. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock.

Passenger Shown, Driver Similar

Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

- It has been more than five seconds since the first lock/unlock button press.
- Two lock/unlock button presses were used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

Keyless Unlocking/Locking from Passenger Doors

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the door handle, pressing the lock/unlock button on that door handle will unlock all doors. Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

- The lock/unlock button was used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

Passive Locking

If the vehicle has the keyless access system, this feature allows you to select whether the doors automatically lock during normal vehicle exit. When the vehicle is turned off and all doors are closed, the vehicle will determine how many RKE transmitters remain in the vehicle interior. If at least one RKE transmitter has been removed from the interior of the vehicle, the doors will lock after eight seconds.

Temporarily disable the locking feature by pressing and holding the power door switch for several seconds with a door open. Passive locking will then remain disabled until the door switch is pressed, or until the vehicle is turned on.

To customize whether the doors automatically lock when exiting the vehicle, see "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40*.

Keyless Liftgate Opening

Press the touch pad on the liftgate handle to open the liftgate if the keyless entry transmitter is within 1 m (3 ft).

Programming Transmitters to the Vehicle

Only keyless entry transmitters programmed to the vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen transmitters no longer work. Each vehicle can have up to eight transmitters matched to it.

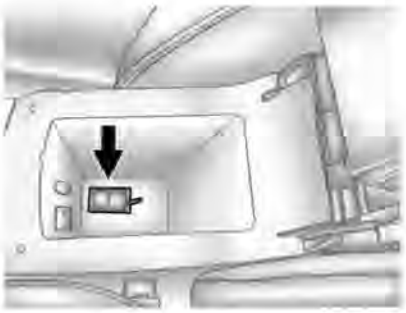
Programming with a Recognized Transmitter (Keyless Access Vehicles Only)

A new transmitter can be programmed to the vehicle when there is one recognized transmitter.

To program, the vehicle must be off and all of the transmitters, both currently recognized and new, must be with you.

1. Place the recognized transmitter(s) in the cupholder.
2. Insert the vehicle key of the transmitter into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

   The Driver Information Center (DIC) displays READY TO LEARN ELECTRONIC KEY #2, 3, 4, ETC.



3. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
4. Press the START button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
5. Remove the transmitter from the transmitter pocket and press the transmitter 🔓 or 🔒 button.

   To program additional transmitters, repeat Steps 3 through 5.

   When all additional transmitters are programmed, press and hold the START button for 10 seconds to exit programming mode.

Programming without a Recognized Transmitter (Keyless Access Vehicles Only)

If there are no currently recognized transmitters available, follow this procedure to program up to eight transmitters. This feature is not available in Canada. This procedure will take approximately 30 minutes to complete. The vehicle must be off and all of the transmitters you wish to program must be with you.

1. Insert the vehicle key of the transmitter into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

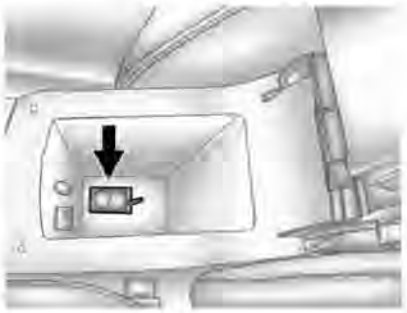
   The Driver Information Center (DIC) displays REMOTE LEARN PENDING, PLEASE WAIT.

2. Wait for ten minutes until the DIC displays PRESS ENGINE START BUTTON TO LEARN and then press the START button.

   The DIC displays will again show REMOTE LEARN PENDING, PLEASE WAIT.

3. Repeat Step 2 two additional times. After the third time all previously known transmitters will no longer work with the vehicle. Remaining transmitters can be relearned during the next steps.

   The DIC display should now show READY FOR REMOTE # 1.



4. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
5. Press the START button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.

6. Remove the transmitter from the transmitter pocket and press the transmitter or button.

   To program additional transmitters, repeat Steps 4 through 6.

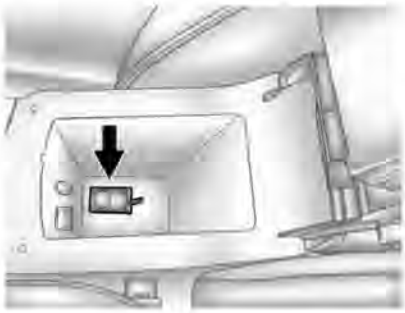
   When all additional transmitters are programmed, press and hold the START button for 10 seconds to exit programming mode.

Starting the Vehicle with a Low Transmitter Battery

If the transmitter battery is weak, the DIC may display NO REMOTE DETECTED when you try to start the vehicle. The REPLACE BATTERY IN REMOTE KEY message may also be displayed at this time.

To start the vehicle:

1. Open the center console storage area and the storage tray.



2. Place the transmitter in the transmitter pocket.
3. With the vehicle in P (Park) or N (Neutral), press the brake pedal and the START button.

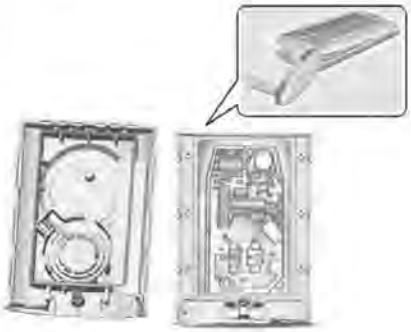
   Replace the transmitter battery as soon as possible.

Battery Replacement

Notice: **When replacing the battery, do not touch any of the circuitry on the transmitter. Static from your body could damage the transmitter.**

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC.

1. Press the button near the bottom of the transmitter and pull the key out.



2. Use the oval base of the key blade to separate the two halves of the transmitter.
3. Remove the old battery. Do not use a metal object.

4. Insert the new battery on the back housing, positive side facing down. Replace with a CR2032 or equivalent battery.
5. Align the key release button and snap the transmitter back together.

Remote Vehicle Start

If available, this feature allows the engine to be started from outside of the vehicle.

(Remote Vehicle Start): This button will be on the RKE transmitter if the vehicle has remote start.

The climate control system will use the previous settings during a remote start. The rear defog may come on during remote start based on cold ambient conditions. The rear fog indicator light does not come on during remote start.

If the vehicle has heated seats, they may come on during a remote start. See *Heated and Ventilated Front Seats on page 3-9*

Laws in some local communities may restrict the use of remote starters. For example, some laws may require a person using remote start to have the vehicle in view. Check local regulations for any requirements.

Other conditions can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System on page 2-3* for additional information.

Starting the Engine Using Remote Start

1. Press and release on the RKE transmitter.
2. Immediately press and hold for at least two seconds until the turn signal lamps flash. The turn signal lamps flashing confirms the request to remote start the vehicle has been received.

   During the remote start the doors will be locked and the parking lamps will remain on as long as the engine is running.

   The engine will shut off after 10 minutes unless a time extension is done or the ignition is put in ON/RUN/START.
3. Press the brake pedal and select the ON/RUN/START ignition mode to drive the vehicle.

Extending Engine Run Time

For a 10-minute extension, repeat Steps 1 and 2 while the engine is still running. The remote start can only be extended once.

When the remote start is extended, the second 10-minute period will start immediately.

For example, if the vehicle has been running for five minutes, and 10 minutes are added, the engine will run for a total of 15 minutes.

A maximum of two remote starts, or a remote start with an extension, are allowed between ignition cycles.

The vehicle's ignition must be changed to ON/RUN/START and then back to OFF before the remote start procedure can be used again.

Shutting the Engine Off After a Remote Start

To cancel a remote start, do any of the following:

- Press Ω until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then back off.

Conditions in Which Remote Start Will Not Work

The remote start will not operate if any of the following occur:

- The ignition is in any mode other than OFF.
- The transmitter is in the vehicle.
- The hood is not closed.
- The hazard warning flashers are on.
- There is an emission control system malfunction.
- The engine coolant temperature is too high.
- The oil pressure is low.
- Two remote vehicle starts have already been used.
- The vehicle is not in P (Park).

Door Locks

⚠ WARNING

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked. So, all passengers should wear safety belts properly and the doors should be locked whenever the vehicle is driven.
- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.

(Continued)

WARNING (Continued)

- Outsiders can easily enter through an unlocked door when slowing or stopping the vehicle. Lock the doors to help prevent this from happening.

Keyless Access

When the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door, pressing the lock/unlock button on that door handle will lock/unlock the doors. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock. See *Remote Keyless Entry (RKE) System Operation on page 2-3.*

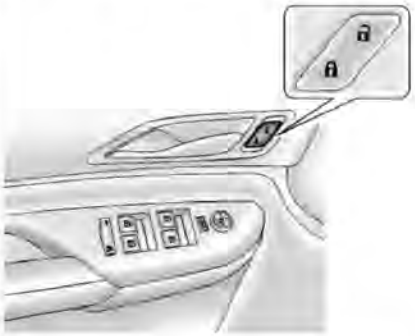
Key

To lock or unlock the door, use the key in the driver door. Turn the key counterclockwise once to unlock the driver door; turning the key again will unlock the passenger doors.

Inside the Vehicle

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks



(Lock): Press to lock the doors.

(Unlock): Press to unlock the doors.

Lockout Deterrent

Lockout deterrent decreases the chances that the keys may be accidentally locked in the vehicle.

When door locking is requested by pressing on the front door panels or the RKE transmitter and the driver door is open, all doors will lock and the driver door will immediately unlock. The driver door must be closed when is pressed for all doors to remain locked.

This feature can be programmed to provide the lockout deterrent feature only when the ignition mode is ACC/ACCESSORY, or ON/RUN/START. See "Power Door Locks" in *Vehicle Personalization on page 5-40*.

Delayed Locking

When this feature is enabled and the doors are locked with the power lock switch on the front door panels, three chimes sound to signal that the delayed locking feature is in use. All doors lock five seconds after the last door is closed.

When the delayed locking feature is in use, pressing on the front door panels or the RKE transmitter will override the feature and lock all doors immediately.

This feature can be programmed by using the Driver Information Center (DIC). See "Delayed Door Lock" in *Vehicle Personalization on page 5-40*. The delayed locking feature is only available if "Unlocked Door Anti-Lockout" is disabled.

Automatic Door Locks

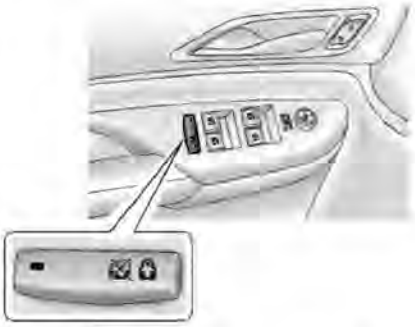
The doors will lock automatically when all doors are closed, the ignition is on, and the shift lever is moved out of P (Park). The doors will automatically unlock when the vehicle is stopped and the shift lever is moved into P (Park).

Use the manual or power door locks to unlock the doors if someone needs to exit, and to lock the doors again.

The power door locks can be programmed through the Driver Information Center (DIC). See *Vehicle Personalization on page 5-40*.

Safety Locks

The rear door safety locks prevent passengers from opening the rear doors from inside the vehicle.



Press to activate the safety locks. The indicator light comes on when activated.

The rear door power windows are also disabled. See *Power Windows on page 2-22.*

Press again to deactivate the safety locks and power windows.

If a rear door handle is pulled when the safety lock is deactivated, that door will remain locked and the indicator light may flash. Release the handle, then press the safety lock twice to deactivate the safety locks.

Doors

Liftgate

⚠ WARNING

Exhaust gases can enter the vehicle if it is driven with the liftgate or trunk/hatch open, or with any objects that pass through the seal between the body and the trunk/hatch or liftgate. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle must be driven with the liftgate or trunk/hatch open:

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.

(Continued)

WARNING (Continued)

- Adjust the climate control system to a setting that brings in only outside air and set the fan speed to the highest setting. See "Climate Control Systems" in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

See *Engine Exhaust on page 9-22.*

Notice: **If you open the liftgate without checking for overhead obstructions such as a garage door, you could damage the liftgate or the liftgate glass. Always check to make sure the area above and behind the liftgate is clear before opening it.**

Manual Liftgate

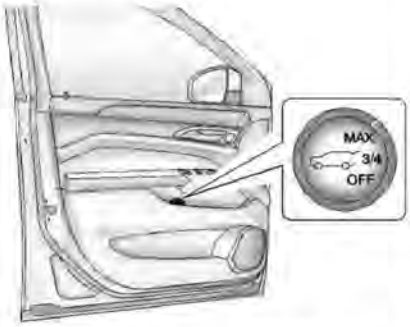
For vehicles without keyless access, unlock the vehicle before opening the liftgate.

Press the touch pad located in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Always close the liftgate before driving.

Power Liftgate



On vehicles with a power liftgate, the switch is on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

⚠ WARNING

You, or others, could be injured if caught in the path of the power liftgate. Make sure there is no one in the way of the liftgate as it is opening and closing.

Choose the power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position. Press the center of the switch.

The three modes are:

MAX: The liftgate opens to the full open height.

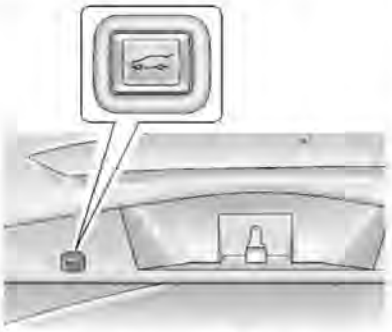
3/4: The liftgate opens to a reduced height that can be set by the vehicle operator in a range of approximately three-quarters open to full open. Use this setting to prevent the liftgate from opening into overhead obstructions such as a garage door or roof mounted cargo during power operation. The liftgate can still be manually opened all the way.

OFF: The liftgate only operates manually in this position.

Manual operation of a liftgate that also has power operation requires more effort than with a standard manual liftgate.

In either the MAX or the 3/4 mode, the liftgate can be power opened and closed by:

- Pressing on the Remote Keyless Entry (RKE) transmitter until the liftgate starts moving. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.
- Pressing on the center of the mode switch on the driver door, with the driver door unlocked.
- Pressing the touch pad switch on the liftgate outside handle, with all doors unlocked, to open the liftgate.



Press and release on the liftgate next to the latch to close the liftgate.

Pressing any liftgate button, or the touch pad switch while the liftgate is moving, stops it. Pressing the button or RKE switch again reverses the direction. There is a minimum distance that the power liftgate must already be open for the system to hold it open. If movement is stopped below that minimum, the liftgate closes.

Do not force the liftgate open or closed during a power cycle.

The power liftgate may be temporarily disabled under extreme temperatures or low battery conditions. If this occurs, the liftgate can still be operated manually.

If you shift the transmission out of P (Park) while the power function is in progress, the liftgate power function will continue to completion. If you shift the transmission out of P (Park) and accelerate before the power liftgate latch is closed, the liftgate may reverse to the open position. Cargo could fall out of the vehicle. Always make sure the power liftgate is closed and latched before you drive away.

If you power open the liftgate and the liftgate support struts have lost pressure, the turn signals flash and a chime sounds. The liftgate stays open temporarily, then slowly closes. See your dealer for service before using the liftgate.

Obstacle Detection Features

If the liftgate encounters an obstacle during a power open or close cycle, a warning chime will sound and the liftgate will automatically reverse direction to the full closed or open position. After removing the obstruction, the power liftgate operation can be used again.
If the liftgate encounters multiple obstacles on the same power cycle, the power function will deactivate. After removing the obstructions, the liftgate will resume normal power operation.

The vehicle has pinch sensors located on the side edges of the liftgate. If an object is caught between the liftgate and the body and presses against this sensor, the liftgate will reverse direction and open fully. The liftgate will remain open until it is activated again or closed manually.

Setting the Power Liftgate 3/4 Mode

To change the liftgate stop position.

1. Turn the liftgate switch to either the MAX, or the 3/4 mode position and power open the liftgate.
2. Stop the liftgate movement at the desired height by pressing any liftgate switch. Manually adjust the liftgate position if required.
3. Press and hold the button on the liftgate next to the latch until the turn signals flash and a beep sounds to indicate that the new setting is recorded.

When power opened with the 3/4 mode selected, the liftgate stops at the new set position.

If you do not receive the audible and visual feedback when setting the intermediate stop position, you are attempting to set the height below the 3/4 open height minimum (approximately 1.52 m or 5 ft). The liftgate cannot be set below that minimum and the new setting will not be recorded.

Manual Operation of Power Liftgate

To change the liftgate to manual operation, turn the mode switch to the OFF position.

With the power liftgate disabled and all of the doors unlocked, the liftgate can be manually opened and closed. The effort required to operate a power liftgate is greater than the effort required to operate a non-power liftgate.

To open the liftgate, press the touch pad on the handle on the outside of the liftgate, and lift the gate open. To close the liftgate, use the pull cup to lower the liftgate and close. With the power liftgate disabled, the liftgate electric latch will still power latch once contact is made with the striker. Always close the liftgate before driving.

If the RKE button is pressed while power operation is disabled, the turn signals flash and the liftgate will not move.

The liftgate has an electric latch. If the battery is disconnected or has low voltage, the liftgate will not open. The liftgate will resume operation when the battery is reconnected and charged.

Vehicle Security

This vehicle has theft-deterrent features; however, they do not make the vehicle impossible to steal.

Vehicle Alarm System

This vehicle has an anti-theft alarm system.

The indicator light, on the instrument panel near the windshield, indicates the status of the system.

Arming the System

1. Close all doors, liftgate, and hood.
2. Lock the vehicle using the transmitter or the power door lock button. The indicator light on the instrument panel should come on and stay on for about 30 seconds.
3. After 30 seconds, the alarm system will arm, and the indicator light will begin to slowly flash indicating the alarm is operating.

If a door, the hood, or liftgate is opened without first unlocking with the transmitter, the turn signals will flash and the horn will sound for about 30 seconds. The alarm system will then re-arm to monitor for the next unauthorized event.

The theft-deterrent alarm system will not activate if the doors are locked with the key. You can start the vehicle with a recognized transmitter in the vehicle if the alarm has been set off.

Disarming the System

To disarm the system, either unlock the doors using the transmitter, or start the vehicle with a recognized transmitter in the vehicle.

To avoid setting off the alarm by accident:

- Lock the vehicle with the transmitter after all occupants have left the vehicle and all doors are closed.
- Always unlock a door with the transmitter. Unlocking a door any other way will not disarm the alarm.

If you set off the alarm by accident, turn off the alarm by pressing on the transmitter. The alarm will not stop if you try to unlock a door any other way.

How to Detect a Tamper Condition

If is pressed and the horn chirps three times, an attempted break-in occurred while the system was armed.

If the alarm has been activated, the THEFT ATTEMPTED message will appear on the DIC. See *Key and Lock Messages on page 5-34* for additional information.

Immobilizer

See *Radio Frequency Statement on page 13-21* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

Immobilizer Operation

This vehicle has a passive theft-deterrent system.

The system does not have to be manually armed or disarmed.

The vehicle is automatically immobilized when the vehicle is turned off.

The immobilization system is disarmed when the pushbutton start is activated to enter the ACC/ACCESSORY mode or the ON/RUN/START mode and a valid transmitter is present in the vehicle.

The security light, in the instrument cluster, comes on if there is a problem with arming or disarming the theft-deterrent system.

The system has one or more RKE transmitters matched to an immobilizer control unit in your vehicle. Only a correctly matched RKE transmitter will start the vehicle. If the transmitter is ever damaged, you may not be able to start your vehicle.

When trying to start the vehicle, the security light comes on briefly when the ignition is turned on.

If the engine does not start and the security light stays on, there is a problem with the system. Turn the ignition off and try again.

If the vehicle will not change ignition modes (ACC/ACCESSORY, ON/RUN/START, OFF), and the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket located in the center console. See "NO REMOTE DETECTED" under *Key and Lock Messages on page 5-34*.

If the ignition modes will not change with the other transmitter, your vehicle needs service. If the ignition does change modes, the first transmitter may be faulty. See your dealer who can service the theft-deterrent system and have a new RKE transmitter programmed to the vehicle.

It is possible for the immobilizer system to learn new or replacement RKE transmitters. Up to eight transmitters can be programmed for the vehicle. To program additional transmitters, see "Programming Transmitters to the Vehicle" under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Do not leave the key or device that disarms or deactivates the theft-deterrent system in the vehicle.

Exterior Mirrors

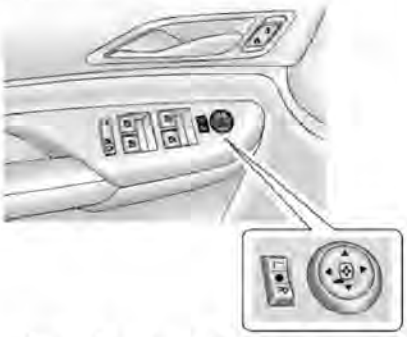
Convex Mirrors

⚠ WARNING

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on the right. Check the inside mirror or glance over your shoulder before changing lanes.

The passenger side mirror is convex shaped. A convex mirror's surface is curved so more can be seen from the driver seat.

Power Mirrors



Manual Folding Mirrors Shown, Power Folding Similar

To adjust the mirror:

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror in the desired direction.
3. Return the selector switch to the center position.

Side Blind Zone Alert (SBZA)

The vehicle may have side blind zone alert. See *Side Blind Zone Alert (SBZA) on page 9-55*.

Folding Mirrors

Manual Folding Mirrors

If equipped, manually fold the mirrors inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

Power Folding Mirrors

If equipped, to fold the mirrors:

1. With the selector switch in the ● position, press the down arrow on the control pad. Both mirrors will automatically fold.
2. Pressing the down arrow again will return the mirrors to their original position.

Resetting the Power Folding Mirrors

Reset the power folding mirrors if:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.
- The mirrors do not stay in the unfolded position.
- The mirrors vibrate at normal driving speeds.

Fold and unfold the mirrors one time using the mirror controls to reset them to their normal position. A noise may be heard during the resetting of the power folding mirrors. This sound is normal after a manual folding operation.

Heated Mirrors

(Rear Window Defogger): Press to heat the mirrors.

See "Rear Window Defogger" under *Dual Automatic Climate Control System on page 8-1*.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror automatically adjusts for the glare of headlamps behind you.

Reverse Tilt Mirrors

If the vehicle is equipped with memory mirrors, there is an option to have the mirrors tilt down, when in R (Reverse), to more easily see the ground near the vehicle.

When the vehicle is shifted to R (Reverse), both the driver and passenger mirrors will tilt downward. They will return to their previous position when the vehicle is shifted out of R (Reverse), the ignition is turned to OFF, or the vehicle is left in R (Reverse) for an extended period of time.

This feature can be turned on or off. See *Vehicle Personalization on page 5-40*.

Interior Mirrors

Manual Rearview Mirror

Adjust the inside rearview mirror for a clear view of the area behind your vehicle. To avoid glare of the headlamps from behind, push the tab forward for daytime and pull it for nighttime use.

Vehicles with OnStar® have three control buttons at the bottom of the mirror. See your dealer for more information about OnStar and how to subscribe to it. See *OnStar Overview on page 14-1*.

Automatic Dimming Rearview Mirror

The vehicle may have an automatic dimming inside rearview mirror. Automatic dimming reduces the glare from the headlamps of the vehicle behind you. The dimming feature and the indicator light come on each time the vehicle is started.

Vehicles with OnStar have three control buttons located at the bottom of the mirror. See your dealer for more information about OnStar and how to subscribe to it. See *OnStar Overview on page 14-1*.

Cleaning the Mirror

Do not spray glass cleaner directly on the mirror. Use a soft towel dampened with water.

Windows

⚠ WARNING

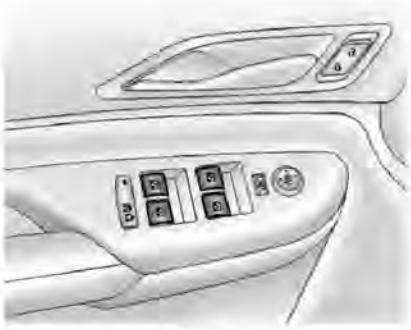
Never leave a child, a helpless adult, or a pet alone in a vehicle, especially with the windows closed in warm or hot weather. They can be overcome by the extreme heat and suffer permanent injuries or even death from heat stroke.

The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a pulsing sound when either rear window is down and the front windows are up. To reduce the sound, open either a front window or the sunroof, if equipped.

Power Windows

⚠ WARNING

Children could be seriously injured or killed if caught in the path of a closing window. Never leave the Remote Keyless Entry (RKE) transmitter in a vehicle with children. When there are children in the rear seat, use the window lockout switch to prevent operation of the windows. See *Keys on page 2-2*.



The power windows:

- Can be operated with the ignition in ACC/ACCESSORY or ON/RUN/START.
- Can be operated within 10 minutes of switching the ignition off. See *Retained Accessory Power (RAP) on page 9-19*.
- Will stop operation when any door is opened.

Press or pull the switch part of the way to open or close the window.

Express-Down/Up Windows

Windows that have the express-down/up feature allow the windows to be lowered and raised fully without holding the window switch. Press the window switch fully and release it to activate the express-down feature. Pull the window switch fully up and release it to activate the express-up feature. The express mode can be canceled at any time by briefly pressing or pulling the switch.

Programming the Power Windows

Programming the power windows may be necessary if the vehicle's battery has been disconnected or discharged.

If the window will not express up after power has been restored and a message is displayed in the Driver Information Center:

1. Close all doors.
2. Place the ignition in ACC/ ACCESSORY or ON/RUN/ START.
3. From any partial open position, close the window and continue to pull the switch briefly after the window has fully closed.

Obstacle Detection Feature

The Obstacle Detection Feature is part of the express-up feature and is active:

- In the middle and upper portions of the window opening.
- During window up movements.
- In ignition OFF during all window up movements and during express-up window movements in ignition ON/RUN/START.

If there is something blocking the window during automatic closing, the window will reverse direction for a short distance. Weather conditions such as extreme cold and/or ice may cause the window to auto-reverse. The window will return to normal operation once the object or condition is removed.

If conditions prevent the window from closing and the window continues to auto-reverse, it is possible to close the window with the ignition in ON/RUN/START by holding the window switch in the partially or fully pulled up position. Release of the switch from the partially pulled up position will cause the window to stop. Release of the switch from the fully pulled up position will activate the express-up and related obstacle detection features.

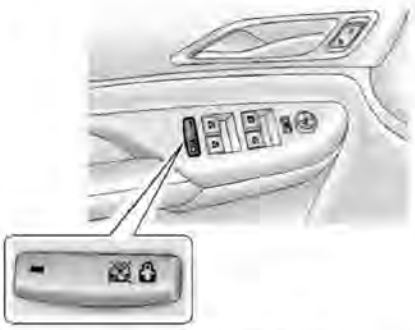
Overload

If the windows are repeatedly operated within a short time, the window operation is disabled for a short time.

Remote Window Operation

The vehicle may have remote operating windows that will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

Window Lockout



This feature prevents the rear passenger windows from operating, except from the driver position.

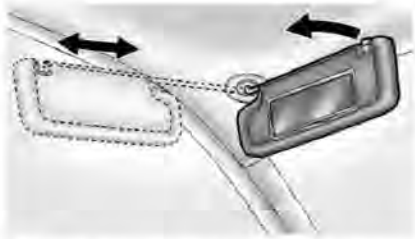
Press to activate the rear window lockout, the indicator light in the switch illuminates.

The rear door lock safety locks are also enabled. See *Safety Locks on page 2-12*.

Press again to deactivate the rear window lockout.

If a rear door handle is pulled when the safety lock is deactivated, that door will remain locked and the indicator light may flash. Release the handle, then press the safety lock twice to deactivate the safety locks.

Sun Visors



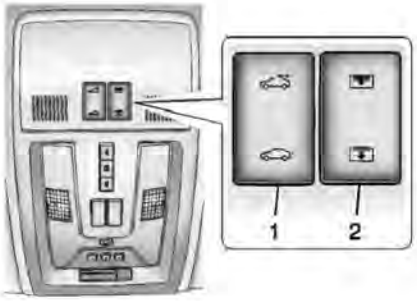
Pull the sun visor down to block glare. If equipped, detach the sun visor from the center mount to pivot to the side window or to extend along the rod.

Roof

Sunroof

On vehicles with a sunroof, the switches are on the overhead console.

The sunroof only operates when the ignition is in ON/RUN/START or ACC/ACCESSORY, or in Retained Accessory Power (RAP). See *Ignition Positions on page 9-16* and *Retained Accessory Power (RAP) on page 9-19*.



1. Sunroof Switch
2. Sunshade Switch

Sunroof Switch

Vent: To vent the sunroof, press the rear of the sunroof switch (1) to the first detent and release, the sunroof will open to the vent position.

Open/Close: To open or close the sunroof, press the front or rear of the sunroof switch (1) to the first detent and hold, to open or close the sunroof to a desired position.

Comfort Stop: The sunroof has a comfort stop feature that stops the sunroof from opening to the full-open position. Press the rear of the sunroof switch (1) to the second detent and release to open the sunroof to the comfort open position. Press and release the rear of the sunroof switch (1) again to fully open the sunroof. Press the front of the sunroof switch (1) to the second detent and release, to express close the sunroof.

Sunshade Switch

Open/Close: To open or close the sunshade, press the front or back of the sunshade switch (2) to the first detent and hold, to open or close the sunshade to a desired position.

Express Open/Express Close: To express open or close the sunshade, press the sunshade switch (2) to the second detent and release.

Fully close the sunroof before fully closing the sunshade.

Anti-Pinch Feature

If an object is in the path of the sunroof when it is closing, the anti-pinch feature detects the object and stops the sunroof from closing at the point of the obstruction. The sunroof then returns to the full-open position.

Dirt and debris may collect on the sunroof seal or in the track. This could cause an issue with sunroof operation or noise. It could also plug the water drainage system. Periodically open the sunroof and remove any obstacles or loose debris. Wipe the sunroof seal and roof sealing area using a clean cloth, mild soap, and water. Do not remove grease from the sunroof.

Seats and Restraints

Head Restraints
Head Restraints 3-2

Front Seats
Seat Adjustment 3-4
Power Seat Adjustment 3-4
Lumbar Adjustment 3-5
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Head Restraints

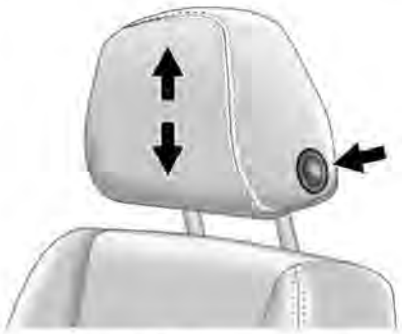
⚠ WARNING

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.

Front Seats

The vehicle's front seats have adjustable head restraints in the outboard seating positions.



The height of the head restraint can be adjusted. To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down, and release the button. Pull and push on the head restraint after the button is released to make sure that it is locked in place.

The front seat outboard head restraints are not designed to be removed.

Rear Seats

The vehicle's rear seats have adjustable head restraints in the outboard seating positions.

The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure that it is locked in place.

To lower the head restraint, press the button, located on the top of the seatback, and push the head restraint down. Try to move the head restraint after the button is released to make sure that it is locked in place.

The vehicle's rear seat has an adjustable headrest in the center seating position that can be adjusted the same way as the outboard head restraints.

If you are installing a child restraint in the rear seat, see "Securing a Child Restraint Designed for the LATCH System" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-41.*

Front Seats

Seat Adjustment

⚠ WARNING

You can lose control of the vehicle if you try to adjust a driver seat while the vehicle is moving. Adjust the driver seat only when the vehicle is not moving.

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

Power Seat Adjustment

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control up or down.

- Raise or lower the entire seat by moving the rear of the control up or down.

To adjust the seatback, see *Reclining Seatbacks on page 3-6*.

To adjust the lumbar support, see *Lumbar Adjustment on page 3-5*.

Some vehicles are equipped with a feature that activates a vibration in the driver seat to help the driver avoid crashes. See *Driver Assistance Systems on page 9-46*.

Lumbar Adjustment

Power Lumbar

If available, press and hold the front or rear of the control to increase or decrease lumbar support. Release the control when the seatback reaches the desired level of lumbar support.

Thigh Support Adjustment

If available, adjust the manual leg extension by pulling up on the lever, and then pulling or pushing on the support to lengthen or shorten it. Release the lever to lock it in place.

Reclining Seatbacks

⚠ WARNING

Sitting in a reclined position when the vehicle is in motion can be dangerous. Even when buckled up, the safety belts cannot do their job.

The shoulder belt will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

The lap belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.

For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the safety belt properly.

Do not have a seatback reclined if the vehicle is moving.

Manual Reclining Seatbacks

⚠ WARNING

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

To recline a manual seatback:

1. Lift the lever.
2. Move the seatback to the desired position, and then release the lever to lock the seatback in place.
3. Push and pull on the seatback to make sure it is locked.

To return the seatback to the upright position:

1. Lift the lever fully without applying pressure to the seatback, and the seatback will return to the upright position.

2. Push and pull on the seatback to make sure it is locked.

Power Reclining Seatbacks

To adjust a power seatback, if available:

- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

Memory Seats

If equipped, the "1," "2," and MEM buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions.

Storing Memory Positions

To save positions to the "1" and "2" buttons:

1. Adjust the driver seat, seatback recliner, both outside mirrors, and adjustable pedals to the desired driving positions.
2. Press and hold MEM (Memory) and "1" at the same time until a beep sounds.
3. Repeat Steps 1 and 2 for a second driver using "2."

Manually Recalling Memory Positions

Press and hold "1" or "2" to manually recall the previously stored memory positions. Releasing "1" or "2" before the stored positions are reached stops the recall.

There is also the ability to press and release "1" or "2" to manually recall the previously stored memory positions. The ignition must be in ON/RUN/START, and the transmission must be in P (Park).

Placing the ignition in OFF before the stored positions are reached stops the recall.

If something has blocked the driver seat and/or the adjustable pedals while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by pressing the appropriate memory button. If the memory position is still not recalling, see your dealer for service.

Automatically Recalling Memory Positions (Auto Memory Recall)

The Auto (Automatic) Memory Recall feature automatically recalls the current driver's previously stored "1" or "2" position when entering the vehicle.

Depending upon the Auto Memory Recall feature enabled in the vehicle personalization menu, memory "1" or "2" positions are recalled in the following ways:

To activate the recall when On - Driver Door Open is selected in the vehicle personalization menu:

- On vehicles with RKE, press on the RKE transmitter and open the door.
- On vehicles with keyless access, press the lock/unlock button on the outside driver door handle and open the driver door. The RKE transmitter must be present for the recall to activate.
- If the driver door is already open, press on the RKE transmitter to activate the recall.

To activate the recall when On - At Ignition On is selected in the vehicle personalization menu:

- Place the ignition in ON/RUN/START.

See *Vehicle Personalization on page 5-40*.

To stop recall movement, press one of the memory, power mirror, or power seat controls; or press the adjustable pedal switch. If On - At Ignition On is selected in the vehicle personalization menu, placing the ignition in OFF also stops the recall.

If something has blocked the driver seat and/or the adjustable pedals while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by opening the driver door and pressing on the RKE transmitter. If the memory position is still not recalling, see your dealer for service.

Easy Exit Recall

If programmed on in the vehicle personalization menu, this feature moves the seat approximately 7 cm (3 in) rearward automatically allowing the driver more room to exit the vehicle.

Easy Exit recall activates when one of the following occurs:

- The vehicle is turned off and the driver door is opened within a short time.
- The vehicle is turned off with the driver door open.

See *Vehicle Personalization on page 5-40*.

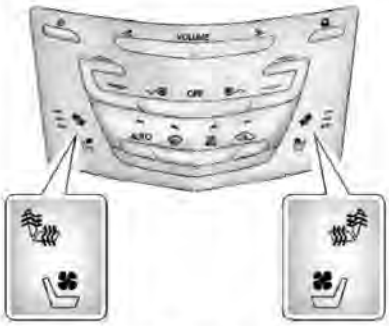
To stop recall movement, press one of the memory, power seat controls, or the adjustable pedal switch.

If something has blocked the driver seat while recalling the exit position, the recall may stop. Remove the obstruction; then press and hold the power seat control rearward for two seconds. Try recalling the exit position again. If the exit position is still not recalling, see your dealer for service.

Heated and Ventilated Front Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns. To reduce the risk of burns, people with such a condition should use care when using the seat heater, especially for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket, cushion, cover, or similar item. This may cause the seat heater to overheat. An overheated seat heater may cause a burn or may damage the seat.



Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the center stack. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

When this feature is off, the symbols on the buttons are white. When a heated seat is turned on, the symbol turns red. When a ventilated seat (if available) is turned on, the symbol turns blue.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights next to the buttons indicate three for the highest setting and one for the lowest. If the front heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

The passenger seat may take longer to heat up.

Remote Start Heated and Ventilated Seats

During a remote start, the heated or ventilated seats can be turned on automatically. When it is cold outside, the heated seats turn on, and when it is hot outside the ventilated seats turn on. This feature is canceled when the ignition is turned on. Press the button to use the heated or ventilated seats after the vehicle is started.

The heated or ventilated seat indicator lights on the button do not turn on during a remote start.

The temperature performance of an unoccupied seat may be reduced. This is normal.

The heated or ventilated seats will not turn on during a remote start unless they are enabled in the vehicle personalization menu. See *Remote Vehicle Start on page 2-9* and *Vehicle Personalization on page 5-40*.

Rear Seats

Split Folding Seatbacks

With this feature, either side of the rear seatback can be folded down for more cargo space.

Folding the Seatbacks

Notice: **Folding a rear seat with the safety belts still fastened may cause damage to the seat or the safety belts. Always unbuckle the safety belts and return them to their normal stowed position before folding a rear seat.**

To fold the seatback:

1. Unbuckle the rear safety belts and move the front seatbacks to the upright position. See *Reclining Seatbacks on page 3-6*.
2. Make sure that there is nothing under, in front of, or on the seat.

3. Lift the lever on the top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.
4. Fold the seatback forward. A tab near the seatback lever retracts when the seatback is locked in place.

Keep the seatback in the upright, locked position when not in use.

Raising the Seatbacks

⚠ WARNING

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

⚠ WARNING

A safety belt that is improperly routed, not properly attached, or twisted will not provide the protection needed in a crash. The person wearing the belt could be seriously injured. After raising the rear seatback, always check to be sure that the safety belts are properly routed and attached, and are not twisted.

To raise the seatback:

1. Lift the lever on top of the seatback. Raise the seatback and release the lever. A tab near the seatback lever raises when the seatback is unlocked.
2. Push the seatback rearward until it locks in the upright position. A tab near the seatback lever retracts when the seatback is locked in place.
3. Make sure the rear safety belts are not twisted or caught between the seat cushion and the seatback.

Reclining the Seatbacks

To recline the seatback:

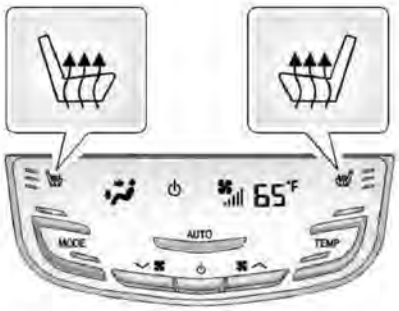
1. Lift and hold the lever on top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.

2. Tilt the seatback rearward, and then release the lever when the seatback is in the desired position. A tab near the seatback lever retracts when the seatback is locked in place.

Heated Rear Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns. See the Warning under *Heated and Ventilated Front Seats on page 3-9*.



If available, the buttons are on the rear climate control panel on the rear of the center console.

With the ignition in ON/RUN/START, press or to heat the left or right outboard seat cushion and seatback. An indicator on the climate control display appears when this feature is on.

Press the button once for the highest setting. With each press of the button, the heated seat changes to the next lower setting, and then the off setting. Three lights indicate the highest setting, and one light indicates the lowest.

Rear Seat Pass-Through Door

There is a rear seat pass-through door in the center of the rear seatback. Fold down the center armrest and push down on the latch to open the door.

Safety Belts

This section of the manual describes how to use safety belts properly. It also describes some things not to do with safety belts.

⚠ WARNING

Do not let anyone ride where a safety belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing safety belts, injuries can be much worse than if you are wearing safety belts. You can be seriously injured or killed by hitting things inside the vehicle harder or by being ejected from the vehicle. In addition, anyone who is not buckled up can strike other passengers in the vehicle.

(Continued)

WARNING (Continued)

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, passengers riding in these areas are more likely to be seriously injured or killed. Do not allow passengers to ride in any area of the vehicle that is not equipped with seats and safety belts.

Always wear a safety belt, and check that all passenger(s) are restrained properly too.

This vehicle has indicators as a reminder to buckle the safety belts. See *Safety Belt Reminders on page 5-14.*

Why Safety Belts Work

When riding in a vehicle, you travel as fast as the vehicle does. If the vehicle stops suddenly, you keep going until something stops you. It could be the windshield, the instrument panel, or the safety belts!

When you wear a safety belt, you and the vehicle slow down together. There is more time to stop because you stop over a longer distance and, when worn properly, your strongest bones take the forces from the safety belts. That is why wearing safety belts makes such good sense.

Questions and Answers About Safety Belts

Q: Will I be trapped in the vehicle after a crash if I am wearing a safety belt?

A: You *could* be — whether you are wearing a safety belt or not. Your chance of being conscious during and after a crash, so you *can* unbuckle and get out, is *much* greater if you are belted.

Q: If my vehicle has airbags, why should I have to wear safety belts?

A: Airbags are supplemental systems only; so they work *with* safety belts — not instead of them. Whether or not an airbag is provided, all occupants still have to buckle up to get the most protection.

Also, in nearly all states and in all Canadian provinces, the law requires wearing safety belts.

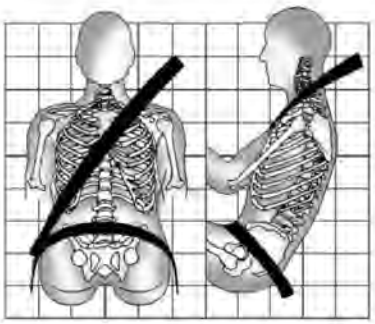
How to Wear Safety Belts Properly

This section is only for people of adult size.

There are special things to know about safety belts and children. And there are different rules for smaller children and infants. If a child will be riding in the vehicle, see *Older Children on page 3-34* or *Infants and Young Children on page 3-36*. Follow those rules for everyone's protection.

It is very important for all occupants to buckle up. Statistics show that unbelted people are hurt more often in crashes than those who are wearing safety belts.

There are important things to know about wearing a safety belt properly.



- Sit up straight and always keep your feet on the floor in front of you.
- Always use the correct buckle for your seating position.
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt

would apply force on your abdomen. This could cause serious or even fatal injuries.

- Wear the shoulder belt over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces. The shoulder belt locks if there is a sudden stop or crash.

⚠ WARNING

You can be seriously injured, or even killed, by not wearing your safety belt properly.

- Never allow the lap or shoulder belt to become loose or twisted.
- Never wear the shoulder belt under both arms or behind your back.
- Never route the lap or shoulder belt over an armrest.

Lap-Shoulder Belt

All seating positions in the vehicle have a lap-shoulder belt.

The following instructions explain how to wear a lap-shoulder belt properly.

1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see "Seats" in the Index.
2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

   The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

   If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. If this happens, let the belt go back all the way and start again.

3. Push the latch plate into the buckle until it clicks.

   Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Safety Belt Extender on page 3-19*.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. If equipped with a shoulder belt height adjuster, move it to the height that is right for you. See "Shoulder Belt Height Adjuster" later in this section for instructions on use and important safety information.

5. To make the lap part tight, pull up on the shoulder belt.

   It may be necessary to pull stitching on the safety belt through the latch plate to fully tighten the lap belt on smaller occupants.

To unlatch the belt, just push the button on the buckle.

Before a door is closed, be sure the safety belt is out of the way. If a door is slammed against a safety belt, damage can occur to both the safety belt and the vehicle.

Shoulder Belt Height Adjuster

The vehicle has a shoulder belt height adjuster for the driver and right front passenger seating positions.

Adjust the height so that the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash. See *How to Wear Safety Belts Properly on page 3-14*.

Move the height adjuster up to the desired position by pushing up on the height adjuster.

After the height adjuster is set to the desired position, try to move it down without pressing the release button to make sure it has locked into position. Press the release button to lower the height adjuster.

Safety Belt Pretensioners

This vehicle has safety belt pretensioners for front outboard occupants. Although the safety belt pretensioners cannot be seen, they are part of the safety belt assembly. They can help tighten the safety belts during the early stages of a moderate to severe frontal and near frontal crash and will deploy in side, rear and rollover events if the threshold conditions for pretensioner activation are met.

Pretensioners work only once. If the pretensioners activate in a crash, they will need to be replaced, and probably other new parts for the vehicle's safety belt system. See *Replacing Safety Belt System Parts after a Crash on page 3-20*.

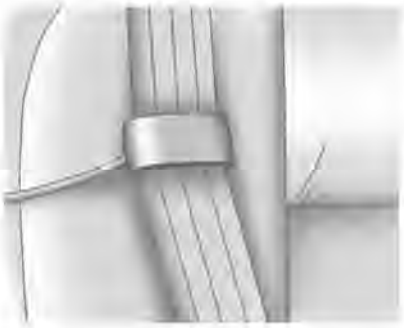
Rear Safety Belt Comfort Guides

This vehicle may have rear shoulder belt comfort guides for the outboard passenger positions in the rear seat. If not, they are available through your dealer. The guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, and properly adjusted, the comfort guide positions the belt away from the neck and head.

Here is how to install a comfort guide to the safety belt:

1. Remove the guide from its storage pocket on the side of the seat.

2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.



3. Be sure that the belt is not twisted and it lies flat. The elastic cord must be under the belt and the guide on top.

⚠ WARNING

A safety belt that is not properly worn may not provide the protection needed in a crash. The person wearing the belt could be seriously injured. The shoulder belt should go over the shoulder

(Continued)

WARNING (Continued)

and across the chest. These parts of the body are best able to take belt restraining forces.

4. Buckle, position, and release the safety belt as described previously in this section. Make sure the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck.

To remove and store the comfort guide, squeeze the belt edges together so that the safety belt can be removed from the guide. Slide the guide back into its storage pocket located on the side of the seat.

Safety Belt Use During Pregnancy

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear safety belts.

A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

The best way to protect the fetus is to protect the mother. When a safety belt is worn properly, it is more likely that the fetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child seats. To wear it, attach it to the regular safety belt. See the instruction sheet that comes with the extender.

Safety System Check

Now and then, check that the safety belt reminder light, safety belts, buckles, latch plates, retractors, and anchorages are all working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from doing its job. See your dealer to have it repaired. Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Make sure the safety belt reminder light is working. See *Safety Belt Reminders on page 5-14*.

Keep safety belts clean and dry. See *Safety Belt Care on page 3-19*.

Safety Belt Care

Keep belts clean and dry.

⚠ WARNING

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Replacing Safety Belt System Parts after a Crash

⚠ WARNING

A crash can damage the safety belt system in the vehicle. A damaged safety belt system may not properly protect the person using it, resulting in serious injury or even death in a crash. To help make sure the safety belt systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

After a minor crash, replacement of safety belts may not be necessary. But the safety belt assemblies that were used during any crash may have been stressed or damaged. See your dealer to have the safety belt assemblies inspected or replaced.

New parts and repairs may be necessary even if the safety belt system was not being used at the time of the crash.

Have the safety belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light on page 5-15.*

Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver.
- A frontal airbag for the front outboard passenger.
- A seat-mounted side impact airbag for the driver.
- A seat-mounted side impact airbag for the front outboard passenger.
- A roof-rail airbag for the driver and for the second row passenger seated directly behind the driver.
- A roof-rail airbag for the front outboard passenger and the second row passenger seated directly behind the front outboard passenger.

All vehicle airbags have the word AIRBAG on the trim or on an attached label near the deployment opening.

For frontal airbags, the word AIRBAG is on the center of the steering wheel for the driver and on the instrument panel for the front outboard passenger.

For seat-mounted side impact airbags, the word AIRBAG is on the side of the seatback closest to the door.

For roof-rail airbags, the word AIRBAG is on the ceiling or trim.

Airbags are designed to supplement the protection provided by safety belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating bag, all airbags must inflate very quickly to do their job.

Here are the most important things to know about the airbag system:

⚠ WARNING

You can be severely injured or killed in a crash if you are not wearing your safety belt, even with airbags. Airbags are designed to work with safety belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes safety belts are the only restraint. See *When Should an Airbag Inflate? on page 3-24.*

Wearing your safety belt during a crash helps reduce the chance of hitting things inside the vehicle or being ejected from it. Airbags are "supplemental restraints" to the safety belts. Everyone in the vehicle should wear a safety belt properly, whether or not there is an airbag for that person.

⚠ WARNING

Because airbags inflate with great force and faster than the blink of an eye, anyone who is up against, or very close to any airbag when it inflates can be seriously injured or killed. Do not sit unnecessarily close to any airbag, as you would be if sitting on the edge of the seat or leaning forward. Safety belts help keep you in position before and during a crash. Always wear a safety belt, even with airbags. The driver should sit as far back as possible while still maintaining control of the vehicle.

Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

⚠ WARNING

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Young children and infants need the protection that a child restraint system can provide. Always secure children properly in the vehicle. To read how, see *Older Children on page 3-34* or *Infants and Young Children on page 3-36*.

There is an airbag readiness light on the instrument cluster, which shows the airbag symbol.

The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light on page 5-15* for more information.

Where Are the Airbags?

The driver frontal airbag is in the center of the steering wheel.

The front outboard passenger frontal airbag is in the passenger side instrument panel.

Driver Side Shown, Passenger Side Similar

The driver and front outboard passenger seat-mounted side impact airbags are in the side of the seatbacks closest to the door.

Driver Side Shown, Passenger Side Similar

The roof-rail airbags for the driver, right front passenger, and second row outboard passengers are in the ceiling above the side windows.

⚠ WARNING

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury or even death. The path of an inflating airbag must be kept clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

Do not use seat accessories that block the inflation path of a seat-mounted side impact airbag.

Never secure anything to the roof of a vehicle with roof-rail airbags by routing a rope or tie-down through any door or window opening. If you do, the path of an inflating roof-rail airbag will be blocked.

When Should an Airbag Inflate?

Frontal airbags are designed to inflate in moderate to severe frontal or near frontal crashes to help reduce the potential for severe injuries mainly to the driver's or front outboard passenger's head and chest. However, they are only designed to inflate if the impact exceeds a predetermined deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants.

Whether the frontal airbags will or should inflate is not based primarily on how fast the vehicle is traveling. It depends on what is hit, the direction of the impact, and how quickly the vehicle slows down.

Frontal airbags may inflate at different crash speeds depending on whether the vehicle hits an object straight on or at an angle, and whether the object is fixed or moving, rigid or deformable, narrow or wide.

Thresholds can also vary with specific vehicle design.

Frontal airbags are not intended to inflate during vehicle rollovers, rear impacts, or in many side impacts.

In addition, the vehicle has dual-stage frontal airbags. Dual-stage airbags adjust the restraint according to crash severity. The vehicle has electronic frontal sensors, that help the sensing system distinguish between a moderate frontal impact and a more severe frontal impact. For moderate frontal impacts, dual-stage airbags inflate at a level less than full deployment. For more severe frontal impacts, full deployment occurs.

The vehicle has seat-mounted side impact and roof-rail airbags. See *Airbag System on page 3-20*. Seat-mounted side impact and roof-rail airbags are intended to inflate in moderate to severe side crashes depending on the location of the impact. In addition, these roof-rail airbags are intended to inflate during a rollover or in a severe frontal impact. Seat-mounted side impact and roof-rail airbags will inflate if the crash severity is above the system's designed threshold level. The threshold level can vary with specific vehicle design.

Seat-mounted side impact airbags are not intended to inflate in frontal impacts, near frontal impacts, rollovers, or rear impacts. Roof-rail airbags are not intended to inflate in rear impacts. A seat-mounted side impact airbag is intended to deploy on the side of the vehicle that is struck. Both roof-rail airbags will deploy when either side of the vehicle is struck, or if the sensing system predicts that the vehicle is about to roll over, or in a severe frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the vehicle damage or repair costs.

What Makes an Airbag Inflate?

In a deployment event, the sensing system sends an electrical signal triggering a release of gas from the inflator. Gas from the inflator fills the airbag causing the bag to break out of the cover. The inflator, the airbag, and related hardware are all part of the airbag module.

For airbag locations, see *Where Are the Airbags? on page 3-22*.

How Does an Airbag Restrain?

In moderate to severe frontal or near frontal collisions, even belted occupants can contact the steering wheel or the instrument panel. In moderate to severe side collisions, even belted occupants can contact the inside of the vehicle.

Airbags supplement the protection provided by safety belts by distributing the force of the impact more evenly over the occupant's body.

Rollover capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the first and second rows. The rollover capable roof-rail airbags are designed to help reduce the risk of full or partial ejection in rollover events, although no system can prevent all such ejections.

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate? on page 3-24*.

Airbags should never be regarded as anything more than a supplement to safety belts.

What Will You See after an Airbag Inflates?

After the frontal airbags and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realize an airbag inflated. Roof-rail airbags may still be at least partially inflated for some time after they inflate. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags? on page 3-22*.

The parts of the airbag that come into contact with you may be warm, but not too hot to touch. There may be some smoke and dust coming from the vents in the deflated airbags. Airbag inflation does not prevent the driver from seeing out of the windshield or being able to steer the vehicle, nor does it prevent people from leaving the vehicle.

⚠ WARNING

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone in the vehicle should get out as soon as it is safe to do so. If you have breathing problems but cannot get out of the vehicle after an airbag inflates, then get fresh air by opening a window or a door. If you experience breathing problems following an airbag deployment, you should seek medical attention.

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps, turn on the hazard warning flashers, and shut off the fuel system after the airbags inflate. You can lock the doors, turn off the interior lamps, and turn off the hazard warning flashers by using the controls for those features.

⚠ WARNING

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel system, brake and steering systems, etc. Even if the vehicle appears to be drivable after a moderate crash, there may be concealed damage that could make it difficult to safely operate the vehicle.

Use caution if you should attempt to restart the engine after a crash has occurred.

In many crashes severe enough to inflate the airbag, windshields are broken by vehicle deformation. Additional windshield breakage may also occur from the front outboard passenger airbag.

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for the vehicle covers the need to replace other parts.
- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy on page 13-19* and *Event Data Recorders on page 13-20*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

Passenger Sensing System

The vehicle has a passenger sensing system for the front outboard passenger position. The passenger airbag status indicator will light on the overhead console when the vehicle is started.

United States

Canada and Mexico

The words ON and OFF, or the symbol for on and off, are visible during the system check. If you use remote start, if equipped, to start the vehicle, you may not see the system check. When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator on page 5-16*.

The passenger sensing system turns off the front outboard passenger frontal airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger sensing system works with sensors that are part of the front outboard passenger seat. The sensors are designed to detect the presence of a properly-seated occupant and determine if the front outboard passenger frontal airbag should be allowed to inflate or not.

According to accident statistics, children are safer when properly secured in a rear seat in the correct child restraint for their weight and size.

We recommend that children be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not inflate under some unusual circumstance, even though the airbag is off.

(Continued)

WARNING (Continued)

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the front outboard passenger seat, always move the seat as far back as it will go. It is better to secure the child restraint in a rear seat.

The passenger sensing system is designed to turn off the front outboard passenger airbag if:

- The front outboard passenger seat is unoccupied.
- The system determines that an infant is present in a child restraint.
- A front outboard passenger takes his/her weight off of the seat for a period of time.

- There is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the front outboard passenger frontal airbag, the off indicator will light and stay lit as a reminder that the airbag is off. See *Passenger Airbag Status Indicator on page 5-16*.

The passenger sensing system is designed to turn on the front outboard passenger frontal airbag anytime the system senses that a person of adult size is sitting properly in the front outboard passenger seat.

When the passenger sensing system has allowed the airbag to be enabled, the on indicator will light and stay lit as a reminder that the airbag is active.

For some children, including children in child restraints, and for very small adults, the passenger sensing system may or may not turn off the front outboard passenger frontal airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a safety belt properly — whether or not there is an airbag for that person.

⚠ WARNING

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 5-15* for more information, including important safety information.

If the On Indicator Is Lit for a Child Restraint

If a child restraint has been installed and the on indicator is lit:

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to "Securing Child Restraints (Front Passenger Seat)" under *Securing Child Restraints (Rear Seat) on page 3-50* or *Securing Child Restraints (Front Passenger Seat) on page 3-52*.

5. If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion.

   Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints on page 3-2*.

6. Restart the vehicle.

The passenger sensing system may or may not turn off the airbag for a child restraint depending upon the child's seating posture and body build. It is better to secure the child restraint in a rear seat.

If the Off Indicator Is Lit for an Adult-Size Occupant

If a person of adult size is sitting in the front outboard passenger seat, but the off indicator is lit, it could be because that person is not sitting properly in the seat.

Use the following steps to allow the system to detect that person and enable the front outboard passenger frontal airbag:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, seat massagers, a laptop, or other electronic devices.
3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. Restart the vehicle and have the person remain in this position for two to three minutes after the on indicator is lit.

Additional Factors Affecting System Operation

Safety belts help keep the passenger in position on the seat during vehicle maneuvers and braking, which helps the passenger sensing system maintain the passenger airbag status. See "Safety Belts" and "Child Restraints" in the Index for additional information about the importance of proper restraint use.

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment except when approved by GM for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle on page 3-32* for more information about modifications that can affect how the system operates.

⚠ WARNING

Stowing of articles under the passenger seat or between the passenger seat cushion and seatback may interfere with the proper operation of the passenger sensing system.

Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the service manual have information about servicing the vehicle and the airbag system. To purchase a service manual, see *Service Publications Ordering Information on page 13-17*.

⚠ WARNING

For up to 10 seconds after the vehicle is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.

Adding Equipment to the Airbag-Equipped Vehicle

Adding accessories that change the vehicle's frame, bumper system, height, front end, or side sheet metal may keep the airbag system from working properly.

The operation of the airbag system can also be affected by changing or moving any parts of the front seats, safety belts, airbag sensing and diagnostic module, steering wheel, instrument panel, roof-rail airbag modules, ceiling or pillar garnish trim, overhead console, front sensors, side impact sensors, rollover sensor module, airbag wiring, or cargo restraint system and convenience net.

Your dealer and the service manual have information about the location of the airbag sensors, sensing and diagnostic module, and airbag wiring.

In addition, the vehicle has a passenger sensing system that includes sensors as part of the front outboard passenger seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery, or trim; or with GM covers, upholstery, or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort-enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See *Passenger Sensing System on page 3-27*.

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels on page 10-61* for additional important information.

If your vehicle needs to be modified because you have a disability and you have questions about whether the modifications will affect the vehicle's airbag system, or if you have questions about whether the airbag system will be affected if the vehicle is modified for any other reason, call Customer Assistance. See *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-5*.

Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See *Airbag Readiness Light on page 5-15*.

Notice: **If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag covers, have the airbag covering and/or airbag module replaced. For the location of the airbags, see *Where Are the Airbags? on page 3-22*. See your dealer for service.**

Replacing Airbag System Parts after a Crash

⚠ WARNING

A crash can damage the airbag systems in the vehicle. A damaged airbag system may not work properly and may not protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See *Airbag Readiness Light on page 5-15*.

Child Restraints

Older Children

Older children who have outgrown booster seats should wear the vehicle safety belts.

The manufacturer instructions that come with the booster seat state the weight and height limitations for that booster. Use a booster seat with a lap-shoulder belt until the child passes the fit test below:

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide. See "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-15*. If the shoulder belt still does not rest on the shoulder, then return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.
- Can proper safety belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.

Q: What is the proper way to wear safety belts?

A: An older child should wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide. The shoulder belt should not cross the face or neck. The lap belt should fit snugly below the hips, just touching the top of the thighs. This applies belt force to the child's pelvic bones in a crash. It should never be worn over the abdomen, which could cause severe or even fatal internal injuries in a crash.

Also see "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-15*.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

In a crash, children who are not buckled up can strike other people who are buckled up, or can be thrown out of the vehicle. Older children need to use safety belts properly.

⚠ WARNING

Never allow more than one child to wear the same safety belt. The safety belt cannot properly spread the impact forces. In a crash, they can be crushed together and seriously injured. A safety belt must be used by only one person at a time.

⚠ WARNING

Never allow a child to wear the safety belt with the shoulder belt behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt. The child could move too far forward increasing the chance of head and neck injury. The child might also slide under the lap

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WARNING (Continued)

belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance traveled nor the age and size of the traveler changes the need, for everyone, to use safety restraints. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

⚠ WARNING

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Never leave children unattended in a vehicle and never allow children to play with the safety belts.

Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints.

Children who are not restrained properly can strike other people, or can be thrown out of the vehicle.

⚠ WARNING

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash. For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's

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WARNING (Continued)

arms. An infant should be secured in an appropriate restraint.

⚠ WARNING

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Never put a rear-facing child restraint in the right front seat. Secure a rear-facing child restraint in a rear seat. It is also better to secure a forward-facing child restraint in a rear seat. If you must secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go.

Q: What are the different types of add-on child restraints?

A: Add-on child restraints, which are purchased by the vehicle owner, are available in four basic types. Selection of a particular restraint should take into consideration not only the child's weight, height, and age but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.

For most basic types of child restraints, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle. If it is, the restraint will have a label saying that it meets federal motor vehicle safety standards.

The restraint manufacturer instructions that come with the restraint state the weight and height limitations for a particular child restraint. In addition, there are many kinds of restraints available for children with special needs.

⚠ WARNING

To reduce the risk of neck and head injury during a crash, infants need complete support. In a crash, if an infant is in a rear-facing child restraint, the crash forces can be distributed across the strongest part of an infant's body, the back and shoulders. Infants should always be secured in rear-facing child restraints.

⚠ WARNING

A young child's hip bones are still so small that the vehicle's regular safety belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's abdomen. In a crash, the belt would apply force on a body area that is unprotected by any bony structure. This alone could cause serious or fatal injuries. To reduce the risk of serious or fatal injuries during a crash, young children should always be secured in appropriate child restraints.

Child Restraint Systems

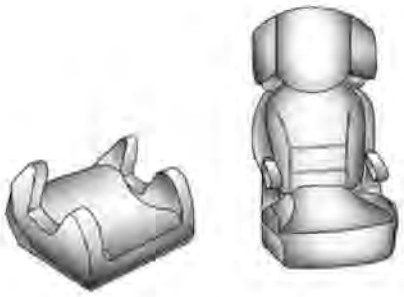
Rear-Facing Infant Seat

A rear-facing infant seat provides restraint with the seating surface against the back of the infant.

The harness system holds the infant in place and, in a crash, acts to keep the infant positioned in the restraint.

Forward-Facing Child Seat

A forward-facing child seat provides restraint for the child's body with the harness.



Booster Seats

A booster seat is a child restraint designed to improve the fit of the vehicle's safety belt system.
A booster seat can also help a child to see out the window.

Securing an Add-On Child Restraint in the Vehicle

⚠ WARNING

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Secure the child restraint properly in the vehicle using the vehicle safety belt or LATCH system, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the LATCH system. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-41.*

Children can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, refer to the instructions that come with the restraint which may be on the restraint itself or in a booklet, or both, and to this manual. The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

In some areas of the United States and Canada, Certified Child Passenger Safety Technicians (CPSTs) are available to inspect and demonstrate how to correctly use and install child restraints.

In the U.S., refer to the National Highway Traffic Safety Administration (NHTSA) website to locate the nearest child safety seat inspection station. For CPST availability in Canada, check with Transport Canada or the Provincial Ministry of Transportation office.

Securing the Child Within the Child Restraint

⚠ WARNING

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Secure the child properly following the instructions that came with that child restraint.

Where to Put the Restraint

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

We recommend that children and child restraints be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

A label on your sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating

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WARNING (Continued)

airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the right front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far

(Continued)

WARNING (Continued)

back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-27* for additional information.

When securing a child restraint in a rear seating position, study the instructions that came with your child restraint to make sure it is compatible with this vehicle.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, we recommend that rear-facing child restraints not be transported in the vehicle, even if the airbag is off.

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others. Always make sure the child restraint is properly secured.

Depending on where you place the child restraint and the size of the child restraint, you may not be able to access adjacent safety belt assemblies or LATCH anchors for additional passengers or child restraints. Adjacent seating positions should not be used if the child restraint prevents access to or interferes with the routing of the safety belt.

Wherever you install a child restraint, be sure to secure the child restraint properly.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in your vehicle — even when no child is in it.

Lower Anchors and Tethers for Children (LATCH System)

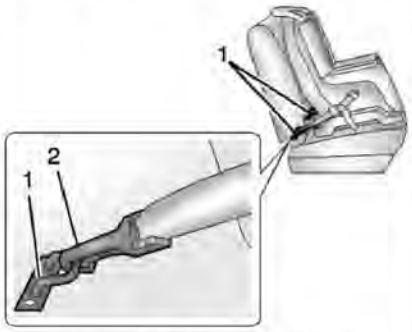
The LATCH system secures a child restraint during driving or in a crash. LATCH attachments on the child restraint are used to attach the child restraint to the anchors in the vehicle. This system is designed to make installation of a child restraint easier.

Make sure that a LATCH-compatible child restraint is properly installed using the anchors, or use the vehicle's safety belts to secure the restraint, following the instructions that came with that restraint, and also the instructions in this manual. When installing a child restraint with a top tether, you must also use either the lower anchors or the safety belts to properly secure the child restraint. A child restraint must never be installed using only the top tether and anchor.

In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. The child restraint manufacturer will provide you with instructions on how to use the child restraint and its attachments. The following explains how to attach a child restraint with these attachments in your vehicle.

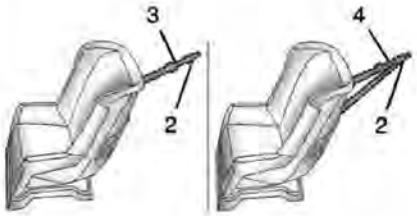
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

Lower Anchors



Lower anchors (1) are metal bars built into the vehicle. There are two lower anchors for each LATCH seating position that will accommodate a child restraint with lower attachments (2).

Top Tether Anchor



A top tether (3, 4) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (2) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during driving or in a crash.

The child restraint may have a single tether (3) or a dual tether (4). Either will have a single attachment (2) to secure the top tether to the anchor.

Some child restraints that have a top tether are designed for use with or without the top tether being attached. Others require the top tether always to be attached. In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached. Be sure to read and follow the instructions for your child restraint.

Lower Anchor and Top Tether Anchor Locations

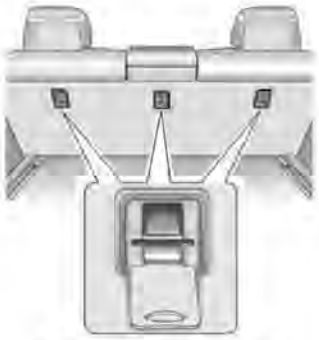
Rear Seat

(Top Tether Anchor): Seating positions with top tether anchors.

(Lower Anchor): Seating positions with two lower anchors.

To assist in locating the lower anchors, each seating position with lower anchors has two labels, near the crease between the seatback and the seat cushion.

To assist in locating the top tether anchors, the top tether anchor symbol is located on the cover.



Top Tether Anchors

The top tether anchors for each rear seating position are located under the covers, on the back of the rear seatback. Be sure to use an anchor located on the same side of the vehicle as the seating position where the child restraint will be placed.

Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether be attached, or if the instructions that come with the child restraint say that the top tether must be attached.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. See *Where to Put the Restraint on page 3-40* for additional information.

Securing a Child Restraint Designed for the LATCH System

⚠ WARNING

If a LATCH-type child restraint is not attached to anchors, the child restraint will not be able to protect the child correctly. In a crash, the child could be seriously injured or killed. Install a LATCH-type child restraint properly using the anchors, or use the vehicle safety

(Continued)

WARNING (Continued)

belts to secure the restraint, following the instructions that came with the child restraint and the instructions in this manual.

⚠ WARNING

Do not attach more than one child restraint to a single anchor. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured. To reduce the risk of serious or fatal injuries during a crash, attach only one child restraint per anchor.

⚠ WARNING

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Buckle any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, if the vehicle has one, after the child restraint has been installed.

Notice: **Do not let the LATCH attachments rub against the vehicle's safety belts. This may damage these parts. If necessary, move buckled safety belts to avoid rubbing the LATCH attachments.**

Do not fold the empty rear seat with a safety belt buckled. This could damage the safety belt or the seat. Unbuckle and return the safety belt to its stowed position, before folding the seat.

If you need to secure more than one child restraint in the rear seat, see *Where to Put the Restraint on page 3-40*.

This system is designed to make installation of child restraints easier. When using lower anchors, do not use the vehicle's safety belts. Instead use the vehicle's anchors and child restraint attachments to secure the restraints. Some restraints also use another vehicle anchor to secure a top tether.

1. Attach and tighten the lower attachments to the lower anchors. If the child restraint does not have lower attachments or the desired seating position does not have lower anchors, secure the child restraint with the top tether and the safety belts. Refer to your child restraint manufacturer instructions and the instructions in this manual.

   1.1. Find the lower anchors for the desired seating position.

   1.2. Put the child restraint on the seat.

   For the outboard rear seating positions, if the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" at the end of this section.

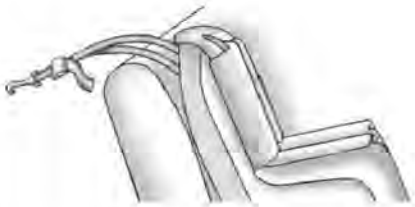
1.3. Attach and tighten the lower attachments on the child restraint to the lower anchors.

2. If the child restraint manufacturer recommends that the top tether be attached, attach and tighten the top tether to the top tether anchor, if equipped. Refer to the child restraint instructions and the following steps:

   2.1. Find the top tether anchor and open its cover to expose the anchor.

   2.2. Route, attach, and tighten the top tether according to your child restraint instructions and the following instructions:

If you are using a dual tether in the rear outboard seating position with an adjustable head restraint, route the dual tether around the head restraint.



If you are using a dual tether in the rear outboard seating position and the head restraint has been removed, route the dual tether over the seatback.

If you are using a single tether in the rear outboard seating position with an adjustable head restraint, route the single tether under the head restraint and in between the head restraint posts.

If you are using a single tether in the rear outboard seating position and the head restraint has been removed, route the single tether over the seatback.

If you are using a dual tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the dual tether over the headrest.

If you are using a single tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the single tether over the headrest.

3. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the LATCH path and attempt to move it side to side and back and forth. There should be no more than 2.5 cm (1 in) of movement for proper installation.

Head Restraint Removal and Reinstallation

The rear outboard head restraints can be removed if they interfere with the proper installation of the child restraint. The headrest in the rear center seating position is not removable and should be lowered to the stowed position for child restraint installation.

To remove the head restraint:

1. Partially fold the seatback forward. See *Rear Seats on page 3-10* for additional information.

2. Press both buttons on the head restraint posts at the same time, and pull up on the head restraint.
3. Store the head restraint in the cargo area of the vehicle.
4. When the child restraint is removed, reinstall the head restraint before the seating position is used.

⚠ WARNING

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

To reinstall the head restraint:

1. Insert the head restraint posts into the holes in the top of the seatback. The notches on the posts must face the driver side of the vehicle.
2. Push the head restraint down.

   If necessary, press the height adjustment release button to further lower the head restraint. See *Head Restraints on page 3-2*.
3. Try to move the head restraint to make sure that it is locked in place.

Replacing LATCH System Parts After a Crash

⚠ WARNING

A crash can damage the LATCH system in the vehicle. A damaged LATCH system may not properly secure the child restraint, resulting in serious injury or even death in a crash. To help make sure the LATCH system is working properly after a crash, see your dealer to have the system inspected and any necessary replacements made as soon as possible.

If the vehicle has the LATCH system and it was being used during a crash, new LATCH system parts may be needed.

New parts and repairs may be necessary even if the LATCH system was not being used at the time of the crash.

Securing Child Restraints (Rear Seat)

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for how and where to install the child restraint using LATCH. If a child restraint is secured in the vehicle using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

If the child restraint does not have the LATCH system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint on page 3-40*.

1. Put the child restraint on the seat.

   If the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-41*.

2. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

3. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 4 and 5.

6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-41*.
7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it. If the head restraint was removed, reinstall it before the seating position is used. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for additional information on installing the head restraint properly.

Securing Child Restraints (Front Passenger Seat)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint on page 3-40*.

In addition, the vehicle has a passenger sensing system which is designed to turn off the right front passenger frontal airbag under certain conditions. See *Passenger Sensing System on page 3-27* and *Passenger Airbag Status Indicator on page 5-16* for more information, including important safety information.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the right front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

(Continued)

WARNING (Continued)

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-27* for additional information.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for how and where to install the child restraint using LATCH. If a child restraint is secured using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-41* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

1. Move the seat as far back as it will go before securing the forward-facing child restraint.

   When the passenger sensing system has turned off the right front passenger frontal airbag and seat-mounted side impact airbag, the off indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator on page 5-16.*

2. Put the child restraint on the seat.
3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

4. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle, so that the safety belt could be quickly unbuckled if necessary.

5. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 5 and 6.

   If the vehicle does not have a rear seat and the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-41*.

7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

   If the airbags are off, the off indicator in the passenger airbag status indicator will come on and stay on when the vehicle is started.

   If a child restraint has been installed and the on indicator is lit, see "If the On Indicator is Lit for a Child Restraint" under *Passenger Sensing System on page 3-27*.

   To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position.

✍ NOTES

Storage

Storage Compartments
Glove Box 4-1
Cupholders 4-1
Front Storage 4-2
Armrest Storage 4-2
Center Console Storage 4-2

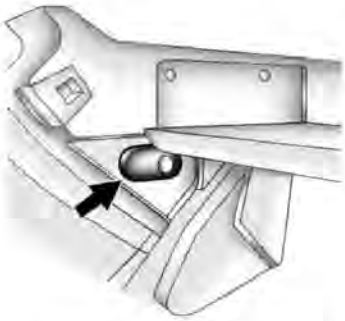
Additional Storage Features
Cargo Cover 4-3
Cargo Tie-Downs 4-4
Cargo Management System 4-4
Cargo Net 4-9
Convenience Net 4-10

Roof Rack System
Roof Rack System 4-11

Storage Compartments

Glove Box

Lift the glove box handle up to open it. Use the key to lock and unlock the glove box.



The glove box is air conditioned and can be used to store items at a lower temperature. The vehicle air conditioning must be turned on for the maximum cool air to enter the glove box. Move the slide control to allow cool air into the glove box. After opening the air flow, close the glove box door to keep the cold air from entering the vehicle.

Cupholders

This vehicle has a cupholder equipped with a divider that can be adjusted to accommodate large containers or small containers.

For large containers, push the button to move aside the divider and make the cupholder deeper. For small containers, push down on the top edge of the divider to lock it back in place and make the cupholder shorter.

Front Storage

If equipped with storage behind the climate control system, touch and hold the chrome bar at the bottom of the climate control system panel to open. There is a USB port inside. See "USB/SD Port" in the infotainment manual.

Keep the storage area closed when not in use.

Touch and hold the chrome bar at the bottom of the climate control system panel again to close.

A storage area is located in front of the shift lever. Push upward on the top of the door and release; the door automatically opens.

There is an accessory power outlet inside. See *Power Outlets on page 5-7*.

Armrest Storage

For vehicles with a rear seat armrest, pull the rear seat armrest forward to access cupholders with removable liners. For vehicles with a rear storage area, pull the lever to access.

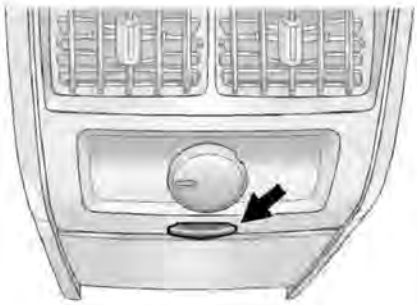
Center Console Storage

The center console has an armrest, upper storage tray, and a lower storage area.

The armrest can be adjusted, slide the top of the armrest to adjust to the desired position.

Push the driver side button to access the upper storage tray. Push the passenger side button to access the lower storage area.

There is an accessory power outlet inside the center console and two USB ports. See *Power Outlets on page 5-7* and the separate infotainment manual.

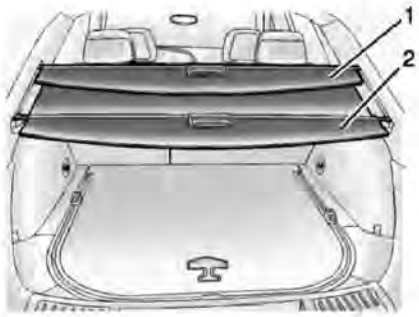


Push the button to open the storage area on the rear of the center console. If equipped with rear seat entertainment (RSE), the audio/video jacks, USB port, and SD port will be inside. See the separate infotainment manual.

Additional Storage Features

Cargo Cover

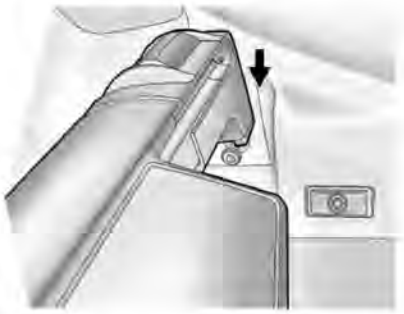
For vehicles with the dual position cargo cover, it can be used to cover items in the cargo area of the vehicle.



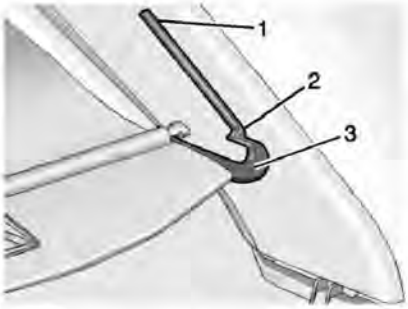
The shade can be set in two positions. It can be set in a halfway open (1) position for loading objects into the rear compartment, or the lower (2) position to conceal objects in the rear compartment.

Install the Cargo Cover

1. Hold the cartridge so that the pull-out shade faces the rear of the vehicle.



2. Align the cartridge over the pins on the trim panels of the vehicle.
3. Push down on the cartridge to snap it into place.
4. Unroll the shade toward the rear of the vehicle.



5. Insert the shade pins in the channels (3) on both sides.
6. Slide the shade to the lower (2) position, or the halfway open (1) position.

Remove the Cargo Cover

1. Remove the cover from the channels and carefully roll it back up.

2. Slide the button on the top to release the cartridge.
3. Pull up to remove the cartridge from the pins.

⚠ WARNING

An unsecured cargo cover could strike people in a sudden stop or turn, or in a crash. Store the cargo cover securely or remove it from the vehicle.

Cargo Tie-Downs

For vehicles equipped with cargo tie-downs, the four tie-downs are located in the rear compartment of the vehicle. Use the tie-downs to secure small loads.

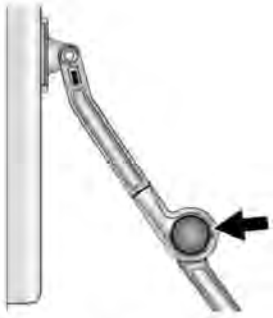
Cargo Management System

To open the cargo management system, press the rear of the handle to unlatch it and then lift the handle up.

A prop rod locks to hold the cover up when opened.

Four hooks are located on the inside cover and can be used for storing items.

There may be additional storage compartments on each side of the cargo management system. Lift the panel up to open.



Press the red button on the prop rod to close the cover.

Rear Storage Area

⚠ WARNING

An improperly latched and closed cargo cover, or cargo cover left in the open position, could be thrown about the vehicle during a crash or sudden maneuver. Someone could be injured. Be sure to return the cover to the

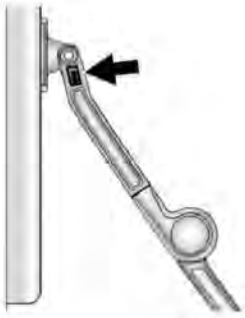
(Continued)

WARNING (Continued)

closed position and latch before driving. If the cover is removed, always store it outside of the vehicle. When it is replaced, always be sure that it is securely reattached.

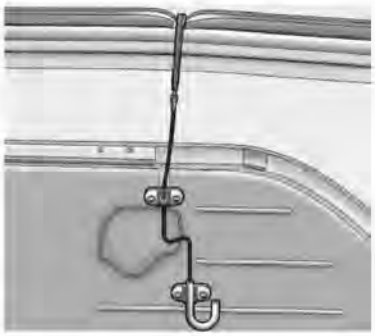
To access the rear storage areas of the cargo management system, and the tire sealant and compressor kit:

1. Remove the cargo cover, if equipped.
2. Open the cargo management system cover.



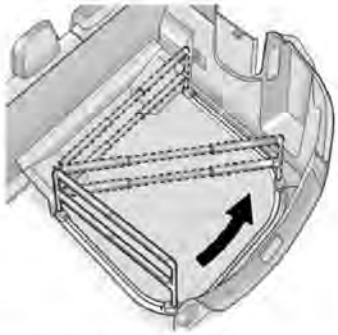
3. Release the prop rod from the inside cover by sliding the red clip down.

   Unhook the prop rod from the pin on the inside cover. Store the unhooked prop rod by folding it into the cargo management compartment.

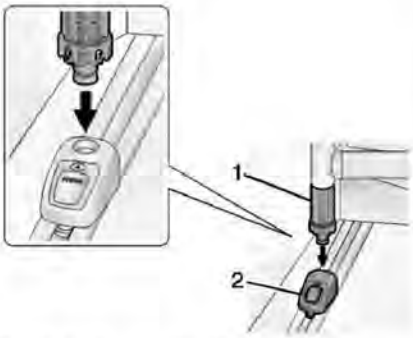


4. Store the cargo management system cover by hooking it onto the weatherstrip.

U-Rail



For vehicles with a u-rail system, the fence can be moved to different positions on the u-rail track to secure cargo.



Push both adapter buttons to move the adapters (2) on the straight part of the u-rail.

To move the fence around the u-rail, disconnect one side:

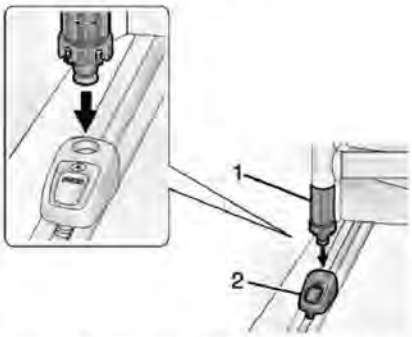
1. Unlock by turning the latch (1) to align 🔓 with the arrow on the adapter (2).
2. Push the adapter button to move the adapters (2) to the desired position.
3. Reinstall the fence and lock both latches (1) by turning to align 🔒 with the arrow on the adapter (2).

Use the fence to secure items in place.

Removing the Fence

Unlock by turning both latches (1) to align 🔓 with the arrow on the adapter (2). Lift and remove the fence.

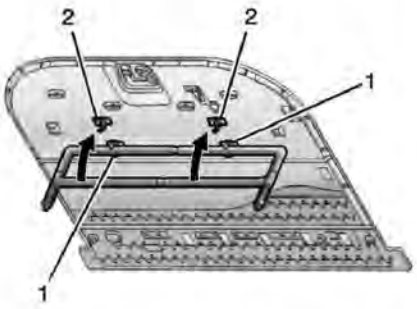
Installing the Fence



Insert the fence into the adapters and lock both latches (1) by turning to align 🔒 with the arrow on the adapter (2).

Storing the Fence

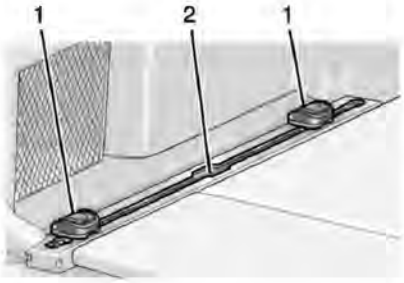
1. Lift the cargo management system cover.
2. Release the cover from the prop rod as described in the previous steps.



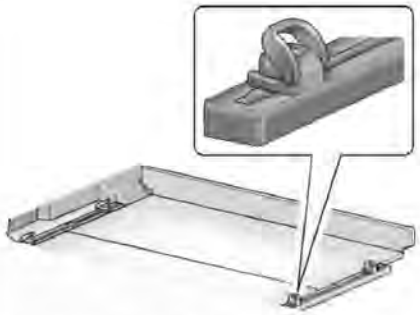
3. Insert the top of the fence into the lower two clips (1).
4. Turn the bottom of the fence up and insert it into the upper two clips (2).

D-Ring Sliders

For vehicles with a D-ring system, there are four D-ring sliders that move along rails. These can be used as tie-downs when storing cargo.



Insert the D-ring sliders (1) into the channel (2) located in the middle of the rail. Push the button to move the D-ring slider along the rail.



The loop of the D-ring slider must be facing inward toward the storage area and the ring must be in the up position for proper usage.

Cargo Net

⚠ WARNING

Do not stack items higher than the upper end of the cargo net or hang anything from the net. Avoid items that have sharp edges or that apply excessive force to the net. If items are not properly stored, damage to the net could occur and items can be thrown about the vehicle. You or others could be injured. Always store items behind the net.

For vehicles equipped with a cargo net, it can be used to store light loads, keeping them from falling over or being thrown into the cabin during heavy braking.

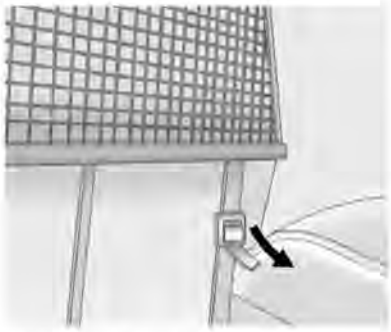
The net should not be overloaded or used to store heavy loads.

There are four openings in the headliner: two located behind the front seats and two behind the rear seats.

1. Insert the top corners of the cargo net into the large opening in the headliner and secure by sliding them into the small opening.
2. The rear seatbacks should be folded down when the net is installed in the headliner opening located behind the front seats.

3. Mount the cargo net to the rear seat tethers located on the back of the folded down rear seats and pull on the straps to tighten the net.
4. When the net is installed in the headliner opening located behind the rear seats, the rear seatbacks should be upright.

5. Mount the cargo net to the cargo tie-downs located on the lower side panels.



6. Pull on the straps to tighten the net.

Cargo Net Storage

The cargo net can be removed from the vehicle and stored in the cargo management system.

1. Disconnect the net from the roof openings and the tethers.
2. Press the red button on the center of the net to fold it in half.
3. Roll up the cargo net, storing it into the attached vinyl bag.
4. Open the cargo management system cover.
5. For vehicles with an inflator kit, store the cargo net in the available space next to the kit.

Convenience Net

This vehicle may have a convenience net located in the rear of the vehicle. Attach it to the cargo tie-downs for storing small loads.

Do not use the net to store heavy loads.

Roof Rack System

⚠ WARNING

If something is carried on top of the vehicle that is longer or wider than the roof rack — like paneling, plywood, or a mattress — the wind can catch it while the vehicle is being driven. The item being carried could be violently torn off, and this could cause a collision and damage the vehicle. Never carry something longer or wider than the roof rack on top of the vehicle unless using a GM certified accessory carrier.

For vehicles with a roof rack, the rack can be used to load items. For roof racks that do not have crossrails included, GM Certified crossrails can be purchased as an accessory. See your dealer for additional information.

Notice: **Loading cargo on the roof rack that weighs more than 100 kg (220 lbs) or hangs over the rear or sides of the vehicle may damage the vehicle. Load cargo onto the roof rack so that it rests evenly between the siderails, making sure to fasten cargo securely.**

To prevent damage or loss of cargo when driving, check to make sure crossrails and cargo are securely fastened. Loading cargo on the roof rack will make the vehicle's center of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt maneuvers; otherwise it may result in loss of control. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place. Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits on page 9-10.*

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Controls

Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Steering Wheel Controls

For vehicles with audio steering wheel controls, some audio controls can be adjusted at the steering wheel.

(Push to Talk): For vehicles with OnStar® or a Bluetooth system, press to talk or interact with those systems. See *OnStar Overview on page 14-1* or "Bluetooth" in the separate infotainment manual.

(End Call): Press to decline an incoming call, or end a current call. Press to mute or unmute the infotainment system when not on a call.

< or > (Previous or Next): Press to go to the previous or next menu option.

∧ or ∨ (Next or Previous): Move SEL up or down to go to the next or previous selection.

SEL (Select): Press to select a highlighted menu option.

△ or ▽ (Next or Previous Favorite): Press to go to the next or previous favorite when listening to the radio. Press to go to the next or previous track when listening to a media source.

+ or − (Volume): Press to increase or decrease the volume.

Heated Steering Wheel

(Heated Steering Wheel): For vehicles equipped with a heated steering wheel, press to turn on or off. A light next to the button displays when the feature is turned on.

The steering wheel takes about three minutes to start heating.

Horn

Press on the steering wheel pad to sound the horn.

Windshield Wiper/Washer

With the ignition in ACC/ ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI: Use for fast wipes.

LO: Use for slow wipes.

INT (Intermittent Wipes): Use for intermittent wipes. To adjust wipe frequency, turn the INT band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see the following Rainsense information.

OFF: Use to turn the wipers off.

(Mist): For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Clear snow and ice from the wiper blades before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement on page 10-25*.

Heavy snow or ice can overload the wiper motor.

Wipe Parking

If the ignition is changed to STOPPING THE ENGINE/OFF mode while the wipers are on LO, HI, or INT, they will immediately stop.

If the windshield wiper lever is then moved to off before the driver door is opened or within 10 minutes, the wipers will restart and move to the base of the windshield.

If the ignition is changed to STOPPING THE ENGINE/OFF while the wipers are performing wipes due to windshield washing, the wipers continue to run until they reach the base of the windshield.

Rainsense™

For vehicles with Rainsense, a sensor located near the top center of the windshield detects the amount of water on the windshield and automatically controls the frequency of the windshield wiper.

Keep this area of the windshield clear of debris to allow for best system performance.

INT (Rainsense Wipe Sensitivity Control): Move the windshield wiper lever to INT. Turn the INT band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

Wiper Arm Assembly Protection

When using an automatic car wash, move the windshield wiper lever to OFF. This disables the automatic Rainsense windshield wipers and/or manual windshield wipers.

With Rainsense, if the transmission is in N (Neutral) and the vehicle speed is very slow, the wipers will automatically stop at the base of the windshield.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers.

The wipers will continue until the lever is released or the maximum wash time is reached. When the windshield wiper lever is released, additional wipes may occur depending on how long the windshield washer had been activated. See *Washer Fluid on page 10-20* for information on filling the windshield washer fluid reservoir.

⚠ WARNING

In freezing weather, do not use the washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Rear Window Wiper/ Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON: Press the upper portion of the button for continuous rear window wipes.

OFF: The rear wiper turns off when the button is returned to the middle position.

INT (Intermittent Rear Wipes): Press the lower portion of the button to set a delay between wipes.

(Rear Washer): Push the windshield wiper lever forward to spray washer fluid on the rear window. The lever automatically returns to its original position when released.

Rear Wiper Arm Assembly Protection

When using an automatic car wash, move the rear wiper control to OFF. This disables the rear wiper.

If the transmission is in N (Neutral) and the vehicle speed is very slow, the rear wiper will automatically stop at the base of the rear window.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Reverse Gear Wipes

If the rear wiper control is off, the rear wiper will automatically operate continuously when the shift lever is in R (Reverse), and the front windshield wiper is performing low or high speed wipes. If the rear wiper control is off, the shift lever is in R (Reverse), and the front windshield wiper is performing interval wipes, then the rear wiper automatically performs interval wipes.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

The windshield washer reservoir is used for the windshield and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid on page 10-20*.

Headlamp Washer

For vehicles with headlamp washers, they are located to the side of the headlamps.

The headlamps must be on in order to use the headlamp washers. If the headlamps are not on, only the windshield will be washed.

Pull the wiper lever toward you and hold briefly to activate. The headlamp washers will spray once, pause, and spray again. The headlamp washer will spray again after five windshield wash cycles.

See *Washer Fluid on page 10-20* for information on filling the windshield washer fluid.

Compass

The vehicle may have a compass display on the Driver Information Center (DIC). The compass receives its heading and other information from the Global Positioning System (GPS) antenna, StabiliTrak®, and vehicle speed information.

The compass system is designed to operate for a certain number of miles or degrees of turn before needing a signal from the GPS satellites. When the compass display shows CAL, drive the vehicle for a short distance in an open area where it can receive a GPS signal. The compass system will automatically determine when a GPS signal is restored and provide a heading again. See *Compass Messages on page 5-31* for the messages that may be displayed for the compass.

Clock

The infotainment system controls are used to access the time and date settings through the menu system. See "Home Page" in the infotainment manual for information about how to use the menu system.

Setting the Time

To set the time:

1. From the Home Page, press the SETTINGS screen button and press Time and Date.
2. Press Set Time and press + or − to increase or decrease hours, minutes, and AM or PM. Press 12Hr or 24Hr for 12 or 24 hour clock.
3. Press ⬅ to go back to the previous menu.

To set the date:

1. Press the SETTINGS screen button and press Time and Date.
2. Press Set Date and press + or − to increase or decrease month, day, or year.
3. Press ⬅ to go back to the previous menu.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle may have five accessory power outlets.

The accessory power outlets are:

- Below the climate control system inside the front storage bin.
- Inside the center floor console.

- On the rear of the center floor console. For vehicles with a rear climate control system, there will be two accessory power outlets on the rear of the center floor console.
- In the rear cargo area.

These are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

There is a small cap that must be removed to access the accessory power outlet. When not using the outlet be sure to cover it with the protective cap.

Notice: **Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the battery. Power is always supplied to the rear cargo outlet. Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 ampere rating.**

Certain accessory power plugs may not be compatible with the accessory power outlet and could overload vehicle or adapter fuses. If a problem is experienced, see your dealer.

When adding electrical equipment, be sure to follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment on page 9-72*.

Notice: **Hanging heavy equipment from the power outlet can cause damage not covered by the vehicle warranty. The power outlets are designed for accessory power plugs only, such as cell phone charge cords.**

Cigarette Lighter

There may be a cigarette lighter located under the climate control system, inside the front storage bin.

To activate the cigarette lighter, push it into the heating element and let go. The lighter pops out when it is ready to be used.

Notice: **Holding a cigarette lighter in while it is heating does not let the lighter back away from the heating element when it is hot. Damage from overheating can occur to the lighter or heating element, or a fuse could be blown. Do not hold a cigarette lighter in while it is heating.**

Ashtrays

There may be an ashtray located under the climate control system on the instrument panel. Press the door to release the ashtray.

To empty the ashtray, remove it from the instrument panel by holding the edges and pulling straight out. To reinstall, push the tray back into place.

There may also be ashtrays located on the center floor console behind the shift lever and in the rear doors.

Notice: **If papers, pins, or other flammable items are put in the ashtray, hot cigarettes or other smoking materials could ignite them and possibly damage the vehicle. Never put flammable items in the ashtray.**

Warning Lights, Gauges, and Indicators

Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury.

Warning lights come on when there could be a problem with a vehicle function. Some warning lights come on briefly when the engine is started to indicate they are working.

Gauges can indicate when there could be a problem with a vehicle function. Often gauges and warning lights work together to indicate a problem with the vehicle.

When one of the warning lights comes on and stays on while driving, or when one of the gauges shows there may be a problem, check the section that explains what to do. Follow this manual's advice. Waiting to do repairs can be costly and even dangerous.

Instrument Cluster

English Shown, Metric Similar

Q8_000000422

Cluster Application Displays

The cluster has three interactive display zones.

Use the five-way control on the right steering wheel control to move between the different display zones and scroll through the different displays.

The left and right zones display Driver Information Center (DIC) information. See *Driver Information Center (DIC) on page 5-27*.

The center zone displays application information for navigation, audio, phone, or settings.

Navigation

If there is no active route, a compass will be displayed. If there is an active route, press SEL to end route guidance or turn the voice prompts on or off.

Audio

While the Audio application page is displayed, press SEL to enter the Audio menu. In the Audio menu search for music or change the audio source.

Phone

While the Phone application page is displayed, press SEL to enter the Phone menu. In the Phone menu, if there is no active phone call, view recent calls or scroll through contacts. If there is an active call, mute the phone or switch to handset operation.

Settings

Press SEL while the Settings application page is displayed to enter the Settings menu.

Units: Press SEL while Units is highlighted to enter the Units menu. Choose English or metric units by pressing SEL while the desired item is highlighted. A checkmark will be displayed next to the selected item.

Info Pages: Press SEL while Info Pages is highlighted to select the items to be displayed in the DIC information displays. See *Driver Information Center (DIC) on page 5-27*.

Open Source Software: Press SEL while Open Source Software is highlighted to display open source software information.

Speedometer

The speedometer shows the vehicle's speed in either kilometers per hour (km/h) or miles per hour (mph).

Odometer

The odometer shows how far the vehicle has been driven, in either kilometers or miles.

This vehicle has a tamper-resistant odometer. If the vehicle needs a new cluster installed, the new odometer is set to the mileage of the old odometer. If this is not possible, it is set at zero and a label is put on the driver door to show the old mileage reading.

Trip Odometer

The trip odometer can show how far the vehicle has been driven since the trip odometer was last reset.

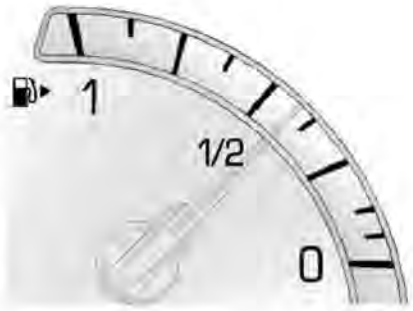
The trip odometer is accessed and reset through the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 5-27*.

Tachometer

The tachometer displays the engine speed in revolutions per minute (rpm).

Notice: **If the engine is operated with the tachometer in the shaded warning area, the vehicle could be damaged, and the damages would not be covered by the vehicle warranty. Do not operate the engine with the tachometer in the shaded warning area.**

Fuel Gauge



When the ignition is on, the fuel gauge indicates about how much fuel is left in the tank.

There is an arrow near the fuel gauge pointing to the side of the vehicle the fuel door is on.

When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refueled soon.

Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

- At the service station, the fuel pump shuts off before the gauge reads full.
- It takes a little more or less fuel to fill up than the gauge indicated. For example, the gauge may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gauge moves a little while turning a corner or speeding up.
- The gauge takes a few seconds to stabilize after the ignition is turned on, and goes back to empty when the ignition is turned off.

Engine Coolant Temperature Gauge

Metric

English

This gauge measures the temperature of the vehicle's engine.

While driving under normal operating conditions, if the needle moves into the shaded area, the engine is too hot. Pull off the road, stop the vehicle, and turn off the engine as soon as possible.

Safety Belt Reminders

Driver Safety Belt Reminder Light

There is a driver safety belt reminder light on the instrument cluster.

When the vehicle is started this light flashes and a chime comes on to remind drivers to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the driver remains or becomes unbuckled while the vehicle is moving.

If the driver safety belt is buckled, neither the light nor chime comes on.

Passenger Safety Belt Reminder Light

There is a passenger safety belt reminder light near the passenger airbag status indicator. See *Passenger Sensing System on page 3-27.*

When the vehicle is started this light flashes and a chime may come on to remind the front passenger to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the passenger remains or becomes unbuckled while the vehicle is moving.

If the front passenger safety belt is buckled, neither the chime nor the light comes on.

The front passenger safety belt warning light and chime may turn on if an object is put on the seat such as a briefcase, handbag, grocery bag, laptop, or other electronic device. To turn off the warning light and/or chime, remove the object from the seat or buckle the safety belt.

Second Row Passenger Belt Reminder Light

Second row seating positions monitored for safety belt use are represented by a colored symbol in the Driver information Center (DIC) indicating safety belt status. When the vehicle is started, three safety belt symbols come on

and stay on for several seconds in the instrument cluster to alert the driver that passengers may need to fasten their safety belts. After the passenger safety belt is buckled, the corresponding safety belt symbol in the instrument cluster turns green. If a safety belt is not initially buckled, the instrument cluster displays a gray safety belt symbol. While the vehicle is moving, if a second row passenger that was previously buckled becomes unbuckled, the corresponding safety belt symbol will change to flashing red and a chime may sound.

Airbag Readiness Light

This light shows if there is an electrical problem with the airbag system. The system check includes the airbag sensor(s), passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System on page 3-20*.

The airbag readiness light comes on for several seconds when the vehicle is started. If the light does not come on then, have it fixed immediately.

⚠ WARNING

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

If there is a problem with the airbag system, a Driver Information Center (DIC) message may also come on. See *Airbag System Messages on page 5-38*.

Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System on page 3-27* for important safety information. The overhead console has a passenger airbag status indicator.

United States

Canada and Mexico

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. If you are using remote start, if equipped, to start the vehicle from a distance you may not see the system check. Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol to let you know the status of the front outboard passenger frontal airbag.

If the word ON or the on symbol is lit on the passenger airbag status indicator, it means that the front outboard passenger frontal airbag is allowed to inflate.

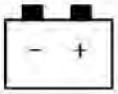
If the word OFF or the off symbol is lit on the passenger airbag status indicator, it means that the passenger sensing system has turned off the front outboard passenger frontal airbag.

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the passenger sensing system. See your dealer for service.

⚠ WARNING

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 5-15* for more information, including important safety information.

Charging System Light



The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. It should go out when the engine is started.

If the light stays on, or comes on while driving, there may be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

When this light comes on, or is flashing, the Driver Information Center (DIC) also displays a message.

See *Battery Voltage and Charging Messages on page 5-30.*

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

Malfunction Indicator Lamp

A computer system called OBD II (On-Board Diagnostics-Second Generation) monitors the operation of the vehicle to ensure emissions are at acceptable levels, helping to maintain a clean environment. The malfunction indicator lamp comes on when the vehicle is placed in Service Only Mode, as a check to show it is working. If it does not, have the vehicle serviced by your dealer. See *Ignition Positions on page 9-16.*

If the malfunction indicator lamp comes on while the engine is running, this indicates that the OBD II system has detected a problem and diagnosis and service might be required.

Malfunctions often are indicated by the system before any problem is apparent. Being aware of the light can prevent more serious damage to the vehicle. This system also assists the service technician in correctly diagnosing any malfunction.

Notice: **If the vehicle is continually driven with this light on, the emission controls might not work as well, the vehicle fuel economy might not be as good, and the engine might not run as smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.**

Notice: **Modifications made to the engine, transmission, exhaust, intake, or fuel system of the vehicle or the replacement of the original tires with other than those of the same Tire Performance Criteria (TPC) can affect the vehicle's emission controls and can cause this light to come on. Modifications to these systems could lead to costly repairs not covered by the vehicle warranty. This could also result in a failure to pass a required Emission Inspection/ Maintenance test. See *Accessories and Modifications on page 10-3*.**

This light comes on during a malfunction in one of two ways:

Light Flashing: A misfire condition has been detected. A misfire increases vehicle emissions and could damage the emission control system on the vehicle. Diagnosis and service might be required.

To prevent more serious damage to the vehicle:

- Reduce vehicle speed.
- Avoid hard accelerations.
- Avoid steep uphill grades.
- If towing a trailer, reduce the amount of cargo being hauled as soon as it is possible.

If the light continues to flash, find a safe place to stop and park the vehicle. Turn the vehicle off, wait at least 10 seconds, and restart the engine. If the light is still flashing, follow the previous steps and see your dealer for service as soon as possible.

Light On Steady: An emission control system malfunction has been detected on the vehicle. Diagnosis and service might be required.

The following may correct an emission control system malfunction:

- Check that the fuel cap is fully installed. See *Filling the Tank on page 9-62*. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap allows fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn the light off.
- Check that good quality fuel is used. Poor fuel quality causes the engine not to run as efficiently as designed and may cause stalling after start-up, stalling when the vehicle is changed into gear, misfiring, hesitation on acceleration,

or stumbling on acceleration. These conditions might go away once the engine is warmed up.

If one or more of these conditions occurs, change the fuel brand used. It may require at least one full tank of the proper fuel to turn the light off.

See *Recommended Fuel on page 9-59*.

If none of the above have made the light turn off, your dealer can check the vehicle. The dealer has the proper test equipment and diagnostic tools to fix any mechanical or electrical problems that might have developed.

Emissions Inspection and Maintenance Programs

Depending on where you live, your vehicle may be required to participate in an emission control system inspection and maintenance program. For the inspection, the emission system test equipment will likely connect to the vehicle's Data Link Connector (DLC).

The DLC is under the instrument panel to the left of the steering wheel. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The malfunction indicator lamp is on with the engine running, or if the vehicle is placed in Service Only Mode and the malfunction indicator lamp does not come on. See your dealer for assistance in verifying proper operation of the malfunction indicator lamp.
- The OBD II (On-Board Diagnostics) system determines that critical emission control systems have not been completely diagnosed. The vehicle would be considered not ready for inspection. This can happen if the 12-volt battery has recently been replaced or run down. The diagnostic system is designed to evaluate critical emission control systems during normal driving. This can take several days of routine driving. If this has been done and the vehicle still does not pass the inspection for lack of OBD II system readiness, your dealer can prepare the vehicle for inspection.

Brake System Warning Light

The vehicle brake system consists of two hydraulic circuits. If one circuit is not working, the remaining circuit can still work to stop the vehicle. For normal braking performance, both circuits need to be working.

If the warning light comes on, there is a brake problem. Have the brake system inspected right away.

Metric **English**

This light comes on briefly when the vehicle is turned on. If it does not come on then, have it fixed so it will be ready to warn if there is a problem.

If the light comes on and stays on, there is a base brake problem.

⚠ WARNING

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to a crash. If the light is still on after the vehicle has been pulled off the road and carefully stopped, have the vehicle towed for service.

Electric Parking Brake Light

Metric **English**

This light comes on when the parking brake is applied. If the light continues flashing after the parking brake is released, or while driving, there is a problem with the Electric Parking Brake system or another system. A message may also display in the Driver Information Center (DIC). See *Brake System Messages on page 5-30*.

If the light does not come on, or remains flashing, see your dealer.

Service Electric Parking Brake Light

This light should come on briefly when the vehicle is in ON/RUN. If it does not come on, have it fixed so it will be ready to warn if there is a problem.

If this light stays on, there is a problem with the Electric Parking Brake system or another system on the vehicle that is causing the parking brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See the information for the Electric Parking Brake under *Parking Brake on page 9-28*. If a message displays in the Driver Information Center (DIC), see *Brake System Messages on page 5-30*.

Antilock Brake System (ABS) Warning Light

This light comes on briefly when the engine is started.

If the light does not come on, have it fixed so it will be ready to warn if there is a problem.

If the ABS light stays on, turn the ignition off.

If the light comes on while driving, stop as soon as it is safely possible and turn off the vehicle. Then start the engine again to reset the system. If the ABS light stays on, or comes on again while driving, the vehicle needs service. A chime may also sound when the light comes on steady.

If the ABS light is the only light on, the vehicle has regular brakes, but the antilock brakes are not functioning.

If both the ABS and the brake system warning light are on, the vehicle's antilock brakes are not functioning and there is a problem with the regular brakes. See your dealer for service.

See *Brake System Warning Light on page 5-20* and *Brake System Messages on page 5-30*.

Lane Departure Warning (LDW) Light

If available, this light briefly comes on amber while starting the vehicle.

If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

This light comes on green when the system is on and ready to operate. When the system determines that the vehicle is leaving its lane without using the turn signal, this light will change to amber and flash.

See *Lane Departure Warning (LDW) on page 9-57.*

Vehicle Ahead Indicator

If available, this light in the Driver Information Center (DIC) displays green when a vehicle is detected ahead.

This light will display amber when you are following a vehicle ahead much too closely.

See *Forward Collision Alert (FCA) System on page 9-50.*

Traction Off Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

The traction off light comes on when the Traction Control System (TCS) has been turned off by pressing and releasing the TCS/StabiliTrak button.

This light and the StabiliTrak OFF light come on when StabiliTrak is turned off.

If the TCS is off, wheel spin is not limited. Adjust driving accordingly.

See *Traction Control System (TCS) on page 9-31* and *StabiliTrak® System on page 9-33.*

StabiliTrak® OFF Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer.

This light comes on when the StabiliTrak system is turned off. If StabiliTrak is off, the Traction Control System (TCS) is also off.

If the TCS is off, the system does not assist in controlling the vehicle. Turn on the TCS and the StabiliTrak systems and the warning light turns off.

See *Traction Control System (TCS) on page 9-31* and *StabiliTrak® System on page 9-33*.

Traction Control System (TCS)/StabiliTrak® Light

The StabiliTrak or Traction Control System (TCS) indicator/warning light comes on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light is on and not flashing, the TCS, and potentially the StabiliTrak system have been disabled. A DIC message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service.

If the indicator/warning light is on and flashing, the TCS and/or the StabiliTrak system is actively working.

See *StabiliTrak® System on page 9-33* and *Traction Control System (TCS) on page 9-31*.

Engine Coolant Temperature Warning Light

This light comes on briefly while starting the vehicle.

If it does not, have the vehicle serviced by the dealer. If the system is working normally the indicator light goes off.

Notice: **The engine coolant temperature warning light indicates that the vehicle has overheated. Driving with this light on can damage the engine and it may not be covered by the vehicle warranty. See *Engine Overheating on page 10-18*.**

The engine coolant temperature warning light comes on when the engine has overheated.

If this happens, pull over and turn off the engine as soon as possible. See *Engine Overheating on page 10-18*.

Tire Pressure Light

For vehicles with the Tire Pressure Monitor System (TPMS), this light comes on briefly when the engine is started. It provides information about tire pressures and the TPMS.

When the Light Is On Steady

This indicates that one or more of the tires are significantly underinflated.

A Driver Information Center (DIC) tire pressure message may also display. See *Tire Messages on page 5-38*. Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information label. See *Tire Pressure on page 10-51*.

When the Light Flashes First and Then Is On Steady

If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on at every ignition cycle. See *Tire Pressure Monitor Operation on page 10-54*.

Engine Oil Pressure Light

Notice: **Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the vehicle serviced. Always follow the maintenance schedule for changing engine oil.**

The oil pressure light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

Fuel Economy Light

eco

This light is in the Driver Information Center (DIC) display.

For vehicles with the fuel economy mode light, it comes on when the eco (economy) button, located next to the shift lever, is pressed. Press the button again to turn off the light and exit the fuel economy mode. See *Driving for Better Fuel Economy on page 1-23* and *Fuel Economy Mode on page 9-26* for more information.

Low Fuel Warning Light

This light is near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

Security Light

The security light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system. See *Immobilizer Operation on page 2-18*.

High-Beam On Light

This light comes on when the high-beam headlamps are in use.

See *Headlamp High/Low-Beam Changer on page 6-2*.

Adaptive Forward Lighting (AFL) Light

This light should come on briefly as the vehicle is started. If it does not come on, have the vehicle serviced by your dealer.

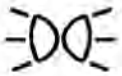
This light comes on solid when there is a problem with the AFL system. It flashes when the system is switching between lighting modes. See *Adaptive Forward Lighting (AFL) on page 6-3*.

Front Fog Lamp Light

The fog lamp light comes on when the fog lamps are in use.

The light goes out when the fog lamps are turned off. See *Front Fog Lamps on page 6-6* for more information.

Lamps On Reminder



This light comes on when the exterior lamps are in use. See *Exterior Lamp Controls on page 6-1*.

Cruise Control Light

The cruise control light is white when the cruise control is on and ready, and turns green when the cruise control is set and active.

See *Cruise Control on page 9-35*.

Adaptive Cruise Control Light

This light in the Driver Information Center (DIC) comes on when the Adaptive Cruise Control (if equipped) is active. See *Adaptive Cruise Control on page 9-37*.

Information Displays

Driver Information Center (DIC)

The DIC displays are shown in the left and right interactive display zones on the instrument cluster. The displays show the status of many vehicle systems. The controls for the DIC are on the right steering wheel control.

^ or v : Press the five-way control to move up or down in a list.

< or >: Press the five-way control to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL (Select): Press the center to open a menu or select a menu item. Press and hold to reset values on certain screens.

DIC Information Display Options

The information displays on the DIC can be turned on or off through the Settings menu.

1. Press SEL while viewing the Settings page in the center display zone on the cluster.
2. Scroll to Info Pages and press SEL.
3. Press ^ or v to move through the list of possible information displays.
4. Press SEL while an item is highlighted to select or deselect that item. When an item is selected, a checkmark will appear next to it.

DIC Information Displays

The following is the list of all possible DIC information displays. Some of the information displays may not be available for your particular vehicle.

Speed: The digital speedometer shows the vehicle speed in either kilometers per hour (km/h) or miles per hour (mph).

Trip 1 and Trip 2: The Trip display shows the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset. The trip odometer can be reset by pressing and holding SEL while this display is active.

Fuel Range: The Fuel Range display shows the approximate distance the vehicle can be driven without refueling. LOW will be displayed when the vehicle is low on fuel. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank.

Average Fuel Economy: The Average Fuel Economy display shows the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. The Average Fuel Economy can be reset by pressing and holding SEL while this display is active.

Instantaneous Fuel Economy: The Instantaneous Fuel Economy display shows the current fuel economy in either liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the fuel economy that the vehicle has right now and changes frequently as driving conditions change.

Average Speed: The Average Speed display shows the average speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. The average speed can be reset by pressing and holding SEL while this display is active.

Timer: This display can be used as a timer. To start the timer, press SEL while this display is active. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press SEL briefly while this display is active and the timer is running. To reset the timer to zero, press and hold SEL while this display is active.

Compass: The Compass display shows the direction the vehicle is driving.

Turn Arrow: The Turn Arrow display shows the next maneuver when using route guidance.

Travel Time: The Travel Time display shows the estimated time duration remaining for the current route.

Distance to Destination: The Distance to Destination display shows the distance to the destination when using route guidance.

Speed Limit: The Speed Limit display shows the current speed limit. The information for this page comes from a roadway database.

Speed Warning: The Speed Warning display allows the driver to set a speed that they do not want to exceed. To set the Speed Warning, press SEL when Speed Warning is displayed. Press ∧ or ∨ to adjust the value. This feature can be turned off by pressing and holding SEL while viewing this page. If the selected speed limit is exceeded, a pop-up warning is displayed with a chime.

Cruise Set Speed: The Cruise Set Speed display shows the speed the cruise control or Adaptive Cruise Control is set to.

Follow Distance: The Follow Distance display shows the current following distance to the vehicle ahead.

Battery Voltage: The Battery Voltage display shows the current battery voltage.

Oil Life: The Oil Life display shows an estimate of the oil's remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-33*. The oil should be changed as soon as possible. See *Engine Oil on page 10-8*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule. See *Maintenance Schedule on page 11-4*.

Remember, the Oil Life display must be reset after each oil change. It will not reset itself. Also, be careful not to reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change.

To reset the engine oil life system, press and hold SEL for several seconds while the Oil Life display is active. See *Engine Oil Life System on page 10-10*.

Tire Pressure: The Tire Pressure display shows the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tire is shown in amber. See *Tire Pressure Monitor System on page 10-53* and *Tire Pressure Monitor Operation on page 10-54*.

Maintenance Required: This display shows how many kilometers (miles) until the next maintenance is needed.

Blank Page: The Blank Page display allows for no information to be displayed in the DIC display zone(s).

Vehicle Messages

Messages displayed on the DIC indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may display one after the other.

The messages that do not require immediate action can be acknowledged and cleared by pressing SET/CLR. The messages that require immediate action cannot be cleared until that action is performed. All messages should be taken seriously and clearing the messages does not correct the problem.

The following are some of the vehicle messages that may be displayed depending on your vehicle content.

Battery Voltage and Charging Messages

BATTERY SAVER ACTIVE

This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing features of the vehicle that may be noticed. At the point that features are disabled, this message displays. Turn off unnecessary accessories to allow the battery to recharge.

LOW BATTERY

This message is displayed when the battery voltage is low. See *Battery on page 10-23*.

SERVICE BATTERY CHARGING SYSTEM

This message is displayed when there is a fault in the battery charging system. Take the vehicle to your dealer for service.

TRANSPORT MODE ON

This message is displayed when the vehicle is in transport mode. Some features can be disabled while in this mode, including Remote Keyless Entry (RKE), remote start, and the vehicle alarm system. Take the vehicle to your dealer for service to turn transport mode off.

Brake System Messages

BRAKE FLUID LOW

This message is displayed when the brake fluid level is low. See *Brake Fluid on page 10-21*.

STEP ON BRAKE TO RELEASE PARK BRAKE

This message is displayed if you attempt to release the Electric Parking Brake without the brake pedal applied. See *Parking Brake on page 9-28*.

RELEASE PARKING BRAKE

This message is displayed if the Electric Parking Brake is on while the vehicle is in motion. See *Parking Brake on page 9-28*.

SERVICE BRAKE ASSIST

This message may be displayed when there is a problem with the brake boost assist system. When this message is displayed, the brake boost assist motor might be heard operating and you might notice pulsation in the brake pedal. This is normal under these conditions. Take the vehicle to your dealer for service.

SERVICE PARKING BRAKE

This message is displayed when there is a problem with the parking brake. Take the vehicle to your dealer for service.

Compass Messages

CAL

This message is displayed when the compass needs to be calibrated. See *Compass on page 5-7*.

– –

Dashes will be displayed if the compass needs service. See your dealer for service.

Cruise Control Messages

ADAPTIVE CRUISE SET TO XXX

This message displays when the Adaptive Cruise Control (ACC) speed is set. See *Adaptive Cruise Control on page 9-37*.

ADAPTIVE CRUISE TEMPORARILY UNAVAILABLE

This message displays when attempting to activate Adaptive Cruise Control (ACC) when it is temporarily unavailable. The ACC system does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-89*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

CRUISE SET TO XXX

This message displays when the cruise control speed is set. See *Cruise Control on page 9-35*.

NO CRUISE BRAKING GAS PEDAL APPLIED

This message displays when Adaptive Cruise Control (ACC) is active and the driver is pressing the gas pedal. When this occurs, ACC will not brake. See *Adaptive Cruise Control on page 9-37*.

Door Ajar Messages

DOOR OPEN

A door open symbol will be displayed on the DIC showing which door is open. If the vehicle has been shifted out of P (Park), a DOOR OPEN message will also be displayed. Close the door completely.

HOOD OPEN

This message will display along with a hood open symbol when the hood is open. Close the hood completely.

REAR ACCESS OPEN

This message will display along with a symbol when the liftgate is open. Close the liftgate completely.

Engine Cooling System Messages

A/C OFF DUE TO HIGH ENGINE TEMP

This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. The vehicle can continue to be driven.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

COOLANT LEVEL LOW ADD COOLANT

This message will display if the coolant is low. See *Engine Coolant on page 10-14*.

ENGINE OVERHEATED — IDLE ENGINE

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OVERHEATED — STOP ENGINE

This message displays and a continuous chime sounds if the engine cooling system reaches unsafe temperatures for operation. Stop and turn off the vehicle as soon as it is safe to do so to avoid severe damage. This message clears when the engine has cooled to a safe operating temperature.

HIGH COOLANT TEMPERATURE

This message displays if the coolant temperature is hot. See *Engine Overheating on page 10-18*.

Engine Oil Messages

CHANGE ENGINE OIL SOON

This message displays when the engine oil needs to be changed. When you change the engine oil, be sure to reset the Oil Life System. See *Engine Oil Life System on page 10-10*, *Driver Information Center (DIC) on page 5-27*, *Engine Oil on page 10-8*, and *Maintenance Schedule on page 11-4*.

ENGINE OIL HOT, IDLE ENGINE

This message displays when the engine oil temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OIL LOW — ADD OIL

On some vehicles, this message displays when the engine oil level may be too low. Check the oil level before filling to the recommended level. If the oil is not low and this message remains on, take the vehicle to your dealer for service. See *Engine Oil on page 10-8*.

OIL PRESSURE LOW — STOP ENGINE

This message displays if low oil pressure levels occur. Stop the vehicle as soon as safely possible and do not operate it until the cause of the low oil pressure has been corrected. Check the oil as soon as possible and have the vehicle serviced by your dealer.

Engine Power Messages

ENGINE POWER IS REDUCED

This message displays when the vehicle's engine power is reduced. Reduced engine power can affect the vehicle's ability to accelerate. If this message is on, but there is no reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven at a reduced speed while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer for service as soon as possible.

Fuel System Messages

FUEL LEVEL LOW

This message displays when the vehicle is low on fuel. Refuel as soon as possible

TIGHTEN GAS CAP

This message displays when the fuel cap is not on tight. Tighten the fuel cap.

Key and Lock Messages

NO REMOTE DETECTED

This message displays when trying to start the vehicle if an RKE transmitter is not detected. The transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

NO REMOTE PRESS BRAKE TO RESTART

This message is displayed if the remote is no longer detected in the vehicle. Press the brake pedal to restart the vehicle.

NUMBER OF KEYS PROGRAMMED

This message displays when programming new keys to the vehicle.

REMOTE LEFT IN VEHICLE

This message displays when leaving the vehicle with the RKE transmitter still inside.

REPLACE BATTERY IN REMOTE KEY

This message displays when the battery in the RKE transmitter needs to be replaced.

Lamp Messages

AFL (ADAPTIVE FORWARD LIGHTING) LAMPS NEED SERVICE

This message displays when the AFL system is disabled and needs service. See your dealer. See *Adaptive Forward Lighting (AFL) on page 6-3*.

AUTOMATIC LIGHT CONTROL ON

This message is displayed when the exterior lamp control is in AUTO and the lights have turned on. See *Twilight Sentinel on page 6-4*.

AUTOMATIC LIGHT CONTROL OFF

This message is displayed when the exterior lamp control is in AUTO and the lights have turned off. See *Twilight Sentinel on page 6-4*.

XXX TURN INDICATOR FAILURE

When one of the turn signals is out, this message displays to show which bulb needs to be replaced. See *Bulb Replacement on page 10-27* and *Replacement Bulbs on page 10-33*.

TURN SIGNAL ON

This message is displayed if the turn signal has been left on. Turn off the turn signal.

Object Detection System Messages

24 GHz RADARS OFF

This message displays when driving in certain areas where there may be radar interference. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and the Active Emergency Braking System may not work or may not work as well. The vehicle does not need service.

AUTOMATIC COLLISION PREP OFF

This message displays when the Active Emergency Braking System has been turned off. See *Active Emergency Braking System on page 9-53*.

AUTOMATIC COLLISION PREP REDUCED

This message displays when the Active Emergency Braking System has been set to the "Alert" setting. This setting disables most automatic braking functions of the Auto Collision Preparation feature. Some last-second automatic braking capability is still provided with the "Alert" setting, but braking is less likely to occur. See *Active Emergency Braking System on page 9-53*.

AUTOMATIC COLLISION PREP UNAVAILABLE

This message displays when the Active Emergency Braking System has been unavailable for some time. The Active Emergency Braking System does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-89*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

This message may also be displayed if there is a problem with the StabiliTrak system.

FORWARD COLLISION ALERT OFF

This message displays when the Forward Collision Alert has been turned off.

FRONT CAMERA BLOCKED CLEAN WINDSHIELD

This message displays when the camera is blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue. The Lane Departure Warning system will not operate. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and the Active Emergency Braking System may not work or may not work as well.

LANE DEPARTURE WARNING UNAVAILABLE

This message displays when attempting to activate the Lane Departure Warning (LDW) system when it is temporarily unavailable. The LDW system does not need service.

This message could be due to the camera being blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue.

PARK ASSIST OFF

This message displays when the Parking Assist system has been turned off or when there is a temporary condition causing the system to be disabled.

REAR AUTO BRAKE AND PARK ASSIST UNAVAILABLE

This message displays when attempting to activate the parking and backing features of the Driver Assistance System when they are temporarily unavailable. The system does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-89*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

See *Driver Assistance Systems on page 9-46*.

SERVICE AUTOMATIC COLLISION PREP

If this message displays, take the vehicle to your dealer to repair the system.

SERVICE DRIVER ASSIST SYSTEM

If this message displays, take the vehicle to your dealer to repair the system.

Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), Active Emergency Braking System, Assistance Systems for Parking or Backing, and/or Lane Departure Warning (LDW) system may not work. Do not use these systems until the vehicle has been repaired.

SERVICE FRONT CAMERA

If this message remains on after continued driving, the vehicle needs service. Do not use the Lane Departure Warning (LDW) and Forward Collision Alert (FCA) features. Take the vehicle to your dealer.

SERVICE PARK ASSIST

This message displays if there is a problem with the Parking Assist system. Do not use this system to help you park. See your dealer for service.

SERVICE REAR AUTO BRAKE AND PARK ASSIST

This message displays if there is a problem with the parking and backing features of the Driver Assistance System. Do not use this system to help park or back the vehicle. See your dealer for service.

SIDE BLIND ZONE ALERT OFF

This message indicates that the driver has turned the Side Blind Zone Alert (SBZA) system off.

SERVICE SIDE DETECTION SYSTEM

If this message remains on after continued driving, the vehicle needs service. Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) features will not work. Take the vehicle to your dealer.

SIDE DETECTION SYSTEM UNAVAILABLE

This message indicates that Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) are disabled either because the sensor is blocked and cannot detect vehicles in the blind zone, or the vehicle is passing through an open area, such as the desert, where there is insufficient data for operation. This message may also activate during heavy rain or due to road spray. The vehicle does not need service. For cleaning, see "Washing the Vehicle" under *Exterior Care on page 10-89*.

Ride Control System Messages

SERVICE REAR AXLE

This message displays when there is a problem with the All-Wheel Drive (AWD) System. See your dealer for service.

SERVICE STABILITRAK

This message displays if there is a problem with the StabiliTrak system. See *StabiliTrak® System on page 9-33*.

SERVICE SUSPENSION SYSTEM

This message displays if there is a problem with the selective ride control. See *Selective Ride Control on page 9-34*.

SERVICE TRACTION CONTROL

This message displays when there is a problem with the Traction Control System (TCS). See *Traction Control System (TCS) on page 9-31*.

SPORT MODE ON

This message displays when Sport Mode has been activated. See *Selective Ride Control on page 9-34* and *Manual Mode on page 9-24*.

TRACTION CONTROL OFF

This message displays when the Traction Control System (TCS) has been turned off. See *Traction Control System (TCS) on page 9-31*.

TRACTION CONTROL ON

This message displays when the Traction Control System (TCS) has been turned on. See *Traction Control System (TCS) on page 9-31*.

Airbag System Messages

SERVICE AIRBAG

This message displays if there is a problem with the airbag system. Take the vehicle to your dealer for service.

Security Messages

THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

Service Vehicle Messages

SERVICE POWER STEERING

This message is displayed if there is a problem with the power steering system and a chime may sound. Take the vehicle to your dealer for service.

SERVICE VEHICLE SOON

This message is displayed if there is a problem with the vehicle. Take the vehicle to your dealer for service.

Starting the Vehicle Messages

PRESS BRAKE TO START VEHICLE

This message is displayed when attempting to start the vehicle without first pressing the brake pedal.

SERVICE KEYLESS START SYSTEM

This message is displayed if there is a problem with the pushbutton start system. Take the vehicle to your dealer for service.

Tire Messages

SERVICE TIRE MONITOR SYSTEM

This message displays if there is a problem with the Tire Pressure Monitor System (TPMS). See *Tire Pressure Monitor Operation on page 10-54*.

TIRE LEARNING ACTIVE

This message displays when the system is learning new tires. See *Tire Pressure Monitor Operation on page 10-54*.

TIRE LOW ADD AIR TO TIRE

This message displays when the pressure in one or more of the tires is low.

This message also displays LEFT FRONT, RIGHT FRONT, LEFT REAR, or RIGHT REAR to indicate the location of the low tire.

The low tire pressure warning light will also come on. See *Tire Pressure Light on page 5-24*.

If a tire pressure message appears on the DIC, stop as soon as you can. Inflate the tires by adding air until the tire pressure is equal to the values shown on the Tire and Loading Information label. See *Tires on page 10-42*, *Vehicle Load Limits on page 9-10*, and *Tire Pressure on page 10-51*.

You can receive more than one tire pressure message at a time. The DIC also shows the tire pressure values. See *Driver Information Center (DIC) on page 5-27*.

Transmission Messages

SERVICE TRANSMISSION

This message displays if there is a problem with the transmission. See your dealer.

SHIFT DENIED

This message displays when using the Driver Shift Control (DSC) and attempting to shift to a gear not appropriate for the vehicle speed and engine revolutions per minute (rpm). See *Manual Mode on page 9-24*.

SHIFT TO PARK

This message displays when the transmission needs to be shifted to P (Park). This may appear when attempting to remove the key from the vehicle if the vehicle is not in P (Park).

TRANSMISSION HOT — IDLE ENGINE

This message displays and a chime sounds if the transmission fluid in the vehicle gets hot. Driving with the transmission fluid temperature high can cause damage to the vehicle. Stop the vehicle and let it idle to allow the transmission to cool. This message clears when the fluid temperature reaches a safe level.

Vehicle Reminder Messages

ICE POSSIBLE DRIVE WITH CARE

This message is displayed when ice conditions are possible.

TURN WIPER CONTROL TO INTERMITTENT FIRST

This message is displayed when attempting to adjust the intermittent wiper speed without intermittent selected on the wiper control. See *Windshield Wiper/Washer on page 5-3*.

Vehicle Speed Messages

SELECTED SPEED LIMIT EXCEEDED

This message is displayed when the vehicle speed is greater than the set speed. See "Speed Warning" under *Driver Information Center (DIC) on page 5-27*.

Washer Fluid Messages

WASHER FLUID LOW ADD FLUID

This message may display when the washer fluid level is low. See *Washer Fluid on page 10-20*.

Vehicle Personalization

The audio system controls are used to access the personalization menus for customizing vehicle features.

Personalization Menus

1. Press SETTINGS on the Home page.
2. Press Vehicle Settings.

The following list of menu items may be available:

- Climate and Air Quality
- Collision/Detection Systems
- Comfort and Convenience
- Lighting
- Power Door Locks
- Remote Lock, Unlock, Start

Climate and Air Quality

Select the Climate and Air Quality menu and the following may be displayed:

- Auto Fan Max Speed
- Air Quality Sensor
- Auto Defog
- Auto Rear Defog

Auto Fan Max Speed

This feature will set the maximum auto fan speed.

Press Auto Fan Max Speed. Press to select Low, Medium, or High. Press < Back to go back to the last menu.

Air Quality Sensor

This allows for selection of air quality sensor operation at high or low sensitivity. Only vehicles with the dual automatic climate control will have this option.

Press Air Quality Sensor. Press to select Off, Low Sensitivity, or High Sensitivity. Press < Back to go back to the last menu.

Auto Defog

When set to ON, the front defog will automatically come on when the vehicle is started. Only vehicles with the dual automatic climate control will have this option.

Press Auto Defog. Press to select Off or On. Press < Back to go back to the last menu.

Auto Rear Defog

If equipped, this will allow you to turn the Auto Rear Defog on or off. This feature will automatically turn on the rear window defogger when it is cold outside.

Press Auto Rear Defog. Press to select Off or On. Press < Back to go back to the last menu.

Collision/Detection Systems

Select the Collision/Detection Systems menu and the following will be displayed:

- Alert Type
- Auto Collision Preparation
- Go Notifier
- Side Blind Zone Alert
- Rear Cross Traffic Alert

Alert Type

This feature will set crash alerts to beeps or seat vibrations. This setting affects all crash alerts including Forward Collision, Lane Departure Warning, Adaptive Cruise Control, Parking Assist, and Backing Warning alerts.

Press Alert Type. Press to select Beeps or Safety Alert Seat. Press < Back to go back to the last menu.

Auto Collision Preparation

This feature will turn on or off the Forward Collision Alert feature as well as the Automatic Braking capability of the Auto Collision Preparation feature. With the "Alert and Brake" setting, both Forward Collision Alert as well as the Automatic Braking capability of the Auto Collision Preparation feature are available. The "Alert" setting disables most automatic braking functions of the Auto Collision Preparation feature. Some last-second automatic braking capability is still provided with the "Alert" setting, but it is much less likely to be triggered by most driving conditions. Off disables all Forward Collision Alert and Automatic Braking capabilities of the Auto Collision Preparation feature. See *Active Emergency Braking System on page 9-53*.

Press Auto Collision Preparation. Press to select Off, Alert & Brake, or Alert. Press < Back to go back to the last menu.

Go Notifier

This feature will give a reminder that Adaptive Cruise Control provides when it has brought the vehicle to a complete stop behind another stopping vehicle, and then that vehicle drives on.

Press Go Notifier. Press to select Off or On. Press or press < Back to go back to the last menu.

Side Blind Zone Alert

This allows the Side Blind Zone Alert feature to be turned on or off.

Press Side Blind Zone Alert. Press to select Off or On. Press < Back to go back to the last menu.

Rear Cross Traffic Alert

This allows the Rear Cross Traffic Alert feature to be turned on or off.

Press Rear Cross Traffic Alert. Press to select Off or On.

Press < Back to go back to the last menu.

Comfort and Convenience

Select the Comfort and Convenience menu and the following will be displayed:

- Auto Memory Recall
- Easy Exit Options
- Chime Volume
- Reverse Tilt Mirror

Auto Memory Recall

This allows the Auto Memory Recall feature to be turned on or off.

Press Auto Memory Recall. Press to select Off or On, On - Driver Door Open, or On - At Ignition On.

Press < Back to go back to the last menu.

Easy Exit Options

This allows the Easy Exit Options feature to be turned on or off.

Press Easy Exit Options. Press to select Off or On. Press < Back to go back to the last menu.

Chime Volume

This allows the selection of the chime volume level.

Press Chime Volume. Press + or − to adjust the volume between 0 and 63. Press < Back to go back to the last menu.

Reverse Tilt Mirror

When on, both the driver and passenger mirrors will tilt downward when the vehicle is shifted to R (Reverse) to improve visibility of the ground near the rear wheels. They will return to their previous driving position when the vehicle is shifted out of R (Reverse) or the ignition is turned to OFF.

Press Reverse Tilt Mirror. Press to select Off or On, On - Driver and Passenger, On - Driver or On - Passenger. Press < Back to go back to the last menu.

Language

Select the Language menu and the following will be displayed:

- English
- French
- Spanish

Press to select the language. Press < Back to go back to the last menu.

Lighting

Select the Lighting menu and the following will be displayed:

- Vehicle Locator Lights
- Exit Lighting

Vehicle Locator Lights

This feature will flash the exterior lights when on the RKE transmitter is pressed to locate the vehicle.

Press Vehicle Locator Lights. Press to select Off or On. Press < Back to go back to the last menu.

Exit Lighting

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Press Exit Lighting. Press to select Off, 30 Seconds, 60 Seconds, or 120 Seconds. Press < Back to go back to the last menu.

Power Door Locks

Select Power Door Locks and the following will be displayed:

- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock

Unlocked Door Anti Lock Out

When on, this feature will keep the driver door from locking when the door is open. If Off is selected, the Delayed Door Lock menu will be available.

Press Unlocked Door Anti Lock Out. Press to select Off or On. Press < Back to go back to the last menu.

Auto Door Unlock

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park).

Press Auto Door Unlock. Press to select Off, All Doors, or Driver Door. Press < Back to go back to the last menu.

Delayed Door Lock

When on, this feature will delay the locking of the doors. To override the delay, press the power door lock switch on the door.

Press Delayed Door Lock. Press to select Off or On. Press < Back to go back to the last menu.

Remote Lock, Unlock, Start

Select Remote Lock, Unlock, Start and the following may be displayed:

- Remote Unlock Light Feedback
- Remote Lock Feedback
- Remote Door Unlock
- Remote Start Auto Cool Seats
- Remote Start Auto Heat Seats
- Passive Door Unlock
- Passive Door Lock
- Remote Left in Vehicle Reminder

Remote Unlock Light Feedback

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Press Remote Unlock Light Feedback. Press to select Off or Flash Lights. Press < Back to go back to the last menu.

Remote Lock Feedback

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Press Remote Lock Feedback. Press to select Off, Lights and Horn, Lights Only, or Horn Only. Press < Back to go back to the last menu.

Remote Door Unlock

This allows selection of which doors will unlock when pressing on the RKE transmitter.

Press Remote Door Unlock. Press to select All Doors or Driver Door Only. Press < Back to go back to the last menu.

Remote Start Auto Cool Seats

If equipped and turned on, this feature will turn the cooled seats on when using remote start on warm days.

Press Remote Start Auto Cool Seats. Press to select Off or On. On some vehicles select Off, On - Driver and Passenger, or On - Driver. Press < Back to go back to the last menu.

Remote Start Auto Heat Seats

If equipped and turned on, this feature will turn the heated seats on when using remote start on cold days.

Press Remote Start Auto Heat Seats. Press to select Off or On. On some vehicles select Off, On - Driver and Passenger, or On - Driver. Press < Back to go back to the last menu.

Passive Door Unlock

This allows the selection of what doors will unlock when using the button on the driver door to unlock the vehicle.

Press Passive Door Unlock. Press to select All Doors or Driver Door Only. Press < Back to go back to the last menu.

Passive Door Lock

This feature can be turned on or off or to select feedback when using the button on the driver door to lock the vehicle. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Press Passive Door Lock. Press to select On, On with Horn Chirp, or Off. Press < Back to go back to the last menu.

Remote Left in Vehicle Reminder

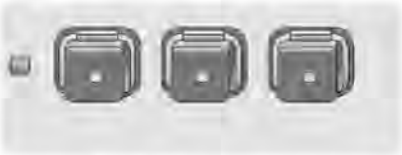
This feature will alert the driver if the remote is left in the vehicle.

Press Remote Left in Vehicle Reminder. Press to select Off or On. Press < Back to go back to the last menu.

Universal Remote System

See *Radio Frequency Statement on page 13-21* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

Universal Remote System Programming



If the vehicle has this feature, you will see these buttons with one indicator light next to them in the overhead console.

This system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Do not use the Universal Remote system with any garage door opener that does not have the stop and reverse feature. This includes any garage door opener model manufactured before April 1,1982.

Read the instructions completely before attempting to program the Universal Remote system. Because of the steps involved, it may be helpful to have another person available to assist with programming the Universal Remote system.

Keep the original hand-held transmitter for use in other vehicles as well as for future Universal Remote system programming.

It is also recommended that upon the sale of the vehicle, the programmed Universal Remote system buttons be erased for security purposes. See "Erasing Universal Remote System Buttons" later in this section.

When programming a garage door, park outside of the garage. Park directly in line with and facing the garage door opener motor-head or gate motor-head. Be sure that people and objects are clear of the garage door or gate being programmed.

It is recommended that a new battery be installed in the hand-held transmitter for quicker and more accurate transmission of the radio-frequency signal.

Programming the Universal Remote System

For questions or help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com.

Programming a garage door opener involves time-sensitive actions, so read the entire procedure before starting. Otherwise, the device will time out and the procedure will have to be repeated.

To program up to three devices:

1. Hold the end of the hand-held transmitter about 3 to 8 cm (1 to 3 in) away from the Universal Remote system buttons while keeping the indicator light in view. The hand-held transmitter was supplied by the manufacturer of the garage door opener receiver (motor-head unit).

2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Remote system buttons to be used to operate the garage door. Do not release the Universal Remote system button or the hand-held transmitter button until the indicator light changes from a slowly to a rapidly flashing light. You now may release both buttons.

   Some entry gates and garage door openers may require substitution of Step 2 with the procedure noted in "Gate Operator and Canadian Programming" later in this section.

3. Press and hold for five seconds the newly trained Universal Remote system button (the button selected in Step 2) while observing the indicator light and garage door activation.
   - If the indicator light stays on continuously or the garage door starts to move when the Universal Remote system button is pressed and released, then the programming is complete. There is no need to continue programming Steps 4–6.
   - If the Universal Remote system indicator light blinks rapidly for two seconds, then turns to a constant light and the garage door does not move, continue with programming Steps 4–6.

   It may be helpful to have another person assist with the remaining Steps 4–6.

"Learn" or "Smart" Button

4. After Steps 1–3 have been completed, locate the "Learn" or "Smart" button inside the garage on the garage door opener receiver (motor-head unit). The name and color of the button may vary by manufacturer.
5. Firmly press and release the "Learn" or "Smart" button. After pressing this button, you will have 30 seconds to complete Step 6.

6. Immediately return to the vehicle. Firmly press and hold for two seconds the Universal Remote system button, selected in Step 2 to control the garage door, and then release it. If the garage door does not move or the lamp on the garage door opener receiver (motor-head unit) does not flash, press and hold the same button a second time for two seconds, then release it. Again, if the door does not move or the garage door lamp does not flash, press and hold the same button a third time for two seconds, then release.

The Universal Remote system should now activate the garage door.

To program the remaining two Universal Remote system buttons, begin with Step 1 of "Programming the Universal Remote System."

Gate Operator and Canadian Programming

If you have questions or need help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com.

Canadian radio-frequency laws require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for the Universal Remote system to pick up the signal during programming. Similarly, some U.S. gate operators are manufactured to time out in the same manner.

If you live in Canada, or you are having difficulty programming a gate operator or garage door opener by using the "Programming the Universal Remote System" procedures, regardless of where you live, replace Step 2 under "Programming the Universal Remote System" with the following:

Continue to press and hold the Universal Remote system button while you press and release every two seconds (cycle) the hand-held transmitter button until the frequency signal has been successfully accepted by the Universal Remote system. The Universal Remote system indicator light will flash slowly at first and then rapidly. Proceed with Step 3 under "Programming the Universal Remote System" to complete.

Universal Remote System Operation

Using the Universal Remote System

Press and hold the appropriate Universal Remote system button for at least half of a second. The indicator light will come on while the signal is being transmitted.

Erasing Universal Remote System Buttons

All programmed buttons should be erased when the vehicle is sold or the lease ends.

To erase all programmed buttons on the Universal Remote system device:

1. Press and hold down the two outside buttons until the indicator light begins to flash. This should take about 10 seconds.
2. Release both buttons.

Reprogramming a Single Universal Remote System Button

To reprogram any of the three Universal Remote system buttons:

1. Press and hold the desired Universal Remote system button. Do not release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, proceed with Step 1 under "Programming the Universal Remote System."

If you have questions or need help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com. You may also call the customer assistance phone number under *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-5*.

✍ NOTES

Lighting

Exterior Lighting
Exterior Lamp Controls 6-1
Headlamp High/Low-Beam Changer 6-2
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Exterior Lighting

Exterior Lamp Controls

This control is on the instrument panel to the left of the steering column.

There are four positions:

⏻ **(Off):** Briefly turn to this position to turn the automatic light control off or on again.

AUTO (Automatic): Turns the headlamps on automatically at normal brightness, together with the following:

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Parking Lamps): Turns the parking lamps on together with the following:

- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Headlamps): Turns the headlamps on together with the lamps listed below. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Front Fog Lamps): For vehicles with fog lamps, press to turn the lamps on or off.

See *Front Fog Lamps on page 6-6*.

Headlamp High/ Low-Beam Changer

Push the turn signal lever away from you and release to turn the high beams on. To return to low beams, push the lever again or pull it toward you and release.

This indicator light turns on in the instrument cluster when the high-beam headlamps are on.

Flash-to-Pass

The flash-to-pass feature works with the low beams or Daytime Running Lamps (DRL) on or off.

To flash the high beams, pull the turn signal lever all the way toward you, then release it.

Daytime Running Lamps (DRL)

Daytime Running Lamps (DRL) can make it easier for others to see the front of your vehicle during the day. Fully functional daytime running lamps are required on all vehicles first sold in Canada.

A light sensor on top of the instrument panel makes the DRL work, so be sure it is not covered.

The DRL system makes the low-beam headlamps come on at a reduced brightness or for vehicles with High Intensity Discharge (HID) headlamps, the DRL lights will come on when the following conditions are met:

- The ignition is in the ON/ RUN mode.
- The exterior lamp control is in AUTO.
- The engine is running.

When the DRL are on, only the low-beam headlamps, at a reduced level of brightness, will be on. The high-beam headlamps, taillamps, sidemarker, instrument panel lamps, and other lamps will not be on.

The headlamps automatically change from DRL to the regular headlamps depending on the darkness of the surroundings. The other lamps that come on with the headlamps will also come on.

When it is bright enough outside, the headlamps go off and the DRL come on.

To turn the DRL lamps off or on again, turn the exterior lamp control to the off position and then release. For vehicles first sold in Canada, the DRL cannot be turned off.

This vehicle may have a DRL disabling function. When the DRL are on and a turn signal is activated, the DRL on that side will be off until the turn signal goes off.

Adaptive Forward Lighting (AFL)

For vehicles with uplevel headlamps, the AFL system adjusts the headlamps to provide greater road illumination in various driving conditions.

To enable AFL, set the exterior lamp control to the AUTO position. Moving the control out of the AUTO position will deactivate the system. AFL will operate when the vehicle speed is greater than 3 km/h (2 mph). AFL will not operate when the transmission is in R (Reverse). AFL is not immediately operable after starting the vehicle; driving a short distance is required to calibrate the AFL. See *Exterior Lamp Controls on page 6-1*.

Curve Lighting

The light beam pivots based on the steering wheel position and vehicle speed of at least 10 km/h (6 mph). The headlamps shine at an angle of up to 15 degrees to the right or left of the direction of travel.

Twilight Sentinel

This feature automatically turns the lamps on and off. A light sensor on top of the instrument panel makes the Twilight Sentinel® work, so be sure it is not covered.

With Twilight Sentinel the following will happen:

- When it is dark enough outside, and the exterior lamp control is in the AUTO position, the Daytime Running Lamps (DRL) go off, and the headlamps and parking lamps come on. The other lamps that come on with the headlamps also come on.
- When it is bright enough outside, the headlamps go off, and the DRL come on, as long as the exterior lamp control is in the AUTO position. See *Exterior Lamp Controls on page 6-1*.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlamp system changes to the DRL. During that delay, the instrument cluster may not be as bright as usual. Make sure the instrument panel brightness control is in full bright position. See *Instrument Panel Illumination Control on page 6-6*.

The vehicle can be idled with the lamps off, even when it is dark outside. After starting the vehicle, turn the exterior lamps control to ⏻, then release it. The lamps will remain off until the control is turned to ⏻ again.

Twilight Sentinel also provides exterior illumination as you leave the vehicle. If Twilight Sentinel has turned on the lamps when the ignition is turned off, the lamps remain on until one of the following occurs:

- The exterior lamp control is moved to ⏻ from the AUTO position or to 0.
- The delay time selected has elapsed.

See *Vehicle Personalization on page 5-40* to select the delay time. You can also select no delay time.

If the ignition is turned off with the exterior lamp control in the parking lamp or headlamp position, the Twilight Sentinel delay will not occur. The lamps will turn off as soon as the control is turned off.

The regular headlamp system should be turned on when needed.

Lights On with Wipers

If the windshield wipers are activated in daylight with the engine on, and the exterior lamp control is in AUTO, the headlamps, parking lamps, and other exterior lamps come on. The transition time for the lamps coming on varies based on wiper speed. When the wipers are not operating, these lamps turn off. Move the exterior lamp control to ⏻ or ≡00≡ to disable this feature.

Hazard Warning Flashers

⚠ **(Hazard Warning Flashers):** Press this button on the instrument panel, to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble. Press again to turn the flashers off.

Turn and Lane-Change Signals

Move the lever all the way up or down to signal a turn.

An arrow on the instrument cluster will flash in the direction of the turn or lane change.

Raise or lower the lever until the arrow starts to flash to signal a lane change. The turn signal flashes three times.

The lever returns to its starting position when it is released.

If after signaling a turn or lane change the arrow flashes rapidly or does not come on, a signal bulb may be burned out.

Replace any burned out bulbs. If a bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers on page 10-34*.

Front Fog Lamps

The front fog lamp button is on the exterior lamp control on the outboard side of the steering wheel.

The ignition must be on to turn on the fog lamps.

(Front Fog Lamps): Press to turn the fog lamps on or off. An indicator light on the instrument cluster comes on when the fog lamps are on.

The fog lamps come on together with the parking lamps.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Interior Lighting

Instrument Panel Illumination Control

The brightness of the instrument panel lights and steering wheel controls can be adjusted.

(Instrument Panel Brightness): Move and hold the thumbwheel up or down to brighten or dim the lights.

Cargo Lamp

The cargo lamp is located in the rear compartment and is controlled by the dome lamp. See *Dome Lamps on page 6-7*.

Courtesy Lamps

The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.

Dome Lamps

The dome lamp is in the overhead console.

To change the dome lamp settings, press the following:

(Dome Lamp Override): Turns the lamp off, even when a door is open.

(Door): The lamp comes on when a door is opened.

(On): Turns the dome lamp on.

Reading Lamps

There are reading lamps in the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

- Press or next to each overhead console reading lamp.
- Press the lamp lens on the rear passenger reading lamps.

Lighting Features

Entry Lighting

The headlamps, taillamps, license plate lamps, back-up lamps, dome lamps, and most of the interior lights turn on briefly, when is pressed on the Remote Keyless Entry (RKE) transmitter. After about 30 seconds the exterior lamps turn off, and then the dome and remaining interior lights dim to off. The entry lighting can be manually turned off by changing the ignition out of the off position, or by pressing on the RKE transmitter.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

Exit Lighting

The headlamps, taillamps, parking lamps, back-up lamps, and license plate lamps come on at night, or in areas with limited lighting, when a door is opened after the ignition is turned off. The dome lamps also come on when the driver door is opened after the ignition is changed to the off position.

The exterior lights and dome lamp remain on after the door is closed for a set amount of time, then automatically turn off.

The exterior lights turn off immediately by turning the exterior lamps control to off.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

Battery Load Management

The vehicle has Electric Power Management (EPM) that estimates the battery's temperature and state of charge. It then adjusts the voltage for best performance and extended life of the battery.

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltmeter gauge or a voltage display on the Driver Information Center (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all of the power needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, fog lamps, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action, this action may be noticeable to the driver. If so, a DIC message might be displayed and it is recommended that the driver reduce the electrical loads as much as possible. See *Battery Voltage and Charging Messages on page 5-30*.

✍ NOTES

Infotainment System

Introduction
Infotainment 7-1

Introduction

Infotainment

See the infotainment manual for information on the radio, audio players, phone, navigation system, and voice or speech recognition. It also includes information on settings and downloadable applications (if equipped).

✍ NOTES

Climate Controls

Climate Control Systems
Dual Automatic Climate Control System 8-1
Rear Climate Control System 8-6

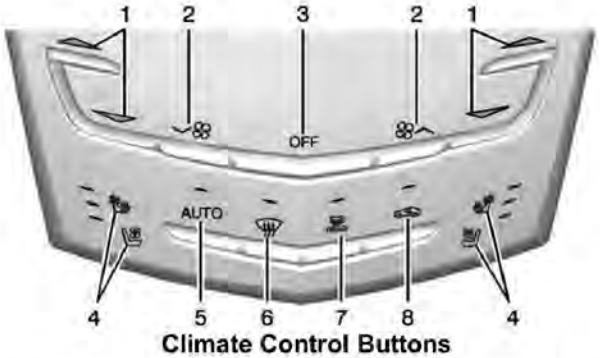
Air Vents
Air Vents 8-8

Maintenance
Passenger Compartment Air Filter 8-8

Climate Control Systems

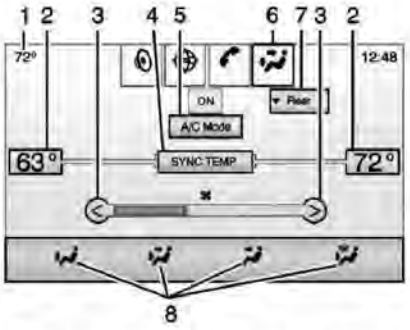
Dual Automatic Climate Control System

The climate control buttons and the touch screen are used to adjust the heating, cooling, and ventilation.



Climate Control Buttons

1. Driver and Passenger Temperature Controls
2. Fan Control
3. OFF (Fan)
4. Driver and Passenger Heated and Ventilated Seats (If Equipped)
5. AUTO (Automatic Operation)
6. Defrost
7. Rear Window Defogger
8. Recirculation



Climate Touch Screen Controls

1. Outside Temperature Display
2. Driver and Passenger Temperature Displays
3. Fan Control
4. SYNC TEMP (Synchronized Temperature)
5. A/C Mode (Air Conditioning)
6. Climate Control Selection (Application Tray Button)
7. Rear (Rear Climate Control Touch Screen)
8. Air Delivery Mode Control

Climate Control Touch Screen

The fan, air delivery mode, air conditioning, and SYNC settings can be controlled by pressing CLIMATE on the infotainment home screen or the climate button in the touch screen application tray. A selection can then be made on the front climate control page displayed. See the infotainment manual.

Climate Control Status Screen

The climate control status screen appears briefly when the climate control buttons on the faceplate are adjusted. The air delivery mode can be adjusted on the climate control status screen.

Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation in order to heat or cool the vehicle to the desired temperature.

When the indicator light is on or AUTO is displayed on the touch screen, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and the display will show the selected settings. Auto operation can be turned off individually for climate settings.

For automatic operation:

1. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Then adjust the temperature as needed for best comfort.

To improve fuel efficiency and to cool the vehicle faster, recirculation may be automatically selected in warm weather. The recirculation light will not come on. Press to select recirculation; press it again to select outside air.

OFF (Fan): Press to turn the fan on or off. The temperature control and air delivery mode can still be adjusted.

△ / ▽ (Driver and Passenger Temperature Controls): The temperature can be adjusted separately for the driver and the passenger. Press to increase or decrease the temperature. Press and hold to rapidly increase or decrease the temperature.

SYNC (Synchronized Temperature): Press SYNC on the touch screen to link all climate zone settings to the driver settings. Adjust the driver side temperature control to change the linked temperature. When the passenger settings are adjusted, the SYNC button is displayed when the temperatures are unlinked.

Manual Operation

∨ or ∧ (Fan Control): Press the fan control buttons or the touch screen fan control, to increase or decrease the fan speed. Press and hold the buttons or the touch screen control to adjust speed more quickly. The fan speed setting displays. Pressing either button cancels automatic fan control and the fan can be controlled manually. Press AUTO to return to automatic operation. To turn off the fan and climate control system, press and hold the fan down button or touch screen fan control until it is off.

Air Delivery Mode Control: When the climate information is displayed, press the desired air delivery mode on the touch screen to change the direction of the airflow. The selected air delivery mode button is lit. Pressing any of the air delivery buttons cancels automatic air delivery control and the direction of the airflow can be controlled manually. Press AUTO to return to automatic operation.

To change the current mode, select one of the following:

(Vent): Air is directed to the instrument panel outlets.

(Bi-Level): Air is divided between the instrument panel outlets and the floor outlets.

(Floor): Air is directed to the floor outlets.

(Defog): Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.

(Defrost): Clears the windshield of fog or frost more quickly. Air is directed to the windshield. Press the button to turn on or off. Changing the air delivery mode also turns the defrost off.

AC Mode (Air Conditioning): Press the AC Mode touch screen control to turn the automatic air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed.

Automatic Air Recirculation: When the AUTO indicator light is on, the air inside the vehicle may automatically recirculate as needed to help quickly cool the inside of the vehicle.

If equipped, an air quality sensor may also activate recirculation when it detects increasing levels of poor quality air outside the vehicle. The air quality sensor will not maintain recirculation for an extended period and may not activate during cold weather. To adjust the sensitivity of the air quality sensor, see "Climate and Air Quality" under *Vehicle Personalization on page 5-40*.

The air quality sensor system does not protect against carbon monoxide (CO), which cannot be seen or smelled. See *Engine Exhaust on page 9-22*.

(Recirculation): Press to alternate between recirculating air inside the vehicle or pulling in outside air. The indicator light on the button is lit when recirculation mode is active. This helps to quickly cool the air inside the vehicle or prevent outside air and odors from entering.

Pressing this button cancels automatic recirculation. Press AUTO to return to automatic operation; recirculation runs automatically as needed.

Manual recirculation mode is not available when in Defrost or Defog modes.

Auto Defog: The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. If the climate control system does not detect possible window fogging, it returns to normal operation. To turn Auto Defog off or on, see "Climate and Air Quality" under *Vehicle Personalization on page 5-40*.

Rear Window Defogger

(Rear Window Defogger): Press to turn the rear window defogger on or off.

The rear window defogger turns off automatically after about 10 minutes. If turned on again, it runs for about five minutes before turning off. At higher vehicle speeds, the rear window defogger may stay on continuously.

The rear window defogger can be set to automatic operation. See "Climate and Air Quality" under *Vehicle Personalization on page 5-40*. When Auto Rear Defog is selected, the rear window defogger turns on automatically when the interior temperature is cold and the outside temperature is about 4°C (40°F) and below. The auto rear defogger turns off automatically after about 10 minutes. At higher vehicle speeds, the rear window defogger may stay on continuously.

The heated outside mirrors turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirrors.

Notice: **Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect the radio's ability to pick up stations clearly. The repairs would not be covered by the vehicle warranty.**

Driver and Passenger Heated and Ventilated Seats (If Equipped): Press or to heat the driver or passenger seat cushion and seatback.

Press or to ventilate the driver or passenger seat. See *Heated and Ventilated Seats on page 1-9*.

Remote Start Climate Control Operation: For vehicles with the remote vehicle start feature, the climate control system may run when the vehicle is started remotely. The system uses the driver's previous settings to heat or cool the inside of the vehicle. The rear defog may come on during remote start based on cold ambient conditions. The rear defog indicator light does not come on during a remote start. If the vehicle has heated or ventilated seats, they may come on during a remote start. See *Remote Vehicle Start on page 2-9* and *Heated and Ventilated Seats on page 1-9*.

The rear window defogger turns on if it is cold outside.

Sensor

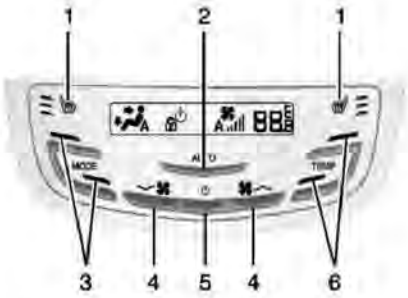
The solar sensor, located on top of the instrument panel near the windshield, monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

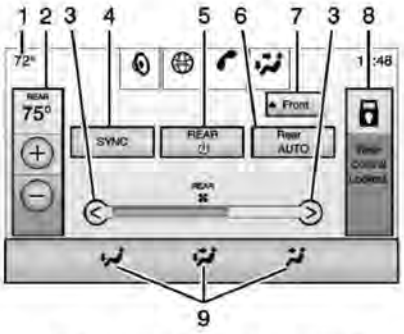
Rear Climate Control System

For vehicles with a rear climate control system, the settings can be adjusted with the rear climate control buttons and the touch screen.



Rear Climate Control Buttons

1. Heated Rear Seats (If Equipped)
2. AUTO (Automatic Operation)
3. Air Delivery Mode Control
4. Fan Control
5. ⏻ (On/Off)
6. TEMP (Temperature Control)



Rear Climate Touch Screen Controls

1. Outside Temperature Display
2. Rear Climate Temperature Control
3. Fan Control
4. SYNC (Synchronized Temperatures)
5. REAR ⏻ (On/Off)
6. Rear AUTO (Automatic Operation)
7. Front (Front Climate Control Touch Screen)
8. Rear Control Lockout
9. Air Delivery Mode Control

Rear: Press this button on the front climate control touch screen to open the rear climate control screen. The rear climate control settings can now be adjusted from the front passenger area.

⏻ **(On/Off):** Press ⏻ or REAR ⏻ to turn the rear climate control on or off. The rear climate control system can also be turned off by pressing the fan down button until the system turns off. If the rear climate control is turned off using REAR ⏻ on the touch screen, the ⏻ button on the rear climate control faceplate must be pressed twice to turn the system back on.

SYNC: Press the SYNC button on the touch screen to match the rear climate control temperature to the front climate control driver temperature. The SYNC button will be lit. Press the TEMP, MODE or AUTO button twice to unlink the set driver and rear temperatures. The SYNC button turns off.

Rear Control Lockout: Press to lock or unlock control of the rear climate control system from the rear seat passengers. When locked the rear climate control can only be adjusted from the front seat.

Automatic Operation

Rear AUTO: Press to turn on or off. The air delivery and fan speed are controlled automatically. The AUTO indicator appears on the display. If any of the climate control settings are manually adjusted, this cancels full automatic operation.

Manual Operation

< ✾ > (Fan Control): Press or press and hold the rear climate control buttons or touch screen to increase or decrease the airflow. Pressing > ✾ when the system is off will turn the system on. The air delivery mode remains in its previous setting.

+/− (Temperature Control): Press or press and hold the rear temperature control buttons or touch screen to adjust the rear passenger temperature. Press + for warmer air and press − for cooler air.

(Air Delivery Mode Control): Press the desired mode button on the touch screen or the mode button on the rear faceplate to change the direction of the airflow in the rear seating area.

or (Heated Rear Seats, If Equipped): Press or to heat the left or right outboard seat cushion and seatback. See *Heated Rear Seats on page 3-12*.

Air Vents

Move the sliding knob on the air outlets up and down or left and right to direct the airflow. Use the thumbwheels near the air outlets to open or close off the airflow.

Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windshield that could block the flow of air into the vehicle.
- Keep the path under the front seats clear of objects to help circulate the air inside the vehicle more effectively.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.
- Do not insert any objects in the outlets, as failure of the mechanism may occur.

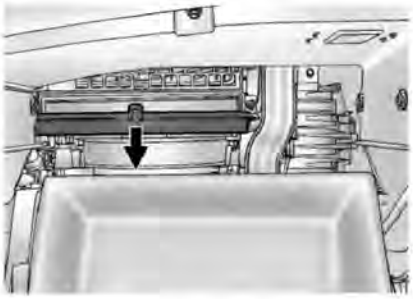
Maintenance

Passenger Compartment Air Filter

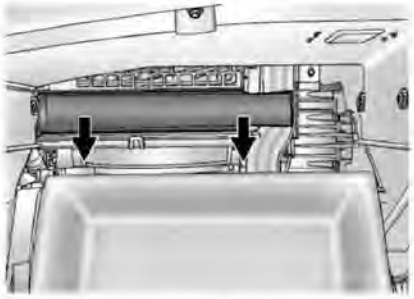
The filter removes dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle.

The filter should be replaced as part of routine scheduled maintenance, see *Maintenance Schedule on page 11-4*. To find out what type of filter to use, see *Maintenance Replacement Parts on page 11-15*.

1. Open the glove box completely and remove the four screws along the upper portion of the glove box.
2. When released, lower the upper portion of the glove box.
3. Locate the service door for the passenger compartment air filter.



4. Release the two latches holding the service door. Lower the service door.



5. Remove the old air filter.
6. Install the new air filter.
7. Close the service door and latches.
8. Reinstall the upper portion of the glove box.

See your dealer if additional assistance is needed.

✍ NOTES

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Driving Information

Distracted Driving

Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgment and do not let other activities divert your attention away from the road. Many local governments have enacted laws regarding driver distraction. Become familiar with the local laws in your area.

To avoid distracted driving, always keep your eyes on the road, hands on the wheel, and mind on the drive.

- Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.
- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.
- Become familiar with vehicle features before driving, such as programming favorite radio stations and adjusting climate control and seat settings. Program all trip information into any navigation device prior to driving.
- Wait until the vehicle is parked to retrieve items that have fallen to the floor.
- Stop or park the vehicle to tend to children.
- Keep pets in an appropriate carrier or restraint.
- Avoid stressful conversations while driving, whether with a passenger or on a cell phone.

⚠ WARNING

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Refer to the Infotainment manual for more information on using that system, including pairing and using a cell phone

Defensive Driving

Defensive driving means "always expect the unexpected." The first step in driving defensively is to wear the safety belt. See *Safety Belts on page 3-13*.

- Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready.
- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

Drunk Driving

Death and injury associated with drinking and driving is a global tragedy.

⚠ WARNING

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking.

Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power brake assist but it will be used when the brake is applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

Steering

Hydraulic Power Steering

Your vehicle has hydraulic power steering. It may require maintenance. See *Power Steering Fluid on page 10-19*.

If power steering assist is lost because the engine stops or because of a system malfunction, the vehicle can be steered but may require increased effort. See your dealer if there is a problem.

Curve Tips

- Take curves at a reasonable speed.
- Reduce speed before entering a curve.
- Maintain a reasonable steady speed through the curve.
- Wait until the vehicle is out of the curve before accelerating gently into the straightaway.

Steering in Emergencies

- There are some situations when steering around a problem may be more effective than braking.
- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- Antilock Brake System (ABS) allows steering while braking.

Off-Road Recovery

The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

1. Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.

2. Turn the steering wheel about one-eighth of a turn, until the right front tire contacts the pavement edge.
3. Turn the steering wheel to go straight down the roadway.

Loss of Control

Skidding

There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid — wheels are not rolling.
- Steering or Cornering Skid — too much speed or steering in a curve causes tires to slip and lose cornering force.
- Acceleration Skid — too much throttle causes the driving wheels to spin.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

If the vehicle starts to slide, follow these suggestions:

- Ease your foot off the accelerator pedal and steer the way you want the vehicle to go. The vehicle may straighten out. Be ready for a second skid if it occurs.
- Slow down and adjust your driving according to weather conditions. Stopping distance can be longer and vehicle control can be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognize warning clues — such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.
- Try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide.

Remember: Antilock brakes help avoid only the braking skid.

Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

⚠ WARNING

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

(Continued)

WARNING (Continued)

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

Hydroplaning

Hydroplaning is dangerous. Water can build up under the vehicle's tires so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When the vehicle is hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. The best advice is to slow down when the road is wet.

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires on page 10-42*.
- Turn off cruise control.

Highway Hypnosis

Always be alert and pay attention to your surroundings while driving. If you become tired or sleepy, find a safe place to park the vehicle and rest.

Other driving tips include:

- Keep the vehicle well ventilated.
- Keep the interior temperature cool.
- Keep your eyes moving — scan the road ahead and to the sides.
- Check the rearview mirror and vehicle instruments often.

Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips for driving in these conditions include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

⚠ WARNING

If you do not shift down, the brakes could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Shift down to let the engine assist the brakes on a steep downhill slope.

⚠ WARNING

Coasting downhill in N (Neutral) or with the ignition off is dangerous. The brakes will have to do all the work of slowing down and they could get so hot that they would not work well. You would then have poor braking or even none going down a hill. Steering may also be affected when ignition is off. You could crash. Always have the engine running and the vehicle in gear when going downhill.

- Stay in your own lane. Do not swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- Be alert on top of hills; something could be in your lane (stalled car, accident).

- Pay attention to special road signs (falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Drive carefully when there is snow or ice between the tires and the road, creating less traction or grip. Wet ice can occur at about 0°C (32°F) when freezing rain begins to fall, resulting in even less traction. Avoid driving on wet ice or in freezing rain until roads can be treated with salt or sand.

Drive with caution, whatever the condition. Accelerate gently so traction is not lost. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick, so there is even less traction.

Try not to break the fragile traction. If you accelerate too fast, the drive wheels will spin and polish the surface under the tires even more.

The Antilock Brake System (ABS) improves vehicle stability during hard stops on slippery roads, but apply the brakes sooner than when on dry pavement.

Allow greater following distance on any slippery road and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.

See *Antilock Brake System (ABS) on page 9-27*.

Turn off cruise control, on slippery surfaces.

Blizzard Conditions

Being stuck in snow can be a serious situation. Stay with the vehicle unless there is help nearby. If possible, use Roadside Service. See *Roadside Service (Mexico) on page 13-7* or *Roadside Service (U.S. and Canada) on page 13-11*. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to an outside mirror.

⚠ WARNING

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

(Continued)

WARNING (Continued)

If the vehicle is stuck in the snow:

- Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust pipe.
- Check again from time to time to be sure snow does not collect there.
- Open a window about 5 cm (2 in) on the side of the vehicle that is away from the wind to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that circulates the air inside the vehicle and set the fan speed to the highest setting. See "Climate Control Systems" in the Index.

(Continued)

WARNING (Continued)

For more information about carbon monoxide, see *Engine Exhaust on page 9-22*.

To save fuel, run the engine for only short periods as needed to warm the vehicle and then shut the engine off and close the window most of the way to save heat. Repeat this until help arrives but only when you feel really uncomfortable from the cold. Moving about to keep warm also helps.

If it takes some time for help to arrive, now and then when you run the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible to save fuel.

If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method. See *Traction Control System (TCS) on page 9-31*.

⚠ WARNING

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 56 km/h (35 mph).

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a low forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see *Towing the Vehicle on page 10-85*.

Vehicle Load Limits

It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo and all nonfactory-installed options. Two labels on the vehicle show how much weight it may properly carry, the Tire and Loading Information label and the Certification label.

⚠ WARNING

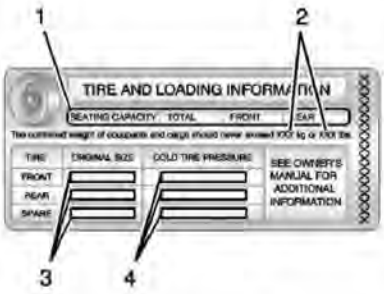
Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the

(Continued)

WARNING (Continued)

vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Tire and Loading Information Label



Label Example

A vehicle-specific Tire and Loading Information label is attached to the vehicle's center

pillar (B-pillar). With the driver door open, the label is attached near the door lock post. The Tire and Loading Information label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilograms and pounds.

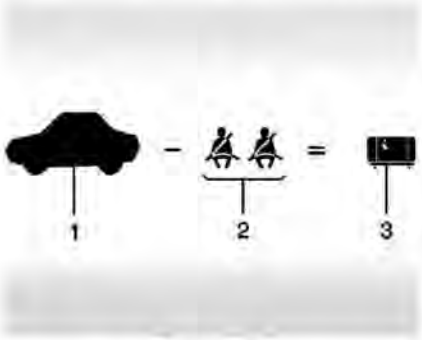
The Tire and Loading Information label also shows the tire size of the original equipment tires (3) and the recommended cold tire inflation pressures (4). For more information on tires and inflation see *Tires on page 10-42* and *Tire Pressure on page 10-51*.

There is also important loading information on the Certification label. It tells you the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification Label" later in this section.

Steps for Determining Correct Load Limit

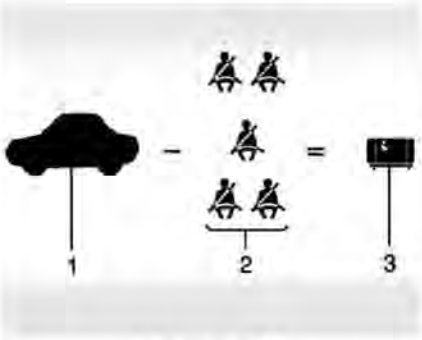
1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs" on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs (1400 − 750 (5 x 150) = 650 lbs).
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, the load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

See *Trailer Towing on page 9-68* for important information on towing a trailer, towing safety rules and trailering tips.



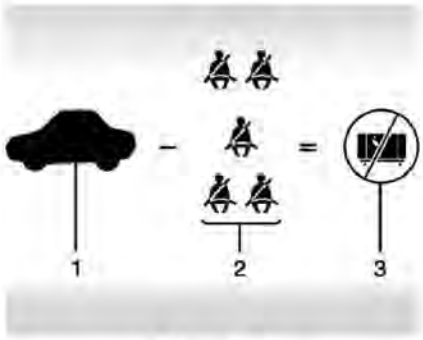
Example 1

1. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).
3. Available Occupant and Cargo Weight = 317 kg (700 lbs).



Example 2

1. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).
3. Available Cargo Weight = 113 kg (250 lbs).



Example 3

1. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).
3. Available Cargo Weight = 0 kg (0 lbs).

Refer to the vehicle's Tire and Loading Information label for specific information about the vehicle's capacity weight and

seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's capacity weight.

Certification Label

Label Example

A vehicle-specific Certification/ Tire label is attached to the driver side center pillar (B-pillar). The label shows the size of the vehicle's original tires and the inflation pressures needed to obtain the gross weight capacity of the vehicle. This is called Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tire label also tells you the maximum weights for the front and rear axles, called Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, you need to go to a weigh station and weigh the vehicle. Your dealer can help you with this. Be sure to spread out the load equally on both sides of the center line.

Never exceed the GVWR for the vehicle, or the GAWR for either the front or rear axle.

If the vehicle is carrying a heavy load, it should be spread out. See "Steps for Determining Correct Load Limit" earlier in this section.

⚠ WARNING

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Your warranty does not cover parts or components that fail because of overloading.

The label will help you decide how much cargo and installed equipment your vehicle can carry.

Using heavier suspension components to get added durability might not change your weight ratings. Ask your dealer to help you load your vehicle the right way.

If you put things inside your vehicle – like suitcases, tools, packages, or anything else – they will go as fast as the vehicle goes. If you have to stop or turn quickly, or if there is a crash, they will keep going.

⚠ WARNING

Things inside the vehicle can strike and injure people in a sudden stop or turn, or in a crash.

- Put things in the cargo area of the vehicle. In the cargo area, put them as

(Continued)

WARNING (Continued)

far forward as possible. Try to spread the weight evenly.

- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.
- Do not leave an unsecured child restraint in the vehicle.
- Secure loose items in the vehicle.
- Do not leave a seat folded down unless needed.

Starting and Operating

New Vehicle Break-In

Notice: **The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:**

- **Do not drive at any one constant speed, fast or slow, for the first 805 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.**
- **During the first 1 000 km (600 mi), avoid using more than moderate acceleration in lower gears and avoid vehicle speeds above 110 km/h (68 mph).**

- **Between the first 1 000 km (600 mi) and 5 000 km (3,000 mi), heavy acceleration in lower gears can be used. Vehicle speeds above 110 km/h (68 mph) should be limited to five minutes per use.**
- **Avoid making hard stops for the first 322 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this breaking-in guideline every time you get new brake linings.**
- **Do not tow a trailer during break-in. See *Driving Characteristics and Towing Tips on page 9-65* for the trailer towing capabilities of your vehicle and more information.**

Following break-in, engine speed and load can be gradually increased.

Adjustable Throttle and Brake Pedal

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.

The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

Adjust the throttle and brake pedals while the vehicle is in P (Park) without pressing on the pedals. The pedals cannot be adjusted while the vehicle is in R (Reverse) or when cruise control is engaged. The throttle and brake pedals can also be adjusted while driving.

Ignition Positions

The vehicle has an electronic keyless ignition with pushbutton start.

Pressing the button cycles it through three modes, ACC/ACCESSORY, ON/RUN/START and STOPPING THE ENGINE/OFF.

If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the keyless entry system. See *Key and Lock Messages on page 5-34*.

To shift out of P (Park), the vehicle must be in ON/RUN mode and the brake pedal must be applied.

STOPPING THE ENGINE/OFF (No Indicator Light): When the vehicle is stopped, press the engine START/STOP button once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 9-19*.

If the vehicle is not in P (Park), the ignition will return to ACC/ ACCESSORY and display the message SHIFT TO PARK in the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 5-27*. When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop, shift to P (Park), and turn the ignition to OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the OFF position.
4. Set the parking brake. See *Parking Brake on page 9-28*.

> **⚠ WARNING**
>
> Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over, and must be shut off while driving, press and hold the engine START/STOP button for longer than two seconds, or press twice in five seconds.

ACC/ACCESSORY (Amber Indicator Light): This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied, will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ACCESSORY to OFF after ten minutes to prevent battery run down.

ON/RUN/START (Green Indicator Light): This mode is for driving and starting. With the ignition off, and the brake pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Gasoline Engine on page 9-17*. The ignition will then remain in ON/RUN.

Service Only Mode

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off, and the brake pedal not applied, pressing and holding the button for more than five seconds will place the vehicle in Service Only Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Only Mode. Push the button again to turn the vehicle off.

Starting the Gasoline Engine

Place the transmission in the proper gear by moving the shift lever to P (Park) or N (Neutral). To restart the engine when the vehicle is already moving, use N (Neutral).

Notice: **Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.**

The keyless access transmitter must be inside the vehicle for the ignition to work.

Cell phone chargers can interfere with the operation of the Keyless Access System. Battery chargers should not be plugged in when starting or turning off the engine.

To start the vehicle:

Starting Procedure

1. With the brake pedal applied, press the START button located on the instrument panel. See *Ignition Positions on page 9-16*.
2. When the engine begins cranking, let go of the button and the engine cranks automatically until it starts.

   If the transmitter is not in the vehicle or something is interfering with the transmitter, the Driver Information Center (DIC) will display NO REMOTE DETECTED. See *Driver Information Center (DIC) on page 5-27*.

   If the battery in the keyless access transmitter needs replacing, the DIC displays REPLACE BATTERY IN REMOTE KEY. The vehicle can still be driven. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.
3. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.
4. If the engine does not start and no DIC message is displayed, wait 15 seconds before trying again to let the cranking motor cool down.

   If the engine does not start after 5-10 seconds, especially in very cold weather (below −18°C or 0°F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor while cranking for up to 15 seconds.

Notice: **Cranking the engine for long periods of time, by pressing the START button immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to allow the cranking motor to cool down.**

When the engine starts, let go of the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine.

The vehicle has a Computer-Controlled Cranking System. This feature assists in starting the engine and protects components. Once cranking has been initiated, the engine continues cranking for a few seconds or until the vehicle starts. If the engine does not start, cranking automatically stops after 15 seconds to prevent cranking motor damage. To prevent gear damage, this system also prevents cranking if the engine is already running.

Notice: **If you add electrical parts or accessories, you could change the way the engine operates. Any resulting damage would not be covered by the vehicle warranty. See *Add-On Electrical Equipment on page 9-72*.**

Engine Heater

The engine coolant heater, if available, can help in cold weather conditions at or below −18°C (0°F) for easier starting and better fuel economy during engine warm-up. Plug in the coolant heater at least four hours before starting the vehicle. An internal thermostat in the plug end of the cord will prevent engine coolant heater operation at temperatures above −18°C (0°F).

To Use the Engine Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. The cord is located near the air cleaner.
3. Plug it into a normal, grounded 110-volt AC outlet.

⚠ WARNING

Plugging the cord into an ungrounded outlet could cause an electrical shock. Also, the wrong kind of extension cord could overheat and cause a fire. You could be seriously injured. Plug the cord into a properly grounded three-prong 110-volt AC outlet. If the cord will not reach, use a heavy-duty three-prong extension cord rated for at least 15 amps.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts. If you do not it could be damaged.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

Retained Accessory Power (RAP)

These accessories can be used after the engine is turned off:

- Infotainment system (up to 10 minutes or driver door is opened).
- Power windows, sunroof (if equipped), and power outlets (up to 10 minutes or any door is opened).

Shifting Into Park

1. Hold the brake pedal down and set the parking brake.

   See *Parking Brake on page 9-28*.

2. Move the shift lever into P (Park) by pushing the lever all the way toward the front of the vehicle.
3. Turn the ignition off.

Leaving the Vehicle with the Engine Running

⚠ WARNING

It can be dangerous to leave the vehicle with the engine running. It could overheat and catch fire.

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

(Continued)

WARNING (Continued)

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 9-20*. If you are towing a trailer, see *Driving Characteristics and Towing Tips on page 9-65*.

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is firmly set before you leave it. After you have moved the shift lever into P (Park), hold down the regular brake pedal.

See if you can move the shift lever away from P (Park) without first pulling it toward you. If you can, it means that the shift lever was not fully locked into P (Park).

Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see "Shifting Into P (Park)" listed previously.

If torque lock does occur, your vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 9-65*.

Shifting out of Park

This vehicle is equipped with an automatic transmission shift lock control system. The shift lock control is designed to prevent movement of the shift lever out of P (Park), unless the ignition is in ON/RUN and the brake pedal is applied.

The shift lock control is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting on page 10-82*.

To shift out of P (Park):

1. Apply the brake pedal.
2. Press the START button.
3. Press the shift lever button.
4. Move the shift lever to the desired position.

If you still are unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.
3. Move the shift lever to the desired position.

If you still cannot move the shift lever from P (Park), consult your dealer or a professional towing service.

Parking over Things That Burn

⚠ WARNING

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Engine Exhaust

⚠ WARNING

Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or tail pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.
- The vehicle exhaust system has been modified, damaged, or improperly repaired.

(Continued)

WARNING (Continued)

- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

Running the Vehicle While Parked

It is better not to park with the engine running.

If the vehicle is left with the engine running, follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park on page 9-20* and *Engine Exhaust on page 9-22*.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-65*.

Automatic Transmission

There are several different positions for the shift lever.

P (Park): This position locks the front wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

⚠ WARNING

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 9-20* and *Driving Characteristics and Towing Tips on page 9-65*.

Make sure the shift lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. You must fully apply the regular brakes first and then press the shift lever button before you can shift from P (Park) when the ignition is in ON/RUN. If you cannot shift out of P (Park), ease pressure on the shift lever and push the shift lever all the way into P (Park) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See *Shifting out of Park on page 9-21*.

Notice: **Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.**

R (Reverse): Use this gear to back up.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging your transmission. See *If the Vehicle Is Stuck on page 9-9* for additional information.

N (Neutral): In this position, the engine does not connect with the wheels. To restart when the vehicle is already moving, use N (Neutral) only. You can also use N (Neutral) when the vehicle is being towed.

⚠ WARNING

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

***Notice:* Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.**

D (Drive): This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Going less than 35 mph (55 km/h), push the accelerator pedal about halfway down.
- Going about 35 mph (55 km/h) or more, push the accelerator all the way down.

  The transmission will shift down to a lower gear and have more power.

Downshifting the transmission in slippery road conditions could result in skidding, see "Skidding" under *Loss of Control on page 9-5*

***Notice:* Spinning the tires or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. If you are stuck, do not spin the tires. When stopping on a hill, use the brakes to hold the vehicle in place.**

Manual Mode

Driver Shift Control (DSC)

***Notice:* Driving with the engine at a high rpm without upshifting while using Driver Shift Control (DSC), could damage the vehicle. Always upshift when necessary while using DSC.**

Driver Shift Control (DSC) allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).

   If you do not move the shift lever forward or rearward, the vehicle will be in Sport Mode. When you are in Sport Mode the vehicle will still shift automatically. The transmission may remain in a gear longer than it would in the normal driving mode based on braking, throttle input, and vehicle lateral acceleration.

   SPORT MODE ON will be displayed in the DIC. See *Ride Control System Messages on page 5-37*. The word "sport" will display below the odometer. The gear position will also be indicated in the tachometer.

   Within Sport Mode there is a further performance feature called Performance Mode Lift Foot (PMLF) Mode. The feature is activated automatically when sports oriented driving is detected, based on cornering and on/off throttle application. PMLF allows the transmission to hold the current gear instead of upshifting when the throttle is lifted.

2. To enter M (Manual Mode), press the shift lever forward to upshift or rearward to downshift.

   An M will be displayed in the DIC.

3. To return to Sport Mode from M (Manual Mode), press and briefly hold the shift lever forward.

Gear position is indicated in the bottom right corner of the display area in the instrument cluster. The number indicates the requested gear range when moving the shift lever forward or rearward.

While using the DSC feature, the vehicle will have firmer, quicker shifting. You can use this for sport driving or when climbing or descending hills, to stay in gear longer, or to downshift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine revolutions per minute (rpm). The transmission will not automatically shift to the next lower gear if the engine rpm is too high, nor to the next higher gear when the maximum engine rpm is reached.

If shifting is prevented for any reason, the currently selected gear will flash multiple times, indicating that the transmission has not shifted gears.

While in the DSC mode, the transmission will automatically downshift when the vehicle comes to a stop. This will allow for more power during take-off.

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into second gear. A higher gear ratio allows you to gain more traction on slippery surfaces.

Fuel Economy Mode

Driving habits can affect fuel mileage. For driving tips to get the best fuel economy possible, see *Driving for Better Fuel Economy on page 1-23*.

The vehicle may have a fuel economy mode. When engaged, fuel economy mode can improve the vehicle's fuel economy.

Pressing the eco button by the shift lever will engage fuel economy mode. When activated, the eco light in the instrument cluster will come on. See *Fuel Economy Light on page 5-24*. Pressing the button a second time will turn fuel economy mode off.

When fuel economy mode is on:

- The transmission will upshift sooner, and downshift later.
- The torque converter will lock up sooner, and stay on longer.
- The gas pedal will be less sensitive.
- The vehicle's computers will more aggressively shut off fuel to the engine under deceleration.
- The engine operates at lower rpm's in fuel economy mode, which can increase noise and vibration. This is normal.

Drive Systems

All-Wheel Drive

Vehicles with this feature always send engine power to all four wheels. It is fully automatic, and adjusts itself as needed for road conditions.

When using a compact spare tire on an AWD vehicle, the system automatically detects the compact spare and disables AWD. To restore AWD operation and prevent excessive wear on the system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire on page 10-81*.

Brakes

Antilock Brake System (ABS)

This vehicle has the Antilock Brake System (ABS), an advanced electronic braking system that helps prevent a braking skid.

When the vehicle begins to drive away, ABS checks itself. A momentary motor or clicking noise might be heard while this test is going on, and it might even be noticed that the brake pedal moves a little. This is normal.

If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light on page 5-21*.

If driving safely on a wet road and it becomes necessary to slam on the brakes and continue braking to avoid a sudden obstacle, a computer senses that the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help you steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You might hear the ABS pump or motor operating and feel the brake pedal pulsate, but this is normal.

Braking in Emergencies

ABS allows you to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

Parking Brake

The vehicle has an Electric Parking Brake (EPB). The switch for the EPB is in the center console. The EPB can always be activated, even if the ignition is off.

To avoid draining the battery, do not cycle the EPB too often without the engine running. The EPB can be left applied while the vehicle is parked.

The system has a parking brake status light and a parking brake warning light. See *Brake System Warning Light on page 5-20*. There are also three Driver Information Center (DIC) messages. See *Driver Information Center (DIC) on page 5-27*. In case of insufficient electrical power, the EPB cannot be applied or released.

Before leaving the vehicle, check the parking brake status light to ensure the parking brake is applied.

EPB Apply

The EPB can be applied any time the vehicle is stopped. The EPB is applied by momentarily lifting up on the EPB switch. Once fully applied, the parking brake status light will be on. While the brake is being applied, the status light will flash until full apply is reached. If the light does not come on, or remains flashing, you need to have the vehicle serviced. Do not drive the vehicle if the parking brake status light is flashing. See your dealer. See *Brake System Warning Light on page 5-20*.

If the EPB is applied while the vehicle is in motion, a chime will sound, and the DIC message RELEASE PARKING BRAKE will be displayed. The vehicle will decelerate as long as the switch is held in the up position. Releasing the EPB switch during the deceleration will release the parking brake. If the switch is held in the up position until the vehicle comes to a stop, the EPB will remain applied.

If the parking brake status light flashes continuously, the EPB is only partially applied or released, or there is a problem with the EPB. The DIC message SERVICE PARKING BRAKE will be displayed. If this light flashes continuously, release the EPB, and attempt to apply it again. If this light continues to flash, do not drive the vehicle. See your dealer.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To apply the EPB when this light is on, lift up on the EPB switch and hold it in the up position. Full application of the parking brake by the EPB system may take a longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light remains on. If the parking brake warning light is on, see your dealer.

Adaptive Cruise Control (if equipped) may automatically apply the EPB in some situations when the vehicle is not moving. This is normal, and is done to periodically check the correct operation of the EPB system. See *Adaptive Cruise Control on page 9-37*.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

EPB Release

To release the EPB, place the ignition in the ACC/ACCESSORY or ON/RUN position, apply and hold the brake pedal, and push down momentarily on the EPB switch. If you attempt to release the EPB without the brake pedal applied, a chime will sound, and the DIC message STEP ON BRAKE TO RELEASE PARK BRAKE will be displayed. The EPB is released when the parking brake status light is off.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To release the EPB when this light is on, push down on the EPB switch and hold it in the down position. EPB release may take a longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light is off. If the light is on, see your dealer.

Notice: **Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.**

Automatic EPB Release

The EPB will automatically release if the vehicle is running, placed into gear, and an attempt is made to drive away. Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 9-65.*

Brake Assist

This vehicle has a brake assist feature designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature uses the stability system hydraulic brake control module to supplement the power brake system under conditions where the driver has quickly and forcefully applied the brake pedal in an attempt to quickly stop or slow down the vehicle. The stability system hydraulic brake control module increases brake pressure at each corner of the vehicle until the ABS activates. Minor brake pedal pulsation or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates. The brake assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

Hill Start Assist (HSA)

This vehicle has a Hill Start Assist (HSA) feature, which may be useful when the vehicle is stopped on a grade. This feature is designed to prevent the vehicle from rolling, either forward or rearward, during vehicle drive off. After the driver completely stops and holds the vehicle in a complete standstill on a grade, HSA will be automatically activated. During the transition period between when the driver releases the brake pedal and starts to accelerate to drive off on a grade, HSA holds the braking pressure to ensure that there is no rolling. The brakes will automatically release when the accelerator pedal is applied within the two-second window. It will not activate if the vehicle is in a drive gear and facing downhill, or if the vehicle is facing uphill and in R (Reverse).

Ride Control Systems

Traction Control System (TCS)

The vehicle has a Traction Control System (TCS) that limits wheel spin. On a front-wheel-drive vehicle, the system operates if it senses that one or both of the front wheels are spinning or beginning to lose traction. On an All-Wheel-Drive (AWD) vehicle, the system will operate if it senses that any of the wheels are spinning or beginning to lose traction. When this happens, the system brakes the spinning wheel(s) and/or reduces engine power to limit wheel spin.

The system may be heard or felt while it is working, but this is normal.

TCS is on whenever the vehicle is started. To limit wheel spin, especially in slippery road conditions, the system should always be left on. But, TCS can be turned off if needed.

flashes to indicate that the traction control system is active.

If there is a problem detected with TCS, SERVICE TRACTION CONTROL and SERVICE STABILITRAK may be displayed on the Driver Information Center (DIC) and will be on. See *Ride Control System Messages on page 5-37*. When this message is displayed and comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly.

Notice: **Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle's driveline could be damaged.**

If comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If still comes on and stays on at a speed above 20 km/h (13 mph), see your dealer for service.

A chime may also sound when the light comes on steady.

The is located on the center stack.

The TCS off light comes on to indicate that the traction control system has been turned off.

TCS can be turned off by pressing and releasing . When TCS is turned off, illuminates in the instrument cluster and the system will not limit wheel spin. Driving should be adjusted accordingly. The Traction Control Off message is displayed in the DIC. See *Ride Control System Messages on page 5-37*.

Press and release again to turn the system back on. goes out in the instrument cluster. The Traction Control On message is displayed in the DIC. See *Ride Control System Messages on page 5-37*.

When TCS is turned off on AWD vehicles, the system may still make noise. This is normal and necessary with AWD hardware.

It may be necessary to turn the system off if the vehicle ever gets stuck in sand, mud, or snow and rocking the vehicle is required. See *If the Vehicle Is Stuck on page 9-9*. See also *Winter Driving on page 9-8* for information on using TCS when driving in snowy or icy conditions.

If cruise control is being used when TCS activates, cruise control will automatically disengage. Press the cruise control button to re-engage when road conditions allow. See *Cruise Control on page 9-35*.

Adding non-GM accessories can affect the vehicle's performance. See *Accessories and Modifications on page 10-3*.

StabiliTrak® System

The vehicle has a vehicle stability enhancement system called StabiliTrak. It is an advanced computer controlled system that assists with directional control of the vehicle in difficult driving conditions.

StabiliTrak activates when the computer senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak selectively applies braking pressure to the vehicle's brakes to help steer the vehicle in the intended direction.

StabiliTrak is on automatically whenever the vehicle is started. To assist with directional control of the vehicle, the system should always be left on. Trailer Sway Control (TSC) is also on automatically when the vehicle is started. See *Trailer Sway Control (TSC) on page 9-71*.

When the stability control system activates, the Traction Control System (TCS)/StabiliTrak light will flash on the instrument panel. This also occurs when traction control or TSC is activated. A noise may be heard or vibration may be felt in the brake pedal. This is normal. Continue to steer the vehicle in the intended direction.

If there is a problem detected with StabiliTrak, SERVICE STABILITRAK is displayed on the Driver Information Center (DIC) and comes on and stays on. See *Ride Control System Messages on page 5-37*. When this message is displayed and/or comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly.

If comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If still comes on and stays on at a speed above 20 km/h (13 mph), see dealer for service.

is located on the center stack.

Both StabiliTrak and Traction Control can be turned off if needed by pressing and holding OFF until OFF and (VSC) illuminate in the instrument cluster. This will also disable the TSC feature. When StabiliTrak is turned off, the system will not assist with directional control of the vehicle or limit wheel spin. Driving should be adjusted accordingly. The Traction Control Off message is displayed in the DIC. See *Ride Control System Messages on page 5-37.*

Press and release OFF again to turn the systems back on. OFF and (VSC) go out in the instrument cluster. The Traction Control On message is displayed in the DIC. See *Ride Control System Messages on page 5-37.*

If cruise control is being used when StabiliTrak activates, the cruise control will automatically disengage. Press the cruise control button to re-engage when road conditions allow. See *Cruise Control on page 9-35.*

Limited-Slip Rear Axle

Vehicles with a limited-slip rear axle can give more traction on snow, mud, ice, sand, or gravel. When traction is low, this feature allows the drive wheel with the most traction to move the vehicle. The limited-slip rear axle also gives the driver enhanced control when cornering hard or completing a maneuver, such as a lane change.

Selective Ride Control

The vehicle may have a ride control system called Selective Ride Control. The setting can be changed at any time. Based on road conditions, steering wheel angle, and the vehicle speed, the system automatically adjusts to provide the best handling while providing a smooth ride. The Tour and Sport modes will feel similar on a smooth road.

Tour: Use for normal city and highway driving. This setting provides a smooth, soft ride.

Sport: Use where road conditions or personal preference demand more control. This setting provides more "feel," or response to road conditions through increased steering effort and suspension control. Transmission shift points and shift firmness are also enhanced.

The vehicle is normally in the Tour Mode. To switch from Tour Mode to Sport Mode, move the shift lever to the left while the transmission is in D (Drive). Sport Mode is automatically engaged when the shift lever is moved to the left. Moving the shift lever forward or rearward will put the transmission in the Manual (M) Mode.

The Driver Information Center (DIC) will display SPORT MODE ON when the Sport Mode has been activated. When the shift lever is moved to the right in D (Drive), the system will revert back to Tour Mode. See *Manual Mode on page 9-24* under Automatic Transmission.

If there is a problem detected with Selective Ride Control, SERVICE SUSPENSION SYSTEM displays on the DIC. See *Ride Control System Messages on page 5-37*. Driving should be adjusted accordingly.

Cruise Control

⚠ WARNING

Cruise control can be dangerous where you cannot drive safely at a steady speed. So, do not use the cruise control on winding roads or in heavy traffic.

Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

With cruise control, a speed of about 40 km/h (25 mph) or more can be maintained without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

If the brakes are applied, the cruise control disengages.

If the StabiliTrak® system begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *StabiliTrak® System on page 9-33* or *Traction Control System (TCS) on page 9-31*. If a collision alert occurs when cruise control is activated, cruise control is disengaged. See *Forward Collision Alert (FCA) System on page 9-50*. When road conditions allow the cruise control to be safely used, you can apply the cruise control again.

(On/Off): Press to turn the system on and off. A white cruise control indicator appears in the instrument cluster when cruise is turned on.

+RES (Resume/Accelerate): Move the control up briefly to resume to a previously set speed or to increase vehicle speed if the cruise control is already activated.

SET− (Set/Coast): Move the control down briefly to set the speed and activate cruise control or to decrease vehicle speed if the cruise control is already activated.

(Cancel): Press to disengage cruise control without erasing the set speed from memory.

Setting Cruise Control

If the cruise button is on when not in use, it could get pressed and go into cruise when not desired. Keep the cruise control button off when cruise is not being used.

1. Press .
2. Get up to the desired speed.
3. Move the control down to SET− and release it.
4. Remove foot from the accelerator.

When the cruise control has been set to the desired speed, the green cruise control indicator appears on the instrument cluster.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle speed reaches about 40 km/h (25 mph) or more, move the control up toward +RES briefly. The vehicle returns to the previous set speed.

Increasing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

- Move the control up toward +RES and hold until the desired speed is reached, then release it.
- To increase vehicle speed in small amounts, move the control up toward +RES briefly and then release it. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) faster.

Reducing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

- Move the control toward SET− and hold until the desired lower speed is reached, then release it.
- To decrease the vehicle speed in small amounts, move the control toward SET− briefly. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) slower.

The cruise control system may automatically brake to slow the vehicle down.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previous set cruise speed.

Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed. When going downhill, you might have to brake or shift to a lower gear to keep the vehicle speed down. If the brake is applied, the cruise control disengages.

Ending Cruise Control

There are three ways to end cruise control:

- Step lightly on the brake pedal.
- Press .
- Press .

Erasing Speed Memory

The cruise control set speed is erased from memory if is pressed or if the ignition is turned off.

Adaptive Cruise Control

For vehicles with Adaptive Cruise Control (ACC), it allows the driver to select the cruise control set speed and following gap. Read this entire section before using this system. The following gap is the following time between your vehicle and a vehicle detected directly ahead in your path moving in the same direction. If no vehicle is detected in your path, ACC works like regular cruise control. ACC uses camera and radar sensors. See *Radio Frequency Statement on page 13-21* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

If a vehicle is detected in your path, ACC can apply acceleration or limited, moderate braking to maintain the selected following gap. To disengage ACC, apply the brake. If ACC is controlling your vehicle speed when the traction control system (TCS) activates, the ACC will automatically disengage. See *Traction Control System (TCS) on page 9-31*. When road conditions allow ACC to be safely used, the ACC can be turned back on.

⚠ WARNING

ACC has limited braking ability and may not have time to slow the vehicle down enough to avoid a collision with another vehicle you are following. This can occur when vehicles suddenly slow or stop ahead, or enter your lane. Also see "Alerting the Driver" in this section. Complete attention is always required while driving and you should be ready to take action and apply the brakes. See *Defensive Driving on page 9-3*.

⚠ WARNING

Adaptive Cruise Control will not detect or brake for children, pedestrians, animals, or other objects.

Do not use Adaptive Cruise Control when:

- On winding and hilly roads or when the sensors are blocked by snow, ice, or dirt. The system may not detect a vehicle ahead. Keep the entire front of the vehicle clean.
- Visibility is low, such as in fog, rain, or snow conditions. Adaptive Cruise Control performance is limited under these conditions.
- On slippery roads where fast changes in tire traction can cause excessive wheel slip.

(On/Off): Press to turn the system on or off.

+RES (Resume/Accelerate): Move the control up briefly to resume to a previously set speed or to increase vehicle speed if the cruise control is already activated.

SET– (Set/Coast): Move the control down briefly to set the speed and activate ACC or to decrease vehicle speed if the cruise control is already activated.

(Cancel): Press to disengage ACC without erasing the set speed from memory.

(Follow Distance Gap): Press to select a following gap time (or distance) setting for ACC. Select a gap setting: Far, Medium, and Near.

Setting Adaptive Cruise Control

If the cruise button is on when not in use, it could get bumped and go into cruise when not desired. Keep the cruise control button off when cruise is not being used.

Select the set speed desired for cruise. This is the vehicle speed when no vehicle is detected in its path slower than the set speed.

ACC will not set at a speed less than 40 km/h (25 mph), although it can be resumed when driving at lower speeds.

To set ACC:

1. Press .
2. Get up to the desired speed.
3. Move the control down to SET– and release it.
4. Remove foot from the accelerator.

After ACC is set, it may immediately apply the brakes if a vehicle is closer than the selected follow gap.

The ACC indicator displays on the instrument cluster. When the ACC is active, the symbol will be lit.

Be mindful of speed limits, surrounding traffic speeds, and weather conditions when selecting the set speed.

Resuming a Set Speed

If the ACC is set at a desired speed and then the brakes are applied, the ACC is disengaged without erasing the set speed from memory.

To begin using ACC again, move the control up toward +RES briefly. The vehicle returns to the previous set speed.

Increasing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the accelerator to get to the higher speed. Move the control toward SET–, then release it and the accelerator pedal. The vehicle will now cruise at the higher speed.

  When the accelerator pedal is pressed, ACC will not brake because it is overridden.
  A warning message will appear on the Driver Information Center (DIC). See *Cruise Control Messages on page 5-31*.
- Move the control toward +RES and hold until the desired set speed appears on the display, then release it.
- To increase vehicle speed in small amounts, move the control toward +RES and then release it. Each time this is done, the vehicle goes 1.6 km/h (1 mph) faster.

When it is determined that there is no vehicle in front of your vehicle slower than the set speed, then the vehicle speed will increase to the set speed.

Reducing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the brake to get to the desired lower speed. Move the control toward SET– and release the accelerator pedal. The vehicle will now cruise at the lower speed.
- Move the control toward SET– and hold until the desired lower speed is reached, then release it.
- To decrease the vehicle speed in small amounts, move the control toward SET– briefly. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) slower.

Selecting the Follow Distance

When a slower moving vehicle is detected ahead, ACC will adjust the vehicle's speed and attempt to maintain the follow distance gap selected.

Press ⇄ on the steering wheel to adjust the following gap. Each press cycles the gap button through three settings: Far, Medium, or Near.

When pressed, the current gap setting displays briefly on the instrument cluster. The gap setting will be maintained until it is changed.

Since each gap setting corresponds to a following time (Far, Medium, or Near), the following distance will vary based on vehicle speed. The faster the vehicle speed, the further back your vehicle will follow a vehicle detected ahead. Consider traffic and weather conditions when selecting the following gap. The range of selectable gaps may not be appropriate for all drivers and driving conditions.

Changing the gap setting automatically changes the alert timing sensitivity (Far, Medium, or Near) for the Forward Collision Alert (FCA) feature. See *Forward Collision Alert (FCA) System on page 9-50*.

Alerting the Driver

If ACC is engaged driver action may be required when:

- ACC cannot apply sufficient braking because of approaching a vehicle too rapidly.
- A temporary condition prohibits ACC from operating. See *Vehicle Messages on page 5-30*.
- A malfunction is detected in the system. See *Vehicle Messages on page 5-30*.

When any of these conditions occur, a series of red collision alert lights will flash on the windshield. Either eight beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. See "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*.

See *Defensive Driving on page 9-3*.

Approaching and Following a Vehicle

The vehicle ahead symbol is located in the instrument cluster.

The vehicle ahead symbol only displays when a vehicle is detected in your vehicle's path.

If this symbol is not displaying, ACC will not respond to or brake to vehicles ahead.

ACC automatically slows the vehicle down and adjusts vehicle speed to follow the vehicle in front at the selected follow gap. The vehicle speed increases or decreases to follow the vehicle in front of you, but will not exceed the set speed. It may apply limited braking, if necessary. When braking is active, the brake lights will come on. The automatic braking may feel or sound different than if the brakes were applied manually. This is normal.

Stationary or Very Slow-Moving Objects

⚠ WARNING

Adaptive Cruise Control (ACC) may not detect and react to stopped or slow-moving vehicles ahead of you. For example, the system may not brake for a vehicle that it has never detected moving. This can occur in stop-and-go traffic or when a vehicle suddenly appears due to a vehicle ahead changing lanes. Your vehicle may not stop and could cause a crash. Use caution when using ACC. Your complete attention is always required while driving and you should be ready to take action and apply the brakes.

ACC Automatically Disengages

ACC may automatically disengage and the driver will need to manually apply the brakes to slow the vehicle when:

- The sensors are blocked.
- There is no traffic and nothing to detect on the side of the road.
- There is a fault in the system.
- The brakes get heated.

The ACC active symbol will not be displayed when ACC is no longer active.

Notification to Resume ACC

ACC will maintain a follow time/ distance gap behind a detected vehicle and slow your vehicle to a stop behind that vehicle.

If the vehicle ahead has driven away and ACC has not resumed, the vehicle ahead symbol will flash as a reminder. In addition, the left and right sides of the Safety Alert Seat will pulse three times, or three beeps will sound. See "Alert Type" and "Go Notifier" in "Collision/ Detection Systems" under *Vehicle Personalization on page 5-40*.

When the vehicle ahead drives away, press RES+ or the accelerator pedal to resume ACC. If stopped for more than two minutes or if the driver door is opened and the driver seat belt is unbuckled, the ACC automatically applies the electric parking brake to hold the vehicle. The electric parking brake status light will turn on. See *Parking Brake on page 9-28*. To resume ACC and release the electric parking brake, press the accelerator pedal and then RES+.

⚠ WARNING

If ACC has stopped the vehicle, and if ACC is disengaged, turned off, or canceled, the vehicle will no longer be held at a stop. The vehicle can move. When ACC is holding the vehicle at a stop, always be prepared to manually apply the brakes.

⚠ WARNING

Leaving the vehicle without placing it in P (Park) can be dangerous. Do not leave the vehicle while it is being held at a stop by ACC. Always place the vehicle in P (Park) and turn off the ignition before leaving the vehicle.

ACC Override

If using the accelerator pedal while ACC is active, a DIC warning message will indicate that automatic braking will not occur. See *Vehicle Messages on page 5-30*. ACC will resume operation when the accelerator pedal is not being pressed.

⚠ WARNING

The ACC will not automatically apply the brakes if your foot is resting on the accelerator pedal. You could crash into a vehicle ahead of you.

Curves in the Road

⚠ WARNING

On curves, ACC may not detect a vehicle ahead in your lane. You could be startled if the vehicle accelerates up to the set speed, especially when following a vehicle exiting or entering exit ramps. You could lose control of the vehicle or crash. Do not use ACC while driving on an entrance or exit ramp. Always be ready to use the brakes if necessary.

⚠ WARNING

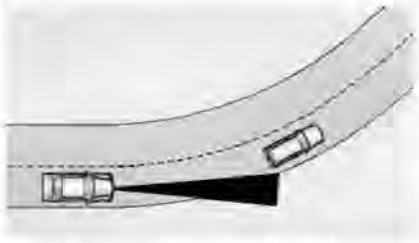
On curves, ACC may respond to a vehicle in another lane, or may not have time to react to a vehicle in your lane. You could crash into a vehicle ahead of you, or lose control of your vehicle. Give extra

(Continued)

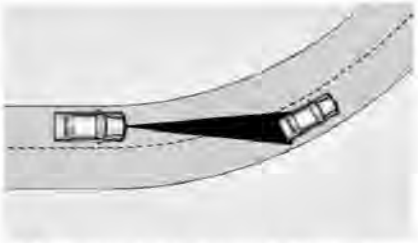
WARNING (Continued)

attention in curves and be ready to use the brakes if necessary. Select an appropriate speed while driving in curves.

ACC may operate differently in a sharp curve. It may reduce the vehicle speed if the curve is too sharp.



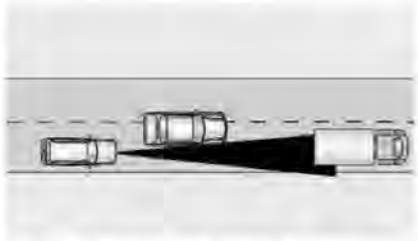
When following a vehicle and entering a curve, ACC may not detect the vehicle ahead and accelerate to the set speed. When this happens the vehicle ahead symbol will not appear.



ACC may detect a vehicle that is not in your lane and apply the brakes.

ACC may occasionally provide an alert and/or braking that is considered unnecessary. It could respond to vehicles in different lanes, signs, guardrails, and other stationary objects when entering or exiting a curve. This is normal operation. The vehicle does not need service.

Other Vehicle Lane Changes



ACC will not detect a vehicle ahead until it is completely in the lane. The brake may need to be manually applied.

Do Not Use ACC on Hills and When Towing a Trailer

Do not use ACC when driving on steep hills or when towing a trailer. ACC will not detect a vehicle in the lane while driving on steep hills. The driver will often need to take over acceleration and braking on steep hills, especially when towing a trailer. If the brakes are applied, the ACC disengages.

Ending ACC

There are three ways to end ACC:

- Step lightly on the brake pedal.
- Press .
- Press .

Erasing Speed Memory

The cruise control set speed is erased from memory if is pressed or if the ignition is turned off.

Cleaning the Sensing System

The camera sensor on the back of the rearview mirror and the radar sensors on the front of the vehicle can become blocked by snow, ice, dirt, or mud. These areas need to be cleaned for ACC to operate properly.

For cleaning instructions, see "Washing the Vehicle" under *Exterior Care on page 10-89*.

System operation may also be limited under snow, heavy rain or road spray conditions.

Driver Assistance Systems

This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, backing, and parking. Read this entire section before using these systems.

⚠ WARNING

Do not rely on the Driver Assistance Systems. These systems do not replace the need for paying attention and driving safely. You may not hear or feel alerts or warnings provided by these systems. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving on page 9-3*.

(Continued)

WARNING (Continued)

Under many conditions, these systems will not:

- Detect children, pedestrians, bicyclists, or animals.
- Detect vehicles or objects outside the area monitored by the system.
- Work at all driving speeds.
- Warn you or provide you with enough time to avoid a crash.
- Work under poor visibility or bad weather conditions.
- Work if the detection sensor is not cleaned or is covered by ice, snow, mud, or dirt.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

Audible or Safety Alert Seat

Some driver assistance features alert the driver of obstacles by beeping. To change the volume of the warning chime, see "Comfort and Convenience" under *Vehicle Personalization on page 5-40*.

If equipped with the Safety Alert Seat, the driver seat cushion may provide a vibrating pulse alert instead of beeping. To change this, see "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*.

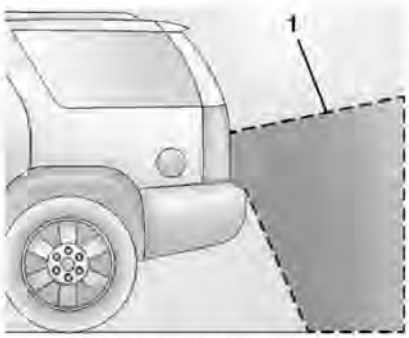
Assistance Systems for Parking or Backing

When the vehicle is in R (Reverse), the Rear Vision Camera (RVC) and Rear Parking Assist may help the driver to avoid a crash or to reduce crash damage while backing and parking. Some models may also have the Rear Automatic Braking and Backing Warning System, Rear Cross Traffic Alert (RCTA), and/or Front Parking Assist.

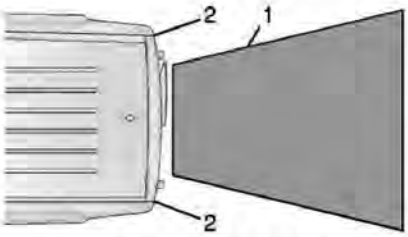
When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the center stack display.

⚠ WARNING

The RVC system does not display children, pedestrians, bicyclists, animals, or any other object located outside the camera's field of view, below the bumper, or under the vehicle. Perceived distances may be different from actual distances. Do not back the vehicle using only the RVC screen, during longer, higher speed backing maneuvers, or where there could be cross traffic. Failure to use proper care before backing may result in injury, death, or vehicle damage. Always check behind and around the vehicle before backing.



1. View Displayed by the Camera



1. View Displayed by the Camera
2. Corners of the Rear Bumper

Displayed images may be farther or closer than they appear. The area displayed is limited and objects that are close to either corner of the bumper or under the bumper do not display.

A warning triangle may display on the RVC screen to show where the Ultrasonic Rear Parking Assist (URPA) has detected an object. This triangle changes from amber to red and increases in size the closer the object.

On vehicles with the Rear Cross Traffic Alert (RCTA), a triangle with an arrow may also display on the RVC screen to warn of traffic coming from either direction. This system detects objects coming from up to 22 m (65 ft) from the left or right side, behind the vehicle. When an object is detected, either three beeps sound or three Safety Alert Seat pulses occur on the left or right side, depending on the direction of the detected vehicle.

Use caution while changing lanes when towing a trailer, as the RCTA detection zones that extend out from the back of the vehicle do not move further back when a trailer is towed.

With URPA, as the vehicle backs up at speeds of less than 8 km/h (5 mph), the sensors on the rear bumper detect objects up to 2.5 m (8 ft) behind the vehicle that are within a zone 25 cm (10 in) high off the ground and below bumper level.

⚠ WARNING

The parking assist system does not detect children, pedestrians, bicyclists, animals, or objects located below the bumper or that are too close or too far from the vehicle. It is not available at speeds greater than 8 km/h (5 mph). To prevent injury, death, or vehicle damage, even with parking assist, always check the

(Continued)

WARNING (Continued)

area around the vehicle and check all mirrors before moving forward or backing.

The instrument cluster parking assist display has bars that show "distance to object" and object location information for URPA, and on some vehicles, for the Front Parking Assist system. As the object gets closer, more bars light up. When an object is first detected in the rear, one beep will be heard from the rear, or both sides of the Safety Alert Seat will pulse two times. When an object is very close (<0.6 m (2 ft) in the vehicle rear, or <0.3 m (1 ft) in the vehicle front), five beeps will sound from the rear or front, or both sides of the Safety Alert Seat will pulse five times. Beeps for Front Parking Assist are higher pitched than for Rear Parking Assist.

Vehicles with Adaptive Cruise Control (ACC) have the Backing Warning System, which is designed to help avoid or reduce the harm caused by backing crashes. The system can warn of rear objects when backing up at speeds greater than 8 km/h (5 mph).

The Backing Warning System will beep once from the rear when a potential object threat is first detected, or pulse twice on both sides of the Safety Alert Seat. When the system detects a potential imminent crash, beeps will be heard from the rear, or five pulses will be felt on both sides of the Safety Alert Seat. There may also be a brief, sharp application of the brakes.

⚠ WARNING

The Backing Warning System only operates at speeds greater than 8 km/h (5 mph). It does not detect children, pedestrians, bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. In some situations, such as at higher backing speeds, there may not be enough time for the short, sharp application of the vehicle brake system to occur. To prevent injury, death, or vehicle damage, even with the Backing Warning System, always check the area around the vehicle and check all mirrors before backing.

Vehicles with Adaptive Cruise Control (ACC) have the Rear Automatic Braking system, which is designed to help avoid or reduce the harm caused by backing crashes. If the system detects the vehicle is backing too fast to avoid a crash with a detected object, it may automatically brake hard to a stop.

⚠ WARNING

Rear Automatic Braking may not avoid many types of backing crashes. Do not wait for the automatic braking to apply. This system is not designed to replace driver braking, but only acts when the vehicle may not stop in time. The system, in some situations or environments, may not brake or may not brake in time to avoid a crash. It does not detect children, pedestrians, bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. To prevent injury, death, or vehicle damage, even with Rear Automatic Braking, always check the area around the vehicle before and while backing.

Pressing the brake pedal after the vehicle comes to a stop will release the Rear Automatic Braking. If the brake pedal is not pressed within two seconds after the stop, the electric parking brake is set. See *Parking Brake on page 9-28* to release the electric parking brake. When it is safe, pressing the accelerator pedal firmly at any time will override the Rear Automatic Braking.

⚠ WARNING

There may be instances where unexpected or undesired automatic braking occurs. If this happens, either press the brake pedal or firmly press the accelerator pedal to release the brakes from the Rear Automatic Braking system. Check the RVC screen and check the area around the vehicle before proceeding.

Turn off parking assist and Rear Automatic Braking when towing a trailer.

Turning the Features On or Off

The P button near the shift lever is used to turn on or off the Front and Rear Parking Assist, Rear Automatic Braking, and Backing Warning System at the same time. The indicator light next to the button comes on when the features are on and turns off when the features have been disabled.

The Rear Vision Camera (RVC), parking assist symbols, guidance lines, and Rear Cross Traffic Alert (RCTA) can be turned on or off through the Settings menu on the infotainment system. To turn the RVC system, symbols, guidance lines, or RCTA on or off:

1. On the infotainment system, press the Settings screen button, or turn the MENU knob to highlight Settings and press MENU.
2. Select Rear Camera.
3. Press Rear Camera Display, Park Assist Symbols, Guidance Lines, or Rear Cross Traffic Alert and then select OFF or ON.

Assistance Systems for Driving

If equipped, when driving the vehicle, Forward Collision Alert (FCA), Lane Departure Warning (LDW), Side Blind Zone Alert (SBZA), and/or the Active Emergency Braking System can help to avoid a crash or reduce crash damage.

Forward Collision Alert (FCA) System

The FCA system may help to avoid or reduce the harm caused by front-end crashes. FCA provides a flashing alert on the windshield, and beeps or pulses the Safety Alert Seat when approaching a vehicle directly ahead too quickly. FCA also provides a visual alert if following another vehicle much too closely.

FCA detects vehicles within a distance of approximately 60 m (197 ft) and operates at speeds above 40 km/h (25 mph). If the vehicle has Adaptive Cruise Control (ACC), it can detect vehicles to distances of approximately 110 m (360 ft) and operates at all speeds. See *Adaptive Cruise Control on page 9-37*.

⚠ WARNING

FCA is a warning system and does not apply the brakes. When approaching a slower-moving or stopped vehicle ahead too rapidly, or when following a vehicle too closely, FCA may not provide a warning with enough time to help avoid a crash. FCA does not warn of pedestrians, animals, signs, guardrails, bridges, construction barrels, or other objects. Be ready to take action and apply the brakes. For more information, see *Defensive Driving on page 9-3*.

FCA can be disabled through vehicle personalization. See the "Auto Collision Preparation" portion of "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*.

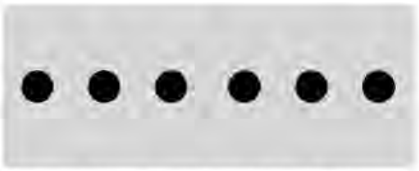
Detecting the Vehicle Ahead

FCA warnings will not occur unless the FCA system detects a vehicle ahead. The vehicle-ahead indicator will display green when a vehicle is detected in front. Vehicles may not be detected on curves, highway exit ramps, or hills; or due to poor visibility. FCA will not detect another vehicle ahead until it is completely in the driving lane.

⚠ WARNING

FCA does not provide a warning to help avoid a crash, unless it detects a vehicle. FCA may not detect a vehicle ahead if the FCA sensor is blocked by dirt, snow, or ice, or if the windshield is damaged. It may also not detect a vehicle on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and FCA sensors clean and in good repair.

Collision Alert



When the vehicle is started, this series of red lights will come on to indicate the system is operating. When your vehicle approaches another vehicle too rapidly, the red lights will flash on the windshield. Either eight beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. If a collision alert occurs when cruise control is activated, cruise control is disengaged.

Tailgating Alert

The vehicle-ahead indicator will display amber when you are following a vehicle ahead much too closely.

Selecting the Alert Timing

With Adaptive Cruise Control

Without Adaptive Cruise Control

Press the collision alert/following gap button on the steering wheel to set the FCA timing to far, medium, near, or on some vehicles, off. The first button press shows the current setting on the DIC. Additional button presses will change this setting. The chosen setting will remain until it is changed and will affect the timing of both the Collision Alert and the Tailgating Alert features.

The timing of both alerts will vary based on vehicle speed. The faster the vehicle speed, the farther away the alert will occur. Consider traffic and weather conditions when selecting the alert timing. The range of selectable alert timing may not be appropriate for all drivers and driving conditions.

Changing the FCA timing setting automatically changes the following gap setting (Far, Medium, or Near) for the Adaptive Cruise Control (ACC) feature.

Unnecessary Alerts

FCA may provide unnecessary alerts for turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.

Cleaning the System

If the FCA system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor and the front of the vehicle may correct the issue.

Active Emergency Braking System

If the vehicle has Adaptive Cruise Control (ACC) it also has the Active Emergency Braking System, which includes Intelligent Brake Assist (IBA) and the Automatic Collision Preparation (ACP) System.

Intelligent Brake Assist (IBA)

IBA may activate when the brake pedal is applied quickly by providing a boost to braking based on the speed of approach and distance to a vehicle ahead.

Minor brake pedal pulsations or pedal movement during this time is normal and the brake pedal should continue to be applied as needed. IBA will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

⚠ WARNING

IBA may increase vehicle braking in situations when it may not be necessary. You could block the flow of traffic. If this occurs, take your foot off the brake pedal and then apply the brakes as needed.

Automatic Collision Preparation (ACP) System

ACP may help reduce crash damage by applying the vehicle's brake system and has a detection range of approximately 60 m (197 ft). Braking can only occur if a vehicle is detected ahead. This is shown by the FCA vehicle-ahead indicator being lit. See *Forward Collision Alert (FCA) System on page 9-50*.

⚠ WARNING

ACP is an emergency crash preparation feature and is not designed to avoid crashes. Do not rely on ACP to brake the vehicle.

ACP may not:

- Respond to stopped vehicles, pedestrians, or animals.
- Detect a vehicle ahead on winding or hilly roads.

(Continued)

WARNING (Continued)

- Detect a stopped or slow-moving vehicle or other object ahead.
- Detect a vehicle when weather limits visibility, such as in fog, rain, or snow. In these situations, ACP sensor performance is limited.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

Brake Preparation

When quickly approaching a vehicle ahead, Brake Preparation reduces brake response time by having the brake system prepared for driver braking to occur more rapidly.

Automatic Braking

In some imminent front-end crash situations, if the driver has not applied the brakes, Automatic Braking applies the brakes to help reduce crash damage. It may even help avoid some crashes at very low speeds.

Automatic Braking may slow the vehicle to a complete stop to try to avoid a potential crash. If this happens, Automatic Braking will engage the electric parking brake to hold the vehicle at a stop. A firm press of the accelerator pedal will release Automatic Braking.

⚠ WARNING

Automatic Braking may automatically brake the vehicle in situations where it may be unnecessary. It could respond to a turning vehicle ahead, guardrails, signs, and other non-moving objects. This could

(Continued)

WARNING (Continued)

be uncomfortable and startling. To override Automatic Braking, firmly press the accelerator pedal, if it is safe to do so.

Automatic Braking can be disabled or reduced through vehicle personalization. See the "Auto Collision Preparation" portion of "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*.

⚠ WARNING

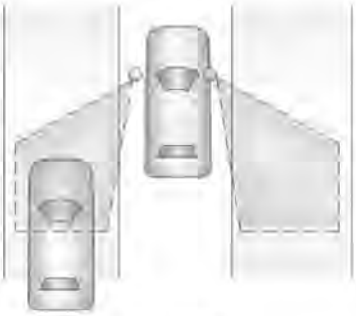
Using the Automatic Collision Preparation System while towing a trailer could cause you to lose control of the vehicle and crash. Turn the system off when towing a trailer.

Side Blind Zone Alert (SBZA)

If equipped, the Side Blind Zone Alert system is a lane-changing aid that assists drivers with avoiding crashes that occur with vehicles in the side blind zone (or spot) areas.

⚠ WARNING

SBZA does not detect vehicles rapidly approaching outside of the side blind zones, pedestrians, bicyclists, or animals. Failure to use proper care when changing lanes may result in injury, death, or vehicle damage. Before making a lane change, always check mirrors, glance over your shoulder, and use the turn signals.



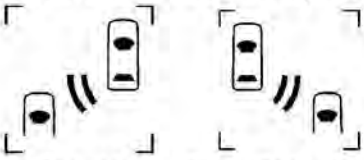
SBZA Detection Zones

The SBZA sensor covers a zone of approximately one lane over from both sides of the vehicle, or 3.5 m (11 ft). This zone starts at each side mirror and goes back approximately 5 m (16 ft). The height of the zone is approximately between 0.5 m (1.5 ft) and 2 m (6 ft) off the ground.

Use caution while changing lanes when towing a trailer, as the SBZA detection zones that extend back from the side of the vehicle do not move further back when a trailer is towed.

How the System Works

The SBZA symbol lights up in the side mirrors when the system detects a vehicle in the side blind zone, indicating it may be unsafe to change lanes. Before making a lane change, check the SBZA display, check mirrors, glance over your shoulder, and use the turn signals.



Left Side Mirror Display **Right Side Mirror Display**

When the vehicle is started, both outside mirror SBZA displays will briefly come on to indicate the system is operating. When the vehicle is moving forward, the left- or right-side mirror display will light up if a vehicle is detected in that blind zone. If the turn signal is activated and a vehicle is also detected on the same side, the display will flash as an extra warning not to change lanes.

SBZA displays may come on when a passed vehicle remains in or drops back into the detection zone.

SBZA can be disabled through vehicle personalization. See "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*. If SBZA is disabled by the driver, the SBZA mirror displays will not light up.

When the System Does Not Seem to Work Properly

SBZA may not always alert the driver to vehicles in the blind zone, especially in wet conditions. The system does not need to be serviced. The system may light up due to guardrails, signs, trees, shrubs, and other non-moving objects. This is normal system operation; the vehicle does not need service.

SBZA may not operate when the SBZA sensors in the left or right corners of the rear bumper are covered with mud, dirt, snow, ice, or slush, or in heavy rainstorms. For cleaning instructions, see "Washing the Vehicle" under *Exterior Care on page 10-89*. If the DIC still displays the SIDE DETECTION SYSTEM UNAVAILABLE message after cleaning the rear bumper corners, see your dealer.

If the SBZA displays do not light up when vehicles are in the blind zone and the system is clean, the system may need service. Take the vehicle to your dealer.

When SBZA is disabled for any reason other than the driver turning it off, the Side Blind Zone Alert On option will not be available on the personalization menu.

FCC Information

See *Radio Frequency Statement on page 13-21* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

Lane Departure Warning (LDW)

LDW may help avoid crashes due to unintentional lane departures. It may provide a warning if the vehicle is crossing a detected lane marker without using a turn signal. LDW uses a camera sensor to detect the lane markings. It only operates at speeds of 56 km/h (35 mph) or greater.

When the vehicle crosses a detected lane marking, the LDW indicator will flash and either three beeps will be sounded from the left or right side, or three Safety Alert Seat pulses will occur on the left or right side of the seat, depending on the lane departure direction. LDW will not warn if the turn signal is on or if a sharp maneuver is made.

⚠ WARNING

The LDW system is an aid to help the vehicle stay in the driving lane. It does not steer the vehicle. The LDW system may not:

- Provide enough time to avoid a crash.
- Detect lane markings under bad weather conditions or if the windshield is dirty.
- Detect lane markings and will not detect road edges.
- Warn that the vehicle is crossing a lane marking if the system does not detect the lane marking.

(Continued)

WARNING (Continued)

If LDW only detects lane markings on one side of the road, it will only warn you when departing the lane on the side where it has detected a lane marker. Even with LDW, always keep your attention on the road and maintain proper vehicle position within the lane, or vehicle damage, injury, or death could occur. Always keep the windshield clean and do not use LDW in bad weather conditions.

How the System Works

The LDW camera sensor is on the windshield ahead of the rearview mirror.

To turn LDW on and off, press near the shift lever. The control indicator will light when LDW is on

When the vehicle is started, the LDW indicator on the instrument cluster will come on briefly.

If LDW is on and the vehicle is traveling at 56 km/h (35 mph) or greater, the LDW indicator will appear green if the system detects a left or right lane marking. If the vehicle crosses a detected lane marking without using the turn signal, this indicator will change to amber and flash. In addition, three beeps will be sounded from the left or right speaker, or the Safety Alert Seat will pulse three times on either the left or right side of the seat, depending on the lane departure direction.

When the System Does Not Seem to Work Properly

If the system is on and the vehicle speed is 56 km/h (35 mph) or greater, and the LDW symbol does not appear:

- The lane markings on the road may not be seen.
- The camera sensor may be blocked by dirt, snow, or ice.
- The weather may be limiting visibility.

This is normal operation; the vehicle does not need service.

If the LDW camera system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor may correct the issue.

A damaged windshield can also impact the performance of the system. If the windshield is damaged, it should be replaced.

Lane markings may not be detected on curves, highway exit ramps, or hills; or due to poor visibility.

⚠ WARNING

If the LDW camera sensor is blocked by dirt, snow, or ice, or if the headlamps are not cleaned or properly aimed, or if the windshield is dirty or damaged, it may not detect the lanes ahead. LDW may not help avoid a crash under these conditions. Keep the headlamps cleaned and properly aimed and the windshield clean.

LDW warnings may occur due to tar marks, shadows, cracks in the road, or other road imperfections. This is normal system operation; the vehicle does not need service.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of this vehicle. To help keep the engine clean and maintain optimum vehicle performance, we recommend using TOP TIER Detergent Gasolines. See www.toptiergas.com for a list of TOP TIER Detergent Gasolines.

TOP TIER
Detergent Gasoline

CATEGORIE SUPERIEURE
Essences Détergentes

If the vehicle has a yellow fuel cap, E85 or flex fuel can be used in the vehicle. See *Fuel E85 (85% Ethanol) on page 9-61.*

Recommended Fuel

Use regular unleaded gasoline with a posted octane rating of 87 or higher. If the octane rating is less than 87, an audible knocking noise, commonly referred to as spark knock, might be heard when driving. If this occurs, use a gasoline rated at 87 octane or higher as soon as possible. If heavy knocking is heard when using gasoline rated at 87 octane or higher, the engine needs service.

Prohibited Fuels

Gasolines containing oxygenates, such as ethers and ethanol, as well as reformulated gasolines are available in some cities. If these gasolines comply with the previously described specification, then they are acceptable to use. However, E85 (85% ethanol) and other fuels containing more than 15% ethanol must be used only in flex fuel vehicles.

⚠ CAUTION

Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.

Some gasolines that are not reformulated for low emissions can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). Do not use gasolines with MMT as they can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp may turn on. If this occurs, see your dealer for service.

Gasoline Specifications

At a minimum, gasoline should meet ASTM specification D 4814. Some gasolines contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). We recommend against the use of gasolines containing MMT. See *Fuel Additives on page 9-60.*

California Fuel Requirements

If the vehicle is certified to meet California Emissions Standards, it is designed to operate on fuels that meet California specifications. See the underhood emission control label. If this fuel is not available in states adopting California Emissions Standards, the vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system performance might be affected. The malfunction indicator lamp could turn on and the vehicle might fail a smog-check test. See *Malfunction Indicator Lamp on page 5-17.* If this occurs, return to your authorized dealer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs might not be covered by the vehicle warranty.

Fuels in Foreign Countries

If planning to drive in countries outside the U.S. or Canada, the proper fuel might be hard to find. Check regional auto club or fuel retail brand websites for availability in the country where driving. Never use leaded gasoline, fuel containing methanol, or any other fuel not recommended. Costly repairs caused by use of improper fuel would not be covered by the vehicle warranty.

Fuel Additives

To provide cleaner air, all gasolines in the United States are now required to contain additives that help prevent engine and fuel system deposits from forming, allowing the emission control system to work properly. In most cases, nothing should have to be added to the fuel. However, some gasolines contain only the minimum amount of additive required to meet U.S. Environmental Protection Agency regulations. To help keep fuel injectors and intake valves clean and avoid problems due to dirty injectors or valves, look for gasoline that is advertised as TOP TIER Detergent Gasoline. Look for the TOP TIER label on the fuel pump to ensure gasoline meets enhanced detergency standards developed by the auto companies. A list of marketers providing TOP TIER Detergent Gasoline can be found at www.toptiergas.com.

For customers who do not use TOP TIER Detergent Gasoline regularly, one bottle of Fuel System Treatment PLUS, part number 88861013, added to the fuel tank at every engine oil change, can help clean deposits from fuel injectors and intake valves. GM Fuel System Treatment PLUS is the only gasoline additive recommended by General Motors. It is available at your dealer.

Gasolines containing oxygenates, such as ethers and ethanol, and reformulated gasolines might be available in your area. We recommend that you use these gasolines, if they comply with the specifications described earlier. However, E85 (85% ethanol) and other fuels containing more than 15% ethanol must not be used in vehicles that were not designed for those fuels.

Notice: **This vehicle was not designed for fuel that contains methanol. Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.**

Some gasolines that are not reformulated for low emissions can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT); ask the attendant where you buy gasoline whether the fuel contains MMT. We recommend against the use of such gasolines. Fuels containing MMT can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp might turn on. If this occurs, return to your dealer for service.

Fuel E85 (85% Ethanol)

Vehicles that have a yellow fuel cap can use either unleaded gasoline or ethanol fuel containing up to 85% ethanol (E85). For all other vehicles, use only the unleaded gasoline described under *Recommended Fuel on page 9-59*.

We encourage the use of E85 in vehicles that are designed to use it. The ethanol in E85 is a "renewable" fuel, meaning it is made from renewable sources such as corn and other crops.

Many service stations will not have an 85% ethanol fuel (E85) pump available. The U.S. Department of Energy has an alternative fuels website (www.afdc.energy.gov/afdc/locator/stations/) that can help you find E85 fuel. Those stations that do have E85 should have a label indicating ethanol content. Do not use the fuel if the ethanol content is greater than 85%.

At a minimum, E85 should meet ASTM Specification D 5798 or CGSB Specification 3.512. Filling the tank with fuel mixtures that do not meet ASTM or CGSB specifications can affect driveability and could cause the malfunction indicator lamp to come on. As the outside temperature approaches freezing, ethanol fuel distributors should supply winter grade ethanol, the same as with unleaded gasoline.

The starting characteristics of E85 fuel make it unsuitable for use when temperatures fall below −18°C (0°F). In the range of −18°C (0°F) to 0°C (32°F), it may take more time to start the engine.

E85 has less energy per liter (gallon) than gasoline, so you will need to refill the fuel tank more often when using E85 than when you are using gasoline. See *Filling the Tank on page 9-62*.

Notice: **Some additives are not compatible with E85 fuel and can harm the vehicle's fuel system. Do not add anything to E85. Damage caused by additives would not be covered by the vehicle warranty.**

Notice: **This vehicle was not designed for fuel that contains methanol. Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.**

Filling the Tank

⚠ WARNING

Fuel vapors and fuel fires burn violently and can cause injury or death.

- To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island.
- Turn off the engine when refueling.
- Keep sparks, flames, and smoking materials away from fuel.
- Do not leave the fuel pump unattended.
- Do not reenter the vehicle while pumping fuel.

(Continued)

WARNING (Continued)

- Keep children away from the fuel pump and never let children pump fuel.
- Fuel can spray out if the fuel cap is opened too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop then unscrew the cap all the way

The tethered fuel cap is located behind a hinged fuel door on the passenger side of the vehicle. To open the fuel door, push the rearward center edge in and release and it will open.

To remove the fuel cap, turn it slowly counterclockwise.

While refueling, hang the tethered fuel cap from the hook on the fuel door.

When reinstalling the cap, turn it clockwise until it clicks once, otherwise the malfunction indicator lamp could turn on. See *Malfunction Indicator Lamp on page 5-17*.

Be careful not to spill fuel. Do not top off or overfill the tank and wait a few seconds after you have finished pumping before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care on page 10-89*.

When replacing the fuel cap, turn it clockwise until it clicks once. Make sure the cap is fully installed. The diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See *Malfunction Indicator Lamp on page 5-17*.

⚠ WARNING

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

Notice: **If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap might not fit properly, might cause the malfunction indicator lamp to light, and could damage the fuel tank and emissions system. See *Malfunction Indicator Lamp on page 5-17*.**

Filling a Portable Fuel Container

⚠ WARNING

Filling a portable fuel container while it is in the vehicle can cause fuel vapors that can ignite either by static electricity or other means. You or others could be badly burned and the vehicle could be damaged. Always:

- Use approved fuel containers.
- Remove the container from the vehicle, trunk, or pickup bed before filling.
- Place the container on the ground.

(Continued)

WARNING (Continued)

- Place the nozzle inside the fill opening of the container before dispensing fuel, and keep it in contact with the fill opening until filling is complete.
- Fill the container no more than 95% full to allow for expansion.
- Do not smoke, light matches, or use lighters while pumping fuel.
- Avoid using cell phones or other electronic devices.

Towing

General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer. Read the entire section before towing a trailer.

For towing a disabled vehicle, see *Towing the Vehicle on page 10-85*. For towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing on page 10-85*.

Driving Characteristics and Towing Tips

Driving with a Trailer

When towing a trailer:

- Become familiar with the state and local laws that apply specifically to trailer towing.
- Do not tow a trailer during the first 800 km (500 miles), to prevent damage to the engine, axle or other parts.
- Then, during the first 800 km (500 miles) trailer towing, do not drive over 80 km/h (50 mph) and do not make starts at full throttle.
- The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.
- Do not use the Fuel Economy Mode when towing.
- Do not use Adaptive Cruise Control when towing.
- The Automatic Collision Preparation System should be set to "Off" when towing. See *Active Emergency Braking System on page 9-53*.

⚠ WARNING

When towing a trailer, exhaust gases may collect at the rear of the vehicle and enter if the liftgate, trunk/hatch, or rear-most window is open.

When towing a trailer:

- Do not drive with the liftgate, trunk/hatch, or rear-most window open.
- Fully open the air outlets on or under the instrument panel.
- Also adjust the Climate Control system to a setting that brings in only outside air. See "Climate Control Systems" in the Index.

For more information about Carbon Monoxide, see *Engine Exhaust on page 9-22*.

Towing a trailer requires a certain amount of experience. The combination you are driving is longer and not as responsive as the vehicle itself. Get acquainted with the handling and braking of the rig before setting out for the open road.

Before starting, check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tires and mirrors. If the trailer has electric brakes, start the combination moving and then apply the trailer brake controller by hand to be sure the brakes work.

During the trip, check occasionally to be sure that the load is secure and the lamps and any trailer brakes still work.

Towing with a Stability Control System

When towing, the sound of the stability control system might be heard. The system is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid situations that require heavy braking and sudden turns.

Passing

More passing distance is needed when towing a trailer. Because the rig is longer, it is necessary to go farther beyond the passed vehicle before returning to the lane.

Backing Up

Hold the bottom of the steering wheel with one hand. To move the trailer to the left, move your hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

Making Turns

Notice: **Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.**

When turning with a trailer, make wider turns than normal so the trailer will not strike soft shoulders, curbs, road signs, trees or other objects. Use the turn signal well in advance and avoid jerky or sudden maneuvers.

Turn Signals When Towing a Trailer

The turn signal indicators on the instrument panel flash whenever signaling a turn or lane change. Properly hooked up, the trailer lamps also flash, telling other drivers the vehicle is turning, changing lanes or stopping.

When towing a trailer, the arrows on the instrument panel flash for turns even if the bulbs on the trailer are burned out. Check occasionally to be sure the trailer bulbs are still working.

Driving on Grades

Reduce speed and shift to a lower gear before starting down a long or steep downgrade. If the transmission is not shifted down, the brakes might have to be used so much that they would get hot and no longer work well.

The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.

When towing at high altitude on steep uphill grades, engine coolant boils at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle could show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating on page 10-18.*

Parking on Hills

⚠ WARNING

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the brake pedal until the chocks absorb the load.
4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
5. Release the brake pedal.

Leaving After Parking on a Hill

1. Apply and hold the brake pedal while you:
   - Start the engine.
   - Shift into a gear.
   - Release the parking brake.
2. Let up on the brake pedal.

3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance When Trailer Towing

The vehicle needs service more often when pulling a trailer. See the *Maintenance Schedule on page 11-4*. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system and brake system. Inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Engine Cooling When Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating on page 10-18*.

Trailer Towing

Before pulling a trailer, there are three important considerations that have to do with weight:

- The weight of the trailer
- The weight of the trailer tongue
- The total weight on the vehicle's tires

Weight of the Trailer

How heavy can a trailer safely be?

It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature and how much the vehicle is used to pull a trailer are all important. It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry. See "Weight of the Trailer Tongue" later in this section.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Use the following chart to determine how much the vehicle can weigh, based upon the vehicle model and options.

Vehicle	Maximum Trailer Weight	GCWR*	Maximum Tongue Weight
3.6L Engine, FWD without Trailering Package	1 134 kg (2,500 lbs)	3 185 kg (7,022 lbs)	113 kg (250 lbs)
3.6L Engine, FWD with Trailering Package	1 588 kg (3,500 lbs)	3 640 kg (8,025 lbs)	159 kg (350 lbs)
3.6L Engine, AWD without Trailering Package	1 134 kg (2,500 lbs)	3 270 kg (7,209 lbs)	113 kg (250 lbs)
3.6L Engine, AWD with Trailering Package	1 588 kg (3,500 lbs)	3 725 kg (8,212 lbs)	159 kg (350 lbs)
*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversions. The GCWR for the vehicle should not be exceeded.			

Ask your dealer for trailering information or advice. See *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-5*.

Weight of the Trailer Tongue

The tongue load (1) of any trailer is an important weight to measure because it affects the total gross weight of the vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo carried in it, and the people who will be riding in the vehicle. If there are a lot of options, equipment, passengers or cargo in the vehicle, it will reduce the tongue weight the vehicle can carry, which will also reduce the trailer weight the vehicle can tow. If towing a trailer, the tongue load must be added to the GVW because the vehicle will be carrying that weight, too. See *Vehicle Load Limits on page 9-10* for more information about the vehicle's maximum load capacity.

1 2

If a weight-carrying hitch or a weight-distributing hitch is being used, the trailer tongue (1) should weigh 10-15 percent of the total loaded trailer weight (2).

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

Trailering may be limited by the vehicle's ability to carry tongue weight. Tongue weight cannot cause the vehicle to exceed the GVWR (Gross Vehicle Weight Rating) or the RGAWR (Rear Gross Axle Weight Rating). The effect of additional weight may reduce the trailering capacity more than the total of the additional weight.

It is important that the vehicle does not exceed any of its ratings — GCWR, GVWR, RGAWR, Maximum Trailer Rating or Tongue Weight. The only way to be sure it is not exceeding any of these ratings is to weigh the vehicle and trailer.

Total Weight on the Vehicle's Tires

Be sure the vehicle's tires are inflated to the upper limit for cold tires. These numbers can be found on the Certification label or see *Vehicle Load Limits on page 9-10.* Make sure not to go over the GVW limit for the vehicle, or the GAWR, including the weight of the trailer tongue. If using a weight distributing hitch, make sure not to go over the rear axle limit before applying the weight distribution spring bars.

Towing Equipment

Hitches

It is important to have the correct hitch equipment. Crosswinds, large trucks going by and rough roads are a few reasons why the right hitch is needed.

- The rear bumper on the vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will any holes be made in the body of the vehicle when the trailer hitch is installed? If there are, then be sure to seal the holes later when the hitch is removed. If the holes are not sealed, dirt, water, and deadly carbon monoxide (CO) from the exhaust can get into the vehicle. See *Engine Exhaust on page 9-22.*

Hitch Cover

The vehicle may have a hitch cover. To remove the hitch cover:

1. Turn the fasteners on the lower tabs 90 degrees counterclockwise.
2. Lift the lower edge of the cover about 45 degrees.
3. Pull the cover downward to disengage the upper attachments.

To reinstall the hitch cover:

1. Hold the cover at a 45 degree angle to the vehicle and push the upper tabs in the hitch cover into the slots in the fascia.
2. Move the bottom of the cover forward until the lower tabs line up with the lower fascia slots.
3. Snap the hitch cover into place by pushing the upper corners forward.
4. Turn the fasteners on the lower tabs 90 degrees clockwise to lock the cover in place.

Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Always leave just enough slack so the rig can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

A loaded trailer that weighs more than 450 kg (1,000 lbs) needs to have its own brake system that is adequate for the weight of the trailer. Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted and maintained properly.

Because the vehicle has anti-lock brakes, do not tap into the vehicle's brake system. If you do, both brake systems will not work well, or at all.

Trailer Sway Control (TSC)

The vehicle has a Trailer Sway Control (TSC) feature as part of the StabiliTrak system. If TSC detects that the trailer is swaying, the vehicle's brakes are automatically applied.

When TSC is applying the brakes, the TCS/StabiliTrak indicator light flashes to notify the driver to reduce speed. If the trailer continues to sway, StabiliTrak will reduce engine torque to help slow the vehicle.

TSC will not function if StabiliTrak is turned off. See *StabiliTrak® System on page 9-33*.

Conversions and Add-Ons

Add-On Electrical Equipment

Notice: **Some electrical equipment can damage the vehicle or cause components to not work and would not be covered by the warranty. Always check with your dealer before adding electrical equipment.**

Add-on equipment can drain the vehicle's 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see *Servicing the Airbag-Equipped Vehicle on page 3-31* and *Adding Equipment to the Airbag-Equipped Vehicle on page 3-32*.

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General Information

For service and parts needs, visit your dealer. You will receive genuine GM parts and GM-trained and supported service people.

Genuine GM parts have one of these marks:

ACDelco

Genuine GM | Parts

GM Accessories

California Proposition 65 Warning

Most motor vehicles, including this one, contain and/or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems, many fluids, and some component wear by-products contain and/or emit these chemicals.

California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, safety belt pretensioners, and lithium batteries contained in Remote Keyless Entry transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.

Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorize the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle on page 3-32*.

Vehicle Checks

Doing Your Own Service Work

⚠ WARNING

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner manual procedures and consult the service manual for your vehicle before doing any service work.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can. To order the proper service manual, see *Service Publications Ordering Information on page 13-17*.

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle on page 3-31*.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records on page 11-16.*

Notice: **Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.**

Hood

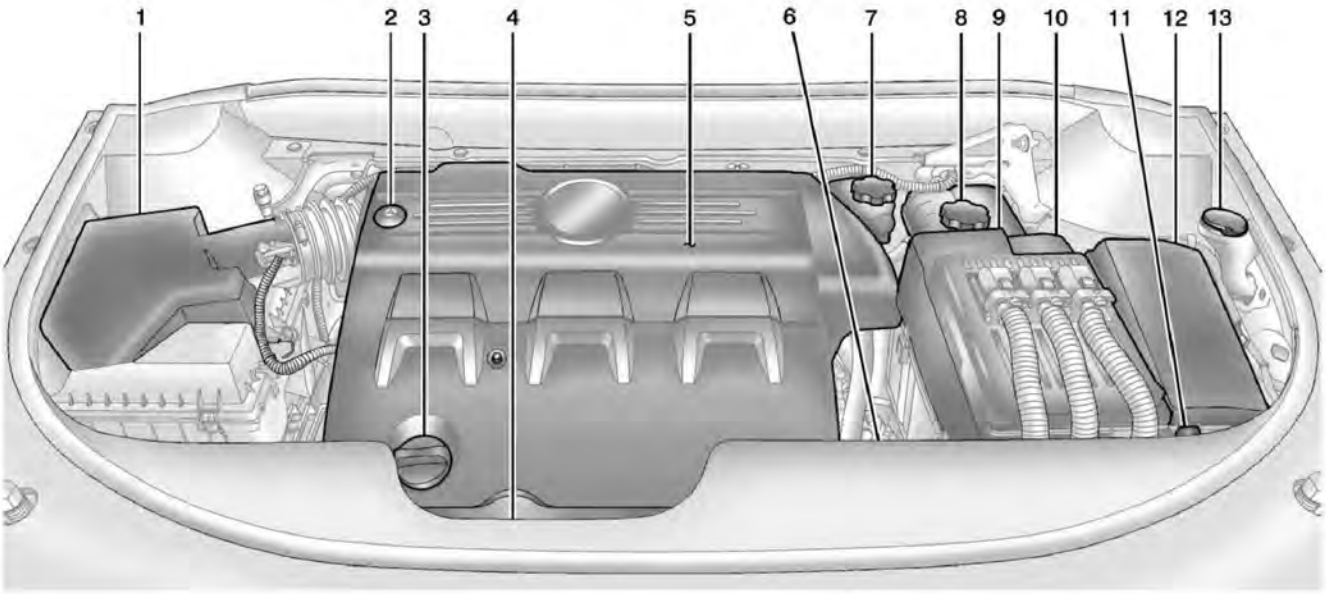
To open the hood:

1. Pull the release handle with the above symbol on it. It is located below the instrument panel to the left of the steering wheel.

2. Move the secondary hood release lever up to release the striker. The lever is located near the middle of the hood.
3. Lift the hood.

Before closing the hood, be sure all the filler caps are on properly.

Engine Compartment Overview



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1. *Engine Air Cleaner/Filter on page 10-11.*
2. Power Steering Reservoir and Cap (Under Engine Cover). See *Power Steering Fluid on page 10-19.*
3. Engine Oil Fill Cap. See *Engine Oil on page 10-8.*
4. Engine Oil Dipstick (Out of View). See *Engine Oil on page 10-8.*
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6. Transmission Fluid Cap and Dipstick (Out of View). See *Automatic Transmission Fluid on page 10-11.*
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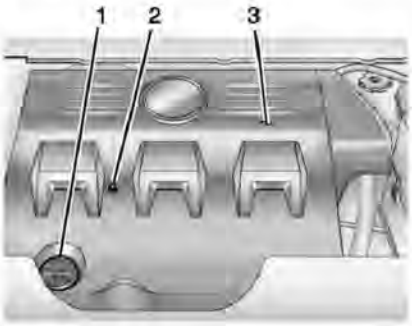
8. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 10-14.*
9. Battery (Out of View). See *Battery on page 10-23.*
10. Remote Positive (+) Terminal. See *Jump Starting on page 10-82.*
11. Remote Negative (−) Terminal (Out of View). See *Jump Starting on page 10-82.*
12. *Engine Compartment Fuse Block on page 10-35.*
13. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 10-20.*

Engine Cover



1. Oil Fill Cap
2. Engine Cover Bolt
3. Engine Cover

To remove:

1. Remove the oil fill cap (1).
2. Remove the engine cover bolt (2).
3. Raise the engine cover (3) to release from the retainers.

4. Lift and remove the engine cover.
5. Reverse Steps 1–4 to reinstall engine cover.

Engine Oil

To ensure proper engine performance and long life, careful attention must be paid to engine oil. Following these simple, but important steps will help protect your investment:

- Always use engine oil approved to the proper specification and of the proper viscosity grade. See "Selecting the Right Engine Oil" in this section.
- Check the engine oil level regularly and maintain the proper oil level. See "Checking Engine Oil" and "When to Add Engine Oil" in this section.
- Change the engine oil at the appropriate time. See *Engine Oil Life System on page 10-10*.
- Always dispose of engine oil properly. See "What to Do with Used Oil" in this section.

Checking Engine Oil

It is a good idea to check the engine oil level at each fuel fill. In order to get an accurate reading, the vehicle must be on level ground. The engine oil dipstick handle is a loop. See *Engine Compartment Overview on page 10-6* for the location of the engine oil dipstick.

1. If the engine has been running recently, turn off the engine and allow several minutes for the oil to drain back into the oil pan. Checking the oil level too soon after engine shutoff will not provide an accurate oil level reading.

⚠ WARNING

The engine oil dipstick handle may be hot; it could burn you. Use a towel or glove to touch the dipstick handle.

2. Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

When to Add Engine Oil

If the oil is below the cross-hatched area at the tip of the dipstick, add 1 L (1 qt) of the recommended oil and then recheck the level. See "Selecting the Right Engine Oil" in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications on page 12-2*.

Notice: **Do not add too much oil. Oil levels above or below the acceptable operating range shown on the dipstick are harmful to the engine. If you find that you have an oil level above the operating range, i.e., the engine has so much oil that the oil level gets above the cross-hatched area that shows the proper operating range, the engine could be damaged. You should drain out the excess oil or limit driving of the vehicle and seek a service professional to remove the excess amount of oil.**

See *Engine Compartment Overview on page 10-6* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when through.

Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade. See *Recommended Fluids and Lubricants on page 11-13*.

Specification

Use and ask for licensed engine oils with the dexos1® approved certification mark. Engine oils meeting the requirements for the vehicle should have the dexos1 approved certification mark. This certification mark indicates that the oil has been approved to the dexos1 specification.

Notice: **Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty. Check with your dealer or service provider on whether the oil is approved to the dexos1 specification.**

Viscosity Grade

SAE 5W-30 is the best viscosity grade for the vehicle. Do not use other viscosity grade oils such as SAE 10W-30, 10W-40, or 20W-50.

Cold Temperature Operation: In an area of extreme cold, where the temperature falls below −29°C (−20°F), an SAE 0W-30 oil may be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, always select an oil of the correct specification. See "Specification" earlier in this section for more information.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils with the dexos specification and displaying the dexos certification mark are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Engine Oil Life System

When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. See *Engine Oil Messages on page 5-33*. Change the oil as soon as possible within the next 1 000 km (600 mi). It is possible that, if driving under the best conditions, the oil life system might indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. To reset the system:

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-27*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-33*.
2. Press SEL on the DIC controls and hold SEL down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

The system is reset when the CHANGE ENGINE OIL SOON message is off.

If the CHANGE ENGINE OIL SOON message comes back on when the vehicle is started, the engine oil life system has not been reset. Repeat the procedure.

Automatic Transmission Fluid

A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer and have it repaired as soon as possible.

Change the fluid and filter at the intervals listed in *Maintenance Schedule on page 11-4*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants on page 11-13*.

Engine Air Cleaner/Filter

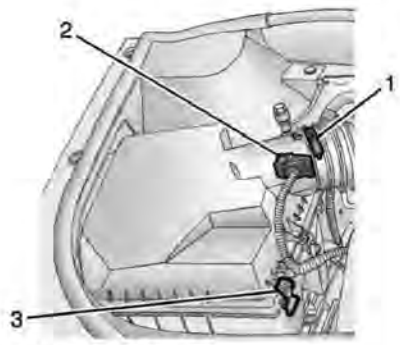
See *Engine Compartment Overview on page 10-6* for the location of the engine air cleaner/filter.

When to Inspect the Engine Air Cleaner/Filter

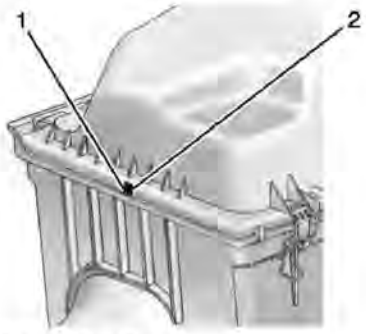
Inspect the air cleaner/filter at the scheduled maintenance intervals and replace it at the first oil change after each 80 000 km (50,000 mi) interval. See *Maintenance Schedule on page 11-4*. If driving in dusty/dirty conditions, inspect the filter at each engine oil change.

How to Inspect the Engine Air Cleaner/Filter

To inspect the air cleaner/filter, remove the filter from the vehicle and lightly shake the filter to release loose dust and dirt. If the filter remains covered with dirt, a new filter is required. Never use compressed air to clean the filter.



1. Air Duct Clamp
2. Electrical Connector
3. Retaining Clips



1. Cover Cut Outs
2. Air Filter Tabs

To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood on page 10-5*.
2. Locate the air filter housing on the front of the passenger side of the engine compartment. See *Engine Compartment Overview on page 10-6*.
3. Disconnect the outlet duct by loosening the air duct clamp (1).

4. Disconnect the electrical connector (2). First, remove the connector lock clip located at the bottom of the connector, then press on the top and bottom of the connector to remove.
5. Lift the 3 retaining clips (3) on the air filter housing.
6. Tilt and lift the cover slightly upwards and slide the cover away from outside edge of the vehicle. Remove the air filter.
7. To install the air filter, place filter inside box where the pleats fit in between the tabs located inside the lower box. Ensure that the cover cut outs (1) on both sides match the air filter tabs (2) on both sides.
8. Replace air cleaner cover by inserting the 4 tabs into the 4 slots. Lower cover to meet bottom of box. Place the 3 retaining clips (3) on retention features and clip closed.
9. Reconnect outlet duct to cover and tighten the air duct clamp (1).
10. Reconnect the electrical connector (2). Install connector lock clip to bottom of connector.

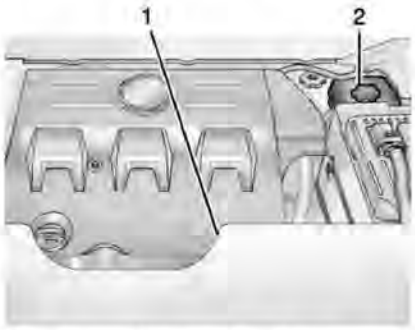
⚠ WARNING

Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

Notice: **If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when you are driving.**

Notice: **Installing an air cleaner different than the one recommended in Maintenance Replacement Parts may cause engine damage not covered by the vehicle warranty.**

Cooling System



1. Engine Cooling Fan (Out of View)
2. Engine Coolant Surge Tank and Pressure Cap

⚠ WARNING

An electric engine cooling fan under the hood can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood electric fan.

If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. The vehicle should be parked on a level surface.

The coolant level should be between the MIN and MAX lines. If it is not, the vehicle may have a leak at the radiator hoses, heater hoses, radiator, water pump, or somewhere else in the cooling system.

⚠ WARNING

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.

If there seems to be no leak, with the engine on, check to see if the engine cooling fan is running. If the engine is overheating, the fan should be running. If it is not, the vehicle needs service. Turn off the engine.

Notice: **Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner, at 50 000 km (30,000 mi) or 24 months, whichever occurs first. Any repairs would not be covered by the vehicle warranty. Always use DEX-COOL (silicate-free) coolant in the vehicle.**

Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL® engine coolant. This coolant needs to be checked and replaced at appropriate intervals. See *Maintenance Schedule on page 11-4*.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating on page 10-18*.

What to Use

⚠ WARNING

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. If using this mixture, nothing else needs to be added. This mixture:

- Gives freezing protection down to −37°C (−34°F), outside temperature.
- Gives boiling protection up to 129°C (265°F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminum parts.
- Helps keep the proper engine temperature.

Notice: **If improper coolant mixture, inhibitors, or additives are used in the vehicle cooling system, the engine could overheat and be damaged. Too much water in the mixture can freeze and crack engine cooling parts. The repairs would not be covered by the warranty. Use only the proper mixture of engine coolant for the cooling system. See *Recommended Fluids and Lubricants on page 11-13*.**

Never dispose of engine coolant by putting it in the trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

Checking Coolant

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. If coolant is visible but the coolant level is not at the indicated mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system is cool before this is done. See *Engine Overheating on page 10-18*.

The coolant surge tank is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview on page 10-6*.

How to Add Coolant to the Coolant Surge Tank

***Notice:* This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.**

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.

⚠ WARNING

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. Never turn the cap when the cooling system,

(Continued)

WARNING (Continued)

including the surge tank pressure cap, is hot. Wait for the cooling system and surge tank pressure cap to cool.

⚠ WARNING

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Notice: **In cold weather, water can freeze and crack the engine, radiator, heater core and other parts. Use the recommended coolant and the proper coolant mixture.**

⚠ WARNING

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.

1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This will allow any pressure still left to be vented out the discharge hose.
2. Then keep turning the pressure cap slowly and remove it.
3. Fill the coolant surge tank with the proper mixture to the indicated level mark.
4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper mixture to the coolant surge tank until the level reaches the indicated level mark.
5. Replace the pressure cap tightly.
6. Verify coolant level after the engine is shut off and the coolant is cold. If necessary, repeat coolant fill procedure Steps 1–6.

   If the coolant still is not at the proper level when the system cools down again, see your dealer.

Notice: **If the pressure cap is not tightly installed, coolant loss and possible engine damage may occur. Be sure the cap is properly and tightly secured.**

Engine Overheating

The vehicle has an indicator to warn of engine overheating.

There is an engine coolant temperature warning light on the vehicle's instrument panel. See *Engine Coolant Temperature Gauge on page 5-13.*

If the decision is made not to lift the hood when this warning appears, but instead get service help right away. See *Roadside Service (Mexico) on page 13-7* or *Roadside Service (U.S. and Canada) on page 13-11.*

If the decision is made to lift the hood, make sure the vehicle is parked on a level surface.

Then check to see if the engine cooling fans are running. If the engine is overheating, both fans should be running. If they are not, do not continue to run the engine and have the vehicle serviced.

Notice: **Running the engine without coolant may cause damage or a fire. Vehicle damage would not be covered by the warranty.**

If Steam Is Coming from the Engine Compartment

⚠ WARNING

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down.

(Continued)

WARNING (Continued)

Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when the engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop the engine if it overheats, and get out of the vehicle until the engine is cool.

If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day
- Stops after high-speed driving

- Idles for long periods in traffic
- Tows a trailer

If the overheat warning displays with no sign of steam:

1. Turn the air conditioning off.
2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
3. In heavy traffic, let the engine idle in N (Neutral) while stopped. If it is safe to do so, pull off the road, shift to P (Park) or N (Neutral) and let the engine idle.

If the temperature overheat gauge is no longer in the overheat zone or an overheat warning no longer displays, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe vehicle distance from the vehicle in front. If the warning does not come back on, continue to drive normally.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

Power Steering Fluid

See *Engine Compartment Overview on page 10-6* for reservoir location.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless a leak is suspected in the system or unusual noise is heard. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

To check the power steering fluid:

1. Turn the engine off and let the engine compartment cool down.
2. Remove the engine cover, if required. See *Engine Cover on page 10-7*.
3. Wipe the cap and the top of the reservoir clean.
4. Unscrew the cap and wipe the dipstick with a clean rag.
5. Replace the cap and completely tighten it.
6. Remove the cap again and look at the fluid level on the dipstick.

The level should be within the HOT mark. If necessary, add only enough fluid to bring the level within the mark.

What to Use

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants on page 11-13*. Always use the proper fluid.

Washer Fluid

What to Use

When windshield washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid

The WASHER FLUID LOW ADD FLUID message appears on the Driver Information Center (DIC) when the fluid level is low.

Open the cap with the washer symbol on it. Add washer fluid up to the fill mark. See *Engine Compartment Overview on page 10-6* for reservoir location.

Notice

- **When using concentrated washer fluid, follow the manufacturer instructions for adding water.**
- **Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.**
- **Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.**
- **Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.**

Brakes

This vehicle has disc brakes. Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or be heard all the time the vehicle is moving, except when applying the brake pedal firmly.

⚠ WARNING

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

Notice: **Continuing to drive with worn-out brake pads could result in costly brake repair.**

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications in *Capacities and Specifications on page 12-2*.

Brake linings should always be replaced as complete axle sets.

Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service might be required.

Brake Adjustment

Every time the brakes are applied, with or without the vehicle moving, the brakes adjust for wear.

Replacing Brake System Parts

The braking system on a vehicle is complex. Its many parts have to be of top quality and work well together if the vehicle is to have really good braking. The vehicle was designed and tested with top-quality brake parts. When parts of the braking system are replaced, be sure to get new, approved replacement parts. If this is not done, the brakes might not work properly. For example, installing disc brake pads that are wrong for the vehicle, can change the balance between the front and rear brakes — for the worse. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed.

Brake Fluid

The brake master cylinder reservoir is filled with DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview on page 10-6* for the location of the reservoir.

There are only two reasons why the brake fluid level in the reservoir might go down:

- The brake fluid level goes down because of normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake hydraulic system can also cause a low fluid level. Have the brake hydraulic system fixed, since a leak means that sooner or later the brakes will not work well.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove brake fluid, as necessary, only when work is done on the brake hydraulic system.

⚠ WARNING

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light on page 5-20*.

What to Add

Use only new DOT 3 brake fluid from a sealed container. See *Recommended Fluids and Lubricants on page 11-13*.

Always clean the brake fluid reservoir cap and the area around the cap before removing it. This helps keep dirt from entering the reservoir.

⚠ WARNING

With the wrong kind of fluid in the brake hydraulic system, the brakes might not work well. This could cause a crash. Always use the proper brake fluid.

Notice

- **Using the wrong fluid can badly damage brake hydraulic system parts. For example, just a few drops of mineral-based oil, such as engine oil, in the brake hydraulic system can damage brake hydraulic system parts so badly that they will have to be replaced. Do not let someone put in the wrong kind of fluid.**

- **If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on the vehicle. If you do, wash it off immediately.**

Battery

Refer to the replacement number shown on the original battery label when a new battery is needed. See *Engine Compartment Overview on page 10-6* for battery location.

⚠ WARNING

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Vehicle Storage

⚠ WARNING

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. See *Jump Starting on page 10-82* for tips on working around a battery without getting hurt.

Infrequent Usage: Remove the black, negative (−) cable from the battery to keep the battery from running down.

Extended Storage: Remove the black, negative (−) cable from the battery or use a battery trickle charger.

All-Wheel Drive

Transfer Case

Under normal driving conditions, transfer case fluid does not require changing or checking unless there is a fluid leak or unusual noise. If required, have the transfer case serviced by your dealer.

Starter Switch Check

⚠ WARNING

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.

2. Firmly apply both the parking brake and the regular brake. See *Parking Brake on page 9-28*.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.

3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

Automatic Transmission Shift Lock Control Function Check

⚠ WARNING

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.
2. Firmly apply the parking brake. See *Parking Brake on page 9-28*.

   Be ready to apply the regular brake immediately if the vehicle begins to move.

3. With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the shift lever out of P (Park) with normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

Park Brake and P (Park) Mechanism Check

⚠ WARNING

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

Wiper Blade Replacement

Windshield wiper blades should be inspected for wear or cracking. See *Maintenance Schedule on page 11-4*.

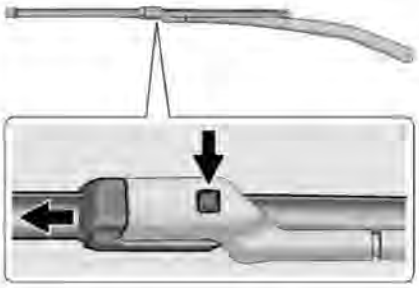
It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn. For proper windshield wiper blade length and type, see *Maintenance Replacement Parts on page 11-15*.

Notice: **Allowing the wiper arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that occurs would not be covered by your warranty. Do not allow the wiper arm to touch the windshield.**

Front Wiper Blade Replacement

To replace the wiper blade assembly:

1. Pull the windshield wiper assembly away from the windshield.



2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
3. Remove the wiper blade.
4. Reverse steps 1–3 for wiper blade replacement.

Rear Wiper Blade Replacement

The rear wiper blade and wiper arm have a cover for protection. The cover must be removed before the wiper blade can be replaced.

To remove the cover:

1. Slide a plastic tool under the cover and push upward to unsnap.
2. Slide the cover toward the wiper blade tip to unhook it from the blade assembly.
3. Remove the cover.
4. After wiper blade replacement, ensure that the cover hook slides into the slot in the blade assembly.
5. Snap the cover down to secure.

To remove the wiper blade:

1. Lift the wiper arm away from the windshield.
2. Push the release lever (2) to disengage the hook and push the wiper arm (1) out of the blade assembly (3).
3. Push the new blade assembly securely on the wiper arm until the release lever clicks into place.
4. Replace the wiper cover.

Headlamp Aiming

Headlamp aim has been preset and should need no further adjustment.

If the vehicle is damaged in a crash, the headlamp aim may be affected. If adjustment to the headlamps is necessary, see your dealer.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs on page 10-33*.

For any bulb changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

⚠ WARNING

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

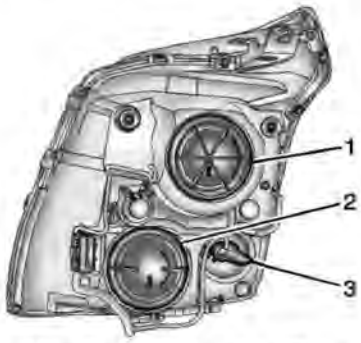
High Intensity Discharge (HID) Lighting

⚠ WARNING

The high intensity discharge lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.

After an HID headlamp bulb has been replaced, the beam might be a slightly different shade than it was originally. This is normal.

Headlamps



Base Headlamp Assembly (Rear View Passenger Side)

1. Low-Beam Headlamp/Daytime Running Lamp (DRL)
2. High-Beam Headlamp
3. Turn Signal Lamp

Uplevel Headlamp Assembly (Rear View Driver Side)

1. High/Low-Beam Headlamp (To be replaced at dealer only)
2. Daytime Running Lamp (DRL)
3. Turn Signal Lamp

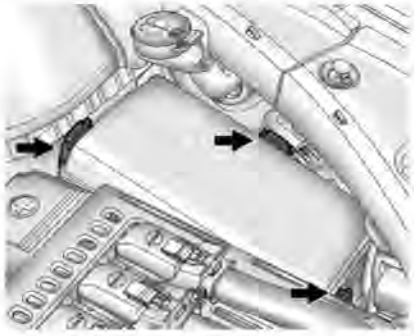
Driver Side

The removal of the underhood electrical center is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-5*.

⚠ WARNING

Liquids from environment or spillage and/or tools placed on top of or used in the underhood electrical center while the cover is removed can pose a risk of electrical shock/burn to anyone in the vicinity. These conditions can also cause damage to electrical components on the vehicle. Keep liquids and tools away from the underhood electrical center when the cover is removed.



2. Unlatch three clips and lift up the underhood electrical center cover to remove.

Passenger Side

The removal of the air filter/cleaner assembly and base is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-5*.
2. Remove the air cleaner/filter cover. See *Engine Air Cleaner/ Filter on page 10-11*.

3. Lift the air cleaner/filter base to disengage from the three pins.

Low-Beam Headlamps/Daytime Running Lamps (DRL), High-Beam Headlamps (Base)

1. From the back side of the headlamp assembly, remove the top cap to replace the low-beam headlamp/DRL bulb.

2. From the back side of the headlamp assembly, remove the bottom cap to replace the high-beam headlamp bulb.
3. Disconnect electrical connector.
4. Remove the bulb socket from the headlamp assembly.
5. Replace the bulb in the bulb socket.
6. Install the bulb socket in the headlamp assembly.
7. Connect the electrical connector.
8. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
9. For driver side, reinstall the underhood electrical center cover by latching three clips.
10. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

High/Low-Beam Headlamps (Uplevel)

The high/low beam headlamps on the uplevel are High Intensity Discharge (HID) and should be replaced at the dealer.

Daytime Running Lamp (DRL) (Uplevel)

1. From the back side of the headlamp assembly, remove the bottom cap to replace the DRL bulb.
2. Disconnect electrical connector.
3. Remove the DRL bulb socket from the headlamp assembly.
4. Replace the bulb in the bulb socket.
5. Install the bulb socket in the headlamp assembly.
6. Connect the electrical connector.
7. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
8. For driver side, reinstall the underhood electrical center cover by latching three clips.
9. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat . Verify the base is seated securely, then install the engine air filter/ cleaner assembly.

Front Turn Signal Lamp (Base and Uplevel)

To replace the Front Turn Signal Lamp:

1. Remove the turn signal lamp bulb socket from the headlamp assembly.
2. Remove the turn signal lamp bulb from the socket.
3. Replace the bulb in the bulb socket.
4. Install the bulb socket in the headlamp assembly.
5. For driver side, reinstall the underhood electrical center cover by latching three clips.
6. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat . Verify the base is seated securely, then install the engine air filter/ cleaner assembly.

Turn Signal Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-13*.

2. Remove the push pin (1) on the taillamp cover (2).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten the snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.

6. Turn the turn signal lamp bulb socket counterclockwise to remove it from the taillamp assembly.
7. Pull the bulb straight out from the socket.
8. Press a new bulb into the socket, insert it into the taillamp assembly, and turn the bulb socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.

10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

Back-Up Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-13.*

2. Remove the push pin (1) on the taillamp cover (2).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from the snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.

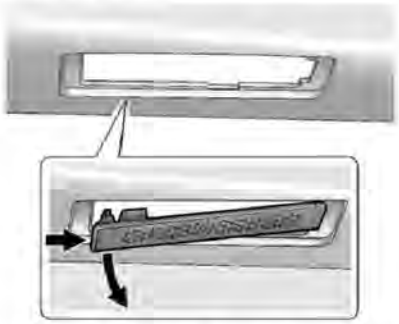
6. Disconnect the wiring harness connector from the back-up bulb/ socket assembly.
7. Turn the back-up bulb socket counterclockwise to remove it from the taillamp assembly.
8. Install a new bulb/socket assembly into the taillamp assembly, and turn the bulb/ socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.

10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

License Plate Lamp

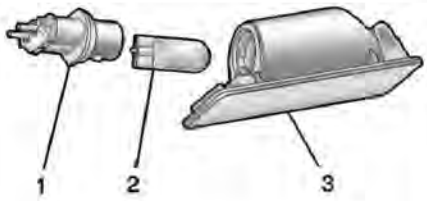
To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-13*.



Passenger Side Shown, Driver Side Similar

2. Push the left end of the lamp assembly towards the right.
3. Turn the lamp assembly down to remove from liftgate.



4. Turn the bulb socket (1) counterclockwise to remove from lamp assembly (3).
5. Pull the bulb (2) straight out of the bulb socket.
6. Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install into lamp assembly.
7. Turn the lamp assembly into the liftgate engaging the clip side first.
8. Push on the lamp side opposite the clip until the lamp assembly snaps into place.

Replacement Bulbs

Exterior Lamp	Bulb Number
Back-up Lamp	Hyperclick PH16W
Daytime Running Lamp	7443 ULL
Headlamp High-Beam	9005LL
Headlamp Low-Beam	H11LL
License Plate Lamp	W5WLL
Turn Signal Front	7444NA
Tail/Turn Signal Rear	7440

For replacement bulbs not listed here, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect power devices in the vehicle.

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

Windshield Wipers

If the wiper motor overheats due to heavy snow or ice, the windshield wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windshield before using the windshield wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

Fuses and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit breakers. This greatly reduces the chance of damage caused by electrical problems.

To check a fuse, look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating.

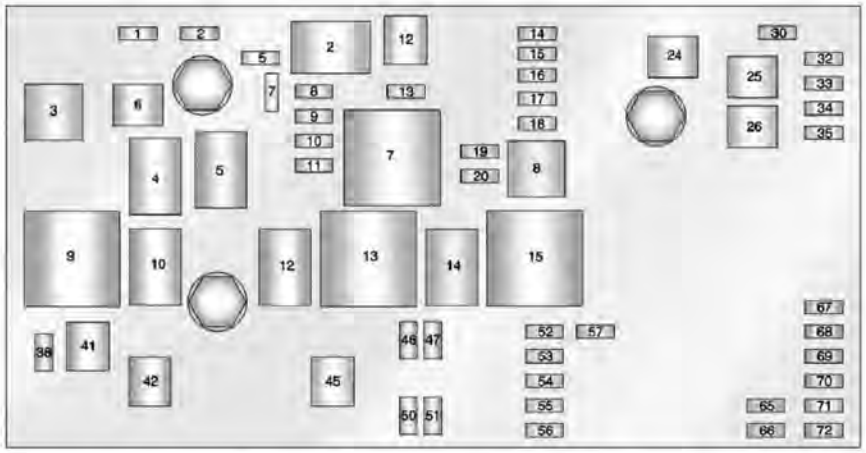
Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as possible.

To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse Block on page 10-35*, *Instrument Panel Fuse Block on page 10-37*, and *Rear Compartment Fuse Block on page 10-39*.

Engine Compartment Fuse Block

To remove the fuse block cover, press the clips on the cover and lift it straight up.

Notice: **Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.**



Engine Compartment Fuse Block

The vehicle may not be equipped with all of the fuses, relays, and features shown.

J-Case Fuses	Usage
6	Wiper
12	Vacuum Pump

J-Case Fuses	Usage
24	Antilock Brake System Pump
25	Rear Electrical Center 1

J-Case Fuses	Usage
26	Rear Electrical Center 2
41	Cooling Fan 2
42	Starter
45	Cooling Fan 1

Mini Fuses	Usage
1	Engine Control Module Battery
2	Transmission Control Module Battery
5	Engine Control Module Run Crank
7	Post–Catalytic Converter O2 Sensor
8	Pre–Catalytic Converter O2 Sensor

Mini Fuses	Usage
9	Engine Control Module Powertrain
10	Fuel Injectors–Even
11	Fuel Injectors-Odd
13	Washer
14	Heated Steering Wheel
15	Heads Up Display
16	Instrument Cluster/ Malfunction Indicator Lamp/Ignition
17	Air Quality Sensor
18	Headlamp Washer
19	Transmission Control Module Run Crank
20	Rear Electrical Center Run Crank
30	Switch Back Light

Mini Fuses	Usage
32	Battery Sense (Regulated Voltage Control)
33	Adaptive Forward Lighting/Adaptive Headlamp Leveling Module
34	Body Control Module 7
35	Electronic Brake Control Module
36	Air Conditioning Compressor Clutch
46	Low-Beam Headlamp-Right
47	Low-Beam Headlamp-Left
50	Front Fog Lamps
51	Horn
52	Fuel System Control Module
53	Headlamp Level

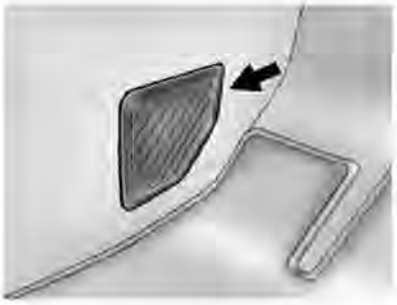
Mini Fuses	Usage
54	Sensing Diagnostic Module Ignition
55	High-Beam Headlamp-Right
56	High-Beam Headlamp-Left
57	Ignition Steering Column Lock
65	Trailer Right Stoplamp
66	Trailer Left Stoplamp
67	Spare
68	Spare
69	Spare
70	Spare
71	Spare
72	Spare

Mini Relays	Usage
7	Powertrain
9	Cooling Fan 2
13	Cooling Fan 1
15	Run/Crank

Micro Relays	Usage
2	Vacuum Pump
4	Wiper Control
5	Wiper Speed
10	Starter
12	Cool Fan 3
14	Low Beam/HID

U Micro Relays	Usage
3	Air Conditioning Compressor Clutch
8	Headlamp Washer

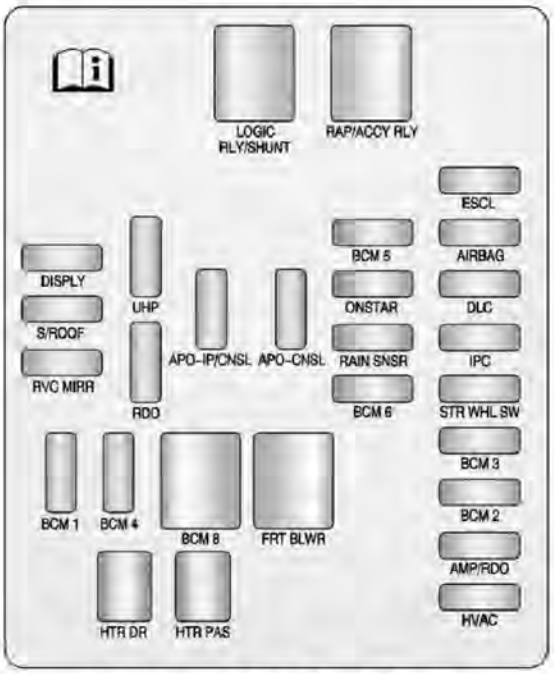
Instrument Panel Fuse Block



The instrument panel fuse block is located in the center console between the driver and passenger seats. To access the fuses, open the fuse panel door from the passenger side by pulling it out.

To reinstall the door, push the door back into its original location.

The vehicle may not be equipped with all of the fuses, relays and features shown.



Instrument Panel Fuse Block

Mini Fuses	Usage
DISPLY	Display
S/ROOF	Sunroof
RVC MIRR	Rear Vision Camera Mirror
UHP	Universal Handsfree Phone
RDO	Radio
APO – IP/CNSL	Auxiliary Power Outlet – Instrument Panel/Console
APO – CNSL	Auxiliary Power Outlet – Floor Console
BCM 1	Body Control Module 3
BCM 4	Body Control Module 4
BCM 5	Body Control Module 5
ONSTAR	OnStar® System (If Equipped)

Mini Fuses	Usage
RAIN SNSR	Rain Sensor
BCM 6	Body Control Module 6
ESCL	Electronic Steering Column Lock
AIRBAG	Sensing and Diagnostic Module
DLC	Data Link Connector
IPC	Instrument Cluster
STR WHL SW	Steering Wheel Switch
BCM 3	Body Control Module 1
BCM 2	Body Control Module 2
AMP/RDO	Amplifier/Radio
HVAC	Heating Ventilation & Air Conditioning

J-Case Fuses	Usage
BCM 8	Body Control Module 8
FRT BLWR	Front Blower

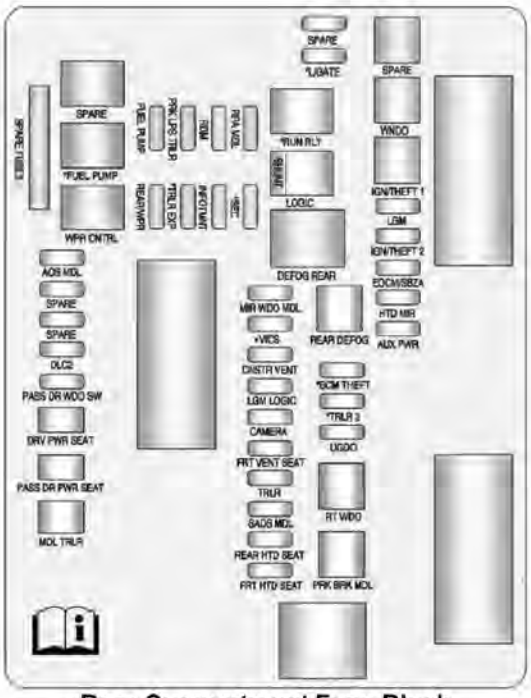
Relays	Usage
LOGIC RLY/ SHUNT	Logistics Relay/ Shunt
RAP/ ACCY RLY	Retained Accessory Power/ Accessory Relay

Breakers	Usage
HTR DR	Heated Driver Seat
HTR PAS	Heated Passenger Seat

Rear Compartment Fuse Block

The rear compartment fuse block is located in the cargo area, on the driver side of the vehicle behind the lower trim panel. To open, turn the latch with a flat bladed tool and pull the trim panel from the edges to fold it down.

The vehicle may not be equipped with all of the fuses, relays, and features shown.



Rear Compartment Fuse Block

Fuses	Usage
SPARE FUSES	Spare Fuses
AOS MDL	Automatic Occupant Sensing Module
SPARE	Not Used
SPARE	Not Used
DLC2	Data Link Connector 2
PASS DR WDO SW	Passenger Door Window Switch
DRV PWR SEAT	Driver Power Seat
PASS DR PWR SEAT	Passenger/Driver Power Seats
MDL TRLR	Trailer Module
RPA MDL	Rear Parking Assist Module
RDM	Rear Drive Module
PRK LPS TRLR	Trailer Park Lamps

Fuses	Usage
FUEL PUMP	Fuel Pump
*SEC	Security
INFOTMNT	Infotainment
*TRLR EXP	Trailer Export
REAR/WPR	Rear Wiper
MIR WDO MDL	Mirror Window Module
VICS	Vehicle Information Communications System (Export)
CNSTR VENT	Canister Vent
LGM LOGIC	Liftgate Module Logic
CAMERA	Rear Vision Camera
FRT VENT SEAT	Front Ventilated Seats
TRLR	Trailer Module

Fuses	Usage
SADS MDL	Semi Active Damping System Module
REAR HTD SEAT	Rear Heated Seats
FRT HTD SEAT	Front Heated Seats
SPARE	Spare
*L/GATE	Liftgate
SHUNT	Shunt
REAR DEFOG	Rear Defog
*BCM THEFT	Body Control Module Theft
*TRLR 2	Trailer 2
UGDO	Universal Garage Door Opener
RT WDO	Right Window
PRK BRK MDL	Park Brake Module
SPARE	Not Used

Fuses	Usage
WNDO	Power Window
IGN/ THEFT 1	Ignition/Theft 1
LGM	Liftgate Module
IGN/ THEFT 2	Ignition/Theft 2
EOCM/ SBZA	External Object Calculating Module/ Side Blind Zone Alert
HTD MIR	Heated Mirror
AUX PWR	Auxiliary Power Outlet

Relays	Usage
SPARE	Not Used
*FUEL PUMP	Fuel Pump
WPR CONTRL	Wiper Control
*RUN RLY	Run Relay

Relays	Usage
LOGIC	Logistic Relay (Export)
DEFOG REAR	Rear Window Defogger

*Denotes uplevel content.

Wheels and Tires

Tires

Every new GM vehicle has high-quality tires made by a leading tire manufacturer. See the warranty manual for information regarding the tire warranty and where to get service. For additional information refer to the tire manufacturer.

⚠ WARNING

- Poorly maintained and improperly used tires are dangerous.
- Overloading the tires can cause overheating as a result of too much flexing. There could be a blowout and a serious crash. See *Vehicle Load Limits on page 9-10*.
- Underinflated tires pose the same danger as overloaded tires. The resulting crash could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when the tires are cold.

(Continued)

WARNING (Continued)

- Overinflated tires are more likely to be cut, punctured, or broken by a sudden impact — such as when hitting a pothole. Keep tires at the recommended pressure.
- Worn or old tires can cause a crash. If the tread is badly worn, replace them.
- Replace any tires that have been damaged by impacts with potholes, curbs, etc.
- Improperly repaired tires can cause a crash. Only the dealer or an authorized tire service

(Continued)

WARNING (Continued)

center should repair, replace, dismount, and mount the tires.

- Do not spin the tires in excess of 56 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tires to explode.

See *Tire Pressure for High-Speed Operation on page 10-52* for inflation pressure adjustment for high-speed driving.

All-Season Tires

This vehicle may come with all-season tires. These tires are designed to provide good overall performance on most road surfaces and weather conditions. Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. Original equipment all-season tires can be identified by the last two characters of this TPC code, which will be "MS."

Consider installing winter tires on the vehicle if frequent driving on snow or ice-covered roads is expected. All-season tires provide adequate performance for most winter driving conditions, but they may not offer the same level of traction or performance as winter tires on snow or ice-covered roads. See *Winter Tires on page 10-44*.

Winter Tires

This vehicle was not, originally, equipped with winter tires. Winter tires are designed for increased traction on snow and ice-covered roads. Consider installing winter tires on the vehicle if frequent driving on snow or ice-covered roads is expected. See your dealer for details regarding winter tire availability and proper tire selection. Also, see *Buying New Tires on page 10-59*.

With winter tires, there may be decreased dry road traction, increased road noise, and shorter tread life. After changing to winter tires, be alert for changes in vehicle handling and braking.

If using winter tires:

- Use tires of the same brand and tread type on all four wheel positions.
- Use only radial ply tires of the same size, load range, and speed rating as the original equipment tires.

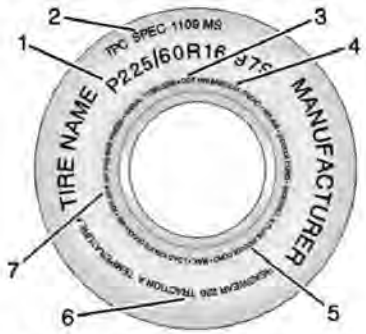
Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y, and ZR speed rated tires. If winter tires with a lower speed rating are chosen, never exceed the tire's maximum speed capability.

Summer Tires

This vehicle may come with high performance summer tires. These tires have a special tread and compound that are optimized for maximum dry and wet road performance. This special tread and compound will decrease performance in cold climates, and on ice and snow. We recommend installing winter tires on the vehicle if frequent driving in cold temperatures or on snow or ice covered roads is expected. See *Winter Tires on page 10-44*.

Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples show a typical passenger vehicle tire and a compact spare tire sidewall.



Passenger (P-Metric) Tire Example

(1) Tire Size: The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type,

and service description. See the "Tire Size" illustration later in this section.

(2) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

(3) DOT (Department of Transportation): The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

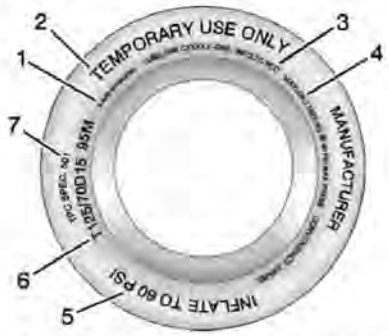
DOT Tire Date of Manufacture: The last four digits of the TIN indicate the tire manufactured date. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

(4) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(5) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(6) Uniform Tire Quality Grading (UTQG): Tire manufacturers are required to grade tires based on three performance factors: treadwear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading on page 10-62.*

(7) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.



Compact Spare Tire Example

(1) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(2) Temporary Use Only: The compact spare tire or temporary use tire should not be driven at speeds over 80 km/h (50 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If the vehicle has a compact spare tire, see *Compact Spare Tire on page 10-81* and *If a Tire Goes Flat on page 10-65*.

(3) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(4) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.

(5) Tire Inflation: The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure on page 10-51*.

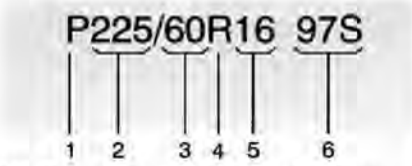
(6) Tire Size: A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(7) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

Tire Designations

Tire Size

The following is an example of a typical passenger vehicle tire size.



(1) Passenger (P-Metric) Tire: The United States version of a metric tire sizing system. The letter P as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

(2) Tire Width: The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(3) Aspect Ratio: A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item 3 of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(4) Construction Code: A letter code is used to indicate the type of ply construction in the tire. The letter R means radial ply construction; the letter D means diagonal or bias ply construction; and the letter B means belted-bias ply construction.

(5) Rim Diameter: Diameter of the wheel in inches.

(6) Service Description: These characters represent the load index and speed rating of the tire. The load index represents the load carrying capacity a tire is certified to carry. The speed rating is the maximum speed a tire is certified to carry a load.

Tire Terminology and Definitions

Air Pressure: The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in kPa (kilopascal) or psi (pounds per square inch).

Accessory Weight: The combined weight of optional accessories. Some examples of optional accessories are automatic transmission, power steering, power brakes, power windows, power seats, and air conditioning.

Aspect Ratio: The relationship of a tire's height to its width.

Belt: A rubber coated layer of cords between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead: The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire: A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure: The amount of air pressure in a tire, measured in kPa (kilopascal) or psi (pounds per square inch) before a tire has built up heat from driving. See *Tire Pressure on page 10-51*.

Curb Weight: The weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil, and coolant, but without passengers and cargo.

DOT Markings: A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation (DOT) Motor Vehicle Safety Standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand, and date of production.

GVWR: Gross Vehicle Weight Rating. See *Vehicle Load Limits on page 9-10.*

GAWR FRT: Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits on page 9-10.*

GAWR RR: Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits on page 9-10.*

Intended Outboard Sidewall: The side of an asymmetrical tire, that must always face outward when mounted on a vehicle.

Kilopascal (kPa): The metric unit for air pressure.

Light Truck (LT-Metric) Tire: A tire used on light duty trucks and some multipurpose passenger vehicles.

Load Index: An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

Maximum Inflation Pressure: The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.

Maximum Load Rating: The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum Loaded Vehicle Weight: The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Normal Occupant Weight: The number of occupants a vehicle is designed to seat multiplied by 68 kg (150 lb). See *Vehicle Load Limits on page 9-10.*

Occupant Distribution: Designated seating positions.

Outward Facing Sidewall: The side of an asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The side of the tire that contains a whitewall, bears white lettering, or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the other sidewall of the tire.

Passenger (P-Metric) Tire: A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

Recommended Inflation Pressure: Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Tire Pressure on page 10-51* and *Vehicle Load Limits on page 9-10.*

Radial Ply Tire: A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

Rim: A metal support for a tire and upon which the tire beads are seated.

Sidewall: The portion of a tire between the tread and the bead.

Speed Rating: An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

Traction: The friction between the tire and the road surface. The amount of grip provided.

Tread: The portion of a tire that comes into contact with the road.

Treadwear Indicators: Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1.6 mm (1/16 in) of tread remains. See *When It Is Time for New Tires on page 10-59.*

UTQGS (Uniform Tire Quality Grading Standards): A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading on page 10-62.*

Vehicle Capacity Weight: The number of designated seating positions multiplied by 68 kg (150 lb) plus the rated cargo load. See *Vehicle Load Limits on page 9-10.*

Vehicle Maximum Load on the Tire: Load on an individual tire due to curb weight, accessory weight, occupant weight, and cargo weight.

Vehicle Placard: A label permanently attached to a vehicle showing the vehicle capacity weight and the original equipment tire size and recommended inflation pressure.

See "Tire and Loading Information Label" under *Vehicle Load Limits on page 9-10*.

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

Notice: **Neither tire underinflation nor overinflation is good. Underinflated tires, or tires that do not have enough air, can result in:**

- **Tire overloading and overheating which could lead to a blowout.**
- **Premature or irregular wear.**
- **Poor handling.**
- **Reduced fuel economy.**

Overinflated tires, or tires that have too much air, can result in:

- **Unusual wear.**
- **Poor handling.**
- **Rough ride.**
- **Needless damage from road hazards.**

The Tire and Loading Information label on the vehicle indicates the original equipment tires and the correct cold tire inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity. See *Vehicle Load Limits on page 9-10*.

How the vehicle is loaded affects vehicle handling and ride comfort. Never load the vehicle with more weight than it was designed to carry.

When to Check

Check the tires once a month or more. Do not forget the compact spare, if the vehicle has one. The cold compact spare tire pressure should be at 420 kPa (60 psi). See *Compact Spare Tire on page 10-81*.

How to Check

Use a good quality pocket-type gauge to check tire pressure. Proper tire inflation cannot be determined by looking at the tire. Check the tire inflation pressure when the tires are cold, meaning the vehicle has not been driven for at least three hours or no more than 1.6 km (1 mi).

Remove the valve cap from the tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement. If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until the recommended pressure is reached. If the inflation pressure is high, press on the metal stem in the center of the tire valve to release air.

Recheck the tire pressure with the tire gauge.

Return the valve caps on the valve stems to prevent leaks and keep out dirt and moisture.

Tire Pressure for High-Speed Operation

⚠ WARNING

Driving at high speeds, 160 km/h (100 mph) or higher, puts an additional strain on tires. Sustained high-speed driving causes excessive heat buildup and can cause sudden tire failure. You could have a crash and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for high-speed operation. When speed limits and road conditions are such that a vehicle can be driven at high speeds, make sure the tires are rated for high-speed operation, in excellent condition, and set to the correct cold tire inflation pressure for the vehicle load.

Vehicles with P235/65R18, P235/55R20, or 235/55R20 size tires require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold inflation pressure to the maximum inflation pressure shown on the tire sidewall, or 260 kPa (38 psi), whichever is lower. Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See *Vehicle Load Limits on page 9-10* and *Tire Pressure on page 10-51*.

The maximum load and inflation pressure is molded on the tire sidewall, in small letters, near the rim flange. It will read something like this: Maximum load 690 kg (1521 lbs) 300 kPa (44 psi) Max. Press.

Tire Pressure Monitor System

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS sensors monitor the air pressure in your tires and transmit tire pressure readings to a receiver located in the vehicle.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated.

Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

See *Tire Pressure Monitor Operation on page 10-54*.

Federal Communications Commission (FCC) Rules and with Industry Canada Standards

See *Radio Frequency Statement on page 13-21* for information regarding Part 15 of the Federal Communications Commission (FCC) Rules and with Industry Canada Standards RSS-GEN/210/220/310.

Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the tires and transmits the tire pressure readings to a receiver located in the vehicle.

When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-10*.

A message to check the pressure in a specific tire displays in the Driver Information Center (DIC). The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure. Using the DIC, tire pressure levels can be viewed.

For additional information and details about the DIC operation and displays see *Driver Information Center (DIC) on page 5-27*.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tire and Loading Information label, attached to your vehicle, shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See *Vehicle Load Limits on page 9-10*, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure on page 10-51*.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection on page 10-57*, *Tire Rotation on page 10-57* and *Tires on page 10-42*.

Notice: **Tire sealant materials are not all the same. A non-approved tire sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tire sealant is not covered by the vehicle warranty. Always use only the GM-approved tire sealant available through your dealer or included in the vehicle.**

Factory-installed Tire Inflator Kits use a GM approved liquid tire sealant. Using non-approved tire sealants could damage the TPMS sensors. See *Tire Sealant and Compressor Kit on page 10-67* for information regarding the inflator kit materials and instructions.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tire warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and DIC message should go off after the road tire is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.
- The TPMS sensor matching process was not done or not completed successfully after rotating the tires. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tires or wheels do not match the original equipment tires or wheels. Tires and wheels other than those recommended could prevent the TPMS from functioning properly. See *Buying New Tires on page 10-59*.

- Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning properly it cannot detect or signal a low tire condition. See your dealer for service if the TPMS malfunction light and DIC message comes on and stays on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the vehicle's tires or replacing one or more of the TPMS sensors. The TPMS sensor matching process should also be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message should go off at the next ignition cycle. The sensors are matched to the tire/wheel positions, using a TPMS relearn tool, in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear. See your dealer for service or to purchase a relearn tool.

There are two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is:

1. Set the parking brake.
2. Place the vehicle power mode in ON/RUN/START. See *Ignition Positions on page 9-16*.
3. Make sure the Tire Pressure info display option is turned on. The info displays on the DIC can be turned on and off through the Settings menu. See *Driver Information Center (DIC) on page 5-27*.
4. Use the five-way DIC control on the right side of the steering wheel to scroll to the Tire Pressure screen under the DIC info page. See *Driver Information Center (DIC) on page 5-27*.
5. Press and hold the SEL button located in the center of the five-way DIC control.

   The horn sounds twice to signal the receiver is in relearn mode and the TIRE LEARNING ACTIVE message displays on the DIC screen.
6. Start with the driver side front tire.
7. Place the relearn tool against the tire sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tire and wheel position.

8. Proceed to the passenger side front tire, and repeat the procedure in Step 7.
9. Proceed to the passenger side rear tire, and repeat the procedure in Step 7.
10. Proceed to the driver side rear tire, and repeat the procedure in Step 7. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
11. Press STOP to turn the ignition off.
12. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

Tire Inspection

We recommend that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

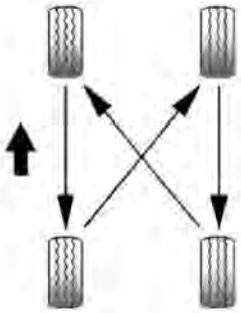
- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Tire Rotation

Tires should be rotated every 12 000 km (7,500 mi). See *Maintenance Schedule on page 11-4*.

Tires are rotated to achieve a uniform wear for all tires. The first rotation is the most important.

Anytime unusual wear is noticed, rotate the tires as soon as possible, check for proper tire inflation pressure, and check for damaged tires or wheels. If the unusual wear continues after the rotation, check the wheel alignment. See *When It Is Time for New Tires on page 10-59* and *Wheel Replacement on page 10-64*.



Use this rotation pattern when rotating the tires.

Do not include the compact spare tire in the tire rotation.

Adjust the front and rear tires to the recommended inflation pressure on the Tire and Loading Information label after the tires have been rotated. See *Tire Pressure on page 10-51* and *Vehicle Load Limits on page 9-10*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 10-54*.

Check that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications on page 12-2*.

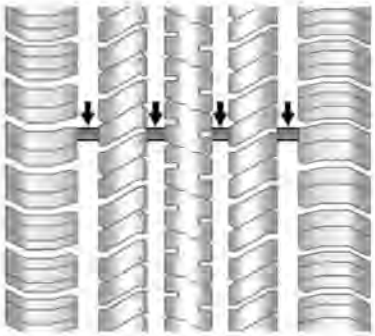
⚠ WARNING

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

Lightly coat the center of the wheel hub with wheel bearing grease after a wheel change or tire rotation to prevent corrosion or rust build-up. Do not get grease on the flat wheel mounting surface or on the wheel nuts or bolts.

When It Is Time for New Tires

Factors such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tires.



Treadwear indicators are one way to tell when it is time for new tires. Treadwear indicators appear when the tires have only 1.6 mm (1/16 in) or less of tread remaining. See *Tire Inspection on page 10-57* and *Tire Rotation on page 10-57*.

The rubber in tires ages over time. This also applies to the spare tire, if the vehicle has one, even if it is never used. Multiple factors including temperatures, loading conditions, and inflation pressure maintenance affect how fast aging takes place. GM recommends that tires, including the spare if equipped, be replaced after six years, regardless of tread wear. The tire manufacturer date is the last four digits of the DOT Tire Identification Number (TIN) which is molded into one side of the tire sidewall. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

Vehicle Storage

Tires age when stored normally mounted on a parked vehicle. Park a vehicle that will be stored for at least a month in a cool, dry, clean area away from direct sunlight to slow aging. This area should be free of grease, gasoline, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tires that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tires or raise the vehicle to reduce the weight from the tires.

Buying New Tires

GM has developed and matched specific tires for the vehicle. The original equipment tires installed were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. When replacement tires are needed, GM strongly recommends buying tires with the same TPC Spec rating.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of the vehicle, including brake system performance, ride and handling, traction control, and tire pressure monitoring performance. GM's TPC Spec number is molded onto the tire's sidewall near the tire size. If the tires have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow. See *Tire Sidewall Labeling on page 10-44*.

GM recommends replacing worn tires in complete sets of four. Uniform tread depth on all tires will help to maintain the performance of the vehicle. Braking and handling performance may be adversely affected if all the tires are not replaced at the same time.

If proper rotation and maintenance have been done, all four tires should wear out at about the same time. See *Tire Rotation on page 10-57* for information on proper tire rotation. However, if it is necessary to replace only one axle set of worn tires, place the new tires on the rear axle.

Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y and ZR speed rated tires. Never exceed the winter tire's maximum speed capability when using winter tires with a lower speed rating.

⚠ WARNING

Tires could explode during improper service. Attempting to mount or dismount a tire could cause injury or death. Only your dealer or authorized tire service center should mount or dismount the tires.

⚠ WARNING

Mixing tires of different sizes, brands, or types may cause loss of control of the vehicle, resulting in a crash or other vehicle damage. Use the correct size, brand, and type of tires on all wheels.

⚠ WARNING

Using bias-ply tires on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tire and/or wheel could fail suddenly and cause a crash. Use only radial-ply tires with the wheels on the vehicle.

If the vehicle tires must be replaced with a tire that does not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction (radial) as the original tires.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed. See *Tire Pressure Monitor System on page 10-53*.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See *Vehicle Load Limits on page 9-10*.

Different Size Tires and Wheels

If wheels or tires are installed that are a different size than the original equipment wheels and tires, vehicle performance, including its braking, ride and handling characteristics, stability, and resistance to rollover may be affected. If the vehicle has electronic systems such as antilock brakes, rollover airbags, traction control, electronic stability control, or All-Wheel Drive, the performance of these systems can also be affected.

⚠ WARNING

If different sized wheels are used, there may not be an acceptable level of performance and safety if tires not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tire systems developed for the vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires on page 10-59* and *Accessories and Modifications on page 10-3*.

Uniform Tire Quality Grading

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires.

The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter tires, compact spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

Traction – AA, A, B, C

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature – A, B, C

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

Wheel Alignment and Tire Balance

The tires and wheels were aligned and balanced at the factory to provide the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing will not be necessary on a regular basis. However, check the alignment if there is unusual tire wear or if the vehicle is pulling to one side or the other. If the vehicle vibrates when driving on a smooth road, the tires and wheels might need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it. Some aluminum wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

⚠ WARNING

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tires can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

Notice: **The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tire or tire chain clearance to the body and chassis.**

Used Replacement Wheels

⚠ WARNING

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

Tire Chains

⚠ WARNING

Do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes, suspension, or other vehicle parts. The area damaged by the tire chains could cause loss of control and a crash.

Use another type of traction device only if its manufacturer recommends it for the vehicle's tire size combination and road conditions. Follow that manufacturer's instructions. To avoid vehicle damage, drive slow and readjust or remove the traction device if it contacts the vehicle. Do not spin the wheels. If traction devices are used, install them on the front tires.

If a Tire Goes Flat

It is unusual for a tire to blow out while driving, especially if the tires are maintained properly. See *Tires on page 10-42*. If air goes out of a tire, it is much more likely to leak out slowly. But if there is ever a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

⚠ WARNING

Driving on a flat tire will cause permanent damage to the tire. Re-inflating a tire after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tire that has been driven on while severely underinflated or flat. Have your dealer or an authorized tire service center repair or replace the flat tire as soon as possible.

⚠ WARNING

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-5*.

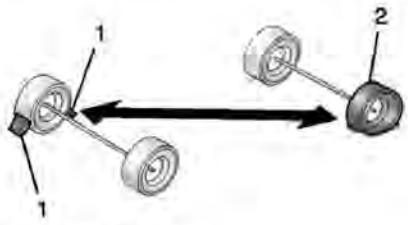
⚠ WARNING

Changing a tire can be dangerous. The vehicle can slip off the jack and roll over or fall causing injury or death. Find a level place to change the tire. To help prevent the vehicle from moving:

1. Set the parking brake firmly.
2. Put an automatic transmission in P (Park) or a manual transmission in 1 (First) or R (Reverse).
3. Turn off the engine and do not restart while the vehicle is raised.
4. Do not allow passengers to remain in the vehicle.
5. Place wheel blocks on both sides of the tire at the opposite corner of the tire being changed.

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. To use the jacking equipment to change a spare tire safely, follow the instructions below. Then see *Tire Changing on page 10-75*. To use the tire sealant and compressor kit, see *Tire Sealant and Compressor Kit on page 10-67*.

When the vehicle has a flat tire (2), use the following example as a guide to assist you in the placement of wheel blocks (1).



1. Wheel Block
2. Flat Tire

The following information explains how to repair or change a tire.

Tire Sealant and Compressor Kit

⚠ WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 9-22*.

⚠ WARNING

Overinflating a tire could cause the tire to rupture and you or others could be injured. Be sure to read and follow the tire sealant and compressor kit instructions and inflate the tire to its recommended pressure. Do not exceed the recommended pressure.

⚠ WARNING

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

If this vehicle has a tire sealant and compressor kit, there may not be a spare tire or tire changing equipment, and on some vehicles there may not be a place to store a tire.

The tire sealant and compressor can be used to temporarily seal punctures up to 6 mm (0.25 in) in the tread area of the tire. It can also be used to inflate an underinflated tire.

If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Service (Mexico) on page 13-7* or *Roadside Service (U.S. and Canada) on page 13-11*.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

Tire Sealant

Read and follow the safe handling instructions on the label adhered to the sealant canister.

Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date.

Replacement sealant canisters are available at your local dealer. See "Removal and Installation of the Sealant Canister" following.

There is only enough sealant to seal one tire. After usage, the sealant canister and sealant/air hose assembly must be replaced. See "Removal and Installation of the Sealant Canister" following.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

When using the tire sealant and compressor kit during cold temperatures, warm the kit in a heated environment for five minutes. This will help to inflate the tire faster.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-5*.

See *If a Tire Goes Flat on page 10-65* for other important safety warnings.

Do not remove any objects that have penetrated the tire.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-74*.
2. Unwrap the sealant/air hose (6) and the power plug (8).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the valve stem cap from the flat tire by turning it counterclockwise.

5. Attach the sealant/air hose (6) onto the tire valve stem. Turn it clockwise until it is tight.
6. Plug the power plug (8) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-7*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Press and turn the selector switch (1) counterclockwise to the Sealant + Air position.
9. Press the on/off button (2) to turn the tire sealant and compressor kit on.

   The compressor will inject sealant and air into the tire.

   The pressure gauge (3) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.
10. Inflate the tire to the recommended inflation pressure using the pressure gauge (3). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-51*.

    The pressure gauge (3) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

***Notice:* If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tire is too severely damaged and the tire sealant and compressor kit cannot inflate the tire. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Service (Mexico) on page 13-7* or *Roadside Service (U.S. and Canada) on page 13-11*.**

11. Press the on/off button (2) to turn the tire sealant and compressor kit off.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire, therefore, Steps 12–18 must be done immediately after Step 11.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (8) from the accessory power outlet in the vehicle.
13. Turn the sealant/air hose (6) counterclockwise to remove it from the tire valve stem.
14. Replace the tire valve stem cap.
15. Replace the sealant/air hose (6), and the power plug (8) back in their original location.

16. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (5) and place it in a highly visible location. Do not exceed the speed on this label until the damaged tire is repaired or replaced.
17. Return the equipment to its original storage location in the vehicle.
18. Immediately drive the vehicle 8 km (5 mi) to distribute the sealant in the tire.
19. Stop at a safe location and check the tire pressure. Refer to Steps 1–11 under "Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)."

    If the tire pressure has fallen more than 68 kPa (10 psi) below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant cannot seal the tire. See *Roadside Service (Mexico) on page 13-7* or *Roadside Service (U.S. and Canada) on page 13-11*.

    If the tire pressure has not dropped more than 68 kPa (10 psi) from the recommended inflation pressure, inflate the tire to the recommended inflation pressure.

20. Wipe off any sealant from the wheel, tire, and vehicle.

21. Dispose of the used sealant canister (5) and sealant/air hose (6) assembly at a local dealer or in accordance with local state codes and practices.
22. Replace with a new canister assembly available from your dealer.
23. After temporarily sealing the tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within 161 km (100 mi) of driving to have the tire repaired or replaced.

Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-5*.

See *If a Tire Goes Flat on page 10-65* for other important safety warnings.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-74*.
2. Unwrap the air only hose (7) and the power plug (8).

3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.

4. Remove the tire valve stem cap from the flat tire by turning it counterclockwise.

5. Attach the air only hose (7) onto the tire valve stem by turning it clockwise until it is tight.

6. Plug the power plug (8) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-7*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.

7. Start the vehicle. The vehicle must be running while using the air compressor.

8. Press and turn the selector switch (1) clockwise to the Air Only position.

9. Press the on/off button (2) to turn the compressor on.

   The compressor will inflate the tire with air only.

10. Inflate the tire to the recommended inflation pressure using the pressure gauge (3). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-51*.

    The pressure gauge (3) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on/off until the correct pressure is reached.

    If you inflate the tire higher than the recommended pressure you can adjust the excess pressure by pressing the pressure deflation button (4) until the proper pressure reading is reached. This option is only functional when using the air only hose (7).

11. Press the on/off button (2) to turn the tire sealant and compressor kit off.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (8) from the accessory power outlet in the vehicle.

13. Disconnect the air only hose (7) from the tire valve stem, by turning it counterclockwise, and replace the tire valve stem cap.

14. Replace the air only hose (7) and the power plug (8) and cord back in its original location.
15. Place the equipment in the original storage location in the vehicle.

The tire sealant and compressor kit has an accessory adapter located in a compartment on the bottom of its housing that may be used to inflate air mattresses, balls, etc.

Removal and Installation of the Sealant Canister

To remove the sealant canister:

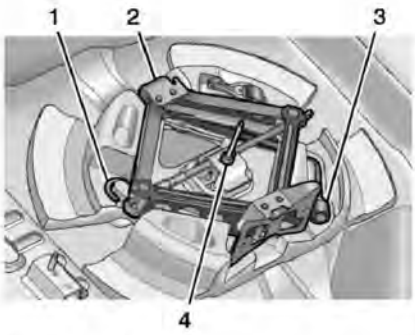
1. Unwrap the sealant hose.
2. Press the canister release button (9).
3. Pull up and remove the canister.
4. Replace with a new canister which is available from your dealer.
5. Push the new canister into place.

Storing the Tire Sealant and Compressor Kit

This vehicle may have a tire sealant and compressor kit in place of a jack or spare tire. It is located in a foam container in the rear compartment storage area. If the vehicle has a cargo cover, see *Cargo Management System on page 4-4* for instructions on how to access the tire sealant and compressor kit.

Tire Changing

Removing the Spare Tire and Tools



1. Extension
2. Jack
3. Wheel Wrench
4. Wing Nut

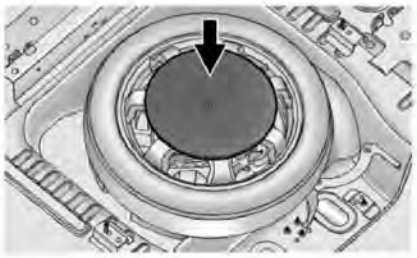
To access the spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-13*.

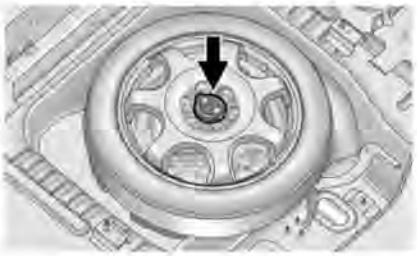
2. Press on the bottom of the handle assembly to unlatch it and lift up on the handle.

   The prop rod locks into place when open.

3. Remove the spare tire cover.



4. Remove the rubber cover.



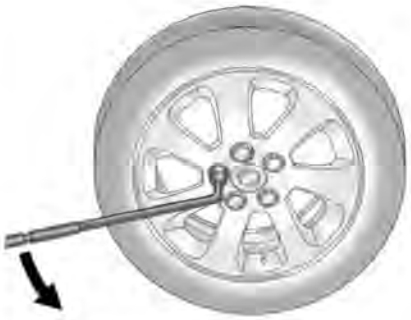
5. Remove the nut retaining the spare tire.
6. Remove the spare tire and place it next to the tire being changed.
7. Remove the wing nut.
8. Remove the extension, jack, and wheel wrench and place them near the tire being changed.

Removing the Flat Tire and Installing the Spare Tire

Take off the wheel cover or center cap, if the vehicle has one, to reach the wheel bolts.

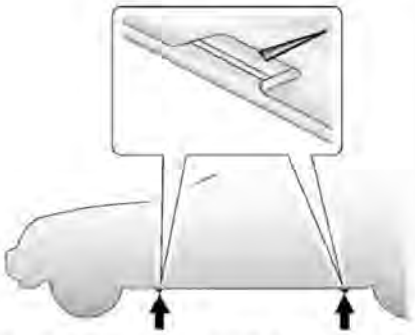
1. Do a safety check before proceeding. See *If a Tire Goes Flat on page 10-65* for more information.
2. Turn the wheel wrench counterclockwise to loosen and remove the wheel nut caps.

   Do not try to remove plastic caps from the cover or center cap.
3. Pull the cover or center cap away from the wheel. Store the wheel cover in the cargo area until you have the flat tire repaired or replaced.



4. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
5. Place the jack near the flat tire.

Notice: **Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.**



6. Position the jack lift head at the jack location nearest the flat tire.

   The jacking location is indicated by a V-shaped notch in the plastic molding. The jack must not be used in any other position.

7. Insert the hooked end of the extension handle through the jack and the flat end through the wheel wrench.

⚠ WARNING

Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

⚠ WARNING

Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

⚠ WARNING

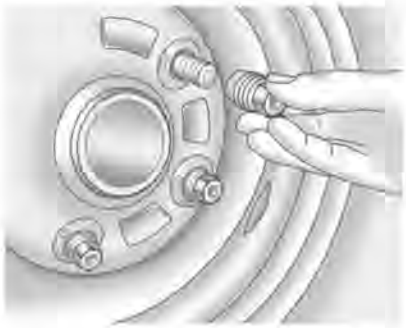
Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

8. Turn the extension with the wheel wrench clockwise to raise the jack lift head until the jack just fits under the vehicle.

9. Raise the vehicle by turning the wheel wrench clockwise until the slots in the jack head fit into the metal flange located behind the triangle on the plastic moulding.

***Notice:* Using a jack to raise the vehicle without positioning it correctly could damage your vehicle. When raising your vehicle on a jack, be sure to position it correctly under the frame and avoid contact with the plastic molding.**

10. Put the compact spare tire near you.



Remove all of the wheel nuts.

11. Remove the flat tire.

⚠ WARNING

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

12. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
13. Place the compact spare tire on the wheel-mounting surface.

⚠ WARNING

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

14. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
15. Lower the vehicle by turning the jack handle counterclockwise.

⚠ WARNING

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench to the proper torque specification after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications on page 12-2* for original equipment wheel nut torque specifications.

Notice: **Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications on page 12-2* for the wheel nut torque specification.**

16. Tighten the wheel nuts firmly in a crisscross sequence, as shown.

17. Lower the jack all the way and remove the jack from under the vehicle.
18. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or center cap on the full-size tire, tighten all six plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

Notice: **Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.**

Storing a Flat or Spare Tire and Tools

⚠ WARNING

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

To store the flat or spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-13* for more information.
2. Put back all tools as they were stored in the rear storage compartment and put the compartment cover back on. For more information, see "Storing the Compact Spare Tire and Tools" next in this section.
3. Install the cargo cover. For more information, see *Cargo Management System on page 4-4.*
4. Place the tire, lying flat, in the rear storage compartment.

5. Attach the strap to the cargo tie-down in the rear of the vehicle.

6. Route the strap through the wheel, as shown.
7. Attach the strap to the other cargo tie-down in the rear of the vehicle.
8. Tighten the strap.
9. Replace the rubber cover.

The compact spare is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can.

Compact Spare Tire

⚠ WARNING

Driving with more than one compact spare tire at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tire at a time.

If this vehicle has a compact spare tire, it was fully inflated when new; however, it can lose air over time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

Stop as soon as possible and check that the spare tire is correctly inflated after being installed on the vehicle. The compact spare tire is designed for temporary use only. The vehicle will perform differently with the spare tire installed and it is recommended that the vehicle speed be limited to 80 km/h (50 mph). To conserve the tread of the spare tire, have the standard tire repaired or replaced as soon as convenient and return the spare tire to the storage area.

Notice: **When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tire, wheel, and other parts of the vehicle.**

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

Notice: **Tire chains will not fit the compact spare. Using them can damage the vehicle and the chains. Do not use tire chains on the compact spare.**

Jump Starting

For more information about the vehicle battery, see *Battery on page 10-23*.

If the vehicle battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠ WARNING

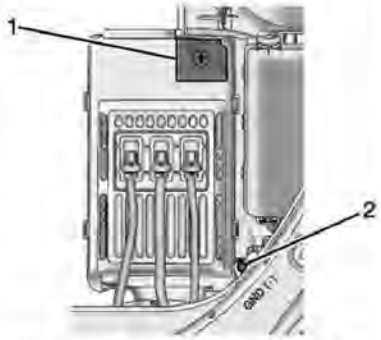
Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

***Notice:* Ignoring these steps could result in costly damage to the vehicle that would not be covered by the warranty.**

Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.



1. Remote Positive (+) Terminal
2. Remote Negative (−) Terminal

Your vehicle is equipped with a remote positive (+) terminal (1) and a remote negative (−) terminal (2).

The remote positive (+) terminal is located in the engine compartment on the driver side of the vehicle, above the rear of the battery. The remote negative (−) terminal is a stud located in the engine compartment on the driver side of the vehicle, on the front tie bar. See *Engine Compartment Overview on page 10-6*.

To uncover the remote positive (+) terminal, lift open the access panel on the battery cover indicated by the (+) sign.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

***Notice:* Only use a vehicle that has a 12-volt system with a negative ground for jump starting. If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be damaged.**

2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start your vehicle, and the bad grounding could damage the electrical systems.

   To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the transmission in P (Park) before setting the parking brake.

Notice: **If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs would not be covered by the vehicle warranty. Whenever possible, turn off or unplug all accessories on either vehicle when jump starting the vehicle.**

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or the accessory power outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks, helping save both batteries and the radio.
4. Open the hood on the other vehicle and locate the positive (+) and negative (−) terminal locations on that vehicle.

   Open the hood on your vehicle and find the remote positive (+) and remote negative (−) jump starting terminals.

⚠ WARNING

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.

⚠ WARNING

Using an open flame near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.

Be sure the battery has enough water. You do not need to add water to the battery installed in your new vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you do not, explosive gas could be present.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

⚠ WARNING

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could also be damaged.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the vehicle has one. Negative (−) will go to a heavy, unpainted metal engine part or to a remote negative (−) terminal if the vehicle has one.

   Do not connect positive (+) to negative (−) or you will get a short that would damage the battery and maybe other parts. Do not connect the negative (−) cable to the negative (−) terminal on the dead battery because this can cause sparks.

6. Connect the red positive (+) cable to the positive (+) terminal on the vehicle with the dead battery. Use a remote positive (+) terminal if the vehicle has one.

7. Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.

8. Now connect the black negative (−) cable to the negative (−) terminal of the good battery. Use a remote negative (−) terminal if the vehicle has one.

   Do not let the other end touch anything until the next step. The other end of the negative (−) cable does not go to the dead battery. It goes to a heavy, unpainted metal engine part or to a remote negative (−) terminal on the vehicle with the dead battery.

9. Connect the other end of the negative (−) cable away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, and the chance of sparks getting back to the battery is much less.

   Your vehicle has a remote (−) terminal for this purpose.

10. Now start the vehicle with the good battery and run the engine for a while.

11. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

Notice: **If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.**

Jumper Cable Removal

Reverse the sequence exactly when removing the jumper cables.

Towing

Towing the Vehicle

Notice: **Incorrectly towing a disabled vehicle may cause damage. The damage would not be covered by the vehicle warranty. Do not lash or hook to the chassis components including the front and rear subframes, suspension control arms and links during towing and recovery of a disabled vehicle or to secure the vehicle to a flatbed car carrier. Use the proper nylon strap harnesses around the tires to secure the flatbed car carrier.**

Have the vehicle towed on a flatbed car carrier. A wheel lift tow truck could damage the vehicle.

Consult your dealer or a professional towing service if the disabled vehicle must be towed.

To tow the vehicle behind another vehicle for recreational purposes, such as behind a motor home, see "Recreational Vehicle Towing" in this section.

Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle – such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

- What is the towing capacity of the towing vehicle? Be sure to read the tow vehicle manufacturer's recommendations.
- What is the distance that will be travelled? Some vehicles have restrictions on how far and how long they can tow.
- Is the proper towing equipment going to be used? See your dealer or trailering professional for additional advice and equipment recommendations.
- Is the vehicle ready to be towed? Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

Dinghy Towing

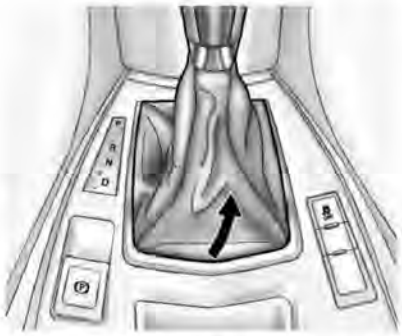
Front-wheel-drive and all-wheel-drive vehicles may be dinghy towed from the front. These vehicles can also be towed by placing them on a platform trailer with all four wheels off of the ground. For other towing options, see "Dolly Towing" following in this section.

Notice: **If 105 km/h (65 mph) is exceeded while towing the vehicle, it could be damaged. Never exceed 105 km/h (65 mph) while towing the vehicle.**

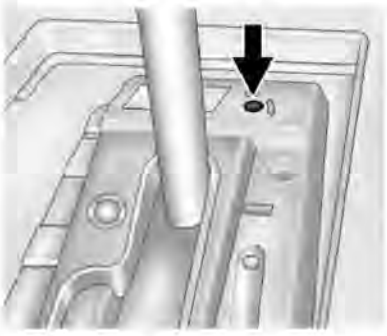
For vehicles being dinghy towed, the vehicle should be run at the beginning of each day and at each RV fuel stop for about five minutes. This will ensure proper lubrication of transmission components.

To tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle that will be towed and secure it to the towing vehicle.



2. Remove the shift lever boot by pulling up on the rear of the trim plate.



3. Use a small screw driver or tool to press and hold the manual release button on the front right.
4. Put the vehicle in N (Neutral).

Notice: **If the vehicle is towed without performing each of the steps listed under "Dinghy Towing," the automatic transmission could be damaged. Be sure to follow all steps of the dinghy towing procedure prior to and after towing the vehicle.**

Once the destination has been reached:

1. Shift the vehicle to P (Park).
2. Reinstall the shift lever boot by inserting the front edge and pressing the rear of the trim plate until it snaps into place.
3. Start the engine and let it idle for more than three minutes before driving the vehicle.

Notice: **Too much or too little fluid can damage the transmission. Be sure that the transmission fluid is at the proper level before towing with all four wheels on the ground.**

Notice: **Do not tow a vehicle with the front drive wheels on the ground if one of the front tires is a compact spare tire. Towing with two different tire sizes on the front of the vehicle can cause severe damage to the transmission.**

Dolly Towing (All-Wheel-Drive Vehicles)

All-wheel-drive vehicles should not be towed with two wheels on the ground. To properly tow these vehicles, they should be placed on a platform trailer with all four wheels off of the ground or dinghy towed from the front. See Dinghy Towing earlier in this section.

Dolly Towing (Front-Wheel-Drive Vehicles)

To tow the vehicle from the front with the rear wheels on the ground, do the following:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park). See *Shifting Into Park on page 9-20*.
3. Set the parking brake.
4. Secure the vehicle to the dolly.
5. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.
6. Release the parking brake.

Towing the Vehicle From the Rear

Notice: **Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.**

Appearance Care

Exterior Care

Locks

Locks are lubricated at the factory. Use a de-icing agent only when absolutely necessary, and have the locks greased after using. See Recommended Fluids and Lubricants.

Washing the Vehicle

To preserve the vehicle's finish, wash it often and out of direct sunlight.

Notice: **Do not use petroleum-based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle's warranty. Approved cleaning products can be obtained from your dealer.**

Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

Notice: **Avoid using high-pressure washes closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.**

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

Finish Care

Application of aftermarket clearcoat sealant/wax materials is not recommended. If painted surfaces are damaged, see your dealer to have the damage assessed and repaired. Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Occasional hand waxing or mild polishing should be done to remove residue from the paint finish. See your dealer for approved cleaning products.

Do not apply waxes or polishes to uncoated plastic, vinyl, rubber, decals, simulated wood, or flat paint as damage can occur.

Notice: **Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/ clearcoat paint finish on the vehicle.**

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Parts

Regularly clean bright metal parts with water or chrome polish on chrome or stainless steel trim, if necessary.

For aluminum, never use auto or chrome polish, steam, or caustic soap to clean. A coating of wax, rubbed to a high polish, is recommended for all bright metal parts.

Cleaning Exterior Lamps/ Lenses and Emblems

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps, lenses and emblems. Follow instructions under "Washing the Vehicle" in this section.

Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean rubber blades using a lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking.

Replace the wiper blades if they are worn or damaged. Damage can be caused by extreme dusty conditions, sand, salt, heat, sun, snow, and ice.

Weatherstrips

Apply silicone grease on weatherstrips to make them last longer, seal better, and not stick or squeak. Lubricate weatherstrips once a year. Black marks from rubber material on painted surfaces can be removed by rubbing with a clean cloth. See *Recommended Fluids and Lubricants on page 11-13*.

Tires

Use a stiff brush with tire cleaner to clean the tires.

Notice: **Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on the vehicle.**

Wheels and Trim — Aluminum or Chrome

Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

Notice: **Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium, or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.**

Notice: **To avoid surface damage, do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels. Use only approved cleaners. Also, never drive a vehicle with aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.**

Steering, Suspension, and Chassis Components

Visually inspect the front and rear suspension and steering system for damaged, loose, or missing parts or signs of wear. Inspect the power steering for proper hook-up, binding, leaks, cracks, chafing, etc. Visually check constant velocity joints, rubber boots, and axle seals for leaks.

Body Component Lubrication

Lubricate all key lock cylinders, hood hinges, liftgate hinges, and the steel fuel door hinge unless the components are plastic. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

Underbody Maintenance

Use plain water to flush dirt and debris from the vehicle's underbody. Your dealer or an underbody car washing system can do this. If not removed, rust and corrosion can develop.

Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

Finish Damage

Quickly repair minor chips and scratches with touch-up materials available from your dealer to avoid corrosion. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

Chemical Paint Spotting

Airborne pollutants can fall upon and attack painted vehicle surfaces causing blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface.

Interior Care

To prevent dirt particle abrasions, regularly clean the vehicle's interior. Immediately remove any soils. Note that newspapers or dark garments that can transfer color to home furnishings can also permanently transfer color to the vehicle's interior.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. Using a mild soap solution, immediately remove hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

Your dealer may have products for cleaning the interior. Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage. Apply all cleaners directly to the cleaning cloth. Do not spray cleaners directly on any switches or controls. Cleaners should be removed quickly. Never allow cleaners to remain on the surface being cleaned for extended periods of time.

Cleaners may contain solvents that can become concentrated in the interior. Before using cleaners, read and adhere to all safety instructions on the label. While cleaning the interior, maintain adequate ventilation by opening the doors and windows.

To prevent damage, do not clean the interior using the following cleaners or techniques:

- Never use a razor or any other sharp object to remove a soil from any interior surface.
- Never use a brush with stiff bristles.
- Never rub any surface aggressively or with excessive pressure.
- Do not use laundry detergents or dishwashing soaps with degreasers. For liquid cleaners, use approximately 20 drops per 3.78 L (1 gal) of water. A concentrated soap solution will leave a residue that creates streaks and attracts dirt. Do not use solutions that contain strong or caustic soap.
- Do not heavily saturate the upholstery when cleaning.
- Do not use solvents or cleaners containing solvents.

Interior Glass

To clean, use a terry cloth fabric dampened with water. Wipe droplets left behind with a clean dry cloth. Commercial glass cleaners may be used, if necessary, after cleaning the interior glass with plain water.

Notice: **To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window defogger.**

Notice: **Cleaning the windshield with water during the first three to six months of ownership will reduce tendency to fog.**

Speaker Covers

Vacuum around a speaker cover gently, so that the speaker will not be damaged. Clean spots with just water and mild soap.

Coated Moldings

Coated moldings should be cleaned.

- When lightly soiled, wipe with a sponge or soft lint-free cloth dampened with water.
- When heavily soiled, use warm soapy water.

Fabric/Carpet/Suede

Start by vacuuming the surface using a soft brush attachment. If a rotating brush attachment is being used during vacuuming, only use it on the floor carpet. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- Gently blot liquids with a paper towel. Continue blotting until no more soil can be removed.
- For solid soils, remove as much as possible prior to vacuuming.

To clean:

1. Saturate a clean lint-free colorfast cloth with water or club soda. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.
3. Start on the outside edge of the soil and gently rub toward the center. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
4. Continue gently rubbing the soiled area until there is no longer any color transfer from the soil to the cleaning cloth.
5. If the soil is not completely removed, use a mild soap solution followed only by club soda or plain water.

If the soil is not completely removed, it may be necessary to use a commercial upholstery cleaner or spot lifter. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If ring formation occurs, clean the entire fabric or carpet.

Following the cleaning process, a paper towel can be used to blot excess moisture.

Cleaning High Gloss Surfaces and Vehicle Information and Radio Displays

For vehicles with high gloss surfaces or vehicle displays, use a microfiber cloth to wipe surfaces. Before wiping the surface with the microfiber cloth, use a soft bristle brush to remove dirt that could scratch the surface. Then use the microfiber cloth by gently rubbing to clean. Never use window cleaners or solvents. Periodically hand wash the microfiber cloth separately, using mild soap. Do not use bleach or fabric softener. Rinse thoroughly and air dry before next use.

Notice: **Do not attach a device with a suction cup to the display. This may cause damage and would not be covered by the warranty.**

Instrument Panel, Leather, Vinyl, and Other Plastic Surfaces

Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfiber cloth dampened with a mild soap solution.

Notice: **Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to dry naturally. Never use heat, steam, spot lifters, or spot removers. Do not use cleaners that contain silicone or wax-based products.**

Cleaners containing these solvents can permanently change the appearance and feel of leather or soft trim and are not recommended.

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windshield under certain conditions.

***Notice:* Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.**

Cargo Cover and Convenience Net

Wash with warm water and mild detergent. Do not use chlorine bleach. Rinse with cold water, and then dry completely.

Care of Safety Belts

Keep belts clean and dry.

⚠ WARNING

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Floor Mats

⚠ WARNING

If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

Use the following guidelines for proper floor mat usage.

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that certified floor mats be purchased. Non-certified floor mats may not fit properly and may interfere with the pedals. Always check that the floor mats do not interfere with the pedals.
- Use the floor mat with the correct side up. Do not turn it over.
- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

Removing and Replacing the Floor Mats

The driver side floor mat is held in place by two button-type retainers. The passenger side floor mat is held in place by one button-type retainer.

1. Pull up on the rear of the floor mat to unlock each retainer and remove.
2. Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.
3. Make sure the floor mat is properly secured and verify that it does not interfere with the pedals.

Service and Maintenance

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General Information

Your vehicle is an important investment. This section describes the required maintenance for the vehicle. Follow this schedule to help protect against major repair expenses resulting from neglect or inadequate maintenance. It may also help to maintain the value of the vehicle if it is sold. It is the responsibility of the owner to have all required maintenance performed.

Your dealer has trained technicians who can perform required maintenance using genuine replacement parts. They have up-to-date tools and equipment for fast and accurate diagnostics. Many dealers have extended evening and Saturday hours, courtesy transportation, and online scheduling to assist with service needs.

Your dealer recognizes the importance of providing competitively priced maintenance and repair services. With trained technicians, the dealer is the place for routine maintenance such as oil changes and tire rotations and additional maintenance items like tires, brakes, batteries, and wiper blades.

Notice: **Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.**

The Tire Rotation and Required Services are the responsibility of the vehicle owner. It is recommended to have your dealer perform these services every 12 000 km/7,500 mi.

Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions.

Because of the way people use vehicles, maintenance needs vary. There may need to be more frequent checks and services. The Additional Required Services - Normal are for vehicles that:

- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-10*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Recommended Fuel on page 9-59*.

Refer to the information in the Maintenance Schedule Additional Required Services - Normal chart.

The Additional Required Services - Severe are for vehicles that are:

- Mainly driven in heavy city traffic in hot weather.
- Mainly driven in hilly or mountainous terrain.
- Frequently towing a trailer.
- Used for high speed or competitive driving.
- Used for taxi, police, or delivery service.

Refer to the information in the Maintenance Schedule Additional Required Services - Severe chart.

⚠ WARNING

Performing maintenance work can be dangerous and can cause serious injury. Perform maintenance work only if the required information, proper tools, and equipment are available. If they are not, see your dealer to have a trained technician do the work. See *Doing Your Own Service Work on page 10-4*.

Cadillac Premium Care Maintenance

Your vehicle comes with the Cadillac Premium Care Maintenance. It is a maintenance program that covers select maintenance services during the first 4 years or 80 000 km (50,000 mi), whichever comes first.

Cadillac Premium Care Maintenance covers routine maintenance services, when scheduled in accordance with the owner manual, including:

- Oil changes based on the vehicle's oil life monitor system.
- Tire rotation every 12 000 km (7,500 mi).
- Engine air cleaner filter replacement.
- Passenger compartment air filter replacement.
- Multi-point vehicle inspection (MPVI) performed by a qualified technician.

Cadillac requires that all Cadillac Premium Care Maintenance services be performed by a Cadillac authorized service dealer.

Maintenance Schedule

Owner Checks and Services

At Each Fuel Stop

- Check the engine oil level. See *Engine Oil on page 10-8*.

Once a Month

- Check the tire inflation pressures. See *Tire Pressure on page 10-51*.
- Inspect the tires for wear. See *Tire Inspection on page 10-57*.
- Check the windshield washer fluid level. See *Washer Fluid on page 10-20*.

Engine Oil Change

When the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km/600 mi. If driven under the best conditions, the engine oil life system might not indicate the need for vehicle service for more than a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your trained dealer technician can perform this work. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 mi since the last service. Reset the oil life system when the oil is changed. See *Engine Oil Life System on page 10-10*.

Tire Rotation and Required Services Every 12 000 km/ 7,500 mi

Rotate the tires, if recommended for the vehicle, and perform the following services. See *Tire Rotation on page 10-57*.

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. See *Engine Oil on page 10-8* and *Engine Oil Life System on page 10-10*.
- Check engine coolant level. See *Engine Coolant on page 10-14*.
- Check windshield washer fluid level. See *Washer Fluid on page 10-20*.

- Visually inspect windshield wiper blades for wear, cracking, or contamination. See *Exterior Care on page 10-89*. Replace worn or damaged wiper blades. See *Wiper Blade Replacement on page 10-25*.
- Check tire inflation pressures. See *Tire Pressure on page 10-51*.
- Inspect tire wear. See *Tire Inspection on page 10-57*.
- Visually check for fluid leaks.
- Inspect engine air cleaner filter. See *Engine Air Cleaner/Filter on page 10-11*.
- Inspect brake system.
- Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear. See *Exterior Care on page 10-89*.
- Check restraint system components. See *Safety System Check on page 3-19*.
- Visually inspect fuel system for damage or leaks.
- Visually inspect exhaust system and nearby heat shields for loose or damaged parts.
- Lubricate body components. See *Exterior Care on page 10-89*.
- Check starter switch. See *Starter Switch Check on page 10-23*.
- Check automatic transmission shift lock control function. See *Automatic Transmission Shift Lock Control Function Check on page 10-24*.
- Check parking brake and automatic transmission park mechanism. See *Park Brake and P (Park) Mechanism Check on page 10-24*.
- Check accelerator pedal for damage, high effort, or binding. Replace if needed.
- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. See your dealer if service is required.
- Check tire sealant expiration date, if equipped. See *Tire Sealant and Compressor Kit on page 10-67*.
- Inspect sunroof track and seal, if equipped. See *Sunroof on page 2-25*.

Maintenance Schedule Additional Required Services – Normal	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter. (1)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (2)						✓						✓						✓		
Replace engine air cleaner filter. (3)						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Change automatic transmission fluid. If equipped. If filter is serviceable, change filter.													✓							
Change transfer case fluid, if equipped with AWD. (4)													✓							
Drain, flush, and fill engine cooling system. (5)																				✓
Visually inspect accessory drive belts. (6) (7)																				✓
Replace brake fluid. (6)																				✓

Footnotes — Maintenance Schedule Additional Required Services — Normal

(1) Or every two years, whichever comes first. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

(2) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition. Check that the purge valve, if the vehicle has one, works properly. Replace as needed.

(3) Or every four years, whichever comes first.

(4) Do not directly power wash the transfer case output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and should be replaced.

(5) Or every five years, whichever comes first. See *Cooling System on page 10-13*.

(6) Or every 10 years, whichever comes first.

(7) Inspect for fraying, excessive cracking, or damage; replace, if needed.

Maintenance Schedule Additional Required Services – Severe	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter. (1)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (2)						✓						✓						✓		
Replace engine air cleaner filter. (3)						✓						✓						✓		
Change automatic transmission fluid, if equipped. If filter is serviceable, change filter.						✓						✓						✓		
Change transfer case fluid, if equipped with AWD. (4)						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Drain, flush, and fill engine cooling system. (5)																				✓
Visually inspect accessory drive belts. (6) (7)																				✓
Replace brake fluid. (6)																				✓

Footnotes — Maintenance Schedule Additional Required Services — Severe

(1) Or every two years, whichever comes first. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

(2) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition. Check that the purge valve, if the vehicle has one, works properly. Replace as needed.

(3) Or every four years, whichever comes first.

(4) Do not directly power wash the transfer case output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and should be replaced.

(5) Or every five years, whichever comes first. See *Cooling System on page 10-13*.

(6) Or every 10 years, whichever comes first.

(7) Inspect for fraying, excessive cracking, or damage; replace, if needed.

Special Application Services

- Severe Commercial Use Vehicles Only: Lubricate chassis components every 5 000 km/3,000 mi.
- Have underbody flushing service performed once a year.

Additional Maintenance and Care

Your vehicle is an important investment and caring for it properly may help to avoid future costly repairs. To maintain vehicle performance, additional maintenance services may be required.

It is recommended that your dealer perform these services — their trained dealer technicians know your vehicle best. Your dealer can also perform a thorough assessment with a multi-point inspection to recommend when your vehicle may need attention.

The following list is intended to explain the services and conditions to look for that may indicate services are required.

Battery

The battery supplies power to start the engine and operate any additional electrical accessories.

- To avoid break-down or failure to start the vehicle, maintain a battery with full cranking power.
- Trained dealer technicians have the diagnostic equipment to test the battery and ensure that the connections and cables are corrosion-free.

Belts

- Belts may need replacing if they squeak or show signs of cracking or splitting.
- Trained dealer technicians have access to tools and equipment to inspect the belts and recommend adjustment or replacement when necessary.

Brakes

Brakes stop the vehicle and are crucial to safe driving.

- Signs of brake wear may include chirping, grinding, or squealing noises, or difficulty stopping.
- Trained dealer technicians have access to tools and equipment to inspect the brakes and recommend quality parts engineered for the vehicle.

Fluids

Proper fluid levels and approved fluids protect the vehicle's systems and components. See *Recommended Fluids and Lubricants on page 11-13* for GM approved fluids.

- Engine oil and windshield washer fluid levels should be checked at every fuel fill.
- Instrument cluster lights may come on to indicate that fluids may be low and need to be filled.

Hoses

Hoses transport fluids and should be regularly inspected to ensure that there are no cracks or leaks. With a multi-point inspection, your dealer can inspect the hoses and advise if replacement is needed.

Lamps

Properly working headlamps, taillamps, and brake lamps are important to see and be seen on the road.

- Signs that the headlamps need attention include dimming, failure to light, cracking, or damage. The brake lamps need to be checked periodically to ensure that they light when braking.
- With a multi-point inspection, your dealer can check the lamps and note any concerns.

Shocks and Struts

Shocks and struts help aid in control for a smoother ride.

- Signs of wear may include steering wheel vibration, bounce/sway while braking, longer stopping distance, or uneven tire wear.
- As part of the multi-point inspection, trained dealer technicians can visually inspect the shocks and struts for signs of leaking, blown seals, or damage, and can advise when service is needed.

Tires

Tires need to be properly inflated, rotated, and balanced. Maintaining the tires can save money, fuel, and can reduce the risk of tire failure.

- Signs that the tires need to be replaced include three or more visible treadwear indicators; cord or fabric showing through the rubber; cracks or cuts in the tread or sidewall; or a bulge or split in the tire.
- Trained dealer technicians can inspect and recommend the right tires. Your dealer can also provide tire/wheel balancing services to ensure smooth vehicle operation at all speeds. Your dealer sells and services name brand tires.

Vehicle Care

To help keep the vehicle looking like new, vehicle care products are available from your dealer. For information on how to clean and protect the vehicle's interior and exterior, see *Interior Care on page 10-92* and *Exterior Care on page 10-89*.

Wheel Alignment

Wheel alignment is critical for ensuring that the tires deliver optimal wear and performance.

- Signs that the alignment may need to be adjusted include pulling, improper vehicle handling, or unusual tire wear.
- Your dealer has the required equipment to ensure proper wheel alignment.

Windshield

For safety, appearance, and the best viewing, keep the windshield clean and clear.

- Signs of damage include scratches, cracks, and chips.
- Trained dealer technicians can inspect the windshield and recommend proper replacement if needed.

Wiper Blades

Wiper blades need to be cleaned and kept in good condition to provide a clear view.

- Signs of wear include streaking, skipping across the windshield, and worn or split rubber.
- Trained dealer technicians can check the wiper blades and replace them when needed.

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Usage	Fluid/Lubricant
Engine Oil	Use only engine oil licensed to the dexos1 specfication, or equivalent, of the proper SAE viscosity grade. ACDelco dexos1 Synthetic Blend is recommended. See *Engine Oil on page 10-8*.
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL Coolant. See *Engine Coolant on page 10-14*.
Hydraulic Brake System	DOT 3 Hydraulic Brake Fluid (GM Part No. 88863461, in Canada 88863462).
Windshield Washer	Automotive windshield washer fluid that meets regional freeze protection requirements.
Hydraulic Power Steering System	DEXRON®-VI Automatic Transmission Fluid.
Automatic Transmission	DEXRON®-VI Automatic Transmission Fluid.
Transfer Case (All-Wheel Drive)	Transfer Case Fluid (GM Part No. 19256084, in Canada 19256085).

Usage	Fluid/Lubricant
Chassis Lubrication	Chassis Lubricant (GM Part No. 12377985, in Canada 88901242) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Key Lock Cylinders	Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).
Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl	Lubriplate Lubricant Aerosol (GM Part No. 89021668, in Canada 89021674) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Hood and Door Hinges	Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).
Power Liftgate Actuator Ball Joint	Multi-Purpose Lubricant (GM Part No. 89021668, in Canada 89021674).
Weatherstrip Conditioning	Weatherstrip Lubricant (GM Part No. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. 12345579, in Canada 10953481).

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

Part	GM Part Number	ACDelco Part Number
Engine Air Cleaner/Filter	20897358	A3147C
Engine Oil Filter	89017525	PF63
Passenger Compartment Air Filter Element	13271191	CF176
Spark Plugs	12622561	41–109
Wiper Blades		
Driver Side – 65.0 cm (25.6 in)	22870539	—
Passenger Side – 42.5 cm (16.7 in)	22870540	—
Rear – 30.0 cm (11.8 in)	20825882	—

Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

✍ NOTES

Technical Data

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Vehicle Identification

Vehicle Identification Number (VIN)

This legal identifier is in the front corner of the instrument panel, on the left side of the vehicle. It can be seen through the windshield from outside. The VIN also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under *Capacities and Specifications on page 12-2* for the vehicle's engine code.

Service Parts Identification Label

This label, on the inside of the rear side cargo management cover, has the following information:

- Vehicle Identification Number (VIN).
- Model designation.
- Paint information.
- Production options and special equipment.

Do not remove this label from the vehicle.

Vehicle Data

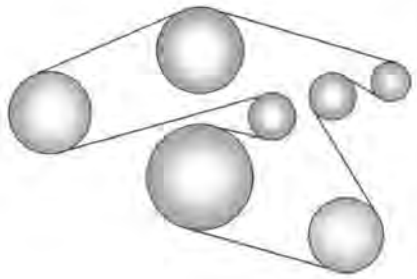
Capacities and Specifications

Application	Capacities	
	Metric	English
Air Conditioning Refrigerant R134a	For the air conditioning system refrigerant charge amount, see the refrigerant label located under the hood. See your dealer for more information.	
Engine Cooling System		
3.6L V6 Engine	12.8 L	13.5 qt
Engine Oil with Filter	5.7 L	6.0 qt
Fuel Tank	79.5 L	21.0 gal
Transfer Case Fluid	0.65 L	0.69 qt
Wheel Nut Torque	150 N•m	110 ft lb
All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.		

Engine Specifications

Engine	VIN Code	Transmission	Spark Plug Gap
3.6L V6 (LFX)	3	Automatic	1.10 mm (0.043 in)

Engine Drive Belt Routing



✍ NOTES

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Customer Information

Customer Satisfaction Procedure (U.S. and Canada)

Your satisfaction and goodwill are important to your dealer and to Cadillac. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by your dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

STEP ONE: Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service or parts manager, contact the owner of your dealership or the general manager.

STEP TWO: If after contacting a member of dealership management, it appears your concern cannot be resolved by your dealership without further help, in the U.S., call the Cadillac Customer Assistance Center at 1-800-458-8006. In Canada, call the Canadian Cadillac Customer Care Centre at 1-888-446-2000.

We encourage you to call the toll-free number in order to give your inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Cadillac, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

STEP THREE — U.S. Owners: Both General Motors and your dealer are committed to making sure you are completely satisfied with the new vehicle. However, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you can file with the Better Business Bureau (BBB) Auto Line® Program to enforce your rights.

The BBB Auto Line Program is an out-of-court program administered by the Council of Better Business Bureaus to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you.

You may contact the BBB Auto Line Program using the toll-free telephone number or write them at the following address:

BBB Auto Line Program
Council of Better Business Bureaus, Inc.
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203-1838

Telephone: 1-800-955-5100
www.dr.bbb.org/goauto

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage, and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

STEP THREE — Canadian Owners: In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps One and Two, General Motors of Canada Limited wants you to be aware of its participation in a no-charge mediation/arbitration program. General Motors of Canada Limited has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in approximately 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call the General Motors Customer Care Centre, 1-800-263-3777 (English), 1-800-263-7854 (French), or write to:

Mediation/Arbitration Program
c/o Customer Care Centre
General Motors of Canada Limited
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

The inquiry should be accompanied by the Vehicle Identification Number (VIN).

Customer Satisfaction Procedure (Mexico)

Did you get the Warranty Extension Plan? This plan is recommended by General Motors to supplement the warranty included with the new vehicle purchase.

See your dealer for details.

Customer Assistance Procedure

Owner satisfaction and goodwill are very important to your dealer and General Motors.

Normally, any problem with the transaction, sale, or usage of the vehicle must be handled by your dealer sales or service departments. However, we recognize that despite the good intentions of all parties involved, sometimes a misunderstanding may occur.

If you have a problem that has not been satisfactorily handled through the normal means, we suggest the following steps:

STEP ONE

Explain your case to your dealer service agent, service manager, dealer sales agent, or sales manager, depending on your case. Make sure that they have all necessary information. They are interested in your continual satisfaction.

STEP TWO

If you are not satisfied, please contact the general manager or your dealership owner to ask for their help. If they are not able to resolve your case, ask them to contact the right people at General Motors for support, if needed.

STEP THREE

If your case is not resolved in a reasonable amount of time by your dealer, please call the General Motors Customer Assistance Center (CAC) and provide the following information:

- Name
- Address
- Phone number
- Model year
- Brand
- Vehicle Identification Number (VIN)
- Mileage
- Delivery date
- Description of the problem
- Dealership name
- Dealership address

See *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-5*.

Customer Assistance Offices (U.S. and Canada)

Cadillac encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Cadillac, the letter should be addressed to:

United States and Puerto Rico

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169
www.Cadillac.com

1-800-458-8006
1-800-833-2622 (For Text Telephone devices (TTYs))
Roadside Service: 1-800-882-1112

From U.S. Virgin Islands:

1-800-496-9994

Canada

General Motors of Canada Limited
Canadian Cadillac Customer Care Centre, Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
www.gm.ca

1-888-446-2000
1-800-263-3830 (For Text Telephone devices (TTYs))
Roadside Service: 1-800-882-1112

Overseas

Please contact the local General Motors Business Unit.

Customer Assistance Offices (Mexico)

To contact the Customer Assistance Center (CAC), use the phone numbers listed in this section. Customer assistance is available Monday through Friday, 08:00 to 20:00 hours, and Saturdays from 09:00 to 15:00 hours.

All e-mail inquiries to the Customer Assistance Center (CAC) should be sent to: cac.cadillac@gm.com.

Mexico

01-800-466-0816

United States and Canada

1-866-466-8195

Costa Rica

00-800-052-1005

Guatemala

1-800-999-5252

Panama

00-800-052-0001

Dominican Republic

1-888-751-5301

El Salvador

800-6273

Honduras

800-0122-6101

Customer Assistance for Text Telephone (TTY) Users (U.S. and Canada)

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Cadillac has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Cadillac by dialing: 1-800-833-2622. TTY users in Canada can dial 1-800-263-3830.

Online Owner Center

Online Owner Experience (U.S.) my.cadillac.com

The Cadillac online owner experience is a one-stop resource that allows interaction with Cadillac and keeps important vehicle-specific information in one place.

Membership Benefits

(Vehicle Information): Download owner manuals and view vehicle-specific how-to videos.

(Maintenance Information): View maintenance schedules, required alerts, OnStar onboard vehicle diagnostic information, and schedule service appointments.

(Service History): View printable dealer-recorded service records and self-recorded service records.

(Preferred Dealer Information): Select a preferred dealer and view dealer location, maps, phone numbers, and hours.

(Warranty Tracking Information): Track the vehicle's warranty information.

(Recall Information): View active recalls or search by Vehicle Identification Number (VIN). See *Vehicle Identification Number (VIN) on page 12-1*.

(Other Account Information): View GM Card, SiriusXM Satellite radio, and OnStar account information.

(Live Chat Support): Chat live with online help representatives.

Visit my.cadillac.com to register your vehicle.

Cadillac Owner Centre (Canada) cadillacowner.ca

Take a trip to the Cadillac Owner Centre:

- Chat live with online help representatives.
- Use the Vehicle Tools section.
- Access third party enthusiast sites and social media networks.
- Locate owner resources such as lease-end, financing, and warranty information.
- Retrieve favorite articles, quizzes, tips, and multimedia galleries organized into the Features and Auto Care Sections.
- Download owner manuals.
- Find Cadillac-recommended maintenance services.

GM Mobility Reimbursement Program (U.S. and Canada)

GM MOBILITY

This program is available to qualified applicants for cost reimbursement of eligible aftermarket adaptive equipment required for the vehicle, such as hand controls or a wheelchair/ scooter lift for the vehicle.

For more information on the limited offer, visit www.gmmobility.com or call the GM Mobility Assistance Center at 1-800-323-9935. Text Telephone (TTY) users, call 1-800-833-9935.

General Motors of Canada also has a Mobility Program. Call 1-800-GM-DRIVE (463-7483) for details. TTY users call 1-800-263-3830.

Roadside Service (Mexico)

As a new owner, your vehicle is automatically enrolled in the Roadside Assistance program. The services are available at no cost under the terms and conditions of the program. The Roadside Assistance program is not part of, or included, in the coverage provided by the new vehicle limited warranty.

Roadside Assistance provides assistance to the driver and passengers while driving the vehicle within your city of residence or on any passable road in Mexico, the United States, and Canada.

Services are subject to the limitations described in the following pages. Program coverage varies by country.

Roadside Assistance is available 24 hours a day, 365 days of the year.

This program expires two years from the date of the invoice for the vehicle, regardless of vehicle mileage and changes in vehicle ownership.

For more information about the renewal of this program at the end of its term, contact the Cadillac Customer Assistance Center at 01-800-466-0805.

Services Provided

- **Flat Tire Change**: If unable to change a flat tire, Roadside Assistance will provide towing service to the nearest authorized Cadillac dealership. It is the owner's responsibility for the repair or replacement of the tire.

This service is limited to the transfer of the vehicle to the repair facility.

- **Emergency Fuel Delivery**: Delivery of enough fuel for the vehicle to get to the nearest service station.
- **Lock-Out Service**: Service to unlock the vehicle if you are locked out.
- **Battery Jump Start**: Service to jump start a dead battery.
- ***Emergency Messages**: Transmission of urgent phone messages.
- ***Emergency Calls**: Call for emergency services.
- ***Dealership Location Assistance**: Information regarding addresses and telephone numbers for Cadillac dealers.
- **Emergency Towing**: Tow to the nearest dealer for warranty service if the vehicle cannot be driven.

  If the vehicle is involved in an accident during the commission of a crime, administrative violation, or breach of traffic regulations, Roadside Assistance will not provide service. When the vehicle is not accessible to be towed, all maneuvers required to access it will be at the owner's expense.

  If the vehicle is in another city outside of your residence, Roadside Assistance is limited to moving the vehicle to the nearest dealer. If you would like the vehicle moved to a different dealer, you will be asked to cover the difference in cost at the time of the move.

  If the vehicle cannot be received by the nearest Cadillac dealer due to scheduling conflicts, the vehicle will be taken to a safe place where it will remain for up to 48 hours until it can be taken to the dealer. If the storage costs exceed the amount authorized, the owner is responsible to pay the difference at the time of service. Contact Roadside Assistance for more information on authorized amounts.
- ***Trip Interruption**: This service is provided if you are prevented from further usage of your vehicle while traveling and it is not possible for the nearest Cadillac dealership to repair the vehicle the same day, requiring the vehicle to stay at the dealership for a night or more.

If this happens, in addition to the previously listed services and prior to confirmation by the dealership, you are entitled to choose one of the following alternatives, within the limits of existing Roadside Assistance program guidelines. If the costs exceed the amount authorized for these services, you must pay the difference at the time of service.

Roadside Assistance will coordinate hotel accommodations for all vehicle travelers for up to two nights.

A rental car will be provided for up to two days and the vehicle must be returned to its original destination, excluding vehicles with a carrying capacity greater than 3.5 tons.

Complimentary Transportation: If you prefer to continue your trip to the intended destination or return to your place of residence, and the trip requires more than eight hours driving on the road, transportation for the driver and passengers by first class bus or coach commercial airline will be provided to a location chosen by Roadside Assistance, depending on availability at the chosen destination. Restrictions apply based on vehicle specifications.

If you are on the road, taxi service to the nearest bus station or airport will be provided.

- ***Complimentary Transportation for Vehicle Pick Up**: Transportation to pick up your vehicle after repairs are complete. Once the dealer has reported that the vehicle has been repaired, Roadside Assistance will provide bus or commercial airline one-way service (subject to availability) for the person designated by you to collect your vehicle at the dealership's location if you or the designated person are not in the same town or city as the dealership.

*These services are not provided for U.S. or Canada residents. All services provided in the U.S. and Canada are at the owner's expense and will be reimbursed by Roadside Assistance.

Services Not Included in Roadside Assistance

Roadside Assistance does not cover or reimburse services for the following:

- Events caused by fraud or bad faith by the driver.
- Vehicle immobilization situations due to a major force or unforeseen circumstances, such as natural phenomena of an extraordinary nature, earthquakes, volcanic eruptions, and other cyclonic storms.

- Vehicle immobilization situations arising from car accidents caused by the driver of the vehicle or third parties. This means any occurrence that causes physical injury to the occupants and/or the vehicle caused by external forces.
- Acts of terrorism, riot or uproar, armed forces or police actions which prevent timely delivery of assistance services.
- Food service, beverages, telephone calls, or other extra costs. Accommodation costs apply only to Mexico per the terms and conditions of the Roadside Assistance program.
- Any damage to the vehicle without intent, derived from the services provided.
- Cost of towing a trailer when choosing a Cadillac dealer that is nearest to the temporary storage facility for the disabled vehicle.
- Cost of all maneuvers required to access the vehicle when it is not available to be towed.
- Cost of fuel provided.

Routine vehicle repair costs are not covered by the Roadside Assistance program. For more information, see your new vehicle warranty.

Contacting Roadside Assistance

Roadside Assistance services are of no cost to you and available 24 hours a day, 365 days a year. Costs are only incurred in situations that exceed the limits of the program, some of which are listed previously in this section.

To contact Roadside Assistance by phone, use the following numbers:

Mexico

01-800-466-0805

United States

1-866-466-8906

Canada

1-800-268-6800

E-mail

asistencia.cadillac@gm.com

Cadillac reserves the right to make any changes or discontinue the Roadside Assistance program at any time without notification.

Roadside Service (U.S. and Canada)

U.S.: 1-800-224-1400.

Canada: 1-800-882-1112.

Text Telephone (TTY) Users (U.S. Only): 1-888-889-2438.

Service is available 24 hours a day, 365 days a year.

Calling for Service

When calling Roadside Service, have the following information ready:

- Your name, home address, and home telephone number.
- Telephone number of your location.
- Location of the vehicle.
- Model, year, color, and license plate number of the vehicle.
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle.
- Description of the problem.

Coverage

Services are provided up to 6 years/110 000 km (70,000 mi), whichever comes first.

In the U.S., anyone driving the vehicle is covered. In Canada, a person driving the vehicle without permission from the owner is not covered.

Roadside Service is not a part of the New Vehicle Limited Warranty. Cadillac and General Motors of Canada Limited reserve the right to make any changes or discontinue the Roadside Service program at any time without notification.

Cadillac and General Motors of Canada Limited reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

Cadillac Owner Privileges™

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.
- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.
- **Emergency Tow from a Public Road or Highway:** Tow to the nearest Cadillac dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is also given when the vehicle is stuck in the sand, mud, or snow.

- **Flat Tire Change:** Service to change a flat tire with a spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is your responsibility for the repair or replacement of the tire if it is not covered by the warranty.
- **Battery Jump Start:** Service to jump start a dead battery.
- **Trip Interruption Benefits and Service:** If your trip is interrupted due to a warranty failure, incidental expenses may be reimbursed during the 6 years/110 000 km (70,000 mi) Powertrain warranty period. Items considered are hotel, meals, and rental car.

Cadillac Technician Roadside Service (U.S. Only)

Cadillac's exceptional Roadside Service is more than an auto club or towing service. It provides every Cadillac owner in the United States with the advantage of contacting a Cadillac advisor and, where available, a Cadillac trained dealer technician who can provide on-site service.

A dealer technician will travel to your location within a 30-mile radius of a participating Cadillac dealership. If beyond this radius, we will arrange to have your car towed to the nearest Cadillac dealership. Each technician travels with a specially equipped service vehicle complete with the necessary Cadillac parts and tools required to handle most roadside repairs.

Services Not Included in Roadside Service

- Impound towing caused by violation of any laws.
- Legal fines.
- Mounting, dismounting, or changing of snow tires, chains, or other traction devices.
- Towing or services for vehicles driven on a non-public road or highway.

Services Specific to Canadian-Purchased Vehicles

- **Fuel delivery:** Reimbursement is approximately $5 Canadian. Diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.
- **Lock-Out Service:** Vehicle registration is required.

- **Trip Interruption Benefits and Service:** Pre-authorization, original detailed receipts, and a copy of the repair orders are required. Once authorization has been received, the Roadside Service advisor will help you make arrangements and explain how to receive payment.
- **Alternative Service:** If assistance cannot be provided right away, the Roadside Service advisor may give you permission to get local emergency road service. You will receive payment, up to $100, after sending the original receipt to Roadside Service. Mechanical failures may be covered, however any cost for parts and labor for repairs not covered by the warranty are the owner responsibility.

Scheduling Service Appointments (U.S. and Canada)

When the vehicle requires warranty service, contact your dealer and request an appointment. By scheduling a service appointment and advising the service consultant of your transportation needs, your dealer can help minimize your inconvenience.

If the vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety related. If it is, please call your dealership, let them know this, and ask for instructions.

If your dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for same-day repair.

Courtesy Transportation Program (U.S. and Canada)

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper-to-Bumper (Base Warranty Coverage period in Canada), extended powertrain, and/or hybrid-specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled "Limited Warranty and Owner Assistance Information" furnished with each new vehicle provides detailed warranty coverage information.

Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to wait, GM helps to minimize inconvenience by providing several transportation options. Depending on the circumstances, your dealer can offer one of the following:

Shuttle Service

Shuttle service is the preferred means of offering Courtesy Transportation. Dealers may provide shuttle service to get you to your destination with minimal interruption of your daily schedule. This includes one-way or round-trip shuttle service within reasonable time and distance parameters of your dealer's area.

Public Transportation or Fuel Reimbursement

If the vehicle requires overnight warranty repairs, and public transportation is used instead of your dealer's shuttle service, the expense must be supported by original receipts and can only be up to the maximum amount allowed by GM for shuttle service. In addition, for U.S. customers, should you arrange transportation through a friend or relative, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information regarding the allowance amounts for reimbursement of fuel or other transportation costs.

Courtesy Rental Vehicle

Your dealer may arrange to provide you with a courtesy rental vehicle or reimburse you for a rental vehicle that you obtain if the vehicle is kept for an overnight warranty repair. Rental reimbursement will be limited and must be supported by original receipts. This requires that you sign and complete a rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. You are responsible for fuel usage charges and may also be responsible for taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair.

It may not be possible to provide a like vehicle as a courtesy rental.

Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Please contact your dealer for specific information about availability. All Courtesy Transportation arrangements will be administered by appropriate dealer personnel.

General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

Collision Damage Repair (U.S. and Canada)

If the vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish the vehicle resale value, and safety performance can be compromised in subsequent collisions.

Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine GM Collision parts are the best choice to ensure that the vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain the GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain the vehicle's originally designed appearance and safety performance; however, the history of these parts is not known. Such parts are not covered by the GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for the vehicle. As a result, these parts may fit poorly, exhibit premature durability/ corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by the GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

Repair Facility

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

Insuring the Vehicle

Protect your investment in the GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to the GM vehicle by limiting compensation for damage repairs by using aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you ensure that the vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If the vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read the lease carefully, as you may be charged at the end of the lease for poor quality repairs.

If a Crash Occurs

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see *Roadside Service (Mexico) on page 13-7* or *Roadside Service (U.S. and Canada) on page 13-11*.

Gather the following information:

- Driver name, address, and telephone number.
- Driver license number.
- Owner name, address, and telephone number.
- Vehicle license plate number.
- Vehicle make, model, and model year.
- Vehicle Identification Number (VIN).
- Insurance company and policy number.
- General description of the damage to the other vehicle.

Choose a reputable repair facility that uses quality replacement parts. See "Collision Parts" earlier in this section.

If the airbag has inflated, see *What Will You See after an Airbag Inflates? on page 3-26*.

Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take the vehicle there, or have it towed there.

Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by the GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with the repair professional, and insist on Genuine GM parts. Remember, if the vehicle is leased, you may be obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

Service Publications Ordering Information

Service Manuals

Service Manuals have the diagnosis and repair information on the engines, transmission, axle, suspension, brakes, electrical, steering, body, etc.

Service Bulletins

Service Bulletins give additional technical service information needed to knowledgeably service General Motors cars and trucks. Each bulletin contains instructions to assist in the diagnosis and service of the vehicle.

Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The Owner Manual includes the Maintenance Schedule for all models.

In-Portfolio: Includes a Portfolio, Owner Manual, and Warranty Manual.

RETAIL SELL PRICE: $35.00 (U.S.) plus handling and shipping fees.

Without Portfolio: Owner Manual only.

RETAIL SELL PRICE: $25.00 (U.S.) plus handling and shipping fees.

Current and Past Models

Technical Service Bulletins and Manuals are available for current and past model GM vehicles.

ORDER TOLL FREE:
1-800-551-4123 Monday – Friday
8:00 AM – 6:00 PM Eastern Time

For Credit Card Orders Only (VISA-MasterCard-Discover), see Helm, Inc. at: www.helminc.com.

Or write to:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

All listed prices are quoted in U.S. funds. Make checks payable in U.S. funds.

Reporting Safety Defects

Reporting Safety Defects to the United States Government

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign.

However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to *http://www.safercar.gov;* or write to:

Administrator, NHTSA
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from *http://www.safercar.gov.*

Reporting Safety Defects to the Canadian Government

If you live in Canada, and you believe that the vehicle has a safety defect, notify Transport Canada immediately, and notify General Motors of Canada Limited. Call Transport Canada at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
80 rue Noel
Gatineau, QC J8Z 0A1

Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify General Motors.

Call 1-800-458-8006, or write:

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169

In Canada, call 1-888-446-2000, or write:

Canadian Cadillac Customer Care Centre,
Mail Code: CA1-163-005
General Motors of Canada Limited
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Vehicle Data Recording and Privacy

The vehicle has a number of computers that record information about the vehicle's performance and how it is driven. For example, the vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy them in a crash, and, if equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help the dealer technician service the vehicle. Some modules may also store data about how the vehicle is operated, such as rate of fuel consumption or average speed. These modules may retain personal preferences, such as radio presets, seat positions, and temperature settings.

Event Data Recorders

This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur. NOTE: EDR data are recorded by your vehicle only if a non-trivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access this data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request by police or similar government office; as part of GM's defense of litigation through the discovery process; or, as required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

OnStar®

If the vehicle is equipped with OnStar® and has an active subscription, additional data may be collected through the OnStar system. This includes information about the vehicle's operation; about collisions involving the vehicle; the use of the vehicle and its features; and, in certain situations, the location and approximate GPS speed of the vehicle. Refer to the OnStar Terms and Conditions and Privacy Statement on the OnStar website.

Infotainment System

If the vehicle is equipped with a navigation system as part of the infotainment system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. See the infotainment manual for information on stored data and for deletion instructions.

Radio Frequency Identification (RFID)

RFID technology is used in some vehicles for functions such as tire pressure monitoring and ignition system security, as well as in connection with conveniences such as Remote Keyless Entry (RKE) transmitters for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in GM vehicles does not use or record personal information or link with any other GM system containing personal information.

Radio Frequency Statement

This vehicle has systems that operate on a radio frequency that comply with Part 15 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-GEN/210/220/310.

Operation is subject to the following two conditions:

1. The device may not cause harmful interference.
2. The device must accept any interference received, including interference that may cause undesired operation of the device.

Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

✍ NOTES

OnStar

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OnStar Overview

If equipped, this vehicle has a comprehensive, in-vehicle system that can connect to a live Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services.

The OnStar system status light is next to the OnStar buttons. If the status light is:

- Solid Green: System is ready.
- Flashing Green: On a call.
- Red: Indicates a problem.

Press or call 1-888-4ONSTAR (1-888-466-7827) to speak to an Advisor.

Press to:

- Make a call, end a call, or answer an incoming call.
- Give OnStar Hands-Free Calling voice commands.
- Give OnStar Turn-by-Turn Navigation voice commands. Requires the available Directions and Connections service plan.

Press to connect to a live Advisor to:

- Verify account information or update contact information.
- Get driving directions. Requires the available Directions and Connections service plan.
- Receive On-Demand Diagnostics for a check of the vehicle's key operating systems.
- Receive Roadside Assistance.

Press the OnStar Emergency button SOS to get a priority connection to an Emergency Advisor available 24/7 to:

- Get help for an emergency.
- Be a Good Samaritan or respond to an AMBER Alert.
- Get crisis assistance and evacuation routes.

OnStar Services

Emergency

With Automatic Crash Response, the built-in system can automatically connect to help in most crashes, even if help cannot be requested.

Press SOS to connect to an Emergency Advisor. GPS technology is used to identify the vehicle location and can provide critical information to emergency personnel. The Advisor is also trained to offer critical assistance in emergency situations before first responders arrive.

Security

OnStar provides services like Stolen Vehicle Assistance, Remote Ignition Block, and Roadside Assistance, if the vehicle is equipped. OnStar can unlock the vehicle doors remotely, if it is equipped with automatic door locks, and can help police locate the vehicle if it is stolen.

Navigation

OnStar navigation requires the Directions and Connections service plan.

Press On to receive directions or have them sent to the vehicle navigation screen, if equipped. Destinations can also be forwarded to the vehicle from MapQuest.com. The OnStar mapping database is continuously updated. For coverage maps, see www.onstar.com (U.S.) www.onstar.ca (Canada).

Turn-by-Turn Navigation

1. Press to connect to a live Advisor.
2. Request directions.
3. Directions are downloaded to the vehicle.
4. Follow the voice-guided commands.

Using Voice Commands During a Planned Route

Cancel Route

1. Press . System responds: "OnStar ready," then a tone. Say "Cancel route." System responds: "Do you want to cancel directions?"
2. Say "Yes." System responds: "OK, request completed, thank you, goodbye."

Route Preview

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Route preview." System responds with the next three maneuvers.
3. Say "Goodbye." Exits voice commands.

Repeat

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Repeat." System responds with the last direction given, then responds with "OnStar ready," then a tone.
3. Say "Goodbye." Exits voice commands.

Get My Destination

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Get my destination." System responds with address and the distance to the destination, then responds with "OnStar ready," then a tone.
3. Say "Goodbye." Exits voice commands.

Other Navigation Services Available from OnStar

OnStar eNav: Allows subscribers to send destinations from MapQuest.com to their Turn-by-Turn Navigation or screen-based navigation system. When ready, the directions will be downloaded to the vehicle.

Destination Download: Press , then request the Advisor to download directions to the navigation system in the vehicle. After the call ends, press the "Go" button on the navigation screen to begin driving directions.

Destinations can also be downloaded on the go. For information about eNav, Destination Download, and coverage maps see www.onstar.com (U.S.), www.onstar.ca (Canada).

Connections

OnStar Hands-Free Calling allows calls to be made and received from the vehicle. The vehicle can also be controlled from a cell phone through the OnStar RemoteLink mobile app. For coverage maps, see www.onstar.com (U.S.), www.onstar.ca (Canada).

Hands-Free Calling

1. Press . System responds: "OnStar ready."
2. Say "Call." System responds: "Please say the name or number to call."
3. Say the entire number without pausing, including a "1" and the area code. System responds: "OK calling."

Calling 911 Emergency

1. Press . The system responds "OnStar Ready," followed by a tone.
2. Say "Call." The system responds "Please say the name or number to call."
3. Say "911" without pausing. The system responds "911."
4. Say "Call." The system responds "OK, dialing 911."

Retrieve My Number

1. Press . System responds: "OnStar ready."
2. Say "My number." System responds: "Your OnStar Hands-Free Calling number is."

End a Call

Press . System responds: "Call ended."

Store a Name Tag for Speed Dialing

1. Press . System responds: "OnStar ready."
2. Say "Store." System responds: "Please say the number you would like to store."
3. Say the entire number without pausing. System responds: "Please say the name tag."
4. Pick a name tag. System responds: "About to store <name tag>. Does that sound OK?"

5. Say "Yes" or say "No" to try again. System responds: "OK, storing <name tag>."

Place a Call Using a Stored Number

1. Press . System responds: "OnStar ready."
2. Say "Call <name tag>." System responds: "OK, calling <name tag>."

Verify Minutes and Expiration

Press and say "Minutes" then "Verify" to check how many minutes remain and their expiration date.

OnStar Mobile App

Download the OnStar RemoteLink mobile app to select Apple, Android and BlackBerry devices to check vehicle fuel level, oil life, or tire pressure; to start the vehicle (if equipped) or unlock it; or to connect to an OnStar Advisor. For OnStar RemoteLink information and compatibility, see www.onstar.com (U.S.), www.onstar.ca (Canada).

Diagnostics

OnStar Vehicle Diagnostics will perform a vehicle check every month. It will check the engine, transmission, antilock brakes, and major vehicle systems. It also checks the tire pressures, if the vehicle is equipped with the Tire Pressure Monitoring System. If a diagnostics check is needed between e-mails, press , and an Advisor can run a check.

OnStar Additional Information

Transferring Service

Press to request account transfer eligibility information. The Advisor can assist in canceling or removing account information. If OnStar receives information that vehicle ownership has changed, OnStar may send a voice message to the vehicle, requesting updated account information.

Reactivation for Subsequent Owners

Press and follow the prompts to speak to an Advisor as soon as possible after acquiring the vehicle. The Advisor will update vehicle records and will explain the OnStar service offers and options available.

How OnStar Service Works

Automatic Crash Response, Emergency Services, Crisis Assist, Stolen Vehicle Assistance, Vehicle Diagnostics, Remote Door Unlock, Roadside Assistance, Turn-by-Turn Navigation, and Hands-Free Calling are available on most vehicles. Not all OnStar services are available everywhere or on all vehicles. For more information, a full description of OnStar services, system limitations, and OnStar terms and conditions:

- In the U.S. see www.onstar.com (U.S.) or call 1-888-4-ONSTAR. (1-888-466-7827).
- In Canada see www.onstar.ca (Canada) or call 1-888-4-ONSTAR. (1-888-466-7827).
- TTY 1-877-248-2080.
- Press to speak with an Advisor.

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

OnStar service cannot work unless your vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area, and the wireless service provider has coverage, network capacity, reception, and technology compatible with OnStar service. Service involving location information about the vehicle cannot work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. OnStar service may not work if the OnStar equipment is not properly installed or it has not been properly maintained. If equipment or software is added, connected, or modified, OnStar service may not work. Other problems beyond the control of OnStar may prevent service such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage to the vehicle in a crash, or wireless phone network congestion or jamming.

See *Radio Frequency Statement on page 13-21* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

Services for People with Disabilities

Advisors provide services to help subscribers with physical disabilities and medical conditions.

Press for help with:

- Locating a gas station with an attendant to pump gas.
- Finding a hotel, restaurant, etc., that meets accessibility needs.
- Providing directions to the closest hospital or pharmacy in urgent situations.

TTY Users

OnStar has the ability to communicate to the deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available dealer-installed TTY system can provide in-vehicle access to all of the OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

OnStar.com (U.S.) or OnStar.ca (Canada)

The website provides access to account information, allows management of the OnStar subscription, and viewing of videos of each service. Get subscription plan pricing and sign up for OnStar Vehicle Diagnostics. Click on the "My Account" tab on the home page. The website navigation and services provided may vary by country.

OnStar Personal Identification Number (PIN)

A PIN is needed to access some of the OnStar services, like Remote Door Unlock and Stolen Vehicle Assistance. You will be prompted to change the PIN the first time when speaking with an Advisor. To change the OnStar PIN, call OnStar and provide the Advisor with the current number.

Warranty

OnStar equipment may be warranted as part of the New Vehicle Limited Warranty. The manufacturer of the vehicle furnishes detailed warranty information.

Languages

The vehicle can be programmed to respond in English, French or Spanish. Press and ask an Advisor. Advisors can speak English, French or Spanish.

Potential Issues

OnStar cannot perform Remote Door Unlock or Stolen Vehicle Assistance after the vehicle has been off continuously for five days. After five days, OnStar can contact Roadside Assistance and a locksmith to help gain access to the vehicle.

Global Positioning System (GPS)

- Obstruction of the GPS can occur in a large city with tall buildings; in parking garages; around airports; in tunnels, underpasses, or parking garages; or in an area with very dense trees. If GPS signals are not available, the OnStar system should still operate to call OnStar. However, OnStar could have difficulty identifying the exact location.

- In emergency situations, OnStar can use the last stored GPS location to send to emergency responders.
- A temporary loss of GPS can cause loss of the ability to send a Turn-by-Turn Navigation route. The Advisor may give a verbal route or may ask for a call back after the vehicle is driven into an open area.

Cellular and GPS Antennas

Avoid placing items over or near the antenna to prevent blocking cellular and GPS signal reception. Cellular reception is required for OnStar to send remote signals to the vehicle.

Unable to Connect to OnStar Message

If there is limited cellular coverage or the cellular network has reached maximum capacity, this message may come on. Press to try the call again or try again after driving a few miles into another cellular area.

Vehicle and Power Issues

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

Add-on Electrical Equipment

The OnStar system is integrated into the electrical architecture of the vehicle. Do not add any electrical equipment. See *Add-On Electrical Equipment on page 9-72*. Added electrical equipment may interfere with the operation of the OnStar system and cause it to not operate.

Privacy

The complete OnStar Privacy Statement may be found at www.onstar.com (U.S.), or www.onstar.ca (Canada). Privacy-sensitive users of wireless communications are cautioned that the privacy of any information sent via wireless cellular communications cannot be assured. Third parties may unlawfully intercept or access transmissions and private communications without consent.

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This manual describes features that may or may not be on your specific vehicle either because they are options that you did not purchase or due to changes subsequent to the printing of this owner manual. Please refer to the purchase documentation relating to your specific vehicle to confirm each of the features found on your vehicle. For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Cadillac Motor Car Division wherever it appears in this manual.

Keep this manual in the vehicle for quick reference.

Canadian Vehicle Owners

Propriétaires Canadiens

A French language manual can be obtained from your dealer, at www.helminc.com, or from:

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire ou à l'adresse savant:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Litho in U.S.A.
Part No. 22858232 C Third Printing

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Using this Manual

To quickly locate information about the vehicle, use the Index in the back of the manual. It is an alphabetical list of what is in the manual and the page number where it can be found.

Danger, Warnings, and Cautions

⚠ Danger

Text marked ⚠ Danger provides information on risk of fatal injury. Disregarding this information may endanger life.

⚠ Warning

Text marked ⚠ Warning provides information on risk of accident or injury. Disregarding this information may lead to injury.

⚠ Caution

Text marked ⚠ Caution provides information that may indicate a hazard that could result in injury or death. It could also result in possible damage to the vehicle.

A circle with a slash through it is a safety symbol which means "Do Not," "Do not do this," or "Do not let this happen."

Symbols

The vehicle has components and labels that use symbols instead of text. Symbols are shown along with the text describing the operation or information relating to a specific component, control, message, gauge, or indicator.

📖 : This symbol is shown when you need to see your owner manual for additional instructions or information.

: This symbol is shown when you need to see a service manual for additional instructions or information.

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. For more information on the symbol, refer to the Index.

: Airbag Readiness Light

: Air Conditioning

: Antilock Brake System (ABS)

: Audio Steering Wheel Controls or OnStar®

: Brake System Warning Light

: Charging System

: Cruise Control

: Engine Coolant Temperature

: Exterior Lamps

: Fog Lamps

: Fuel Gauge

: Fuses

: Headlamp High/Low-Beam Changer

: Heated Steering Wheel

: LATCH System Child Restraints

: Malfunction Indicator Lamp

: Oil Pressure

: Outside Power Foldaway Mirrors

: Power

: Remote Vehicle Start

: Safety Belt Reminders

: Tire Pressure Monitor

: Traction Control/StabiliTrak®

: Windshield Washer Fluid

✍ NOTES

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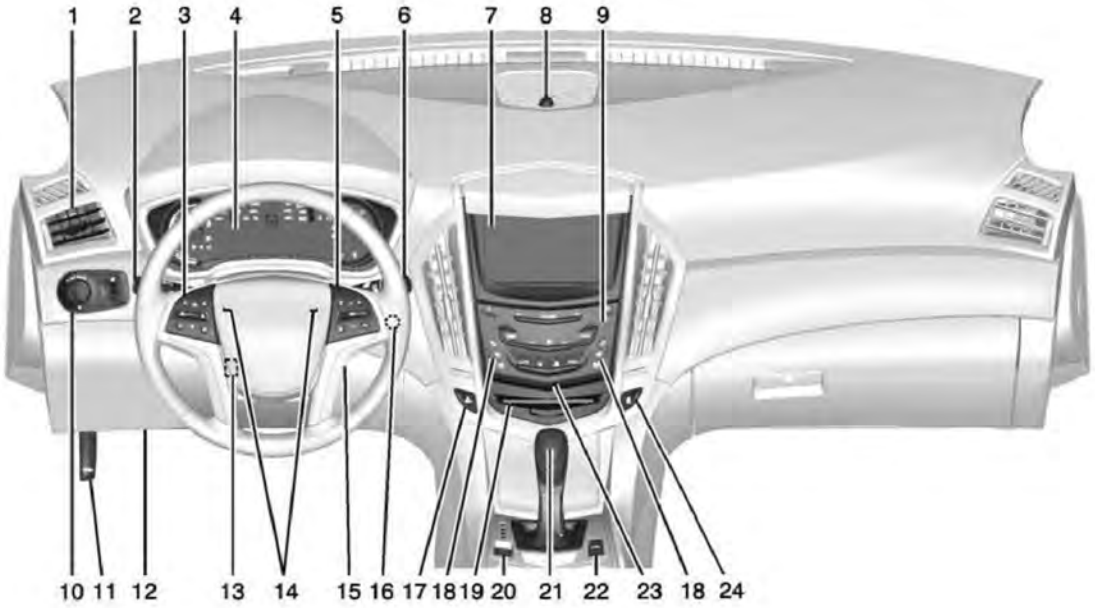
Instrument Panel



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1. *Air Vents on page 8-7.*
2. Turn Signal Lever. See *Turn and Lane-Change Signals on page 6-6.*
3. *Cruise Control on page 9-33.*

   Forward Collision Alert (FCA) System on page 9-49.
4. *Instrument Cluster on page 5-10.*
5. *Steering Wheel Controls on page 5-2.*

   Driver Information Center (DIC) Controls. See *Driver Information Center (DIC) on page 5-26.*
6. *Windshield Wiper/Washer on page 5-3.*

   Rear Window Wiper/Washer on page 5-5.
7. *Infotainment on page 7-1.*
8. Light Sensor. See *Twilight Sentinel on page 6-5.*
9. *Dual Automatic Climate Control System on page 8-1.*
10. *Exterior Lamp Controls on page 6-1.*

    Front Fog Lamps on page 6-7 (If Equipped).

    Instrument Panel Illumination Control on page 6-7.
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12. Data Link Connector (DLC) (Out of View). See *Malfunction Indicator Lamp on page 5-16.*
13. *Steering Wheel Adjustment on page 5-2.*
14. *Horn on page 5-3.*
15. Pedal Adjust Control (Out of View) (If Equipped). See *Adjustable Throttle and Brake Pedal on page 9-15.*
16. ENGINE START/STOP Button. See *Ignition Positions on page 9-15.*
17. *Hazard Warning Flashers on page 6-6.*
18. *Heated and Ventilated Front Seats on page 3-8* (If Equipped).
19. CD Player. See *Infotainment on page 7-1.*

    Blu-Ray® Optical Drive (If Equipped). See *Infotainment on page 7-1.*
20. *Parking Brake on page 9-28.*
21. Shift Lever. See *Automatic Transmission on page 9-22.*
22. Lane Departure Warning Button (If Equipped). See *Lane Departure Warning (LDW) on page 9-55.*

    Parking Assist (If Equipped). See *Driver Assistance Systems on page 9-44.*

    Economy Mode (If Equipped). See *Fuel Economy Mode on page 9-25.*
23. *Front Storage on page 4-2* (If Equipped).
24. *Traction Control/Electronic Stability Control on page 9-30.*

Initial Drive Information

This section provides a brief overview about some of the important features that may or may not be on your specific vehicle.

For more detailed information, refer to each of the features which can be found later in this owner manual.

Remote Keyless Entry (RKE) System

The RKE transmitter may be used to lock and unlock the doors from up to 60 m (197 ft) away from the vehicle.

: Press to lock all doors.

: Press to unlock the driver door or all doors depending on the vehicle personalization settings.

Lock and unlock feedback can be personalized.

See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40*.

: Press and release one time to initiate vehicle locator.

Press and hold for three seconds to sound the panic alarm.

HOLD : Press and hold to open or close the liftgate.

Press the key release button near the bottom of the transmitter to remove the key. The key can be used for the driver door and the glove box.

See *Keys on page 2-1* and *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Remote Vehicle Start

If available, this feature allows the engine to be started from outside of the vehicle.

Starting the Vehicle

1. Press and release on the RKE transmitter.
2. Immediately press and hold for at least four seconds until the turn signal lamps flash.

When the vehicle starts, the parking lamps will remain on as long as the engine is running. The doors will be locked and the climate control system may come on.

The engine will continue to run for 10 minutes. Repeat the steps for a 10-minute time extension. Remote start can be extended only once.

Canceling a Remote Start

To cancel a remote start, do any of the following:

- Press and hold ⍝ until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

See *Remote Vehicle Start on page 2-8.*

Door Locks

Keyless Access

When the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door, pressing the lock/unlock button on that door handle will lock/unlock the doors. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock. See *Remote Keyless Entry (RKE) System Operation on page 2-3.*

Remote Keyless Entry (RKE)

To lock or unlock the doors from the outside, press 🔒 or 🔓 on the RKE transmitter. See *Remote Keyless Entry (RKE) System Operation on page 2-3.*

Key

To lock or unlock the door, use the key in the driver door. Turn the key counterclockwise once to unlock the driver door; turning the key again will unlock the passenger doors.

Inside the Vehicle

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks

There is a power door lock switch on the front door panels.

🔒 : Press to lock the doors.

🔓 : Press to unlock the doors.

See *Power Door Locks on page 2-11*.

Liftgate

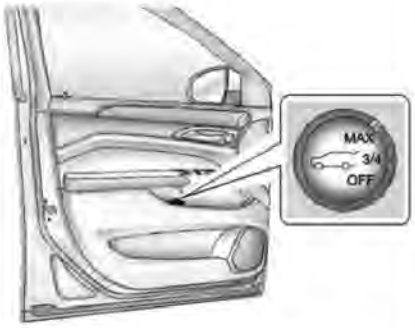
Manual Liftgate Operation

For vehicles without Keyless Access, unlock the vehicle before opening the liftgate.

Press the touch pad in the handle of the liftgate above the license plate and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Power Liftgate Operation



On vehicles with a power liftgate, the switch is on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

Choose a power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position. Press the center of the switch.

The three modes are:

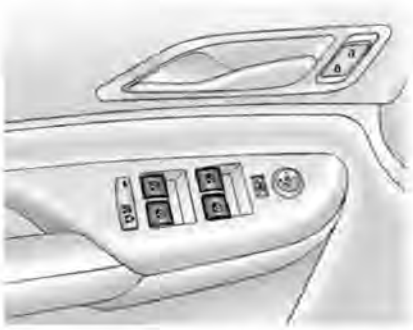
MAX: The liftgate opens to the full open height.

3/4: The liftgate opens to a reduced height that can be set by the vehicle operator in a range of approximately three-quarters open to full open.

OFF: The liftgate only operates manually in this position.

See *Liftgate on page 2-13*.

Windows



Press or pull the switch part of the way to open or close the window.

Fully press the front of the switch down and release it to express-down the window. Fully pull the switch up and release it to express-up the window.

Press to activate the window lockout on the rear doors.

See *Power Windows on page 2-22.*

Remote Window Operation

If equipped, remote operating windows will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

See *Power Windows on page 2-22.*

Seat Adjustment

Manual Seats

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.

4. Try to move the seat back and forth to be sure it is locked in place.

To raise or recline the seatback, use the lever on the outboard side of the seat.

See *Seat Adjustment on page 3-3* and *Reclining Seatbacks on page 3-5.*

Power Seats

1. Seat Position Control
2. Seatback Adjustment Control
3. Lumbar Adjustment Control

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control (1) forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control (1) up or down.
- Raise or lower the entire seat by moving the rear of the control (1) up or down.

  See *Power Seat Adjustment on page 3-4.*
- Raise or recline the seatback by tilting control (2) forward or rearward.

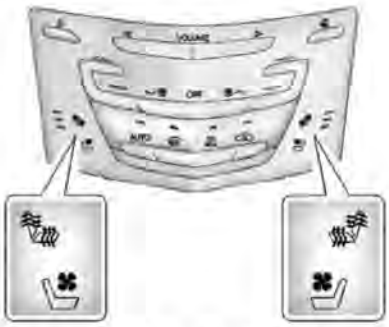
  See *Reclining Seatbacks on page 3-5.*
- Increase or decrease the lumbar support by pressing and holding the front or rear of control (3). See *Lumbar Adjustment on page 3-4.*

Memory Features

If equipped, the "1," "2," and MEM buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions.

See *Memory Seats on page 3-6* and *Vehicle Personalization on page 5-40.*

Heated and Ventilated Seats



Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the center stack. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights next to the buttons indicate three for the highest setting and one for the lowest. If the front heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

See *Heated and Ventilated Front Seats on page 3-8.*

The heated and ventilated front seats can also be programmed to come on during a remote start. See *Vehicle Personalization on page 5-40.*

Head Restraint Adjustment

Do not drive until the head restraints for all occupants are installed and adjusted properly.

To achieve a comfortable seating position, change the seatback recline angle as little as necessary while keeping the seat and the head restraint height in the proper position.

See *Head Restraints on page 3-2* and *Seat Adjustment on page 3-3.*

Safety Belts

Refer to the following sections for important information on how to use safety belts properly:

- *Safety Belts on page 3-12.*
- *How to Wear Safety Belts Properly on page 3-13.*
- *Lap-Shoulder Belt on page 3-14.*
- *Lower Anchors and Tethers for Children (LATCH System) on page 3-40.*

Passenger Sensing System

United States

Canada and Mexico

The passenger sensing system will turn off the front outboard passenger frontal airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger airbag status indicator will be visible on the overhead console when the vehicle is started. See *Passenger Sensing System on page 3-26.*

Mirror Adjustment

Exterior

Manual Folding Mirrors Shown, Power Folding Similar

To adjust the mirror:

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.

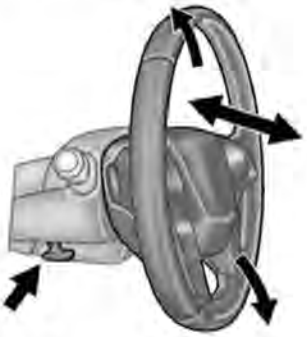
2. Press the arrows on the control pad to move each mirror to the desired position.
3. Return the selector switch to the center position.

See *Folding Mirrors on page 2-20*.

Automatic Dimming Mirror

If equipped, the driver outside mirror and the inside rearview mirror automatically adjust for the glare of headlamps behind you. See *Automatic Dimming Mirror on page 2-21* or *Automatic Dimming Rearview Mirror on page 2-22*.

Steering Wheel Adjustment



To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Throttle and Brake Pedal Adjustment

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.

The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

See *Adjustable Throttle and Brake Pedal on page 9-15.*

Interior Lighting

Dome Lamp

The dome lamp control is in the overhead console.

To change the dome lamp settings, press the following:

: Turns the lamp off, even when a door is open.

: The lamp comes on when a door is opened.

: Turns the dome lamp on.

Reading Lamps

There are reading lamps on the overhead console and over the rear passenger doors. These lamps come on when any door is opened.

To manually turn the reading lamps on or off:

- For the overhead console reading lamps, press the or next to each lamp.
- For the rear passenger reading lamps, press the lamp lens.

For more information on interior lighting, see *Instrument Panel Illumination Control on page 6-7.*

Exterior Lighting

The exterior lamp control is on the instrument panel to the left of the steering column.

Turn the control to the following positions:

: Briefly turn to this position to turn the automatic light control off or on again.

AUTO: Automatically turns the exterior lamps on and off, depending on outside lighting.

: Turns on the parking lamps including all lamps, except the headlamps.

: Turns on the headlamps together with the parking lamps and instrument panel lights. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

: If equipped with fog lamps, press to turn the lamps on or off.

See:

- *Exterior Lamp Controls on page 6-1*
- *Daytime Running Lamps (DRL) on page 6-4*

Windshield Wiper/Washer

With the ignition in ACC/ ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI: Use for fast wipes.

LO: Use for slow wipes.

INT: Use for intermittent wipes. To adjust wipe frequency, turn the INT band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see the following Rainsense information.

OFF: Use to turn the wipers off.

: For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers.

Rainsense™

For vehicles with Rainsense:

INT: Move the windshield wiper lever to INT. Turn the INT band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON: Press the upper portion of the button for continuous rear window wipes.

OFF: The rear wiper turns off when the button is returned to the middle position.

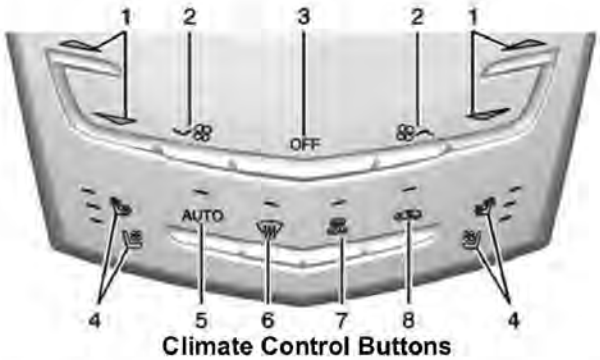
INT: Press the lower portion of the button to set a delay between wipes.

: Push the windshield wiper lever forward to spray washer fluid on the rear window.

See *Windshield Wiper/Washer on page 5-3* and *Rear Window Wiper/Washer on page 5-5*.

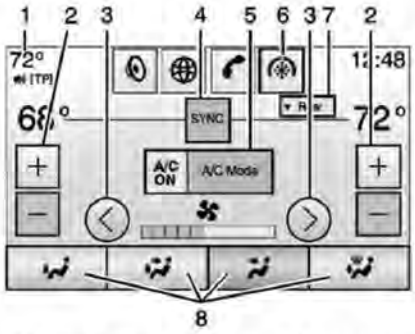
Climate Controls

The climate control buttons and the touch screen are used to adjust the heating, cooling, and ventilation.



Climate Control Buttons

1. Driver and Passenger Temperature Controls
2. Fan Control
3. OFF (Fan)
4. Driver and Passenger Heated and Ventilated Seats (If Equipped)
5. AUTO (Automatic Operation)
6. Defrost
7. Rear Window Defogger
8. Recirculation



Climate Touch Screen Controls

1. Outside Temperature Display
2. Driver and Passenger Temperature Controls
3. Fan Control
4. SYNC (Synchronized Temperature)
5. AC Mode (Air Conditioning)
6. Climate Control Selection (Application Tray Button)
7. Rear (Rear Climate Control Touch Screen)
8. Air Delivery Mode Control

See *Dual Automatic Climate Control System on page 8-1* and *Rear Climate Control System on page 8-6* (If Equipped).

Transmission

Driver Shift Control (DSC)

DSC allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to Sport Mode.
2. To enter M (Manual Mode), press the shift lever forward (+) to upshift or rearward (−) to downshift.

See *Manual Mode on page 9-24*.

Vehicle Features

Steering Wheel Controls

For vehicles with audio steering wheel controls, some audio controls can be adjusted at the steering wheel.

: For vehicles with OnStar® or a Bluetooth® system, press to talk or interact with those systems. See *OnStar Overview on page 14-1* or "Bluetooth" in the separate infotainment manual.

: Press to decline an incoming call, or end a current call. Press to mute or unmute the infotainment system when not on a call.

< or >: Press to go to the previous or next menu option.

∧ or ∨: Press the five-way control up or down to go to the next or previous selection.

SEL: Press to select a highlighted menu option.

⍓ or ⍗: Press to go to the next or previous favorite when listening to the radio. Press to go to the next or previous track when listening to a media source.

◁+ or ◁−: Press to increase or decrease the volume.

See *Steering Wheel Controls on page 5-2.*

Cruise Control

: Press to turn the system on and off. An indicator appears in the instrument cluster when turned on.

+RES: Press the control up briefly to resume to a previously set speed or to increase vehicle speed if the cruise control is already activated.

SET−: Press the control down briefly to set the speed and activate cruise control or to decrease vehicle speed if the cruise control is already activated.

: Press to disengage cruise control without erasing the set speed from memory.

See *Cruise Control on page 9-33* or *Adaptive Cruise Control on page 9-36* (if equipped).

Infotainment System

See the infotainment manual for information on the radio, audio players, phone, navigation system, and voice or speech recognition. It also includes information on settings and downloadable applications (if equipped).

Driver Information Center (DIC)

The DIC display is in the instrument cluster. It shows the status of many vehicle systems.

∧ or ∨: Move SEL up or down to go to the previous or next selection.

< or >: Press to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL: Press to open a menu or select a menu item. Press and hold to reset values on certain screens.

See *Driver Information Center (DIC) on page 5-26*.

Forward Collision Alert (FCA) System

If equipped, FCA may help avoid or reduce the harm caused by front-end crashes. FCA provides a green indicator when a vehicle is detected ahead. This indicator displays amber if you follow a vehicle much too closely. When approaching a vehicle ahead too quickly, FCA provides a flashing red alert on the windshield and rapidly beeps or pulses the driver seat.

See *Forward Collision Alert (FCA) System on page 9-49*.

Lane Departure Warning (LDW)

If equipped, LDW is intended to help avoid unintentional lane departures at speeds of 56 km/h (35 mph) or greater. LDW uses a camera sensor to detect the lane markings. The LDW indicator, , appears green if a lane marking is detected. If the vehicle departs the lane, the

indicator will change to amber and flash. In addition, beeps will sound, or the driver seat will pulse.

See *Lane Departure Warning (LDW) on page 9-55*.

Side Blind Zone Alert (SBZA)

If equipped, SBZA will detect vehicles in the next lane over in the vehicle's side blind zone area. When this happens, the SBZA display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

See *Side Blind Zone Alert (SBZA) on page 9-53*.

Rear Vision Camera (RVC)

If equipped, RVC displays a view of the area behind the vehicle on the center stack display when the vehicle is shifted into R (Reverse).

See *Assistance Systems for Parking or Backing on page 9-44*.

Ultrasonic Parking Assist

If equipped, Ultrasonic Rear Parking Assist (URPA) uses sensors on the rear bumper to assist with parking and avoiding objects while in R (Reverse). It operates at speeds less than 8 km/h (5 mph). URPA may display a warning triangle on the Rear Vision Camera screen and a graphic on the instrument cluster to provide the object distance. In addition, multiple beeps or seat pulses may occur if very close to an object.

The vehicle may also have the Front Parking Assist system, a higher speed Backing Warning System, and the Rear Automatic Braking system.

See *Driver Assistance Systems on page 9-44*.

Active Emergency Braking System

If the vehicle has Adaptive Cruise Control (ACC) it also has the Active Emergency Braking System, which includes Intelligent Brake Assist (IBA) and the Automatic Collision Preparation (ACP) System. These systems can provide a boost to braking or automatically brake the vehicle to help avoid or lessen the severity of crashes while moving forward.

See *Active Emergency Braking System on page 9-51*.

Storage Compartments

The glove box is air conditioned and can be used to store items at a lower temperature. Move the slide control to open or close the opening to adjust the air flow. See *Glove Box on page 4-1*.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle may have up to five accessory power outlets.

The accessory power outlets are:

- Below the climate control system inside the front storage bin.
- Inside the center floor console.
- On the rear of the center floor console. For vehicles with a rear climate control system, there will be two accessory power outlets on the rear of the center floor console.
- In the rear cargo area.

These are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

See *Power Outlets on page 5-7.*

Universal Remote System

If available, this system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Read the instructions completely before attempting to program the Universal Remote system. Because of the steps involved, it may be helpful to have another person available to assist you with programming the Universal Remote system.

See *Universal Remote System on page 5-46.*

Performance and Maintenance

Traction Control/ Electronic Stability Control

The "Traction Control System (TCS)" limits wheel spin. The system turns on automatically when the vehicle is started.

The StabiliTrak system assists with directional control of the vehicle in difficult driving conditions. The system turns on automatically when the vehicle is started.

- To turn off traction control, press and release OFF on the center stack. illuminates in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-37.*

- Press and release OFF again to turn traction control back on. goes out in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-37*.
- To turn off both traction control and StabiliTrak, press and hold OFF on the center stack until OFF and illuminate in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-37*.
- Press OFF again to turn on both systems. OFF and go out in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-37*.

See *Traction Control/Electronic Stability Control on page 9-30*.

Tire Pressure Monitor

This vehicle may have a Tire Pressure Monitor System (TPMS).

The low tire pressure warning light alerts to a significant loss in pressure of one of the vehicle's tires. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-10*. The warning light will remain on until the tire pressure is corrected.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This may be an early indicator that the tire pressures are getting low and the tires need to be inflated to the proper pressure.

The TPMS does not replace normal monthly tire maintenance. Maintain the correct tire pressures.

See *Tire Pressure Monitor System on page 10-51*.

Engine Oil Life System

The engine oil life system calculates engine oil life based on vehicle use and displays the CHANGE ENGINE OIL SOON message when it is time to change the engine oil and filter. The oil life system should be reset to 100% only following an oil change.

Resetting the Oil Life System

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-26*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-32*.
2. Press SEL on the DIC controls and hold SEL down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

See *Engine Oil Life System on page 10-9*.

Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tires properly inflated.
- Combine several trips into a single trip.
- Replace the vehicle's tires with the same TPC Spec number molded into the tire's sidewall near the size.
- Follow recommended scheduled maintenance.

Roadside Service

U.S.: 1-800-224-1400

Canada: 1-800-882-1112

TTY Users (U.S. Only): 1-888-889-2438

New Cadillac owners are automatically enrolled in the Roadside Service Program.

See *Roadside Service on page 13-5.*

OnStar®

If equipped, this vehicle has a comprehensive, in-vehicle system that can connect to a live Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services. See *OnStar Overview on page 14-1.*

Keys, Doors, and Windows

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Keys and Locks

Keys

⚠ Warning

Leaving children in a vehicle with a Remote Keyless Entry (RKE) transmitter is dangerous and children or others could be seriously injured or killed. They could operate the power windows or other controls or make the vehicle move. The windows will function with the RKE transmitter in the vehicle, and children or others could be caught in the path of a closing window. Do not leave children in a vehicle with an RKE transmitter.

This key, located inside the Remote Keyless Entry (RKE) transmitter, is used for the driver door and glove box.

To remove the key, press the button near the bottom of the transmitter, and pull the key out. Never pull the key out without pressing the button.

If it becomes difficult to turn the key, inspect the key blade for debris.

See your dealer if a new key is needed.

Contact Roadside Service if locked out of the vehicle. See *Roadside Service on page 13-5*.

With an active OnStar subscription, an OnStar Advisor may remotely unlock the vehicle. See *OnStar Overview on page 14-1*.

Remote Keyless Entry (RKE) System

See *Radio Frequency Statement on page 13-15*.

If there is a decrease in the RKE operating range:

- Check the distance. The transmitter may be too far from the vehicle.
- Check the location. Other vehicles or objects may be blocking the signal.
- Check the transmitter's battery. See "Battery Replacement" later in this section.

- If the transmitter is still not working correctly, see your dealer or a qualified technician for service.

Remote Keyless Entry (RKE) System Operation

The Keyless Access system allows for vehicle entry when the transmitter is within range. See "Keyless Access Operation" following.

The RKE transmitter functions may work up to 60 m (197 ft) away from the vehicle.

Keep in mind that other conditions, such as those previously stated, can impact the performance of the transmitter.

With Remote Start and Power Liftgate Shown, Without Similar

(Lock): Press to lock all doors. The turn signal indicators may flash and/or the horn may sound to indicate locking. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40.*

If the driver door is open when is pressed, all doors lock except the driver door, if Unlocked Door Anti Lock Out is enabled through the vehicle personalization. If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the theft-deterrent system. See *Vehicle Alarm System on page 2-17.*

If equipped, pressing will also lock the fuel door.

(Unlock): Press to unlock the driver door or all doors. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40.* When remotely unlocking the vehicle at night the fog lamps and back-up lamps will come on for about 20 seconds to light your approach to the vehicle. The turn signal indicators may flash to indicate unlocking. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40.*

Memory seat positions may be recalled when unlocking the vehicle. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40.*

Pressing will disarm the theft-deterrent system. See *Vehicle Alarm System on page 2-17.*

On some models, pressing and holding 🔓 will open all of the windows.

If equipped, pressing 🔓 will also unlock the fuel door.

(Remote Start): For vehicles with this feature, press and release 🔓 and then immediately press and hold for at least four seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 2-8*.

(Vehicle Locator/Panic Alarm): Press and release one time to initiate vehicle locator. The exterior lamps flash and the horn chirps three times. Press and hold for three seconds to sound the panic alarm. The horn sounds and the turn signal lamps flash for 30 seconds, or until is pressed again or the vehicle is started.

HOLD (Remote Liftgate Release): Press and hold to open or close the power liftgate.

Keyless Access Operation

With the Keyless Access system, you can lock and unlock the doors and access the hatch without removing the RKE transmitter from your pocket, purse, briefcase, etc. The RKE transmitter should be within 1 m (3 ft) of the door or hatch being opened.

The Keyless Access can be programmed to unlock all doors on the first lock/unlock press from the driver door. See *Vehicle Personalization on page 5-40*.

Keyless Unlocking/Locking from the Driver Door

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the driver door handle, pressing the lock/unlock button on the driver door handle will unlock the driver door. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock.

Passenger Shown, Driver Similar

Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

- It has been more than five seconds since the first lock/unlock button press.
- Two lock/unlock button presses were used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

Keyless Unlocking/Locking from Passenger Doors

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the door handle, pressing the lock/unlock button on that door handle will unlock all doors. Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

- The lock/unlock button was used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

Passive Locking

If equipped with Keyless Access, this feature will lock the vehicle several seconds after all doors are closed, if the vehicle is off and at least one RKE transmitter has been removed from the interior or none remain in the interior. If equipped with a locking fuel door, the fuel door will also lock at this time.

Temporary Disable Passive Locking Feature

Temporarily disable the passive locking by pressing and holding on the interior door switch with a door open for at least four seconds, or until three chimes are heard. Passive locking will then remain disabled until on the interior door is pressed, or until the vehicle is turned on.

To customize the doors to automatically lock when exiting the vehicle, see "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-40*.

Keyless Liftgate Opening

Press the touch pad on the liftgate handle to open the liftgate if the keyless entry transmitter is within 1 m (3 ft).

Programming Transmitters to the Vehicle

Only RKE transmitters programmed to the vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen transmitters no longer work. Each vehicle can have up to eight transmitters matched to it.

Programming with a Recognized Transmitter

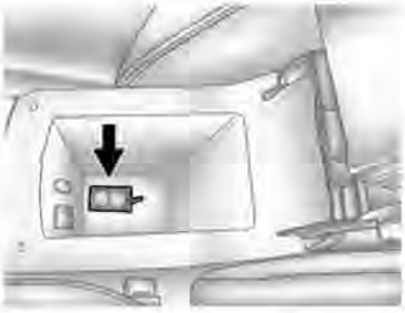
A new transmitter can be programmed to the vehicle when there is one recognized transmitter.

To program, the vehicle must be off and all of the transmitters, both currently recognized and new, must be with you.

1. Place the recognized transmitter(s) in the cupholder.

2. Insert the vehicle key of the transmitter into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

   The Driver Information Center (DIC) displays READY FOR REMOTE #2, 3, 4, ETC.



3. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
4. Press the ENGINE START/ STOP button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
5. Remove the transmitter from the transmitter pocket and press the transmitter 🔓 or 🔒 button.

   To program additional transmitters, repeat Steps 3–5.

   When all additional transmitters are programmed, press and hold the ENGINE START/STOP button for 12 seconds to exit programming mode.

Programming without a Recognized Transmitter

If there are no currently recognized transmitters available, follow this procedure to program up to eight transmitters. This feature is not available in Canada. This procedure will take approximately 30 minutes to complete. The vehicle must be off and all of the transmitters you wish to program must be with you.

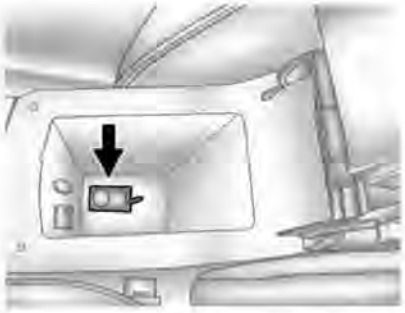
1. Insert the vehicle key of the transmitter into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

   The Driver Information Center (DIC) displays REMOTE LEARN PENDING, PLEASE WAIT.
2. Wait for 10 minutes until the DIC displays PRESS ENGINE START BUTTON TO LEARN and then press the ENGINE START/STOP button.

   The DIC displays will again show REMOTE LEARN PENDING, PLEASE WAIT.

3. Repeat Step 2 two additional times. After the third time all previously known transmitters will no longer work with the vehicle. Remaining transmitters can be relearned during the next steps.

   The DIC display should now show READY FOR REMOTE # 1.



4. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
5. Press the ENGINE START/ STOP button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
6. Remove the transmitter from the transmitter pocket and press the transmitter unlock or lock button.

   To program additional transmitters, repeat Steps 4–6.

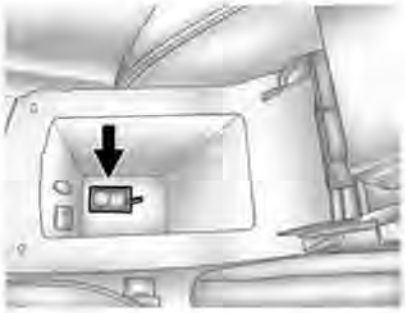
   When all additional transmitters are programmed, press and hold the ENGINE START/STOP button for 12 seconds to exit programming mode.

Starting the Vehicle with a Low Transmitter Battery

When the vehicle is started, if the transmitter battery is weak, the DIC may display NO REMOTE DETECTED or NO REMOTE KEY WAS DETECTED PLACE KEY IN TRANSMITTER POCKET THEN START YOUR VEHICLE. The REPLACE BATTERY IN REMOTE KEY message may also be displayed at this time.

To start the vehicle:

1. Open the center console storage area and the storage tray.



2. Place the transmitter in the transmitter pocket.

3. With the vehicle in P (Park) or N (Neutral), press the brake pedal and the ENGINE START/ STOP button.

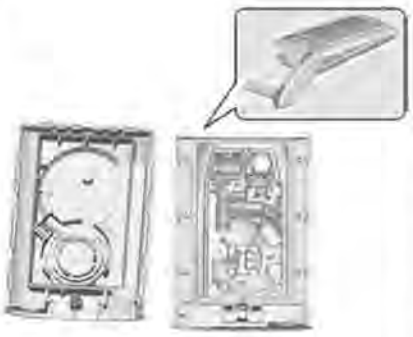
   Replace the transmitter battery as soon as possible.

Battery Replacement

> **⚠ Caution**
>
> When replacing the battery, do not touch any of the circuitry on the transmitter. Static from your body could damage the transmitter.

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC.

1. Press the button near the bottom of the transmitter and pull the key out.



2. Use the oval base of the key blade to separate the two halves of the transmitter.
3. Remove the old battery. Do not use a metal object.
4. Insert the new battery on the back housing, positive side facing down. Replace with a CR2032 or equivalent battery.
5. Align the key release button and snap the transmitter back together.

Remote Vehicle Start

If available, this feature allows the engine to be started from outside of the vehicle.

(Remote Vehicle Start): This button will be on the RKE transmitter if the vehicle has remote start.

The climate control system will use the previous settings during a remote start. The rear defog may come on during remote start based on cold ambient conditions. The rear fog indicator light does not come on during remote start.

If the vehicle has heated seats, they may come on during a remote start. See *Heated and Ventilated Front Seats on page 3-8*

Laws in some local communities may restrict the use of remote starters. For example, some laws may require a person using remote start to have the vehicle in view. Check local regulations for any requirements.

Other conditions can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System on page 2-2* for additional information.

Starting the Engine Using Remote Start

1. Press and release on the RKE transmitter.
2. Immediately press and hold for at least four seconds or until the turn signal lamps flash. The turn signal lamps flashing confirms the request to remote start the vehicle has been received.

   During the remote start the doors will be locked and the parking lamps will remain on as long as the engine is running.

   The engine will shut off after 10 minutes unless a time extension is done or the ignition is put in ON/RUN/START.
3. Press the brake pedal and select the ON/RUN/START ignition mode to drive the vehicle.

Extending Engine Run Time

The engine run time can also be extended by another 10-minutes, if during the first 10 minutes Steps 1–2 are repeated while the engine is still running. This provides a total of 20 minutes.

The remote start can only be extended once.

When the remote start is extended, the second 10-minute period is added on to the first 10 minutes for a total of 20 minutes.

A maximum of two remote starts, or a remote start with an extension, are allowed between ignition cycles.

The vehicle's ignition must be changed to ON/RUN/START and then back to OFF before the remote start procedure can be used again.

Shutting the Engine Off After a Remote Start

To cancel a remote start, do any of the following:

- Press and hold until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

Conditions in Which Remote Start Will Not Work

The remote start will not operate if any of the following occur:

- The transmitter is in the vehicle.
- The hood is not closed.
- The hazard warning flashers are on.
- There is an emission control system malfunction.
- The engine coolant temperature is too high.
- The oil pressure is low.

- Two remote vehicle starts or a start with an extension have already been used.
- The vehicle is not in P (Park).

Door Locks

⚠ Warning

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked. So, all passengers should wear safety belts properly and the doors should be locked whenever the vehicle is driven.

(Continued)

Warning (Continued)

- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.
- Outsiders can easily enter through an unlocked door when slowing or stopping the vehicle. Lock the doors to help prevent this from happening.

Keyless Access

When the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door, pressing the lock/unlock button on that door handle will lock/unlock the doors. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Key

To lock or unlock the door, use the key in the driver door. Turn the key counterclockwise once to unlock the driver door; turning the key again will unlock the passenger doors.

Inside the Vehicle

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks

(Lock): Press to lock the doors.

(Unlock): Press to unlock the doors.

Delayed Locking

This feature delays the locking of the doors until five seconds after all doors are closed.

When is pressed on the power door lock switch while the door is open, a chime will sound three times indicating delayed locking is active.

The doors will lock automatically five seconds after all doors are closed. If a door is reopened before that time, the five-second timer will reset when all doors are closed again.

Press on the door lock switch or press on the RKE transmitter to lock doors immediately.

This feature can also be programmed. See *Vehicle Personalization on page 5-40*.

Automatic Door Locks

The doors will lock automatically when all doors are closed, the ignition is on, and the shift lever is moved out of P (Park). The doors will automatically unlock when the vehicle is stopped and the shift lever is moved into P (Park).

Use the manual or power door locks to unlock the doors if someone needs to exit, and to lock the doors again.

The power door locks can be programmed through the Driver Information Center (DIC). See *Vehicle Personalization on page 5-40*.

Lockout Protection

Lockout protection decreases the chances that the keys may be accidentally locked in the vehicle.

When door locking is requested by pressing on the front door panels or the RKE transmitter and the driver door is open, all doors will lock and the driver door will immediately unlock. The driver door must be closed when is pressed for all doors to remain locked.

This feature can be programmed to provide the lockout protection feature only when the ignition mode is ACC/ACCESSORY, or ON/RUN/START. See "Power Door Locks" in *Vehicle Personalization on page 5-40*.

Safety Locks

The rear door safety locks prevent passengers from opening the rear doors from inside the vehicle.

Press to activate the safety locks. The indicator light comes on when activated.

The rear door power windows are also disabled. See *Power Windows on page 2-22*.

Press again to deactivate the safety locks and power windows.

If a rear door handle is being pulled when the safety lock is deactivated, that door will remain locked and the indicator light may flash. Release the handle, then press the safety lock twice to deactivate the safety locks.

Doors

Liftgate

⚠ Warning

Exhaust gases can enter the vehicle if it is driven with the liftgate or trunk/hatch open, or with any objects that pass through the seal between the body and the trunk/hatch or liftgate. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle must be driven with the liftgate or trunk/hatch open:

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.

(Continued)

Warning (Continued)

- Adjust the climate control system to a setting that brings in only outside air and set the fan speed to the highest setting. See "Climate Control Systems" in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

See *Engine Exhaust on page 9-21*.

⚠ Caution

To avoid damage to the liftgate or liftgate glass, make sure the area above and behind the liftgate is clear before opening it.

Manual Liftgate

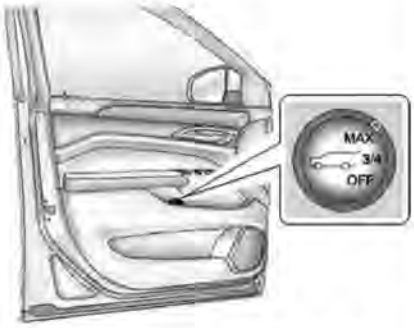
For vehicles without Keyless Access, unlock the vehicle before opening the liftgate.

Press the touch pad in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Always close the liftgate before driving.

Power Liftgate



On vehicles with a power liftgate, the switch is on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

⚠ Warning

You, or others, could be injured if caught in the path of the power liftgate. Make sure there is no one in the way of the liftgate as it is opening and closing.

Choose the power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position. Press the center of the switch.

The three modes are:

MAX: The liftgate opens to the full open height.

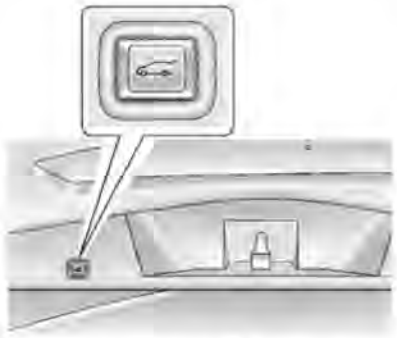
3/4: The liftgate opens to a reduced height that can be set by the vehicle operator in a range of approximately three-quarters open to full open. Use this setting to prevent the liftgate from opening into overhead obstructions such as a garage door or roof mounted cargo during power operation. The liftgate can still be manually opened all the way.

OFF: The liftgate only operates manually in this position.

Manual operation of a liftgate that also has power operation requires more effort than with a standard manual liftgate.

In either the MAX or the 3/4 mode, the liftgate can be power opened and closed by:

- Pressing HOLD on the Remote Keyless Entry (RKE) transmitter until the liftgate starts moving. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.
- Pressing on the center of the liftgate mode switch on the driver door, with the driver door unlocked.
- Pressing the touch pad button on the liftgate outside handle, with all doors unlocked, to open the liftgate.



Press and release on the liftgate next to the latch to close the liftgate.

Pressing any liftgate button, or the touch pad button while the liftgate is moving, stops it. Pressing the button or pressing and holding the RKE switch again reverses the direction. There is a minimum distance that the power liftgate must already be open for the system to hold it open. If movement is stopped below that minimum, the liftgate closes.

Do not force the liftgate open or closed during a power cycle.

The power liftgate may be temporarily disabled under extreme temperatures or low battery conditions. If this occurs, the liftgate can still be operated manually.

If you shift the transmission out of P (Park) while the power function is in progress, the liftgate power function will continue to completion. If you shift the transmission out of P (Park) and accelerate before the power liftgate latch is closed, the liftgate may reverse to the open position. Cargo could fall out of the vehicle. Always make sure the power liftgate is closed and latched before you drive away.

If you power open the liftgate and the liftgate support struts have lost pressure, the turn signals flash and a chime sounds. The liftgate stays open temporarily, then slowly closes. See your dealer for service before using the liftgate.

Obstacle Detection Features

If the liftgate encounters an obstacle during a power open or close cycle, a warning chime will sound and the liftgate will automatically reverse direction to the full closed or open position. After removing the obstruction, the power liftgate operation can be used again. If the liftgate encounters multiple obstacles on the same power cycle, the power function will deactivate. After removing the obstructions, the liftgate will resume normal power operation.

The vehicle has pinch sensors located on the side edges of the liftgate. If an object is caught between the liftgate and the body and presses against this sensor, the liftgate will reverse direction and open fully. The liftgate will remain open until it is activated again or closed manually.

Setting the Power Liftgate 3/4 Mode

To change the liftgate stop position:

1. Turn the liftgate switch to the MAX or 3/4 mode position and power open the liftgate.
2. Stop the liftgate movement at the desired height by pressing any liftgate switch. Manually adjust the liftgate position if required.
3. Press and hold the button on the liftgate next to the latch until the turn signals flash and a beep sounds to indicate that the new setting is recorded.

When power opened with the 3/4 mode selected, the liftgate stops at the new set position.

If you do not receive the audible and visual feedback when setting the intermediate stop position, you are attempting to set the height below the 3/4 open height minimum (approximately 1.52 m or 5 ft). The liftgate cannot be set below that minimum and the new setting will not be recorded.

Manual Operation of Power Liftgate

To change the liftgate to manual operation, turn the mode switch to the OFF position.

With the power liftgate disabled and all of the doors unlocked, the liftgate can be manually opened and closed. The effort required to operate a power liftgate is greater than the effort required to operate a non-power liftgate.

To open the liftgate, press the touch pad on the handle on the outside of the liftgate, and lift the gate open. To close the liftgate, use the pull cup to lower the liftgate and close. With the power liftgate disabled, the liftgate electric latch will still power latch once contact is made with the striker. Always close the liftgate before driving.

If the RKE button is pressed while power operation is disabled, the turn signals flash and the liftgate will not move.

The liftgate has an electric latch. If the battery is disconnected or has low voltage, the liftgate will not open. The liftgate will resume operation when the battery is reconnected and charged.

Vehicle Security

This vehicle has theft-deterrent features; however, they do not make the vehicle impossible to steal.

Vehicle Alarm System

This vehicle has an anti-theft alarm system.

The indicator light, on the instrument panel near the windshield, indicates the status of the system.

Off: Alarm system is disarmed.

On Solid: Vehicle is secured during the delay to arm the system.

Fast Flash: Vehicle is unsecured. A door, the hood, or the liftgate is open.

Slow Flash: Alarm system is armed.

Arming the Alarm System

1. Close the liftgate and the hood. Turn off the vehicle.
2. Lock the vehicle in one of three ways:
   - Use the RKE transmitter.
   - Use the Keyless Access system.
   - With a door open, press on the interior of the door.
3. After 30 seconds the alarm system will arm, and the indicator light will begin to slowly flash indicating the alarm system is operating. Pressing on the RKE transmitter a second time will bypass the 30-second delay and immediately arm the alarm system.

The vehicle alarm system will not arm if the doors are locked with the key.

If the driver door is opened without first unlocking with the RKE transmitter, the horn will chirp and the lights will flash to indicate pre-alarm. If the vehicle is not started, or the door is not unlocked by pressing on the RKE transmitter during the 10-second pre-alarm, the alarm will be activated.

The alarm will also be activated if a passenger door, the liftgate, or the hood is opened without first disarming the system. When the alarm is activated, the turn signals flash and the horn sounds for about 30 seconds. The alarm system will then re-arm to monitor for the next unauthorized event.

Disarming the Alarm System

To disarm the alarm system or turn off the alarm if it has been activated:

- Press on the RKE transmitter.
- Unlock the vehicle using the Keyless Access system.
- Start the vehicle.

To avoid setting off the alarm by accident:

- Lock the vehicle after all occupants have left the vehicle and all doors are closed.
- Always unlock a door with the RKE transmitter or use the Keyless Access system.

Unlocking the driver door with the key will not disarm the system or turn off the alarm.

How to Detect a Tamper Condition

If is pressed and the horn chirps three times, the alarm was activated while the alarm system was armed.

If the alarm system has been activated, a message will appear on the DIC. See *Security Messages on page 5-38*.

Immobilizer

See *Radio Frequency Statement on page 13-15*.

Immobilizer Operation

This vehicle has a passive theft-deterrent system.

The system does not have to be manually armed or disarmed.

The vehicle is automatically immobilized when the vehicle is turned off.

The immobilization system is disarmed when the pushbutton start is activated to enter the ACC/ ACCESSORY mode or the ON/ RUN/START mode and a valid transmitter is present in the vehicle.

The security light, in the instrument cluster, comes on if there is a problem with arming or disarming the theft-deterrent system.

The system has one or more RKE transmitters matched to an immobilizer control unit in your vehicle. Only a correctly matched RKE transmitter will start the vehicle. If the transmitter is ever damaged, you may not be able to start your vehicle.

When trying to start the vehicle, the security light comes on briefly when the ignition is turned on.

If the engine does not start and the security light stays on, there is a problem with the system. Turn the ignition off and try again.

If the vehicle will not change ignition modes (ACC/ACCESSORY, ON/RUN/START, OFF), and the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket located in the center console. See "NO REMOTE DETECTED" under *Key and Lock Messages on page 5-33*.

If the ignition modes will not change with the other transmitter, your vehicle needs service. If the ignition does change modes, the first transmitter may be faulty. See your dealer who can service the theft-deterrent system and have a new RKE transmitter programmed to the vehicle.

It is possible for the immobilizer system to learn new or replacement RKE transmitters. Up to eight transmitters can be programmed for the vehicle. To program additional transmitters, see "Programming Transmitters to the Vehicle" under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Do not leave the key or device that disarms or deactivates the theft-deterrent system in the vehicle.

Exterior Mirrors

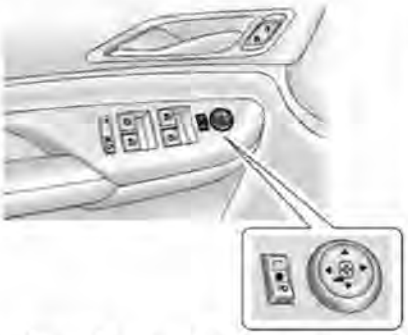
Convex Mirrors

⚠ Warning

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on the right. Check the inside mirror or glance over your shoulder before changing lanes.

The passenger side mirror is convex shaped. A convex mirror's surface is curved so more can be seen from the driver seat.

Power Mirrors



Manual Folding Mirrors Shown, Power Folding Similar

To adjust the mirror:

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror in the desired direction.
3. Return the selector switch to the center position.

Side Blind Zone Alert (SBZA)

The vehicle may have side blind zone alert. See *Side Blind Zone Alert (SBZA) on page 9-53*.

Folding Mirrors

Manual Folding Mirrors

If equipped, manually fold the mirrors inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

Power Folding Mirrors

If equipped, to fold the mirrors:

1. With the selector switch in the ● position, press the down arrow on the control pad. Both mirrors will automatically fold.
2. Pressing the down arrow again will return the mirrors to their original position.

Resetting the Power Folding Mirrors

Reset the power folding mirrors if:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.
- The mirrors do not stay in the unfolded position.
- The mirrors vibrate at normal driving speeds.

Fold and unfold the mirrors one time using the mirror controls to reset them to their normal position. A noise may be heard during the resetting of the power folding mirrors. This sound is normal after a manual folding operation.

Heated Mirrors

(Rear Window Defogger): Press to heat the mirrors.

See "Rear Window Defogger" under *Dual Automatic Climate Control System on page 8-1*.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror automatically adjusts for the glare of headlamps behind you.

Reverse Tilt Mirrors

If the vehicle is equipped with memory mirrors, there is an option to have the mirrors tilt down, when in R (Reverse), to more easily see the ground near the vehicle.

When the vehicle is shifted to R (Reverse), both the driver and passenger mirrors will tilt downward. They will return to their previous position when the vehicle is shifted out of R (Reverse), the ignition is turned to OFF, or the vehicle is left in R (Reverse) for an extended period of time.

This feature can be turned on or off. See *Vehicle Personalization on page 5-40*.

Interior Mirrors

Interior Rearview Mirrors

Adjust the rearview mirror for a clear view of the area behind your vehicle.

If equipped with OnStar, there are three buttons at the bottom of the mirror. See your dealer for more information on the system and how to subscribe to OnStar. See *OnStar Overview on page 14-1*.

To avoid accidental OnStar calls, clean the mirror with the ignition off. Do not spray glass cleaner directly on the mirror. Use a soft towel dampened with water.

Manual Rearview Mirror

Push the tab forward for daytime use and pull it rearward for nighttime use to avoid glare of the headlamps from behind.

Automatic Dimming Rearview Mirror

If equipped, automatic dimming reduces the glare of headlamps from behind. The dimming feature comes on when the vehicle is started.

Windows

⚠ Warning

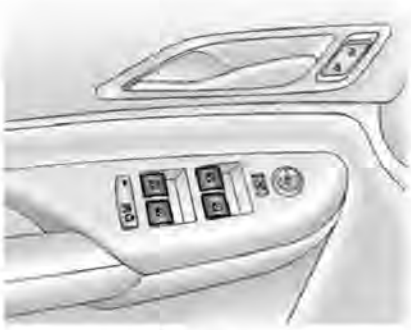
Never leave a child, a helpless adult, or a pet alone in a vehicle, especially with the windows closed in warm or hot weather. They can be overcome by the extreme heat and suffer permanent injuries or even death from heat stroke.

The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a pulsing sound when either rear window is down and the front windows are up. To reduce the sound, open either a front window or the sunroof, if equipped.

Power Windows

⚠ Warning

Children could be seriously injured or killed if caught in the path of a closing window. Never leave the Remote Keyless Entry (RKE) transmitter in a vehicle with children. When there are children in the rear seat, use the window lockout switch to prevent operation of the windows. See *Keys on page 2-1*.



The power windows:

- Can be operated with the ignition in ACC/ACCESSORY or ON/RUN/START.
- Can be operated within 10 minutes of switching the ignition off. See *Retained Accessory Power (RAP) on page 9-19*.
- Will stop operation when any door is opened.

Press or pull the switch part of the way to open or close the window.

Express-Down/Up Windows

Windows that have the express-down/up feature allow the windows to be lowered and raised fully without holding the window switch. Press the window switch fully and release it to activate the express-down feature. Pull the window switch fully up and release it to activate the express-up feature. The express mode can be canceled at any time by briefly pressing or pulling the switch.

Programming the Power Windows

Programming the power windows may be necessary if the vehicle's battery has been disconnected or discharged.

If the window will not express up after power has been restored and a message is displayed in the Driver Information Center:

1. Close all doors.
2. Place the ignition in ACC/ ACCESSORY or ON/RUN/ START.
3. From any partial open position, close the window and continue to pull the switch briefly after the window has fully closed.

Obstacle Detection Feature

The Obstacle Detection Feature is part of the express-up feature and is active:

- In the middle and upper portions of the window opening.
- During window up movements.
- In ignition OFF during all window up movements and during express-up window movements in ignition ON/RUN/START.

If there is something blocking the window during automatic closing, the window will reverse direction for a short distance. Weather conditions such as extreme cold and/or ice may cause the window to auto-reverse. The window will return to normal operation once the object or condition is removed.

If conditions prevent the window from closing and the window continues to auto-reverse, it is possible to close the window with the ignition in ON/RUN/START by holding the window switch in the partially or fully pulled up position. Release of the switch from the partially pulled up position will cause the window to stop. Release of the switch from the fully pulled up position will activate the express-up and related obstacle detection features.

Overload

If the windows are repeatedly operated within a short time, the window operation is disabled for a short time.

Remote Window Operation

If equipped, the remote operating windows will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

Window Lockout

This feature prevents the rear passenger windows from operating except from the driver position.

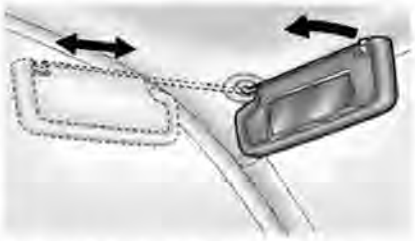
Press to activate the rear window lockout. The indicator light in the switch illuminates.

The rear door safety locks are also enabled. See *Safety Locks on page 2-12*.

Press again to deactivate the rear window lockout.

If an inside rear door handle is being pulled at the same time a safety lock is deactivated, only that door will remain locked and the indicator light may flash. Release the handle, then press the safety lock twice to deactivate the safety locks.

Sun Visors



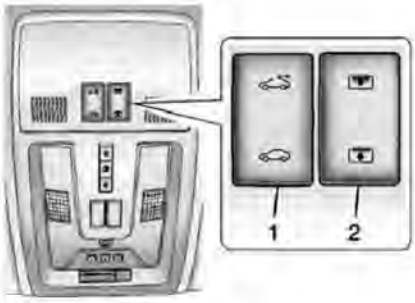
Pull the sun visor down to block glare. If equipped, detach the sun visor from the center mount to pivot to the side window or to extend along the rod.

Roof

Sunroof

On vehicles with a sunroof, the switches are on the overhead console.

The sunroof only operates when the ignition is in ON/RUN/START or ACC/ACCESSORY, or in Retained Accessory Power (RAP). See *Ignition Positions on page 9-15* and *Retained Accessory Power (RAP) on page 9-19*.



1. Sunroof Switch
2. Sunshade Switch

Sunroof Switch

Vent: To vent the sunroof, press the rear of the sunroof switch (1) to the first detent and release. The sunroof will open to the vent position.

Open/Close: To open or close the sunroof, press the front or rear of the sunroof switch (1) to the first detent and hold to open or close the sunroof to a desired position.

Comfort Stop: The sunroof has a comfort stop feature that stops the sunroof from opening to the full-open position. Press the rear of the sunroof switch (1) to the second detent and release to open the sunroof to the comfort open position. Press and release the rear of the sunroof switch (1) again to fully open the sunroof. Press the front of the sunroof switch (1) to the second detent and release to express close the sunroof.

Sunshade Switch

Open/Close: To open or close the sunshade, press the front or back of the sunshade switch (2) to the first detent and hold to open or close the sunshade to a desired position.

Express Open/Express Close: To express open or close the sunshade, press the sunshade switch (2) to the second detent and release.

Fully close the sunroof before fully closing the sunshade.

Anti-Pinch Feature

If an object is in the path of the sunroof when it is closing, the anti-pinch feature detects the object and stops the sunroof from closing at the point of the obstruction. The sunroof then returns to the full-open position.

Dirt and debris may collect on the sunroof seal or in the track. This could cause an issue with sunroof operation or noise. It could also plug the water drainage system. Periodically open the sunroof and remove any obstacles or loose debris. Wipe the sunroof seal and roof sealing area using a clean cloth, mild soap, and water. Do not remove grease from the sunroof.

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Head Restraints

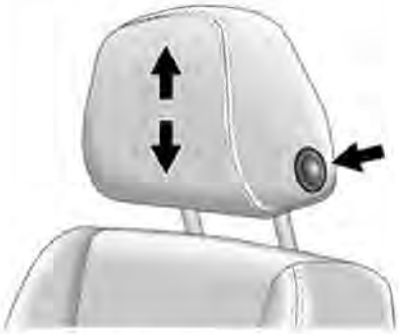
⚠ Warning

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.

Front Seats

The vehicle's front seats have adjustable head restraints in the outboard seating positions.



The height of the head restraint can be adjusted. To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down, and release the button. Pull and push on the head restraint after the button is released to make sure that it is locked in place.

The front seat outboard head restraints are not designed to be removed.

Rear Seats

The vehicle's rear seats have adjustable head restraints in the outboard seating positions.

The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure that it is locked in place.

To lower the head restraint, press the button, located on the top of the seatback, and push the head restraint down. Try to move the head restraint after the button is released to make sure that it is locked in place.

The vehicle's rear seat has an adjustable headrest in the center seating position that can be adjusted the same way as the outboard head restraints.

If you are installing a child restraint in the rear seat, see "Securing a Child Restraint Designed for the LATCH System" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-40.*

Front Seats

Seat Adjustment

⚠ Warning

You can lose control of the vehicle if you try to adjust a driver seat while the vehicle is moving. Adjust the driver seat only when the vehicle is not moving.

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

Power Seat Adjustment

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control up or down.
- Raise or lower the entire seat by moving the rear of the control up or down.

To adjust the seatback, see *Reclining Seatbacks on page 3-5*.

To adjust the lumbar support, see *Lumbar Adjustment on page 3-4*.

Some vehicles are equipped with a feature that activates a vibration in the driver seat to help the driver avoid crashes. See *Driver Assistance Systems on page 9-44*.

Lumbar Adjustment

Power Lumbar

If available, press and hold the front or rear of the control to increase or decrease lumbar support. Release

the control when the seatback reaches the desired level of lumbar support.

Thigh Support Adjustment

If available, adjust the manual leg extension by pulling up on the lever, and then pulling or pushing on the support to lengthen or shorten it. Release the lever to lock it in place.

Reclining Seatbacks

⚠ Warning

Sitting in a reclined position when the vehicle is in motion can be dangerous. Even when buckled up, the safety belts cannot do their job.

The shoulder belt will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

The lap belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.

For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the safety belt properly.

Do not have a seatback reclined if the vehicle is moving.

Manual Reclining Seatbacks

⚠ Warning

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

To recline a manual seatback:

1. Lift the lever.
2. Move the seatback to the desired position, and then release the lever to lock the seatback in place.
3. Push and pull on the seatback to make sure it is locked.

To return the seatback to the upright position:

1. Lift the lever fully without applying pressure to the seatback, and the seatback will return to the upright position.
2. Push and pull on the seatback to make sure it is locked.

Power Reclining Seatbacks

To adjust a power seatback, if available:

- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

Memory Seats

If equipped, the "1," "2," and MEM buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions (if equipped).

Storing Memory Positions

To save positions to the "1" and "2" buttons:

1. Adjust the driver seat, seatback recliner, both outside mirrors, and adjustable pedals (if equipped) to the desired driving positions.
2. Press and hold MEM (Memory) and "1" at the same time until a beep sounds.
3. Repeat Steps 1 and 2 for a second driver using "2."

Manually Recalling Memory Positions

If the vehicle is OFF or not in P (Park), press and hold "1" or "2" to manually recall the previously stored memory positions. Releasing "1" or "2" before the stored positions are reached stops the recall.

If the vehicle is ON and in P (Park), press and release "1" or "2" to manually recall the previously stored memory positions. Placing the ignition in OFF before the stored positions are reached stops the recall.

If something has blocked the driver seat and/or the adjustable pedals while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by pressing the appropriate memory button. If the memory position is still not recalling, see your dealer for service.

Automatically Recalling Memory Positions (Auto Memory Recall)

The Auto (Automatic) Memory Recall feature automatically recalls the current driver's previously stored "1" or "2" position when entering the vehicle.

Depending upon the Auto Memory Recall feature enabled in the vehicle personalization menu, memory "1" or "2" positions are recalled in the following ways:

To activate the recall when On - Driver Door Open is selected in the vehicle personalization menu:

- On vehicles with RKE, press on the RKE transmitter and open the door.
- On vehicles with Keyless Access, press the lock/unlock button on the outside driver door handle and open the driver door. The RKE transmitter must be present for the recall to activate.
- If the driver door is already open, press on the RKE transmitter to activate the recall.

To activate the recall when On - At Ignition On is selected in the vehicle personalization menu:

- Place the ignition in ON/RUN/ START.

See *Vehicle Personalization on page 5-40*.

To stop recall movement, press one of the memory, power mirror, or power seat controls; or press the adjustable pedal switch (if equipped). If On - At Ignition On is selected in the vehicle personalization menu, placing the ignition in OFF also stops the recall.

If something has blocked the driver seat and/or the adjustable pedals (if equipped) while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by opening the driver door and pressing on the RKE transmitter. If the memory position is still not recalling, see your dealer for service.

Easy Exit Recall

If programmed on in the vehicle personalization menu, this feature moves the seat approximately 7 cm (3 in) rearward automatically allowing the driver more room to exit the vehicle.

Easy Exit recall activates when one of the following occurs:

- The vehicle is turned off and the driver door is opened within a short time.
- The vehicle is turned off with the driver door open.

See *Vehicle Personalization on page 5-40*.

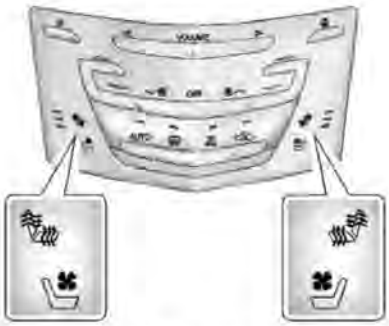
To stop recall movement, press one of the memory, power mirror, power seat controls, or the adjustable pedal switch (if equipped).

If something has blocked the driver seat while recalling the exit position, the recall may stop. Remove the obstruction; then press and hold the power seat control rearward for two seconds. Try recalling the exit position again. If the exit position is still not recalling, see your dealer for service.

Heated and Ventilated Front Seats

⚠ Warning

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns. To reduce the risk of burns, people with such a condition should use care when using the seat heater, especially for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket, cushion, cover, or similar item. This may cause the seat heater to overheat. An overheated seat heater may cause a burn or may damage the seat.



Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the center stack. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

When this feature is off, the symbols on the buttons are white. When a heated seat is turned on, the symbol turns red. When a ventilated seat (if available) is turned on, the symbol turns blue.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights next to the buttons indicate three for the highest setting and one for the lowest. If the front heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

The passenger seat may take longer to heat up.

Remote Start Heated and Ventilated Seats

During a remote start, the heated or ventilated seats can be turned on automatically. When it is cold outside, the heated seats turn on, and when it is hot outside the ventilated seats turn on. This feature is canceled when the ignition is turned on. Press the button to use the heated or ventilated seats after the vehicle is started.

The heated or ventilated seat indicator lights on the button do not turn on during a remote start.

The temperature performance of an unoccupied seat may be reduced. This is normal.

The heated or ventilated seats will not turn on during a remote start unless they are enabled in the vehicle personalization menu. See *Remote Vehicle Start on page 2-8* and *Vehicle Personalization on page 5-40*.

Rear Seats

Split Folding Seatbacks

With this feature, either side of the rear seatback can be folded down for more cargo space.

Folding the Seatbacks

⚠ Caution

Folding a rear seat with the safety belts still fastened may cause damage to the seat or the safety belts. Always unbuckle the safety belts and return them to their normal stowed position before folding a rear seat.

To fold the seatback:

1. Unbuckle the rear safety belts and move the front seatbacks to the upright position. See *Reclining Seatbacks on page 3-5*.
2. Make sure that there is nothing under, in front of, or on the seat.

3. Lift the lever on the top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.
4. Fold the seatback forward. A tab near the seatback lever retracts when the seatback is locked in place.

Keep the seatback in the upright, locked position when not in use.

Raising the Seatbacks

⚠ Warning

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

⚠ Warning

A safety belt that is improperly routed, not properly attached, or twisted will not provide the protection needed in a crash. The person wearing the belt could be seriously injured. After raising the rear seatback, always check to be sure that the safety belts are properly routed and attached, and are not twisted.

To raise the seatback:

1. Lift the lever on top of the seatback. Raise the seatback and release the lever. A tab near the seatback lever raises when the seatback is unlocked.
2. Push the seatback rearward until it locks in the upright position. A tab near the seatback lever retracts when the seatback is locked in place.
3. Make sure the rear safety belts are not twisted or caught between the seat cushion and the seatback.

Reclining the Seatbacks

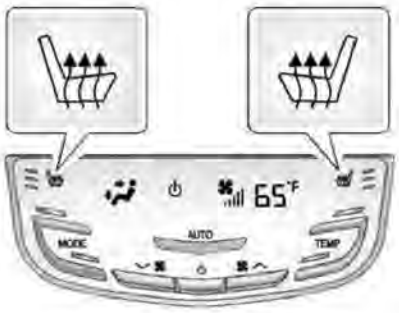
To recline the seatback:

1. Lift and hold the lever on top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.
2. Tilt the seatback rearward, and then release the lever when the seatback is in the desired position. A tab near the seatback lever retracts when the seatback is locked in place.

Heated Rear Seats

⚠ Warning

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns. See the Warning under *Heated and Ventilated Front Seats on page 3-8.*



If available, the buttons are on the rear climate control panel on the rear of the center console.

With the ignition in ON/RUN/START, press or to heat the left or right outboard seat cushion and seatback. An indicator on the climate control display appears when this feature is on.

Press the button once for the highest setting. With each press of the button, the heated seat changes to the next lower setting, and then

the off setting. Three lights indicate the highest setting, and one light indicates the lowest.

Rear Seat Pass-Through Door

There is a rear seat pass-through door in the center of the rear seatback. Fold down the center armrest and push down on the latch to open the door.

Safety Belts

This section of the manual describes how to use safety belts properly. It also describes some things not to do with safety belts.

⚠ Warning

Do not let anyone ride where a safety belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing safety belts, injuries can be much worse than if you are wearing safety belts. You can be seriously injured or killed by hitting things inside the vehicle harder or by being ejected from the vehicle. In addition, anyone who is not buckled up can strike other passengers in the vehicle.

(Continued)

Warning (Continued)

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, passengers riding in these areas are more likely to be seriously injured or killed. Do not allow passengers to ride in any area of the vehicle that is not equipped with seats and safety belts.

Always wear a safety belt, and check that all passenger(s) are restrained properly too.

This vehicle has indicators as a reminder to buckle the safety belts. See *Safety Belt Reminders on page 5-13*.

Why Safety Belts Work

When riding in a vehicle, you travel as fast as the vehicle does. If the vehicle stops suddenly, you keep going until something stops you. It could be the windshield, the instrument panel, or the safety belts!

When you wear a safety belt, you and the vehicle slow down together. There is more time to stop because you stop over a longer distance and, when worn properly, your strongest bones take the forces from the safety belts. That is why wearing safety belts makes such good sense.

Questions and Answers About Safety Belts

Q: Will I be trapped in the vehicle after a crash if I am wearing a safety belt?

A: You *could* be — whether you are wearing a safety belt or not. Your chance of being conscious during and after a crash, so you *can* unbuckle and get out, is *much* greater if you are belted.

Q: If my vehicle has airbags, why should I have to wear safety belts?

A: Airbags are supplemental systems only; so they work *with* safety belts — not instead of them. Whether or not an airbag is provided, all occupants still have to buckle up to get the most protection.

Also, in nearly all states and in all Canadian provinces, the law requires wearing safety belts.

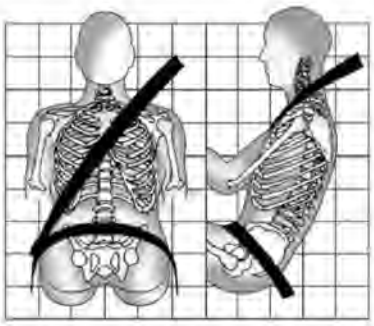
How to Wear Safety Belts Properly

This section is only for people of adult size.

There are special things to know about safety belts and children. And there are different rules for smaller children and infants. If a child will be riding in the vehicle, see *Older Children on page 3-33* or *Infants and Young Children on page 3-35*. Follow those rules for everyone's protection.

It is very important for all occupants to buckle up. Statistics show that unbelted people are hurt more often in crashes than those who are wearing safety belts.

There are important things to know about wearing a safety belt properly.



- Sit up straight and always keep your feet on the floor in front of you.
- Always use the correct buckle for your seating position.
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries.
- Wear the shoulder belt over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces. The shoulder belt locks if there is a sudden stop or crash.

⚠ Warning

You can be seriously injured, or even killed, by not wearing your safety belt properly.

- Never allow the lap or shoulder belt to become loose or twisted.
- Never wear the shoulder belt under both arms or behind your back.
- Never route the lap or shoulder belt over an armrest.

Lap-Shoulder Belt

All seating positions in the vehicle have a lap-shoulder belt.

The following instructions explain how to wear a lap-shoulder belt properly.

1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see "Seats" in the Index.
2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

   The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

   If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. If this happens, let the belt go back all the way and start again.

3. Push the latch plate into the buckle until it clicks.

   Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Safety Belt Extender on page 3-18*.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. If equipped with a shoulder belt height adjuster, move it to the height that is right for you. See "Shoulder Belt Height Adjuster" later in this section for instructions on use and important safety information.

5. To make the lap part tight, pull up on the shoulder belt.

To unlatch the belt, just push the button on the buckle.

Before a door is closed, be sure the safety belt is out of the way. If a door is slammed against a safety belt, damage can occur to both the safety belt and the vehicle.

Shoulder Belt Height Adjuster

The vehicle has a shoulder belt height adjuster for the driver and front outboard passenger seating positions.

Adjust the height so that the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash. See *How to Wear Safety Belts Properly on page 3-13*.

Move the height adjuster up to the desired position by pushing up on the height adjuster.

After the height adjuster is set to the desired position, try to move it down without pressing the release button to make sure it has locked into position. Press the release button to lower the height adjuster.

Safety Belt Pretensioners

This vehicle has safety belt pretensioners for front outboard occupants. Although the safety belt pretensioners cannot be seen, they are part of the safety belt assembly. They can help tighten the safety belts during the early stages of a moderate to severe frontal and near frontal crash and will deploy in side, rear and rollover events if the threshold conditions for pretensioner activation are met.

Pretensioners work only once. If the pretensioners activate in a crash, they will need to be replaced, and the vehicle's safety belt system will probably need other new parts. See *Replacing Safety Belt System Parts after a Crash on page 3-19*.

Rear Safety Belt Comfort Guides

This vehicle may have rear shoulder belt comfort guides for the outboard passenger positions in the rear seat. If not, they are available through your dealer. The guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, and properly adjusted, the comfort guide positions the belt away from the neck and head.

Here is how to install a comfort guide to the safety belt:

1. Remove the guide from its storage pocket on the side of the seat.

2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.

3. Be sure that the belt is not twisted and it lies flat. The elastic cord must be under the belt and the guide on top.

⚠ Warning

A safety belt that is not properly worn may not provide the protection needed in a crash. The person wearing the belt could be seriously injured. The shoulder belt should go over the shoulder

(Continued)

Warning (Continued)

and across the chest. These parts of the body are best able to take belt restraining forces.

4. Buckle, position, and release the safety belt as described previously in this section. Make sure the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck.

To remove and store the comfort guide, squeeze the belt edges together so that the safety belt can be removed from the guide. Slide the guide back into its storage pocket located on the side of the seat.

Safety Belt Use During Pregnancy

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear safety belts.

A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

The best way to protect the fetus is to protect the mother. When a safety belt is worn properly, it is more likely that the fetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child seats. To wear it, attach it to the regular safety belt. See the instruction sheet that comes with the extender.

Safety System Check

Now and then, check that the safety belt reminder light, safety belts, buckles, latch plates, retractors, and anchorages are all working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from doing its job. See your dealer

to have it repaired. Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Make sure the safety belt reminder light is working. See *Safety Belt Reminders on page 5-13.*

Keep safety belts clean and dry. See *Safety Belt Care on page 3-19.*

Safety Belt Care

Keep belts clean and dry.

⚠ Warning

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Replacing Safety Belt System Parts after a Crash

⚠ Warning

A crash can damage the safety belt system in the vehicle. A damaged safety belt system may not properly protect the person using it, resulting in serious injury or even death in a crash. To help make sure the safety belt systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

After a minor crash, replacement of safety belts may not be necessary. But the safety belt assemblies that were used during any crash may have been stressed or damaged. See your dealer to have the safety belt assemblies inspected or replaced.

New parts and repairs may be necessary even if the safety belt system was not being used at the time of the crash.

Have the safety belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light on page 5-14.*

Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver.
- A frontal airbag for the front outboard passenger.
- A seat-mounted side impact airbag for the driver.
- A seat-mounted side impact airbag for the front outboard passenger.
- A roof-rail airbag for the driver and for the second row passenger seated directly behind the driver.
- A roof-rail airbag for the front outboard passenger and the second row passenger seated directly behind the front outboard passenger.

All vehicle airbags have the word AIRBAG on the trim or on an attached label near the deployment opening.

For frontal airbags, the word AIRBAG is on the center of the steering wheel for the driver and on the instrument panel for the front outboard passenger.

For seat-mounted side impact airbags, the word AIRBAG is on the side of the seatback closest to the door.

For roof-rail airbags, the word AIRBAG is on the ceiling or trim.

Airbags are designed to supplement the protection provided by safety belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating bag, all airbags must inflate very quickly to do their job.

Here are the most important things to know about the airbag system:

⚠ Warning

You can be severely injured or killed in a crash if you are not wearing your safety belt, even with airbags. Airbags are designed to work with safety belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes safety belts are the only restraint. See *When Should an Airbag Inflate? on page 3-23*.

Wearing your safety belt during a crash helps reduce the chance of hitting things inside the vehicle or being ejected from it. Airbags are "supplemental restraints" to the safety belts. Everyone in the vehicle should wear a safety belt properly, whether or not there is an airbag for that person.

⚠ Warning

Because airbags inflate with great force and faster than the blink of an eye, anyone who is up against, or very close to any airbag when it inflates can be seriously injured or killed. Do not sit unnecessarily close to any airbag, as you would be if sitting on the edge of the seat or leaning forward. Safety belts help keep you in position before and during a crash. Always wear a safety belt, even with airbags. The driver should sit as far back as possible while still maintaining control of the vehicle.

Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

⚠ Warning

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Always secure children properly in the vehicle. To read how, see *Older Children on page 3-33* or *Infants and Young Children on page 3-35*.

There is an airbag readiness light on the instrument cluster, which shows the airbag symbol.

The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light on page 5-14* for more information.

Where Are the Airbags?

The driver frontal airbag is in the center of the steering wheel.

The front outboard passenger frontal airbag is in the passenger side instrument panel.

Driver Side Shown, Passenger Side Similar

The driver and front outboard passenger seat-mounted side impact airbags are in the side of the seatbacks closest to the door.

Driver Side Shown, Passenger Side Similar

The roof-rail airbags for the driver, right front passenger, and second row outboard passengers are in the ceiling above the side windows.

⚠ Warning

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury

(Continued)

Warning (Continued)

or even death. The path of an inflating airbag must be kept clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

Do not use seat accessories that block the inflation path of a seat-mounted side impact airbag.

Never secure anything to the roof of a vehicle with roof-rail airbags by routing a rope or tie-down through any door or window opening. If you do, the path of an inflating roof-rail airbag will be blocked.

When Should an Airbag Inflate?

This vehicle is equipped with airbags. See *Airbag System on page 3-20*. Airbags are designed to inflate if the impact exceeds the specific airbag system's deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants. The vehicle has electronic sensors that help the airbag system determine the severity of the impact. Deployment thresholds can vary with specific vehicle design.

Frontal airbags are designed to inflate in moderate to severe frontal or near frontal crashes to help reduce the potential for severe injuries, mainly to the driver's or front outboard passenger's head and chest.

Whether the frontal airbags will or should inflate is not based primarily on how fast the vehicle is traveling. It depends on what is hit, the direction of the impact, and how quickly the vehicle slows down.

Frontal airbags may inflate at different crash speeds depending on whether the vehicle hits an object straight on or at an angle, and whether the object is fixed or moving, rigid or deformable, narrow or wide.

Frontal airbags are not intended to inflate during vehicle rollovers, in rear impacts, or in many side impacts.

In addition, the vehicle has advanced technology frontal airbags. Advanced technology frontal airbags adjust the restraint according to crash severity.

Seat-mounted side impact airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. Seat-mounted side impact airbags are not designed to inflate in frontal impacts, near frontal impacts, rollovers, or rear impacts.

A seat-mounted side impact airbag is designed to inflate on the side of the vehicle that is struck.

Roof-rail airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. In addition, these roof-rail airbags are designed to inflate during a rollover or in a severe frontal impact. Roof-rail airbags are not designed to inflate in rear impacts. Both roof-rail airbags will inflate when either side of the vehicle is struck, if the sensing system predicts that the vehicle is about to roll over on its side, or in a severe frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the vehicle damage or repair costs.

What Makes an Airbag Inflate?

In a deployment event, the sensing system sends an electrical signal triggering a release of gas from the inflator. Gas from the inflator fills the airbag causing the bag to break out of the cover. The inflator, the airbag, and related hardware are all part of the airbag module.

For airbag locations, see *Where Are the Airbags? on page 3-21*.

How Does an Airbag Restrain?

In moderate to severe frontal or near frontal collisions, even belted occupants can contact the steering wheel or the instrument panel. In moderate to severe side collisions, even belted occupants can contact the inside of the vehicle.

Airbags supplement the protection provided by safety belts by distributing the force of the impact more evenly over the occupant's body.

Rollover capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the first and second rows. The rollover capable roof-rail airbags are designed to help reduce the risk of full or partial ejection in rollover events, although no system can prevent all such ejections.

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate? on page 3-23*.

Airbags should never be regarded as anything more than a supplement to safety belts.

What Will You See after an Airbag Inflates?

After the frontal airbags and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realize an airbag inflated. Roof-rail airbags may still be at least partially inflated for some time after they inflate. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags? on page 3-21*.

The parts of the airbag that come into contact with you may be warm, but not too hot to touch. There may be some smoke and dust coming from the vents in the deflated airbags. Airbag inflation does not prevent the driver from seeing out of the windshield or being able to steer the vehicle, nor does it prevent people from leaving the vehicle.

⚠ Warning

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone in the vehicle should get out as soon as it is safe to do so. If you have breathing problems but cannot get out of the vehicle after an airbag inflates, then get fresh air by opening a window or a door. If you experience breathing problems following an airbag deployment, you should seek medical attention.

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps, turn on the hazard warning flashers, and shut off the fuel system after the airbags inflate. You can lock the doors, turn off the interior lamps, and turn off the hazard warning flashers by using the controls for those features.

⚠ Warning

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel system, brake and steering systems, etc. Even if the vehicle appears to be drivable after a moderate crash, there may be concealed damage that could make it difficult to safely operate the vehicle.

Use caution if you should attempt to restart the engine after a crash has occurred.

In many crashes severe enough to inflate the airbag, windshields are broken by vehicle deformation. Additional windshield breakage may also occur from the front outboard passenger airbag.

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for the vehicle covers the need to replace other parts.
- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy on page 13-13* and *Event Data Recorders on page 13-13*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

Passenger Sensing System

The vehicle has a passenger sensing system for the front outboard passenger position. The passenger airbag status indicator will light on the overhead console when the vehicle is started.

United States

Canada and Mexico

The words ON and OFF, or the symbol for on and off, are visible during the system check. When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator on page 5-15*.

The passenger sensing system turns off the front outboard passenger frontal airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger sensing system works with sensors that are part of the front outboard passenger seat. The sensors are designed to detect the presence of a properly-seated

occupant and determine if the front outboard passenger frontal airbag should be allowed to inflate or not.

According to accident statistics, children are safer when properly secured in a rear seat in the correct child restraint for their weight and size.

Whenever possible, children aged 12 and under should be secured in a rear seating position.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a

(Continued)

Warning (Continued)

forward-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not inflate under some unusual circumstance, even though the airbag is off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the front outboard passenger seat, always move the seat as far back as it will go. It is better to secure the child restraint in a rear seat.

The passenger sensing system is designed to turn off the front outboard passenger airbag if:

- The front outboard passenger seat is unoccupied.
- The system determines that an infant is present in a child restraint.
- A front outboard passenger takes his/her weight off of the seat for a period of time.
- There is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the front outboard passenger frontal airbag, the off indicator will light and stay lit as a reminder that the airbag is off. See *Passenger Airbag Status Indicator on page 5-15.*

The passenger sensing system is designed to turn on the front outboard passenger frontal airbag anytime the system senses that a person of adult size is sitting properly in the front outboard passenger seat.

When the passenger sensing system has allowed the airbag to be enabled, the on indicator will light and stay lit as a reminder that the airbag is active.

For some children, including children in child restraints, and for very small adults, the passenger sensing system may or may not turn off the front outboard passenger frontal airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a safety belt properly — whether or not there is an airbag for that person.

⚠ Warning

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 5-14* for more information, including important safety information.

If the On Indicator Is Lit for a Child Restraint

The passenger sensing system is designed to turn off the front outboard passenger frontal airbag if the system determines that an infant is present in a child restraint. If a child restraint has been installed and the on indicator is lit:

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to *Securing Child Restraints (Rear Seat) on page 3-48* or *Securing Child Restraints (Front Passenger Position) on page 3-50*.
5. If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion.

Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints on page 3-2*.

6. Restart the vehicle.

The passenger sensing system may or may not turn off the airbags for a child in a child restraint depending upon the child's size. It is better to secure a child restraint in a rear seat.

If the Off Indicator Is Lit for an Adult-Sized Occupant

If a person of adult size is sitting in the front outboard passenger seat, but the off indicator is lit, it could be because that person is not sitting properly in the seat.

Use the following steps to allow the system to detect that person and enable the front outboard passenger frontal airbag:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat massagers. Also remove laptops or other electronic devices.
3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. Restart the vehicle and have the person remain in this position for two to three minutes after the on indicator is lit.

⚠ Warning

If the front outboard passenger airbag is turned off for an adult-sized occupant, the airbag will not be able to inflate and help protect that person in a crash, resulting in an increased risk of serious injury or even death. An adult-sized occupant should not ride in the front outboard passenger seat, if the passenger airbag off indicator is lit.

Additional Factors Affecting System Operation

Safety belts help keep the passenger in position on the seat during vehicle maneuvers and braking, which helps the passenger sensing system maintain the passenger airbag status. See "Safety Belts" and "Child Restraints" in the Index for additional information about the importance of proper restraint use.

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment except when approved by GM for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle on page 3-31* for more information about modifications that can affect how the system operates.

A wet seat can affect the performance of the passenger sensing system. Here's how:

- The passenger sensing system may turn off the passenger airbag when liquid is soaked into the seat. If this happens, the off indicator will be lit, and the airbag readiness light will also be lit.
- Liquid pooled on the seat that has not soaked in may make it more likely that the passenger sensing system will turn on the passenger airbag while a child restraint or child occupant is on the seat. If the passenger airbag is turned on, the on indicator will be lit.

If the front passenger seat gets wet, dry it immediately. If the airbag readiness light is lit, do not install a child restraint or allow anyone to occupy the seat. See *Airbag Readiness Light on page 5-14* for important safety information.

The on indicator may be lit if an object, such as a briefcase, handbag, grocery bag, laptop, or other electronic device, is put on an unoccupied seat. If this is not desired, remove the object from the seat.

⚠ Warning

Stowing of articles under the passenger seat or between the passenger seat cushion and seatback may interfere with the proper operation of the passenger sensing system.

Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the service manual have information about servicing the vehicle and the airbag system. To purchase a service manual, see *Service Publications Ordering Information on page 13-11*.

⚠ Warning

For up to 10 seconds after the vehicle is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.

Adding Equipment to the Airbag-Equipped Vehicle

Adding accessories that change the vehicle's frame, bumper system, height, front end, or side sheet metal may keep the airbag system from working properly.

The operation of the airbag system can also be affected by changing or moving any parts of the front seats, safety belts, airbag sensing and diagnostic module, steering wheel, instrument panel, roof-rail airbag modules, ceiling or pillar garnish trim, overhead console, front sensors, side impact sensors, rollover sensor module, airbag wiring, or cargo restraint system and convenience net.

Your dealer and the service manual have information about the location of the airbag sensors, sensing and diagnostic module, and airbag wiring.

In addition, the vehicle has a passenger sensing system that includes sensors as part of the front outboard passenger seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery, or trim; or with GM covers, upholstery, or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort-enhancing pad or device, installed under or on top of the seat fabric, could also

interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See *Passenger Sensing System on page 3-26*.

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels on page 10-59* for additional important information.

If your vehicle needs to be modified because you have a disability and you have questions about whether the modifications will affect the vehicle's airbag system, or if you have questions about whether the airbag system will be affected if the vehicle is modified for any other reason, call Customer Assistance. See *Customer Assistance Offices on page 13-3*.

Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See *Airbag Readiness Light on page 5-14*.

⚠ Caution

If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag coverings, have the airbag covering and/or airbag module replaced. For the location of the airbags, see *Where Are the Airbags? on page 3-21*. See your dealer for service.

Replacing Airbag System Parts after a Crash

⚠ Warning

A crash can damage the airbag systems in the vehicle.
A damaged airbag system may not work properly and may not protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See *Airbag Readiness Light on page 5-14*.

Child Restraints

Older Children

Older children who have outgrown booster seats should wear the vehicle safety belts.

The manufacturer instructions that come with the booster seat state the weight and height limitations for that booster. Use a booster seat with a lap-shoulder belt until the child passes the fit test below:

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide. See "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-14*. If the shoulder belt still does not rest on the shoulder, then return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.

- Can proper safety belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.

Q: What is the proper way to wear safety belts?

A: An older child should wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide. The shoulder belt should not cross the face or neck. The lap belt should fit snugly below the hips, just touching the top of the thighs. This applies belt force to the child's pelvic bones in a crash. It should never be worn over the abdomen, which could cause severe or even fatal internal injuries in a crash.

Also see "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-14*.

According to accident statistics, children are safer when properly restrained in a rear seating position.

In a crash, children who are not buckled up can strike other people who are buckled up, or can be thrown out of the vehicle. Older children need to use safety belts properly.

⚠ Warning

Never allow more than one child to wear the same safety belt. The safety belt cannot properly spread the impact forces. In a crash, they can be crushed together and seriously injured. A safety belt must be used by only one person at a time.

⚠ Warning

Never allow a child to wear the safety belt with the shoulder belt behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt. The child could move too far forward increasing the chance of head and neck injury. The child might also slide under the lap

(Continued)

Warning (Continued)

belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance traveled nor the age and size of the traveler changes the need, for everyone, to use safety restraints. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

⚠ Warning

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Never leave children unattended in a vehicle and never allow children to play with the safety belts.

Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints. Neither the vehicle's safety belt system nor its airbag system is designed for them.

Children who are not restrained properly can strike other people, or can be thrown out of the vehicle.

⚠ Warning

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash. For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's arms. An infant should be secured in an appropriate restraint.

⚠ Warning

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Never put a rear-facing child restraint in the front outboard seat. Secure a rear-facing child restraint in a rear seat. It is also better to secure a forward-facing child restraint in a rear seat. If you must secure a forward-facing child restraint in

(Continued)

Warning (Continued)

the front outboard seat, always move the front passenger seat as far back as it will go.

Q: What are the different types of add-on child restraints?

A: Add-on child restraints, which are purchased by the vehicle owner, are available in four basic types. Selection of a particular restraint should take into consideration not only the child's weight, height, and age but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.

For most basic types of child restraints, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle. If it is, the restraint will have a label saying that it meets federal motor vehicle safety standards.

The restraint manufacturer instructions that come with the restraint state the weight and height limitations for a particular child restraint. In addition, there are many kinds of restraints available for children with special needs.

⚠ Warning

To reduce the risk of neck and head injury during a crash, infants need complete support. In a crash, if an infant is in a rear-facing child restraint, the crash forces can be distributed across the strongest part of an infant's body, the back and shoulders. Infants should always be secured in rear-facing child restraints.

⚠ Warning

A young child's hip bones are still so small that the vehicle's regular safety belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's abdomen. In a crash, the belt would apply force on a body area that is unprotected by any bony structure. This alone could cause serious or fatal injuries. To reduce the risk of serious or fatal injuries during a crash, young children should always be secured in appropriate child restraints.

Child Restraint Systems

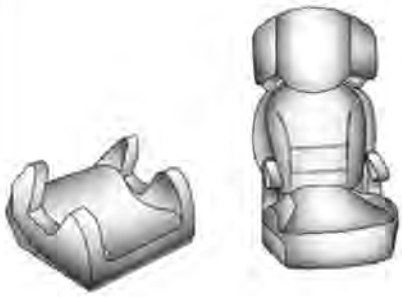
Rear-Facing Infant Seat

A rear-facing infant seat provides restraint with the seating surface against the back of the infant.

The harness system holds the infant in place and, in a crash, acts to keep the infant positioned in the restraint.

Forward-Facing Child Seat

A forward-facing child seat provides restraint for the child's body with the harness.



Booster Seats

A booster seat is a child restraint designed to improve the fit of the vehicle's safety belt system.
A booster seat can also help a child to see out the window.

Securing an Add-On Child Restraint in the Vehicle

⚠ Warning

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Secure the child restraint properly in the vehicle using the vehicle safety belt or LATCH system, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the LATCH system. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-40*.

Children can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, refer to the instructions that come with the restraint which may be on the restraint itself or in a booklet, or both, and to this manual. The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

In some areas of the United States and Canada, Certified Child Passenger Safety Technicians (CPSTs) are available to inspect and demonstrate how to correctly use and install child restraints. In the U.S., refer to the National Highway Traffic Safety Administration (NHTSA) website to locate the nearest child safety seat inspection station. For CPST availability in Canada, check with Transport Canada or the Provincial Ministry of Transportation office.

Securing the Child Within the Child Restraint

⚠ Warning

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Secure the child properly following the instructions that came with that child restraint.

Where to Put the Restraint

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. Whenever possible, children aged 12 and under should be secured in a rear seating position.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great if the airbag deploys.

⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the front passenger frontal airbag, no

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Warning (Continued)

system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-26* for additional information.

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others. Always make sure the child restraint is properly secured.

Depending on where you place the child restraint and the size of the child restraint, you may not be able to access adjacent safety belt assemblies or LATCH anchors for additional passengers or child restraints. Adjacent seating positions should not be used if the child restraint prevents access to or interferes with the routing of the safety belt.

Wherever a child restraint is installed, be sure to secure the child restraint properly.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

Lower Anchors and Tethers for Children (LATCH System)

The LATCH system secures a child restraint during driving or in a crash. LATCH attachments on the child restraint are used to attach the child restraint to the anchors in the vehicle. The LATCH system is designed to make installation of a child restraint easier.

In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. LATCH-compatible rear-facing and forward-facing child seats can be properly installed using either the LATCH anchors or the vehicle's safety belts. Do not use both the safety belts and the LATCH anchorage system to secure a rear-facing or forward-facing child seat.

Booster seats use the vehicle's safety belts to secure the child in the booster seat. If the manufacturer

recommends that the booster seat be secured with the LATCH system, this can be done as long as the booster seat can be positioned properly and there is no interference with the proper positioning of the lap-shoulder belt on the child.

Make sure to follow the instructions that came with the child restraint, and also the instructions in this manual.

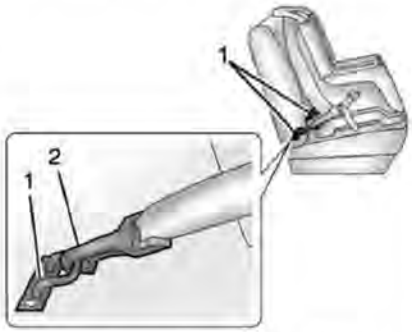
When installing a child restraint with a top tether, you must also use either the lower anchors or the safety belts to properly secure the child restraint. A child restraint must never be installed using only the top tether and anchor.

The LATCH anchorage system can be used until the combined weight of the child plus the child restraint is 29.5 kg (65 lbs). Use the safety belt alone instead of the LATCH anchorage system once the combined weight is more than 29.5 kg (65 lbs).

The following explains how to attach a child restraint with these attachments in the vehicle.

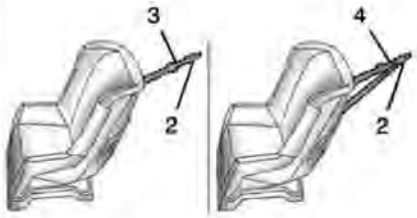
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

Lower Anchors



Lower anchors (1) are metal bars built into the vehicle. There are two lower anchors for each LATCH seating position that will accommodate a child restraint with lower attachments (2).

Top Tether Anchor



A top tether (3, 4) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (2) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during driving or in a crash.

The child restraint may have a single tether (3) or a dual tether (4). Either will have a single attachment (2) to secure the top tether to the anchor.

Some child restraints that have a top tether are designed for use with or without the top tether being attached. Others require the top tether always to be attached. In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached. Be sure to read and follow the instructions for your child restraint.

Lower Anchor and Top Tether Anchor Locations

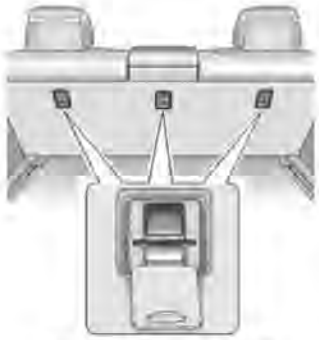
Rear Seat

(Top Tether Anchor): Seating positions with top tether anchors.

(Lower Anchor): Seating positions with two lower anchors.

To assist in locating the lower anchors, each seating position with lower anchors has two labels, near the crease between the seatback and the seat cushion.

To assist in locating the top tether anchors, the top tether anchor symbol is located on the cover.



Top Tether Anchors

The top tether anchors for each rear seating position are located under the covers, on the back of the rear seatback. Be sure to use an anchor located on the same side of the vehicle as the seating position where the child restraint will be placed.

Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether be attached, or if the instructions that come with the child restraint say that the top tether must be attached.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. See *Where to Put the Restraint on page 3-39* for additional information.

Securing a Child Restraint Designed for the LATCH System

⚠ Warning

If a LATCH-type child restraint is not attached to anchors, the child restraint will not be able to protect the child correctly. In a crash, the child could be seriously injured or killed. Install a LATCH-type child restraint properly using the anchors, or use the vehicle safety

(Continued)

Warning (Continued)

belts to secure the restraint, following the instructions that came with the child restraint and the instructions in this manual.

⚠ Warning

Do not attach more than one child restraint to a single anchor. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured. To reduce the risk of serious or fatal injuries during a crash, attach only one child restraint per anchor.

⚠ Warning

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Buckle any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, if the vehicle has one, after the child restraint has been installed.

⚠ Caution

Do not let the LATCH attachments rub against the vehicle's safety belts. This may damage these parts. If necessary, move buckled safety belts to avoid rubbing the LATCH attachments.

(Continued)

Caution (Continued)

Do not fold the empty rear seat with a safety belt buckled. This could damage the safety belt or the seat. Unbuckle and return the safety belt to its stowed position, before folding the seat.

If you need to secure more than one child restraint in the rear seat, see *Where to Put the Restraint on page 3-39*.

This system is designed to make installation of child restraints easier. When using lower anchors, do not use the vehicle's safety belts. Instead use the vehicle's anchors and child restraint attachments to secure the restraints. Some restraints also use another vehicle anchor to secure a top tether.

1. Attach and tighten the lower attachments to the lower anchors. If the child restraint does not have lower attachments or the desired seating position does not have lower anchors, secure the child restraint with the top tether and the safety belts. Refer to your child restraint manufacturer instructions and the instructions in this manual.

1.1. Find the lower anchors for the desired seating position.

1.2. Put the child restraint on the seat.

For the outboard rear seating positions, if the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" at the end of this section.

1.3. Attach and tighten the lower attachments on the child restraint to the lower anchors.

2. If the child restraint manufacturer recommends that the top tether be attached, attach and tighten the top tether to the top tether anchor, if equipped. Refer to the child restraint instructions and the following steps:
   2.1. Find the top tether anchor and open its cover to expose the anchor.
   2.2. Route, attach, and tighten the top tether according to your child restraint instructions and the following instructions:

If you are using a dual tether in the rear outboard seating position with an adjustable head restraint, route the dual tether around the head restraint.

If you are using a dual tether in the rear outboard seating position and the head restraint has been removed, route the dual tether over the seatback.

If you are using a single tether in the rear outboard seating position with an adjustable head restraint, route the single tether under the head restraint and in between the head restraint posts.

If you are using a single tether in the rear outboard seating position and the head restraint has been removed, route the single tether over the seatback.

If you are using a dual tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the dual tether over the headrest.

If you are using a single tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the single tether over the headrest.

3. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the LATCH path and attempt to move it side to side and back and forth. There should be no more than 2.5 cm (1 in) of movement for proper installation.

Head Restraint Removal and Reinstallation

The rear outboard head restraints can be removed if they interfere with the proper installation of the child restraint. The headrest in the rear center seating position is not removable and should be lowered to the stowed position for child restraint installation.

To remove the head restraint:

1. Partially fold the seatback forward. See *Rear Seats on page 3-10* for additional information.

2. Press both buttons on the head restraint posts at the same time, and pull up on the head restraint.
3. Store the head restraint in the cargo area of the vehicle.
4. When the child restraint is removed, reinstall the head restraint before the seating position is used.

⚠ Warning

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

To reinstall the head restraint:

1. Insert the head restraint posts into the holes in the top of the seatback. The notches on the posts must face the driver side of the vehicle.
2. Push the head restraint down.

   If necessary, press the height adjustment release button to further lower the head restraint. See *Head Restraints on page 3-2*.

3. Try to move the head restraint to make sure that it is locked in place.

Replacing LATCH System Parts After a Crash

⚠ Warning

A crash can damage the LATCH system in the vehicle. A damaged LATCH system may not properly secure the child restraint, resulting in serious injury or even death in a crash. To help make sure the LATCH system is working properly after a crash, see your dealer to have the system inspected and any necessary replacements made as soon as possible.

If the vehicle has the LATCH system and it was being used during a crash, new LATCH system parts may be needed.

New parts and repairs may be necessary even if the LATCH system was not being used at the time of the crash.

Securing Child Restraints (Rear Seat)

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-40* for how and where to install the child restraint using LATCH. If a child restraint is secured in the vehicle using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-40* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

If the child restraint does not have the LATCH system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint on page 3-39.*

1. Put the child restraint on the seat.

   If the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-40.*

2. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

3. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt. Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 4 and 5.
6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-40*.
7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it. If the head restraint was removed, reinstall it before the seating position is used. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-40* for additional information on installing the head restraint properly.

Securing Child Restraints (Front Passenger Position)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint on page 3-39*.

In addition, the vehicle has a passenger sensing system which is designed to turn off the front outboard passenger frontal airbag under certain conditions. See *Passenger Sensing System on page 3-26* and *Passenger Airbag Status Indicator on page 5-15* for more information, including important safety information.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously

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Warning (Continued)

injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the right front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

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Warning (Continued)

See *Passenger Sensing System on page 3-26* for additional information.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-40* for how and where to install the child restraint using LATCH. If a child restraint is secured using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-40* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

1. Move the seat as far back as it will go before securing the forward-facing child restraint.

   When the passenger sensing system has turned off the front outboard passenger frontal airbag, the off indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator on page 5-15.*

2. Put the child restraint on the seat.
3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

4. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle, so that the safety belt could be quickly unbuckled if necessary.

5. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt. Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 5 and 6.
7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

If the airbag is off, the off indicator in the passenger airbag status indicator will come on and stay on when the vehicle is started.

If a child restraint has been installed and the on indicator is lit, see "If the On Indicator is Lit for a Child Restraint" under *Passenger Sensing System on page 3-26.*

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position.

✍ NOTES

Storage

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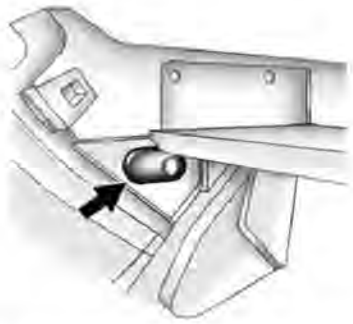
Storage Compartments

⚠ Warning

Do not store heavy or sharp objects in storage compartments. In a crash, these objects may cause the cover to open and could result in injury.

Glove Box

Lift the glove box handle up to open it. Use the key to lock and unlock the glove box.



The glove box is air conditioned and can be used to store items at a lower temperature. The vehicle air conditioning must be turned on for the maximum cool air to enter the glove box. Move the slide control to allow cool air into the glove box. After opening the air flow, close the glove box door to keep the cold air from entering the vehicle.

Cupholders

The front cupholder has a divider that can be adjusted to accommodate large or small containers.

For large containers, press the button to move aside the divider and make the cupholder deeper. For small containers, push down on the top edge of the divider to lock it back in place and make the cupholder shorter.

Front Storage

If equipped with storage behind the climate control system, touch and hold the chrome bar at the bottom of the climate control system panel to open. There is a USB port inside. See "USB/SD Port" in the infotainment manual.

Keep the storage area closed when not in use.

Touch and hold the chrome bar at the bottom of the climate control system panel again to close.

A storage area is located in front of the shift lever. Push upward on the top of the door and release; the door automatically opens.

There is an accessory power outlet inside. See *Power Outlets on page 5-7*.

Armrest Storage

For vehicles with a rear seat armrest, pull the rear seat armrest forward to access cupholders with removable liners. For vehicles with a rear storage area, pull the lever to access.

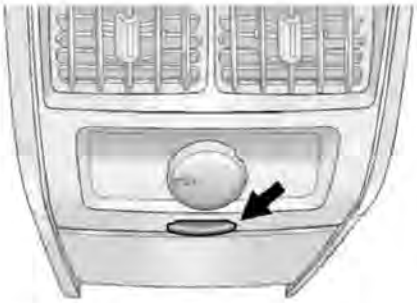
Center Console Storage

The center console has an armrest, upper storage tray, and lower storage area.

The armrest can be adjusted. Slide the top of the armrest to adjust to the desired position.

Press the driver side button to access the upper storage tray. Press the passenger side button to access the lower storage area.

There is an accessory power outlet inside the center console and two USB ports. If equipped, there is an SD card reader and auxiliary jack. See *Power Outlets on page 5-7* and the infotainment manual.



Press the button to open the storage area on the rear of the center console. If equipped with rear seat entertainment (RSE), the audio/video jacks, USB port, and SD port will be inside. See the infotainment manual.

Additional Storage Features

Cargo Cover

For vehicles with the dual position cargo cover, it can be used to cover items in the cargo area of the vehicle.

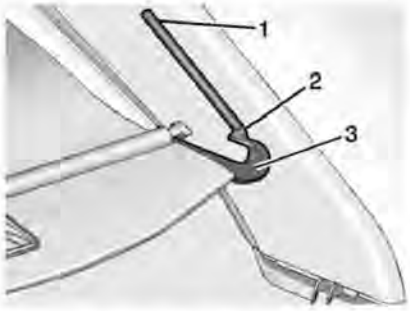
The shade can be set in two positions. It can be set in a halfway open (1) position for loading objects

into the rear compartment, or the lower (2) position to conceal objects in the rear compartment.

Install the Cargo Cover

1. Hold the cartridge so that the pull-out shade faces the rear of the vehicle.

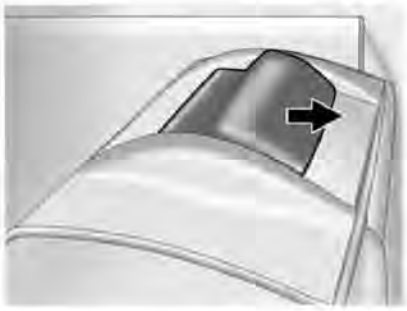
2. Align the cartridge over the pins on the trim panels of the vehicle.
3. Push down on the cartridge to snap it into place.
4. Unroll the shade toward the rear of the vehicle.



5. Insert the shade pins in the channels (3) on both sides.
6. Slide the shade to the lower (2) position, or the halfway open (1) position.

Remove the Cargo Cover

1. Remove the cover from the channels and carefully roll it back up.



2. Slide the button on the top to release the cartridge.
3. Pull up to remove the cartridge from the pins.

⚠ Warning

An unsecured cargo cover could strike people in a sudden stop or turn, or in a crash. Store the cargo cover securely or remove it from the vehicle.

Cargo Tie-Downs

For vehicles equipped with cargo tie-downs, the four tie-downs are located in the rear compartment of the vehicle. Use the tie-downs to secure small loads.

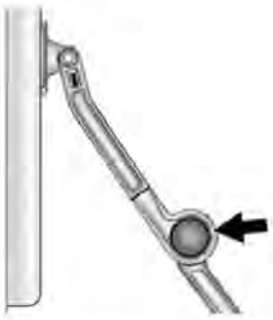
Cargo Management System

To open the cargo management system, press the rear of the handle to unlatch it and then lift the handle up.

A prop rod locks to hold the cover up when opened.

Four hooks are located on the inside cover and can be used for storing items.

There may be additional storage compartments on each side of the cargo management system. Lift the panel up to open.



Press the red button on the prop rod to close the cover.

Rear Storage Area

⚠ Warning

An improperly latched and closed cargo cover, or cargo cover left in the open position, could be thrown about the vehicle during a crash or sudden maneuver. Someone could be injured. Be sure to return the cover to the

(Continued)

Warning (Continued)

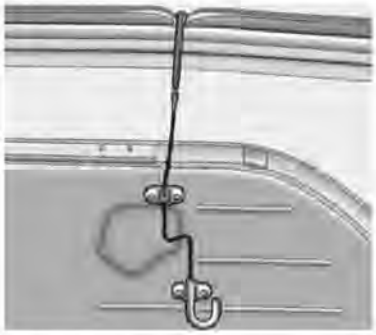
closed position and latch before driving. If the cover is removed, always store it outside of the vehicle. When it is replaced, always be sure that it is securely reattached.

To access the rear storage areas of the cargo management system, and the tire sealant and compressor kit:

1. Remove the cargo cover, if equipped.
2. Open the cargo management system cover.

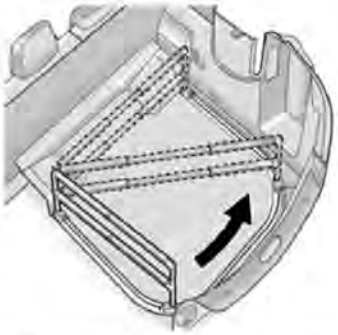
3. Release the prop rod from the inside cover by sliding the red clip down.

   Unhook the prop rod from the pin on the inside cover. Store the unhooked prop rod by folding it into the cargo management compartment.

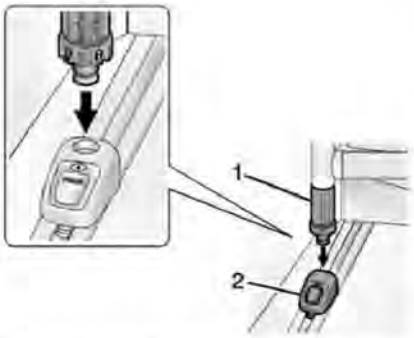


4. Store the cargo management system cover by hooking it onto the weatherstrip.

U-Rail



For vehicles with a u-rail system, the fence can be moved to different positions on the u-rail track to secure cargo.



Press both adapter buttons to move the adapters (2) on the straight part of the u-rail.

To move the fence around the u-rail, disconnect one side:

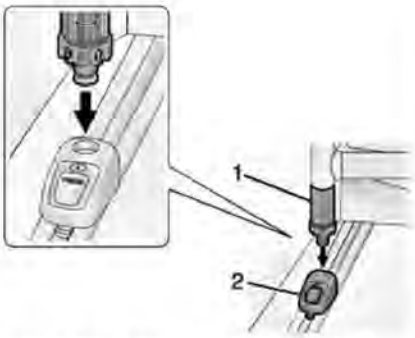
1. Unlock by turning the latch (1) to align 🔓 with the arrow on the adapter (2).
2. Press the adapter button to move the adapters (2) to the desired position.
3. Reinstall the fence and lock both latches (1) by turning to align 🔒 with the arrow on the adapter (2).

Use the fence to secure items in place.

Removing the Fence

Unlock by turning both latches (1) to align 🔓 with the arrow on the adapter (2). Lift and remove the fence.

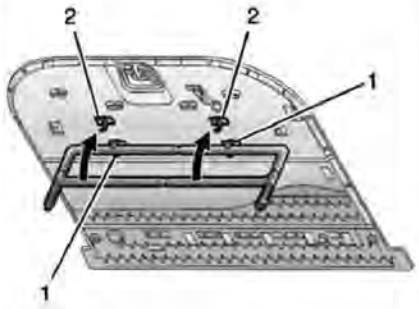
Installing the Fence



Insert the fence into the adapters and lock both latches (1) by turning to align 🔒 with the arrow on the adapter (2).

Storing the Fence

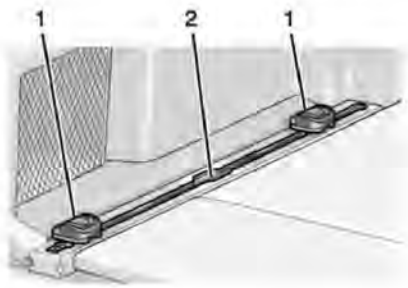
1. Lift the cargo management system cover.
2. Release the cover from the prop rod as described in the previous steps.



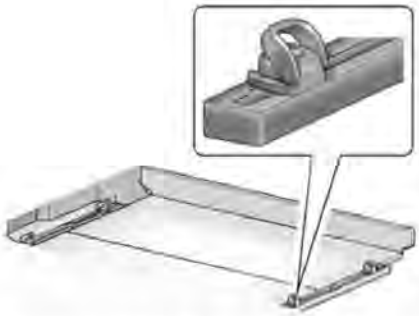
3. Insert the top of the fence into the lower two clips (1).
4. Turn the bottom of the fence up and insert it into the upper two clips (2).

D-Ring Sliders

For vehicles with a D-ring system, there are four D-ring sliders that move along rails. These can be used as tie-downs when storing cargo.



Insert the D-ring sliders (1) into the channel (2) located in the middle of the rail. Push the button to move the D-ring slider along the rail.



The loop of the D-ring slider must be facing inward toward the storage area and the ring must be in the up position for proper usage.

Cargo Net

⚠ Warning

Do not stack items higher than the upper end of the cargo net or hang anything from the net. Avoid items that have sharp edges or that apply excessive force to the

(Continued)

Warning (Continued)

net. If items are not properly stored, damage to the net could occur and items can be thrown about the vehicle. You or others could be injured. Always store items behind the net.

If equipped, the cargo net can be used to store light loads, keeping them from falling over or being thrown into the cabin during heavy braking.

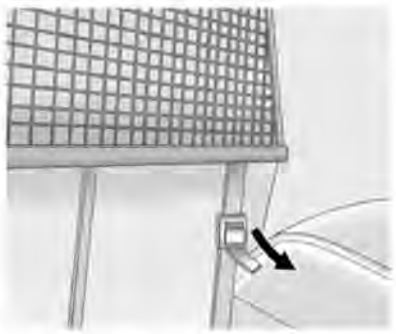
The net should not be overloaded or used to store heavy loads.

There are four openings in the headliner: two behind the front seats and two behind the rear seats.

1. Insert the top corners of the cargo net into the large opening in the headliner and secure by sliding them into the small opening.
2. The rear seatbacks should be folded down when the net is installed in the headliner opening behind the front seats.

3. Mount the cargo net to the rear seat tethers on the back of the folded down rear seats and pull on the straps to tighten the net.
4. When the net is installed in the headliner opening behind the rear seats, the rear seatbacks should be upright.

5. Mount the cargo net to the cargo tie-downs on the lower side panels.



6. Pull on the straps to tighten the net.

Cargo Net Storage

The cargo net can be removed from the vehicle and stored in the cargo management system.

1. Disconnect the net from the roof openings and the tethers.
2. Press the red button on the center of the net to fold it in half.
3. Roll up the cargo net and store in the attached vinyl bag.

4. Open the cargo management system cover.
5. For vehicles with an inflator kit, store the cargo net in the available space next to the kit.

Convenience Net

This vehicle may have a convenience net located in the rear of the vehicle. Attach it to the cargo tie-downs for storing small loads.

Do not use the net to store heavy loads.

Roof Rack System

⚠ Warning

If something is carried on top of the vehicle that is longer or wider than the roof rack — like paneling, plywood, or a mattress — the wind can catch it while the vehicle is being driven. The item being carried could be violently torn off, and this could cause a collision and damage the vehicle. Never carry something longer or wider than the roof rack on top of the vehicle unless using a GM certified accessory carrier.

If equipped, the roof rack can be used to load items. For roof racks that do not have crossrails included, GM Certified crossrails can be purchased as an accessory. See your dealer for additional information.

⚠ Caution

Loading cargo on the roof rack that weighs more than 100 kg (220 lb) or hangs over the rear or sides of the vehicle may damage the vehicle. Load cargo so that it rests evenly between the crossrails, making sure to fasten cargo securely.

To prevent damage or loss of cargo when driving, check to make sure crossrails and cargo are securely

fastened. Loading cargo on the roof rack will make the vehicle's center of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt maneuvers; otherwise it may result in loss of control. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place. Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits on page 9-10*.

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Controls

Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Steering Wheel Controls

For vehicles with audio steering wheel controls, some audio controls can be adjusted at the steering wheel.

(Push to Talk): For vehicles with OnStar® or a Bluetooth system, press to talk or interact with those systems. See *OnStar Overview on page 14-1* or "Bluetooth" in the infotainment manual.

(End Call): Press to decline an incoming call, or end a current call. Press to mute or unmute the infotainment system when not on a call.

< or > (Previous or Next): Press to go to the previous or next menu option.

∧ or ∨ (Next or Previous): Move SEL up or down to go to the next or previous selection.

SEL (Select): Press to select a highlighted menu option.

△ or ▽ (Next or Previous Favorite): Press to go to the next or previous favorite when listening to the radio. Press to go to the next or previous track when listening to a media source.

+ or − (Volume): Press to increase or decrease the volume.

Heated Steering Wheel

(Heated Steering Wheel): For vehicles equipped with a heated steering wheel, press to turn on or off. A light next to the button displays when the feature is turned on.

The steering wheel takes about three minutes to start heating.

Horn

Press on the steering wheel pad to sound the horn.

Windshield Wiper/Washer

With the ignition in ACC/ ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI: Use for fast wipes.

LO: Use for slow wipes.

INT (Intermittent Wipes): Use for intermittent wipes. To adjust wipe frequency, turn the INT band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see the following Rainsense information.

OFF: Use to turn the wipers off.

(Mist): For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Clear snow and ice from the wiper blades before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement on page 10-24.*

Heavy snow or ice can overload the wiper motor.

Wipe Parking

If the ignition is changed to STOPPING THE ENGINE/OFF mode while the wipers are on LO, HI, or INT, they will immediately stop.

If the windshield wiper lever is then moved to off before the driver door is opened or within 10 minutes, the wipers will restart and move to the base of the windshield.

If the ignition is changed to STOPPING THE ENGINE/OFF while the wipers are performing wipes due to windshield washing, the wipers continue to run until they reach the base of the windshield.

Rainsense™

For vehicles with Rainsense, a sensor located near the top center of the windshield detects the amount of water on the windshield and automatically controls the frequency of the windshield wiper.

Keep this area of the windshield clear of debris to allow for best system performance.

INT (Rainsense Wipe Sensitivity Control): Move the windshield wiper lever to INT. Turn the INT band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

Wiper Arm Assembly Protection

When using an automatic car wash, move the windshield wiper lever to OFF. This disables the automatic Rainsense windshield wipers and/or manual windshield wipers.

With Rainsense, if the transmission is in N (Neutral) and the vehicle speed is very slow, the wipers will automatically stop at the base of the windshield.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers. The wipers will continue until the lever is released or the maximum wash time is reached. When the windshield wiper lever is released, additional wipes may occur depending on how long the windshield washer had been activated. See *Washer Fluid on page 10-19* for information on filling the windshield washer fluid reservoir.

⚠ Warning

In freezing weather, do not use the washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Rear Window Wiper/ Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON: Press the upper portion of the button for continuous rear window wipes.

OFF: The rear wiper turns off when the button is returned to the middle position.

INT (Intermittent Rear Wipes): Press the lower portion of the button to set a delay between wipes.

(Rear Washer): Push the windshield wiper lever forward to spray washer fluid on the rear window. The lever automatically returns to its original position when released.

Rear Wiper Arm Assembly Protection

When using an automatic car wash, move the rear wiper control to OFF. This disables the rear wiper.

If the transmission is in N (Neutral) and the vehicle speed is very slow, the rear wiper will automatically stop at the base of the rear window.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Reverse Gear Wipes

If the rear wiper control is off, the rear wiper will automatically operate continuously when the shift lever is in R (Reverse), and the front windshield wiper is performing low or high speed wipes. If the rear wiper control is off, the shift lever is in R (Reverse), and the front windshield wiper is performing interval wipes, then the rear wiper automatically performs interval wipes.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

The windshield washer reservoir is used for the windshield and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid on page 10-19*.

Headlamp Washer

If equipped with headlamp washers, they are located to the side of the headlamps.

The headlamps must be on in order to use the headlamp washers. If the headlamps are not on, only the windshield will be washed.

Pull the wiper lever toward you and hold briefly to activate. The headlamp washers will spray once, pause, and spray again. The headlamp washer will spray again after five windshield wash cycles.

To refill the windshield washer fluid, see *Washer Fluid on page 10-19*.

Compass

The vehicle may have a compass display on the Driver Information Center (DIC). The compass receives its heading and other information from the Global Positioning System (GPS) antenna, StabiliTrak®, and vehicle speed information.

The compass system is designed to operate for a certain number of miles or degrees of turn before needing a signal from the GPS satellites. When the compass display shows CAL, drive the vehicle for a short distance in an open area where it can receive a GPS signal. The compass system will automatically determine when a GPS signal is restored and provide a heading again. See *Compass Messages on page 5-30* for the messages that may be displayed for the compass.

Clock

The infotainment system controls are used to access the time and date settings through the menu system. See "Home Page" in the infotainment manual for information about how to use the menu system.

Setting the Time

To set the time:

1. From the Home Page, press the SETTINGS screen button and press Time and Date.
2. Press Set Time and press + or − to increase or decrease hours, minutes, and AM or PM. Press 12Hr or 24Hr for 12 or 24 hour clock.
3. Press ⬅ to go back to the previous menu.

If auto timing is set, the time displayed on the clock may not update immediately when driving into a new time zone.

To set the date:

1. Press the SETTINGS screen button and press Time and Date.
2. Press Set Date and press + or − to increase or decrease month, day, or year.
3. Press ⬅ to go back to the previous menu.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle may have five accessory power outlets.

The accessory power outlets are:

- Below the climate control system inside the front storage bin.
- Inside the center floor console.
- On the rear of the center floor console. For vehicles with a rear climate control system, there will be two accessory power outlets on the rear of the center floor console.
- In the rear cargo area.

These are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

There is a small cap that must be removed to access the accessory power outlet. When not using the outlet be sure to cover it with the protective cap.

⚠ Caution

Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the battery. Power is always supplied to the rear cargo outlet. Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 ampere rating.

Certain accessory power plugs may not be compatible with the accessory power outlet and could overload vehicle or adapter fuses. If a problem is experienced, see your dealer.

When adding electrical equipment, be sure to follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment on page 9-69*.

⚠ Caution

Hanging heavy equipment from the power outlet can cause damage not covered by the vehicle warranty. The power outlets are designed for accessory power plugs only, such as cell phone charge cords.

Cigarette Lighter

There may be a cigarette lighter under the climate control system, inside the front storage bin.

To activate the cigarette lighter, push it into the heating element and let go. The lighter pops out when it is ready to be used.

⚠ Caution

Holding a cigarette lighter in while it is heating does not let the lighter back away from the heating element when it is hot. Damage from overheating can occur to the lighter or heating element, or a fuse could be blown. Do not hold a cigarette lighter in while it is heating.

Ashtrays

There may be an ashtray under the climate control system on the center stack. Press the door to release the ashtray.

To empty the ashtray, remove it from the instrument panel by holding the edges and pulling straight out. To reinstall, push the tray back into place.

There may also be ashtrays on the center floor console behind the shift lever and in the rear doors.

⚠ Caution

If papers, pins, or other flammable items are put in the ashtray, hot cigarettes or other smoking materials could ignite them and possibly damage the vehicle. Never put flammable items in the ashtray.

Warning Lights, Gauges, and Indicators

Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury.

Warning lights come on when there could be a problem with a vehicle function. Some warning lights come on briefly when the engine is started to indicate they are working.

Gauges can indicate when there could be a problem with a vehicle function. Often gauges and warning lights work together to indicate a problem with the vehicle.

When one of the warning lights comes on and stays on while driving, or when one of the gauges shows there may be a problem, check the section that explains what to do. Follow this manual's advice. Waiting to do repairs can be costly and even dangerous.

Instrument Cluster

English Shown, Metric Similar

Q8_000000850

Cluster Application Displays

The cluster has three interactive display zones.

Use the five-way control on the right steering wheel control to move between the different display zones and scroll through the different displays.

The left and right zones display Driver Information Center (DIC) information. See *Driver Information Center (DIC) on page 5-26*.

The center zone displays application information for navigation, audio, phone, or settings. A speedometer can also be displayed in this center zone.

Navigation

If there is no active route, a compass will be displayed. If there is an active route, press SEL to end route guidance or turn the voice prompts on or off.

Audio

While the Audio application page is displayed, press SEL to enter the Audio menu. In the Audio menu search for music, select from favorites, or change the audio source.

Phone

While the Phone application page is displayed, press SEL to enter the Phone menu. In the Phone menu, if there is no active phone call, view recent calls, select from favorites, or scroll through contacts. If there is an active call, mute the phone or switch to handset operation.

Settings

Press SEL while the Settings application page is displayed to enter the Settings menu.

Units: Press SEL while Units is highlighted to enter the Units menu. Choose English or metric units by pressing SEL while the desired item is highlighted. A checkmark will be displayed next to the selected item.

Info Pages: Press SEL while Info Pages is highlighted to select the items to be displayed in the DIC information displays. See *Driver Information Center (DIC) on page 5-26*.

Open Source Software: Press SEL while Open Source Software is highlighted to display open source software information.

Speedometer

The speedometer shows the vehicle's speed in either kilometers per hour (km/h) or miles per hour (mph).

Odometer

The odometer shows how far the vehicle has been driven, in either kilometers or miles.

This vehicle has a tamper-resistant odometer. If the vehicle needs a new cluster installed, the new odometer is set to the mileage of the old odometer. If this is not

possible, it is set at zero and a label is put on the driver door to show the old mileage reading.

Trip Odometer

The trip odometer can show how far the vehicle has been driven since the trip odometer was last reset.

The trip odometer is accessed and reset through the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 5-26*.

Tachometer

The tachometer displays the engine speed in revolutions per minute (rpm).

⚠ Caution

If the engine is operated with the tachometer in the shaded warning area, the vehicle could be damaged, and the damages

(Continued)

Caution (Continued)

would not be covered by the vehicle warranty. Do not operate the engine with the tachometer in the shaded warning area.

Fuel Gauge

When the ignition is on, the fuel gauge indicates about how much fuel is left in the tank.

There is an arrow near the fuel gauge pointing to the side of the vehicle the fuel door is on.

When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refueled soon.

Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

- At the service station, the fuel pump shuts off before the gauge reads full.
- It takes a little more or less fuel to fill up than the gauge indicated. For example, the gauge may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gauge moves a little while turning a corner or speeding up.

- The gauge takes a few seconds to stabilize after the ignition is turned on, and goes back to empty when the ignition is turned off.

Engine Coolant Temperature Gauge

Metric

English

This gauge measures the temperature of the vehicle's engine.

While driving under normal operating conditions, if the needle moves into the shaded area, the engine is too hot. Pull off the road, stop the vehicle, and turn off the engine as soon as possible.

Safety Belt Reminders

Driver Safety Belt Reminder Light

There is a driver safety belt reminder light on the instrument cluster.

When the vehicle is started this light flashes and a chime comes on to remind drivers to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the driver remains or becomes unbuckled while the vehicle is moving.

If the driver safety belt is buckled, neither the light nor chime comes on.

Passenger Safety Belt Reminder Light

There is a passenger safety belt reminder light near the passenger airbag status indicator. See *Passenger Sensing System on page 3-26*.

When the vehicle is started this light flashes and a chime may come on to remind the front passenger to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the passenger remains or becomes unbuckled while the vehicle is moving.

If the front passenger safety belt is buckled, neither the chime nor the light comes on.

The front passenger safety belt warning light and chime may turn on if an object is put on the seat such as a briefcase, handbag, grocery bag, laptop, or other electronic device. To turn off the warning light and/or chime, remove the object from the seat or buckle the safety belt.

Second Row Passenger Belt Reminder Light

Second row seating positions monitored for safety belt use are represented by a colored symbol in the Driver information Center (DIC) indicating safety belt status. When the vehicle is started, three safety belt symbols come on and stay on for several seconds in the instrument cluster to alert the driver that passengers may need to fasten their safety belts. After the passenger safety belt is buckled, the corresponding safety belt symbol in the instrument cluster turns green. If a safety belt is not initially buckled, the instrument cluster displays a gray safety belt symbol. While the vehicle is moving, if a second row passenger that was previously buckled becomes unbuckled, the corresponding safety belt symbol will change to flashing red and a chime may sound.

Airbag Readiness Light

This light shows if there is an electrical problem with the airbag system. The system check includes the airbag sensor(s), passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System on page 3-20*.

The airbag readiness light comes on for several seconds when the vehicle is started. If the light does not come on then, have it fixed immediately.

⚠ Warning

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

If there is a problem with the airbag system, a Driver Information Center (DIC) message may also come on. See *Airbag System Messages on page 5-37*.

Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System on page 3-26* for important safety information. The overhead console has a passenger airbag status indicator.

United States

Canada and Mexico

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol to let you know the status of the front outboard passenger frontal airbag.

If the word ON or the on symbol is lit on the passenger airbag status indicator, it means that the front outboard passenger frontal airbag is allowed to inflate.

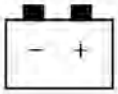
If the word OFF or the off symbol is lit on the passenger airbag status indicator, it means that the passenger sensing system has turned off the front outboard passenger frontal airbag.

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the passenger sensing system. See your dealer for service.

⚠ Warning

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 5-14* for more information, including important safety information.

Charging System Light



The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. It should go out when the engine is started.

If the light stays on, or comes on while driving, there may be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

When this light comes on, or is flashing, the Driver Information Center (DIC) also displays a message.

See *Battery Voltage and Charging Messages on page 5-29*.

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

Malfunction Indicator Lamp

A computer system called OBD II (On-Board Diagnostics-Second Generation) monitors the operation of the vehicle to ensure emissions are at acceptable levels, helping to maintain a clean environment. The malfunction indicator lamp comes on when the vehicle is placed in Service Only Mode, as a check to show it is working. If it does not, have the vehicle serviced by your dealer. See *Ignition Positions on page 9-15*.

If the malfunction indicator lamp comes on while the engine is running, this indicates that the OBD II system has detected a problem and diagnosis and service might be required.

Malfunctions often are indicated by the system before any problem is apparent. Being aware of the light can prevent more serious damage to the vehicle. This system also assists the service technician in correctly diagnosing any malfunction.

⚠ Caution

If the vehicle is continually driven with this light on, the emission controls might not work as well, the vehicle fuel economy might not be as good, and the engine might not run as smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.

⚠ Caution

Modifications made to the engine, transmission, exhaust, intake, or fuel system of the vehicle or the replacement of the original tires with other than those of the same Tire Performance Criteria (TPC) can affect the vehicle's emission controls and can cause this light to come on. Modifications to these systems could lead to costly repairs not covered by the vehicle warranty. This could also result in a failure to pass a required Emission Inspection/Maintenance test. See *Accessories and Modifications on page 10-3*.

This light comes on during a malfunction in one of two ways:

Light Flashing: A misfire condition has been detected. A misfire increases vehicle emissions and could damage the emission control system on the vehicle. Diagnosis and service might be required.

To prevent more serious damage to the vehicle:

- Reduce vehicle speed.
- Avoid hard accelerations.
- Avoid steep uphill grades.
- If towing a trailer, reduce the amount of cargo being hauled as soon as it is possible.

If the light continues to flash, find a safe place to stop and park the vehicle. Turn the vehicle off, wait at least 10 seconds, and restart the engine. If the light is still flashing, follow the previous steps and see your dealer for service as soon as possible.

Light On Steady: An emission control system malfunction has been detected on the vehicle. Diagnosis and service might be required.

The following may correct an emission control system malfunction:

- Check that the fuel cap is fully installed. See *Filling the Tank on page 9-59*. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap allows fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn the light off.
- Check that good quality fuel is used. Poor fuel quality causes the engine not to run as efficiently as designed and may cause stalling after start-up, stalling when the vehicle is changed into gear, misfiring, hesitation on acceleration, or stumbling on acceleration. These conditions might go away once the engine is warmed up.

If one or more of these conditions occurs, change the fuel brand used. It may require at least one full tank of the proper fuel to turn the light off.

See *Recommended Fuel on page 9-57*.

If none of the above have made the light turn off, your dealer can check the vehicle. The dealer has the proper test equipment and diagnostic tools to fix any mechanical or electrical problems that might have developed.

Emissions Inspection and Maintenance Programs

Depending on where you live, your vehicle may be required to participate in an emission control system inspection and maintenance program. For the inspection, the emission system test equipment will likely connect to the vehicle's Data Link Connector (DLC).

The DLC is under the instrument panel to the left of the steering wheel. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The malfunction indicator lamp is on with the engine running, or if the vehicle is placed in Service Only Mode and the malfunction indicator lamp does not come on. See your dealer for assistance in verifying proper operation of the malfunction indicator lamp.
- The OBD II (On-Board Diagnostics) system determines that critical emission control systems have not been completely diagnosed. The vehicle would be considered not

ready for inspection. This can happen if the 12-volt battery has recently been replaced or run down. The diagnostic system is designed to evaluate critical emission control systems during normal driving. This can take several days of routine driving. If this has been done and the vehicle still does not pass the inspection for lack of OBD II system readiness, your dealer can prepare the vehicle for inspection.

Brake System Warning Light

The vehicle brake system consists of two hydraulic circuits. If one circuit is not working, the remaining circuit can still work to stop the vehicle. For normal braking performance, both circuits need to be working.

If the warning light comes on, there is a brake problem. Have the brake system inspected right away.

Metric **English**

This light comes on briefly when the vehicle is turned on. If it does not come on then, have it fixed so it will be ready to warn if there is a problem.

If the light comes on and stays on, there is a base brake problem.

⚠ Warning

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to a crash. If the light is still on after the vehicle has been pulled off

(Continued)

Warning (Continued)

the road and carefully stopped, have the vehicle towed for service.

Electric Parking Brake Light

Metric **English**

This light comes on when the parking brake is applied. If the light continues flashing after the parking brake is released, or while driving, there is a problem with the Electric Parking Brake system or another system. A message may also display in the Driver Information Center (DIC). See *Brake System Messages on page 5-29*.

If the light does not come on, or remains flashing, see your dealer.

Service Electric Parking Brake Light

This light should come on briefly when starting the vehicle. If it does not come on, have it fixed so it will be ready to warn if there is a problem.

If this light stays on, there is a problem with the Electric Parking Brake system or another system on the vehicle that is causing the parking brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See the information for the Electric Parking Brake under *Parking Brake on page 9-28*. If a message displays in the Driver Information Center (DIC), see *Brake System Messages on page 5-29*.

Antilock Brake System (ABS) Warning Light

This light comes on briefly when the engine is started.

If it does not, have the vehicle serviced by your dealer.

If the ABS light stays on, turn the ignition off.

If the light comes on while driving, stop as soon as it is safely possible and turn off the vehicle. Then start the engine again to reset the system. If the ABS light stays on, or comes on again while driving, the vehicle needs service. A chime may also sound when the light comes on steady.

If the ABS light is the only light on, the vehicle has regular brakes, but the antilock brakes are not functioning.

If both the ABS and the brake system warning light are on, the vehicle's antilock brakes are not functioning and there is a problem with the regular brakes. See your dealer for service.

See *Brake System Warning Light on page 5-19* and *Brake System Messages on page 5-29*.

Lane Departure Warning (LDW) Light

If equipped, this light briefly comes on while starting the vehicle.

If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

This light comes on green when the system is on and ready to operate. When the system determines that the vehicle is leaving its lane without using the turn signal, this light will change to amber and flash.

See *Lane Departure Warning (LDW) on page 9-55.*

Vehicle Ahead Indicator

If equipped, this light in the Driver Information Center (DIC) displays green when a vehicle is detected ahead.

This light will display amber when you are following a vehicle ahead much too closely.

See *Forward Collision Alert (FCA) System on page 9-49.*

Traction Off Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

The traction off light comes on when the Traction Control System (TCS) has been turned off by pressing and releasing the TCS/StabiliTrak button.

This light and the StabiliTrak OFF light come on when StabiliTrak is turned off.

If the TCS is off, wheel spin is not limited. Adjust driving accordingly.

See *Traction Control/Electronic Stability Control on page 9-30.*

StabiliTrak® OFF Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer.

This light comes on when the StabiliTrak system is turned off. If StabiliTrak is off, the Traction Control System (TCS) is also off.

If the StabiliTrak and TCS are off, the system does not assist in controlling the vehicle. Turn on the TCS and the StabiliTrak systems and the warning light turns off.

See *Traction Control/Electronic Stability Control on page 9-30.*

Traction Control System (TCS)/StabiliTrak® Light

This light comes on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light is on and not flashing, the TCS, and potentially the StabiliTrak system have been disabled. A DIC message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service.

If the indicator/warning light is on and flashing, the TCS and/or the StabiliTrak system is actively working.

See *Traction Control/Electronic Stability Control on page 9-30.*

Engine Coolant Temperature Warning Light

This light comes on briefly while starting the vehicle.

If it does not, have the vehicle serviced by the dealer. If the system is working normally the indicator light goes off.

⚠ Caution

The engine coolant temperature warning light indicates that the vehicle has overheated. Driving with this light on can damage the engine and it may not be covered by the vehicle warranty. See *Engine Overheating on page 10-17*.

The engine coolant temperature warning light comes on when the engine has overheated.

If this happens, pull over and turn off the engine as soon as possible. See *Engine Overheating on page 10-17*.

Tire Pressure Light

For vehicles with the Tire Pressure Monitor System (TPMS), this light comes on briefly when the engine is started. It provides information about tire pressures and the TPMS.

When the Light Is On Steady

This indicates that one or more of the tires are significantly underinflated.

A Driver Information Center (DIC) tire pressure message may also display. See *Tire Messages on page 5-38*. Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information label. See *Tire Pressure on page 10-49*.

When the Light Flashes First and Then Is On Steady

If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on at every ignition cycle. See *Tire Pressure Monitor Operation on page 10-52*.

Engine Oil Pressure Light

⚠ Caution

Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the vehicle serviced. Always follow the maintenance schedule for changing engine oil.

This light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

Fuel Economy Light

This light is in the Driver Information Center (DIC) display.

For vehicles with the fuel economy mode light, it comes on when the eco (economy) button, located next to the shift lever, is pressed. Press the button again to turn off the light and exit the fuel economy mode. See *Driving for Better Fuel Economy on page 1-21* and *Fuel Economy Mode on page 9-25* for more information.

Low Fuel Warning Light

This light is near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

Security Light

The security light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system. See *Immobilizer Operation on page 2-18*.

High-Beam On Light

This light comes on when the high-beam headlamps are in use.

See *Headlamp High/Low-Beam Changer on page 6-3*.

IntelliBeam® Light

This light comes on when the IntelliBeam system, if equipped, is enabled.

See *Exterior Lamp Controls on page 6-1*.

Adaptive Forward Lighting (AFL) Light

This light should come on briefly as the vehicle is started. If it does not come on, have the vehicle serviced by your dealer.

This light comes on solid when there is a problem with the AFL system. It flashes when the system is switching between lighting modes. See *Adaptive Forward Lighting (AFL) on page 6-4*.

Front Fog Lamp Light

The fog lamp light comes on when the fog lamps are in use.

The light goes out when the fog lamps are turned off. See *Front Fog Lamps on page 6-7* for more information.

Lamps On Reminder

This light comes on when the exterior lamps are in use. See *Exterior Lamp Controls on page 6-1*.

Cruise Control Light

The cruise control light is white when the cruise control is on and ready, and turns green when the cruise control is set and active.

See *Cruise Control on page 9-33*.

Adaptive Cruise Control Light

This light in the Driver Information Center (DIC) comes on when the Adaptive Cruise Control (if equipped) is active. See *Adaptive Cruise Control on page 9-36*.

Information Displays

Driver Information Center (DIC)

The DIC displays are shown in the left and right interactive display zones on the instrument cluster. The displays show the status of many vehicle systems. The controls for the DIC are on the right steering wheel control.

∧ or ∨ : Press the five-way control to move up or down in a list.

< or >: Press the five-way control to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL (Select): Press the center to open a menu or select a menu item. Press and hold to reset values on certain screens.

DIC Information Display Options

The information displays on the DIC can be turned on or off through the Settings menu.

1. Press SEL while viewing the Settings page in the center display zone on the cluster.
2. Scroll to Info Pages and press SEL.
3. Press ∧ or ∨ to move through the list of possible information displays.

4. Press SEL while an item is highlighted to select or deselect that item. When an item is selected, a checkmark will appear next to it.

DIC Information Displays

The following is the list of all possible DIC information displays. Some of the information displays may not be available for your particular vehicle.

Speed: Shows the vehicle speed in either kilometers per hour (km/h) or miles per hour (mph).

Trip 1 and Trip 2: Shows the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset. The trip odometer can be reset by pressing and holding SEL while this display is active.

Fuel Range: Shows the approximate distance the vehicle can be driven without refueling. LOW will be displayed when the vehicle is low on fuel. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank.

Average Fuel Economy: Shows the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. The Average Fuel Economy can be reset by pressing and holding SEL while this display is active.

Instantaneous Fuel Economy: Shows the current fuel economy in either liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the fuel economy that the vehicle has right now and changes frequently as driving conditions change.

Average Speed: Shows the average speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. The average speed can be reset by pressing and holding SEL while this display is active.

Timer: This display can be used as a timer. To start the timer, press SEL while this display is active. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press SEL briefly while this display is active and the timer is running. To reset the timer to zero, press and hold SEL while this display is active.

Compass: Shows the direction the vehicle is driving.

Turn Arrow: Shows the next maneuver when using route guidance.

Travel Time: Shows the estimated time duration remaining for the current route.

Distance to Destination: Shows the distance to the destination when using route guidance.

Speed Limit: Shows sign information, which comes from a roadway database in the onboard navigation.

Speed Warning: Allows the driver to set a speed that they do not want to exceed. To set the Speed Warning, press SEL when Speed Warning is displayed. Press ∧ or ∨ to adjust the value. This feature can be turned off by pressing and holding SEL while viewing this page. If the selected speed limit is exceeded, a pop-up warning is displayed with a chime.

Cruise Set Speed: Shows the speed the cruise control or Adaptive Cruise Control is set to.

Follow Distance: Shows the current following distance to the vehicle ahead.

Battery Voltage: Shows the current battery voltage.

Oil Life: Shows an estimate of the oil's remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-32*. The oil should be changed as soon as possible. See *Engine Oil on page 10-7*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule. See *Maintenance Schedule on page 11-4*.

The Oil Life display must be reset after each oil change. It will not reset itself. Do not to reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system, press and hold SEL for several seconds while the Oil Life display is active. See *Engine Oil Life System on page 10-9*.

Tire Pressure: Shows the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tire is shown in amber. See *Tire Pressure Monitor System on page 10-51* and *Tire Pressure Monitor Operation on page 10-52*.

Blank Page: Allows for no information to be displayed in the DIC display zone(s).

Vehicle Messages

Messages displayed on the DIC indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may display one after the other.

The messages that do not require immediate action can be acknowledged and cleared by pressing SET/CLR. The messages that require immediate action cannot be cleared until that action is performed. All messages should be taken seriously and clearing the messages does not correct the problem.

The following are some of the vehicle messages that may be displayed depending on your vehicle content.

Battery Voltage and Charging Messages

BATTERY SAVER ACTIVE

This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing features of the vehicle that may be noticed. At the point that features are disabled, this message displays. Turn off unnecessary accessories to allow the battery to recharge.

LOW BATTERY

This message is displayed when the battery voltage is low. See *Battery on page 10-22*.

SERVICE BATTERY CHARGING SYSTEM

This message is displayed when there is a fault in the battery charging system. Take the vehicle to your dealer for service.

TRANSPORT MODE ON

This message is displayed when the vehicle is in transport mode. Some features can be disabled while in this mode, including Remote Keyless Entry (RKE), remote start, and the vehicle alarm system. Take the vehicle to your dealer for service to turn transport mode off.

Brake System Messages

BRAKE FLUID LOW

This message is displayed when the brake fluid level is low. See *Brake Fluid on page 10-21*.

STEP ON BRAKE TO RELEASE PARK BRAKE

This message is displayed if you attempt to release the Electric Parking Brake without the brake pedal applied. See *Parking Brake on page 9-28*.

RELEASE PARKING BRAKE

This message is displayed if the Electric Parking Brake is on while the vehicle is in motion. See *Parking Brake on page 9-28*.

SERVICE BRAKE ASSIST

This message may be displayed when there is a problem with the brake boost assist system. When this message is displayed, the brake boost assist motor might be heard operating and you might notice pulsation in the brake pedal. This is normal under these conditions. Take the vehicle to your dealer for service.

SERVICE PARKING BRAKE

This message is displayed when there is a problem with the parking brake. Take the vehicle to your dealer for service.

Compass Messages

CAL

This message is displayed when the compass needs to be calibrated. See *Compass on page 5-6*.

– –

Dashes will be displayed if the compass needs service. See your dealer for service.

Cruise Control Messages

ADAPTIVE CRUISE SET TO XXX

This message displays when the Adaptive Cruise Control (ACC) speed is set. See *Adaptive Cruise Control on page 9-36*.

ADAPTIVE CRUISE TEMPORARILY UNAVAILABLE

This message displays when attempting to activate Adaptive Cruise Control (ACC) when it is temporarily unavailable. The ACC system does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-87*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

CRUISE SET TO XXX

This message displays when the cruise control speed is set. See *Cruise Control on page 9-33*.

NO CRUISE BRAKING GAS PEDAL APPLIED

This message displays when Adaptive Cruise Control (ACC) is active and the driver is pressing the gas pedal. When this occurs, ACC will not brake. See *Adaptive Cruise Control on page 9-36*.

SERVICE ADAPTIVE CRUISE CONTROL

This message displays when the Adaptive Cruise Control (ACC) needs service. Take the vehicle to your dealer.

SHIFT TO PARK BEFORE EXITING

This message may display if Adaptive Cruise Control (ACC) is engaged holding the vehicle at a stop, and the driver attempts to exit the vehicle. Put the vehicle in P (Park) before exiting.

Door Ajar Messages

DOOR OPEN

A door open symbol will be displayed on the DIC showing which door is open. If the vehicle has been shifted out of P (Park), a DOOR OPEN message will also be displayed. Close the door completely.

HOOD OPEN

This message will display along with a hood open symbol when the hood is open. Close the hood completely.

REAR ACCESS OPEN

This message will display along with a symbol when the liftgate is open. Close the liftgate completely.

Engine Cooling System Messages

A/C OFF DUE TO HIGH ENGINE TEMP

This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. The vehicle can continue to be driven.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

COOLANT LEVEL LOW ADD COOLANT

This message will display if the coolant is low. See *Engine Coolant on page 10-13*.

ENGINE OVERHEATED — IDLE ENGINE

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OVERHEATED — STOP ENGINE

This message displays and a continuous chime sounds if the engine cooling system reaches unsafe temperatures for operation. Stop and turn off the vehicle as soon as it is safe to do so to avoid severe damage. This message clears when the engine has cooled to a safe operating temperature.

HIGH COOLANT TEMPERATURE

This message displays if the coolant temperature is hot. See *Engine Overheating on page 10-17*.

Engine Oil Messages

CHANGE ENGINE OIL SOON

This message displays when the engine oil needs to be changed. When you change the engine oil, be sure to reset the oil life system. See *Engine Oil Life System on page 10-9*, *Driver Information Center (DIC) on page 5-26*, *Engine Oil on page 10-7*, and *Maintenance Schedule on page 11-4*.

ENGINE OIL HOT, IDLE ENGINE

This message displays when the engine oil temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OIL LOW — ADD OIL

On some vehicles, this message displays when the engine oil level may be too low. Check the oil level before filling to the recommended level. If the oil is not low and this message remains on, take the vehicle to your dealer for service. See *Engine Oil on page 10-7*.

OIL PRESSURE LOW — STOP ENGINE

This message displays if low oil pressure levels occur. Stop the vehicle as soon as safely possible and do not operate it until the cause of the low oil pressure has been corrected. Check the oil as soon as possible and have the vehicle serviced by your dealer.

Engine Power Messages

ENGINE POWER IS REDUCED

This message displays when the vehicle's engine power is reduced. Reduced engine power can affect the vehicle's ability to accelerate. If this message is on, but there is no reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven at a reduced

speed while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer for service as soon as possible.

Fuel System Messages

FUEL LEVEL LOW

This message displays when the vehicle is low on fuel. Refuel as soon as possible.

TIGHTEN GAS CAP

This message displays when the fuel cap is not on tight. Tighten the fuel cap.

Key and Lock Messages

NO REMOTE DETECTED

This message displays when the transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 2-3.*

NO REMOTE KEY WAS DETECTED PLACE KEY IN TRANSMITTER POCKET THEN START YOUR VEHICLE

This message displays when trying to start the vehicle if an RKE transmitter is not detected. The transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 2-3.*

NO REMOTE PRESS BRAKE TO RESTART

This message is displayed if the remote is no longer detected in the vehicle. Press the brake pedal to restart the vehicle.

NUMBER OF KEYS PROGRAMMED

This message displays when programming new keys to the vehicle.

REMOTE LEFT IN VEHICLE

This message displays when leaving the vehicle with the RKE transmitter still inside.

REPLACE BATTERY IN REMOTE KEY

This message displays when the battery in the RKE transmitter needs to be replaced.

Lamp Messages

AFL (ADAPTIVE FORWARD LIGHTING) LAMPS NEED SERVICE

This message displays when the AFL system is disabled and needs service. See your dealer. See *Adaptive Forward Lighting (AFL) on page 6-4.*

AUTOMATIC LIGHT CONTROL ON

This message is displayed when the exterior lamp control is in AUTO and the lights have turned on. See *Twilight Sentinel on page 6-5*.

AUTOMATIC LIGHT CONTROL OFF

This message is displayed when the exterior lamp control is in AUTO and the lights have turned off. See *Twilight Sentinel on page 6-5*.

XXX TURN INDICATOR FAILURE

When one of the turn signals is out, this message displays to show which bulb needs to be replaced. See *Bulb Replacement on page 10-26* and *Replacement Bulbs on page 10-33*.

TURN SIGNAL ON

This message is displayed if the turn signal has been left on. Turn off the turn signal.

Object Detection System Messages

24 GHz RADARS OFF

This message displays when driving in certain areas where there may be radar interference. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and the Active Emergency Braking System may not work or may not work as well. The vehicle does not need service.

AUTOMATIC COLLISION PREP OFF

This message displays when the Active Emergency Braking System has been turned off. See *Active Emergency Braking System on page 9-51*.

AUTOMATIC COLLISION PREP REDUCED

This message displays when the Active Emergency Braking System has been set to the Alert setting. This setting disables most automatic braking functions of the Auto Collision Preparation feature. Some last-second automatic braking capability is still provided with the Alert setting, but braking is less likely to occur. See *Active Emergency Braking System on page 9-51*.

AUTOMATIC COLLISION PREP UNAVAILABLE

This message displays when the Active Emergency Braking System has been unavailable for some time. The Active Emergency Braking System does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-87*.

- Heavy rain or snow is interfering with the radar object detection or camera performance.

This message may also be displayed if there is a problem with the StabiliTrak system.

FORWARD COLLISION ALERT OFF

This message displays when the Forward Collision Alert has been turned off.

FRONT CAMERA BLOCKED CLEAN WINDSHIELD

This message displays when the camera is blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue. The Lane Departure Warning system will not operate. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and the Active Emergency Braking System may not work or may not work as well.

LANE DEPARTURE WARNING UNAVAILABLE

This message displays when attempting to activate the Lane Departure Warning (LDW) system when it is temporarily unavailable. The LDW system does not need service.

This message could be due to the camera being blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue.

REAR AUTO BRAKE/PARK ASSIST OFF

This message displays when the Parking Assist system has been turned off or when there is a temporary condition causing the system to be disabled.

REAR AUTO BRAKE AND PARK ASSIST UNAVAILABLE

This message displays when attempting to activate the parking and backing features of the Driver Assistance System when they are temporarily unavailable. The system does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-87*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

See *Driver Assistance Systems on page 9-44*.

SERVICE AUTOMATIC COLLISION PREP

If this message displays, take the vehicle to your dealer to repair the system.

SERVICE DRIVER ASSIST SYSTEM

If this message displays, take the vehicle to your dealer to repair the system.

Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), Active Emergency Braking System, Assistance Systems for Parking or Backing, and/or Lane Departure Warning (LDW) system may not work. Do not use these systems until the vehicle has been repaired.

SERVICE FRONT CAMERA

If this message remains on after continued driving, the vehicle needs service. Do not use the Lane Departure Warning (LDW) and Forward Collision Alert (FCA) features. Take the vehicle to your dealer.

SERVICE PARK ASSIST

This message displays if there is a problem with the Parking Assist system. Do not use this system to help you park. See your dealer for service.

SERVICE REAR AUTO BRAKE AND PARK ASSIST

This message displays if there is a problem with the parking and backing features of the Driver Assistance System. Do not use this system to help park or back the vehicle. See your dealer for service.

SIDE BLIND ZONE ALERT OFF

This message indicates that the driver has turned the Side Blind Zone Alert (SBZA) system off.

SERVICE SIDE DETECTION SYSTEM

If this message remains on after continued driving, the vehicle needs service. Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) features will not work. Take the vehicle to your dealer.

SIDE DETECTION SYSTEM UNAVAILABLE

This message indicates that Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) are disabled either because the sensor is blocked and cannot detect vehicles in the blind zone, or the vehicle is passing through an open area, such as the desert, where there is insufficient data for operation. This message may also activate during heavy rain or due to road spray. The vehicle does not need service. For cleaning, see "Washing the Vehicle" under *Exterior Care on page 10-87*.

Ride Control System Messages

SERVICE ALL WHEEL DRIVE

This message displays when there is a problem with the All Wheel Drive (AWD) system. This message could be set by a number of issues. Some may require service of the AWD system some will not. The vehicle will run in normal two-wheel drive mode when this message has been set. This could be caused by:

- A vehicle or an AWD system electronics problem.
- Various vehicle electrical issues.
- Worn out or overheated clutch plates.
- Loss of fluids.

If this message appears, stop when convenient and turn off the ignition for 30 seconds. Restart the vehicle and check for the message on the DIC display. If the message has gone off and stays off, it is not necessary to take your vehicle to the dealer. If the message still displays or appears again when you begin driving, the system needs service. See your dealer.

SERVICE STABILITRAK

This message displays if there is a problem with the StabiliTrak system. See *Traction Control/Electronic Stability Control on page 9-30*.

SERVICE SUSPENSION SYSTEM

This message displays if there is a problem with the selective ride control. See *Selective Ride Control on page 9-32*.

SERVICE TRACTION CONTROL

This message displays when there is a problem with the Traction Control System (TCS). See *Traction Control/Electronic Stability Control on page 9-30*.

SPORT MODE ON

This message displays when Sport Mode has been activated. See *Selective Ride Control on page 9-32* and *Manual Mode on page 9-24*.

TRACTION CONTROL OFF

This message displays when the Traction Control System (TCS) has been turned off. See *Traction Control/Electronic Stability Control on page 9-30*.

TRACTION CONTROL ON

This message displays when the Traction Control System (TCS) has been turned on. See *Traction Control/Electronic Stability Control on page 9-30*.

Airbag System Messages

SERVICE AIRBAG

This message displays if there is a problem with the airbag system. Take the vehicle to your dealer for service.

Security Messages

THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

Service Vehicle Messages

SERVICE POWER STEERING

This message is displayed if there is a problem with the power steering system and a chime may sound. Take the vehicle to your dealer for service.

SERVICE VEHICLE SOON

This message is displayed if there is a problem with the vehicle. Take the vehicle to your dealer for service.

Starting the Vehicle Messages

PRESS BRAKE TO START VEHICLE

This message is displayed when attempting to start the vehicle without first pressing the brake pedal.

SERVICE KEYLESS START SYSTEM

This message is displayed if there is a problem with the pushbutton start system. Take the vehicle to your dealer for service.

Tire Messages

SERVICE TIRE MONITOR SYSTEM

This message displays if there is a problem with the Tire Pressure Monitor System (TPMS). See *Tire Pressure Monitor Operation on page 10-52*.

TIRE LEARNING ACTIVE

This message displays when the system is learning new tires. See *Tire Pressure Monitor Operation on page 10-52*.

TIRE LOW ADD AIR TO TIRE

This message displays when the pressure in one or more of the tires is low.

This message also displays LEFT FRONT, RIGHT FRONT, LEFT REAR, or RIGHT REAR to indicate the location of the low tire.

The low tire pressure warning light will also come on. See *Tire Pressure Light on page 5-23*.

If a tire pressure message appears on the DIC, stop as soon as you can. Inflate the tires by adding air until the tire pressure is equal to the values shown on the Tire and Loading Information label. See *Tires on page 10-42*, *Vehicle Load Limits on page 9-10*, and *Tire Pressure on page 10-49*.

You can receive more than one tire pressure message at a time. The DIC also shows the tire pressure values. See *Driver Information Center (DIC) on page 5-26*.

Transmission Messages

SERVICE TRANSMISSION

This message displays if there is a problem with the transmission. See your dealer.

SHIFT DENIED

This message displays when using the Driver Shift Control (DSC) and attempting to shift to a gear not appropriate for the vehicle speed and engine revolutions per minute (rpm). See *Manual Mode on page 9-24*.

SHIFT TO PARK

This message displays when the transmission needs to be shifted to P (Park). This may appear when turning the ignition off if the vehicle is not in P (Park).

TRANSMISSION HOT — IDLE ENGINE

This message displays and a chime sounds if the transmission fluid in the vehicle gets hot. Driving with the transmission fluid temperature high can cause damage to the vehicle. Stop the vehicle and let it idle to allow the transmission to cool. This message clears when the fluid temperature reaches a safe level.

Vehicle Reminder Messages

ICE POSSIBLE DRIVE WITH CARE

This message is displayed when ice conditions are possible.

TURN WIPER CONTROL TO INTERMITTENT FIRST

This message is displayed when attempting to adjust the intermittent wiper speed without intermittent selected on the wiper control. See *Windshield Wiper/Washer on page 5-3*.

Vehicle Speed Messages

SELECTED SPEED LIMIT EXCEEDED

This message is displayed when the vehicle speed is greater than the set speed. See "Speed Warning" under *Driver Information Center (DIC) on page 5-26*.

Washer Fluid Messages

WASHER FLUID LOW ADD FLUID

This message may display when the washer fluid level is low. See *Washer Fluid on page 10-19*.

Vehicle Personalization

Use the audio system controls to access the personalization menus for customizing vehicle features.

The following are all possible personalization features. Depending on the vehicle, some may not be available.

Infotainment System Audio System Controls

To access the personalization menu:

1. Press SETTINGS on the Home page on the infotainment system display.
2. Press the desired feature to display a list of available options.
3. Press to select the desired feature setting.
4. Press the ❮ Back screen button to return to the previous menu.

Personalization Menus

The following list of menu items may be available:

- Time and Date
- Language [Language]
- Valet Mode
- Radio
- Vehicle
- Bluetooth
- Voice
- Display
- Rear Camera
- Return to Factory Settings
- Software Information

Each menu is detailed in the following information.

Time and Date

Manually set the time and date. See *Clock on page 5-6*.

Language [Language]

Select Language, then select from the available language(s).

Select the language. The selected language will display on the system, and voice recognition will reflect the selected language.

Valet Mode

This will lock the infotainment system, the infotainment controls, and screen storage location.

To turn Valet Mode on and off, Enter a four-digit code on the keypad. Press Enter to go to the confirmation screen. Re-enter the four-digit code. Press LOCK to lock the system. Enter the four-digit code to unlock the system. Press the Back screen button to go back to the previous menu.

Radio

Press to display the Radio Menu and the following may be displayed:

- Manage Favorites
- Number of Favorites Shown
- Audible Touch Feedback
- Bose Audio Pilot
- Maximum Start Up Volume

Manage Favorites

This allows favorites to be edited. See "Manage Favorites" in "Settings" under "Radio" in the infotainment manual.

Number of Favorites Shown

Press to set the number of favorites to display.

Select the desired number or select Auto and the infotainment system will automatically adjust the number of favorite shown.

Audible Touch Feedback

This allows Audible Touch Feedback to be turned on or off.

Select Off or On.

Bose Audio Pilot

This feature adjusts the volume based on the noise in the vehicle. See "Bose AudioPilot Noise Compensation Technology" under "Infotainment System Settings" in the infotainment manual.

Maximum Startup Volume

This feature sets the maximum startup volume. If the vehicle is started and the volume is greater than this level, the volume is adjusted to this level. To set the maximum startup volume, press + or − to increase or decrease.

Vehicle

Select and the following may be displayed:

- Climate and Air Quality
- Collision/Detection Systems
- Comfort and Convenience
- Lighting
- Power Door Locks
- Remote Lock, Unlock, Start

Climate and Air Quality

Select and the following may be displayed:

- Auto Fan Max Speed
- Air Quality Sensor
- Auto Defog

Auto Fan Max Speed

This feature will set the maximum auto fan speed.

Select Low, Medium, or High.

Air Quality Sensor

This allows for selection of air quality sensor operation at high or low sensitivity.

Select Off, Low Sensitivity, or High Sensitivity.

Auto Defog

When set to On, the front defog will automatically react to temperature and humidity conditions that may cause fogging. Only vehicles with the dual automatic climate control will have this option.

Select Off or On.

Collision / Detection Systems

Select the Collision/Detection Systems menu and the following may display:

- Alert Type
- Auto Collision Preparation
- Go Notifier
- Side Blind Zone Alert

Alert Type

This feature will set crash alerts to beeps or seat vibrations. This setting affects all crash alerts including:

- Forward Collision
- Lane Departure Warning
- Adaptive Cruise Control
- Parking Assist
- Backing Warning

Select Beeps or Safety Alert Seat.

Auto Collision Preparation

This feature will turn on or off the Forward Collision Alert feature as well as the Automatic Braking capability of the Auto Collision Preparation feature. With the Alert and Brake setting, both Forward Collision Alert as well as the Automatic Braking capability of the Auto Collision Preparation feature are available. The Alert setting disables most automatic braking functions of the Auto Collision Preparation feature. Some last-second automatic braking capability is still provided with the Alert setting, but it is much less likely to be triggered by most driving conditions. Off disables all Forward Collision Alert and Automatic Braking capabilities of the Auto Collision Preparation feature. See *Active Emergency Braking System on page 9-51*.

Select Off, Alert & Brake, or Alert.

Go Notifier

This feature will give a reminder that Adaptive Cruise Control provides when it has brought the vehicle to a complete stop behind another stopping vehicle, and then that vehicle drives on. See *Adaptive Cruise Control on page 9-36*.

Select Off or On.

Side Blind Zone Alert

This allows the feature to be turned on or off. See *Side Blind Zone Alert (SBZA) on page 9-53*.

Select Off or On.

Comfort and Convenience

Select and the following may be displayed:

- Auto Memory Recall
- Easy Exit Options

- Chime Volume
- Reverse Tilt Mirror

Auto Memory Recall

This allows the feature to be turned on or off.

Select Off, On - Driver Door Open, or On - At Ignition On.

Easy Exit Options

This allows the feature to be turned on or off.

Select Off or On.

Chime Volume

This allows the selection of the chime volume level.

Press + or − to adjust the volume.

Reverse Tilt Mirror

This allows the feature to be turned on or off.

Select Off, On - Driver and Passenger, On - Driver, or On - Passenger.

Lighting

Select and the following may be displayed:

- Vehicle Locator Lights
- Auto High Beam
- Exit Lighting

Vehicle Locator Lights

This feature will flash the exterior lamps when on the Remote Keyless Entry (RKE) transmitter is pressed to locate the vehicle.

Select Off or On.

Auto High Beam

This allows the feature to be turned on or off.

Select On or Off. On some vehicles select Off, Normal Sensitivity, or Low Sensitivity.

Exit Lighting

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Select Off, 30 Seconds, 60 Seconds, or 120 Seconds.

Power Door Locks

Select and the following may be displayed:

- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock

Unlocked Door Anti Lock Out

When on, this feature will keep the driver door from locking when the door is open. If Off is selected, the Delayed Door Lock menu will be available.

Select Off or On.

Auto Door Unlock

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park) with an automatic transmission or when the vehicle is turned off with a manual transmission.

Select Off, All Doors, or Driver Door.

Delayed Door Lock

When on, this feature will delay the locking of the doors. To override the delay, press the power door lock switch on the door.

Select Off or On.

Remote Lock, Unlock, Start

Select and the following may be displayed:

- Remote Unlock Light Feedback
- Remote Lock Feedback
- Remote Door Unlock
- Remote Start Auto Cool Seats
- Remote Start Auto Heat Seats
- Passive Door Unlock
- Passive Door Lock
- Remote Left in Vehicle Alert

Remote Unlock Light Feedback

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Select Off or On.

Remote Lock Feedback

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Select Off, Lights and Horn, Lights Only, or Horn Only.

Remote Door Unlock

This allows selection of which doors will unlock when pressing on the RKE transmitter.

Select All Doors or Driver Door.

Remote Start Auto Cool Seats

If equipped and turned on, this feature will turn the vented seats on when using remote start on warm days.

Select Off or On.

Remote Start Auto Heat Seats

If equipped and turned on, this feature will turn the heated seats on when using remote start on cold days.

Select Off or On.

Passive Door Unlock

This allows the selection of what doors will unlock when using the button on the driver door to unlock the vehicle.

Select All Doors or Driver Door.

Passive Door Lock

This feature can be turned on or off, or can be used to select feedback when using the button on the driver door to lock the vehicle. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Select Off, On with Horn Chirp, or On.

Remote Left in Vehicle Alert

This feature sounds an alert when the RKE transmitter is left in the vehicle.

Select Off or On.

Bluetooth

Select and the following may be displayed:

- Pair New Device
- Device Management
- Ringtones
- Voice Mail Numbers

Pair New Device

Select to pair a new device. See "Pairing" in "Infotainment Controls" under Bluetooth in the infotainment manual.

Device Management

Select to connect to a different phone source, disconnect a phone, or delete a phone.

Ringtones

Press to change the ring tone for the specific phone. The phone does not need to be connected to change the ring.

Voice Mail Numbers

This feature displays the voice mail number for all connected phones. The voice mail number may be changed by selecting EDIT or pressing the EDIT button and typing in a new number, then select SAVE or press the SAVE button.

Voice

Select and the following may be displayed:

- Confidence Threshold
- Prompt Length
- Audio Feedback Speed

Confidence Threshold

This feature allows the adjustment of the sensitivity of the speech recognition system.

Select Confirm More or Confirm Less.

Prompt Length

This feature adjusts the voice prompt length.

Select Short or Long.

Audio Feedback Speed

This feature adjusts the audio feedback speed.

Select Slow, Medium, or Fast.

Display

Select and the following may be displayed:

- Mode
- Calibrate Touchscreen
- Turn Display Off

Mode

Select to change the display screen for day or night driving.

Select Auto, Day, or Night.

Calibrate Touchscreen

Select to calibrate the touchscreen, then follow the prompts.

Turn Display Off

Select to turn the display off. Press anywhere on the display area or any faceplate button to turn the display on.

Rear Camera

Select and the following may be displayed:

- Guidance Lines

Guidance Lines

Select to turn Off or On. See *Assistance Systems for Parking or Backing on page 9-44*.

Return to Factory Settings

Select and the following may be displayed:

- Restore Vehicle Settings
- Clear All Private Data
- Restore Radio Settings

Restore Vehicle Settings

This allows selection of restoring vehicle settings.

Select Cancel or Restore.

Clear All Private Data

This allows selection to clear all private information from the vehicle.

Select Cancel or Delete.

Restore Radio Settings

This allows selection to restore radio settings.

Select Cancel or Restore.

Software Information

Select to view the infotainment system current software information.

Universal Remote System

See *Radio Frequency Statement on page 13-15*.

Universal Remote System Programming

If equipped, these buttons are in the overhead console.

This system can replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices. These instructions refer to a garage door opener, but can be used for other devices.

Do not use the Universal Remote system with any garage door opener that does not have the stop and reverse feature. This includes any garage door opener model manufactured before April 1, 1982.

Read these instructions completely before programming the Universal Remote system. It may help to have another person assist with the programming process.

Keep the original hand-held transmitter for use in other vehicles as well as for future programming. Erase the programming when vehicle ownership is terminated. See "Erasing Universal Remote System Buttons" later in this section.

To program a garage door opener, park outside directly in line with and facing the garage door opener receiver. Clear all people and objects near the garage door.

Make sure the hand-held transmitter has a new battery for quick and accurate transmission of the radio-frequency signal.

Programming the Universal Remote System

For questions or help programming the Universal Remote system, call 1-800-355-3515 or see www.homelink.com.

Programming involves time-sensitive actions, and may time out causing the procedure to be repeated.

To program up to three devices:

1. Hold the end of the hand-held transmitter about 3 to 8 cm (1 to 3 in) away from the Universal Remote system buttons with the indicator light in view. The hand-held transmitter was supplied by the manufacturer of the garage door opener receiver.
2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Remote system buttons to be used to operate the garage door. Do not release either button until the indicator light changes from a slow to a rapid flash. Then release both buttons.

   Some garage door openers may require substitution of Step 2 with the procedure under "Radio Signals for Canada and Some Gate Operators" later in this section.
3. Press and hold the newly programmed Universal Remote system button for five seconds while watching the indicator light and garage door activation.
   - If the indicator light stays on continuously or the garage door moves when the button is pressed, then

programming is complete. There is no need to complete Steps 4–6.

- If the indicator light does not come on or the garage door does not move, a second button press may be required. For a second time, press and hold the newly programmed button for five seconds. If the light stays on or the garage door moves, programming is complete.
- If the indicator light blinks rapidly for two seconds, then changes to a solid light and the garage door does not move, continue with programming Steps 4–6.

Learn or Smart Button

4. After completing Steps 1–3 , locate the Learn or Smart button inside garage on the garage door opener receiver. The name and color of the button may vary by manufacturer.
5. Press and release the Learn or Smart button. Step 6 must be completed within 30 seconds of pressing this button.
6. Inside the vehicle, press and hold the newly programmed Universal Remote system button for two seconds and then release it. If the garage door does not move or the lamp on the garage door opener receiver does not flash, press and hold the same button a second time for two seconds, then release it. Again, if the door does not move or the garage door lamp does not flash, press and hold the same button a third time for two seconds, then release it.

The Universal Remote system should now activate the garage door.

Repeat the process for programming the two remaining buttons.

Radio Signals for Canada and Some Gate Operators

For questions or programming help call 1-800-355-3515 or see www.homelink.com.

Canadian radio-frequency laws and some U.S. gate operators require transmitter signals to time out or quit after several seconds of transmission. This may not be long

enough for the Universal Remote system to pick up the signal during programming.

If the programming did not work, replace Step 2 under "Programming the Universal Remote System" with the following:

Press and hold the Universal Remote system button while pressing and releasing the hand-held transmitter button every two seconds until the signal has been successfully accepted by the Universal Remote system. The Universal Remote system indicator light will flash slowly at first and then rapidly. Proceed with Step 3 under "Programming the Universal Remote System" to complete.

Universal Remote System Operation

Using the Universal Remote System

Press and hold the appropriate Universal Remote system button for at least one-half second. The indicator light will come on while the signal is being transmitted.

Erasing Universal Remote System Buttons

Erase all programmed buttons when vehicle ownership is terminated.

To erase:

1. Press and hold the two outside buttons until the indicator light begins to flash. This should take about 10 seconds.
2. Release both buttons.

Reprogramming a Single Universal Remote System Button

To reprogram any of the system buttons:

1. Press and hold any one of the buttons. Do not release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, proceed with Step 1 under "Programming the Universal Remote System."

✍ NOTES

Lighting

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Exterior Lighting

Exterior Lamp Controls

This control is on the instrument panel to the left of the steering column.

Turn the control to the following positions:

⏻ **(Off):** Briefly turn to this position to turn the automatic light control off or on again.

AUTO (Automatic): Automatically turns the exterior lamps on and off, depending on outside lighting.

(Parking Lamps): Turns on the parking lamps including all lamps, except the headlamps.

(Headlamps): Turns on the headlamps together with the parking lamps and instrument panel lights. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

(Front Fog Lamps, If Equipped): Press to turn the lamps on or off.

See *Front Fog Lamps on page 6-7*.

IntelliBeam® System

If equipped, this system turns the vehicle's high-beam headlamps on and off according to surrounding traffic conditions.

The system turns the high-beam headlamps on when it is dark enough and there is no other traffic present.

This light comes on in the instrument cluster when the IntelliBeam system is enabled.

Turning On and Enabling IntelliBeam

To enable the IntelliBeam system, with the turn signal lever in the neutral position, turn the exterior lamp control to AUTO. The blue high-beam on light appears on the instrument cluster when the high beams are on.

Driving with IntelliBeam

The system only activates the high beams when driving over 40 km/h (25 mph).

There is a sensor near the top center of the windshield that automatically controls the system. Keep this area of the windshield clear of debris to allow for best system performance.

The high-beam headlamps remain on, under the automatic control, until one of the following situations occurs:

- The system detects an approaching vehicle's headlamps.
- The system detects a preceding vehicle's taillamps.
- The outside light is bright enough that high-beam headlamps are not required.
- The vehicle's speed drops below 20 km/h (12 mph).

- The IntelliBeam system can be disabled by the High/Low-Beam Changer or the Flash-to-Pass feature. If this happens, the High/Low-Beam Changer must be activated two times within five seconds to reactivate the IntelliBeam system. The instrument cluster light will come on to indicate the IntelliBeam is reactivated. See *Headlamp High/Low-Beam Changer on page 6-3* or *Flash-to-Pass on page 6-3*.

The high beams may not turn off automatically if the system cannot detect another vehicle's lamps because of any of the following:

- The other vehicle's lamps are missing, damaged, obstructed from view, or otherwise undetected.
- The other vehicle's lamps are covered with dirt, snow, and/or road spray.
- The other vehicle's lamps cannot be detected due to dense exhaust, smoke, fog, snow, road spray, mist, or other airborne obstructions.
- The vehicle's windshield is dirty, cracked, or obstructed by something that blocks the view of the light sensor.
- The vehicle is loaded such that the front end points upward, causing the light sensor to aim high and not detect headlamps and taillamps.
- Driving on winding or hilly roads.

The high-beam headlamps may need to be disabled if any of the above conditions exist.

This feature can be turned on or off in vehicle personalization. See *Vehicle Personalization on page 5-40*.

Headlamp High/ Low-Beam Changer

Push the turn signal lever away from you and release to turn the high beams on. To return to low beams, push the lever again or pull it toward you and release.

This indicator light turns on in the instrument cluster when the high-beam headlamps are on.

Flash-to-Pass

The flash-to-pass feature works with the low beams or Daytime Running Lamps (DRL) on or off.

To flash the high beams, pull the turn signal lever all the way toward you, then release it.

Daytime Running Lamps (DRL)

DRL can make it easier for others to see the front of your vehicle during the day. Fully functional DRL are required on all vehicles first sold in Canada.

A light sensor on top of the instrument panel makes the DRL work, so be sure it is not covered.

The DRL system makes the low-beam headlamps come on at a reduced brightness or for vehicles with High Intensity Discharge (HID) headlamps, the DRL lights will come on when the following conditions are met:

- The ignition is in the ON/ RUN mode.
- The exterior lamp control is in AUTO.
- The engine is running.
- The vehicle is not in P (Park).

When the DRL are on, only the low-beam headlamps, at a reduced level of brightness, will be on. The high-beam headlamps, taillamps, sidemarker, instrument panel lamps, and other lamps will not be on.

The headlamps automatically change from DRL to the regular headlamps depending on the darkness of the surroundings. The other lamps that come on with the headlamps will also come on.

When it is bright enough outside, the headlamps go off and the DRL come on.

To turn the DRL lamps off or on again, turn the exterior lamp control to the off position and then release. For vehicles first sold in Canada, the DRL cannot be turned off.

This vehicle may have a DRL disabling function. When the DRL are on and a turn signal is activated, the DRL on that side will be off until the turn signal goes off.

Adaptive Forward Lighting (AFL)

For vehicles with uplevel headlamps, the Adaptive Forward Lighting System (AFL) adjusts the headlamps to provide greater road illumination in various driving conditions.

To enable AFL, set the exterior lamp control to the AUTO position. Moving the control out of the AUTO position will deactivate the system. AFL will operate when the vehicle speed is greater than 3 km/h (2 mph). AFL will not operate when the transmission is in R (Reverse). AFL is not immediately operable after starting the vehicle. Driving a short distance is required to calibrate the AFL. See *Exterior Lamp Controls on page 6-1*.

Curve Lighting

The light beam pivots based on the steering wheel position and vehicle speed of at least 10 km/h (6 mph). The headlamps shine at an angle of up to 15 degrees to the right or left of the direction of travel.

Highway Lighting

If the vehicle is traveling straight continuously at high speeds, the light beam automatically raises slightly to increase the headlamp range.

City Lighting

If the vehicle speed is less than 50 km/h (31 mph), the headlamp range is automatically reduced.

Twilight Sentinel

This feature automatically turns the lamps on and off. A light sensor on top of the instrument panel makes the Twilight Sentinel® work, so be sure it is not covered.

With Twilight Sentinel the following will happen:

- When it is dark enough outside, and the exterior lamp control is in the AUTO position, the Daytime Running Lamps (DRL) go off, and the headlamps and parking lamps come on. The other lamps that come on with the headlamps also come on.
- When it is bright enough outside, the headlamps go off, and the DRL come on, as long as the exterior lamp control is in the AUTO position. See *Exterior Lamp Controls on page 6-1*.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlamp system changes to the DRL. During that delay, the instrument cluster may not be as bright as usual. Make sure the instrument panel brightness control is in full bright position. See *Instrument Panel Illumination Control on page 6-7*.

The vehicle can be idled with the lamps off, even when it is dark outside. After starting the vehicle, turn the exterior lamps control to ⏻, then release it. The lamps will remain off until the control is turned to ⏻ again.

Twilight Sentinel also provides exterior illumination when exiting the vehicle until one of the following occurs:

- The exterior lamp control is moved to ⏻ from the AUTO position or to ≡00≡.
- The delay time selected has elapsed.

See *Vehicle Personalization on page 5-40* to select the delay time. You can also select no delay time.

If the ignition is turned off with the exterior lamp control in the parking lamp or headlamp position, the Twilight Sentinel delay will not occur. The lamps will turn off as soon as the control is turned off.

The regular headlamp system should be turned on when needed.

Lights On with Wipers

If the windshield wipers are activated in daylight with the engine on, and the exterior lamp control is in AUTO, the headlamps, parking lamps, and other exterior lamps come on. The transition time for the lamps coming on varies based on wiper speed. When the wipers are not operating, these lamps turn off. Move the exterior lamp control to ⏻ or ≡00≡ to disable this feature.

Hazard Warning Flashers

⚠ **(Hazard Warning Flashers):** Press this button on the instrument panel, to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble. Press again to turn the flashers off.

Turn and Lane-Change Signals

Move the lever all the way up or down to signal a turn.

An arrow on the instrument cluster will flash in the direction of the turn or lane change.

Raise or lower the lever until the arrow starts to flash to signal a lane change. The turn signal flashes three times.

The lever returns to its starting position when it is released.

If after signaling a turn or lane change the arrow flashes rapidly or does not come on, a signal bulb may be burned out.

Replace any burned out bulbs. If a bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers on page 10-34*.

Front Fog Lamps

The front fog lamp button is on the exterior lamp control on the outboard side of the steering wheel.

The ignition must be on to turn on the fog lamps.

(Front Fog Lamps): Press to turn the fog lamps on or off. An indicator light on the instrument cluster comes on when the fog lamps are on.

The fog lamps come on together with the parking lamps.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Interior Lighting

Instrument Panel Illumination Control

The brightness of the instrument panel lights and steering wheel controls can be adjusted.

(Instrument Panel Brightness): Move and hold the thumbwheel up or down to brighten or dim the lights.

The brightness of the displays automatically adjusts based on outdoor lighting. The instrument panel illumination control will set the lowest level to which the displays will automatically be adjusted.

Cargo Lamp

The cargo lamp is located in the rear compartment and is controlled by the dome lamp. See *Dome Lamps on page 6-8*.

Courtesy Lamps

The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.

Dome Lamps

The dome lamp is in the overhead console.

To change the dome lamp settings, press the following:

(Dome Lamp Override): Turns the lamp off, even when a door is open.

(Door): The lamp comes on when a door is opened.

(On): Turns the dome lamp on.

Reading Lamps

There are reading lamps in the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

- Press or next to each overhead console reading lamp.
- Press the lamp lens on the rear passenger reading lamps.

Lighting Features

Entry Lighting

The headlamps, taillamps, license plate lamps, dome lamps, and most of the interior lights turn on briefly at night, or in areas with limited lighting, when is pressed on the Remote Keyless Entry (RKE) transmitter. After about 30 seconds the exterior lamps turn off, and then the dome and remaining interior lights dim to off. The entry lighting can be manually turned off by changing the ignition out of the off position, or by pressing on the RKE transmitter.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

Exit Lighting

The headlamps, taillamps, parking lamps, and license plate lamps come on at night, or in areas with limited lighting, when a door is opened after the ignition is turned off. The dome lamps also come on when the driver door is opened after the ignition is changed to the off position.

The exterior lamps and dome lamp remain on after the door is closed for a set amount of time, then automatically turn off.

The exterior lamps turn off immediately by turning the exterior lamps control to off.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

Battery Load Management

The vehicle has Electric Power Management (EPM) that estimates the battery's temperature and state of charge. It then adjusts the voltage for best performance and extended life of the battery.

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltmeter gauge or a voltage display on the Driver Information Center (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all of the power needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, fog lamps, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action, this action may be noticeable to the driver. If so, a DIC message might be displayed and it is recommended that the driver reduce the electrical loads as much as possible. See *Battery Voltage and Charging Messages on page 5-29*.

Battery Power Protection

The battery saver feature is designed to protect the vehicle's battery.

If some interior lamps are left on and the ignition is turned off, the battery rundown protection system automatically turns the lamp off after some time.

Exterior Lighting Battery Saver

The exterior lamps turn off about 10 minutes after the ignition is turned off, if the parking lamps or headlamps have been manually left on. This protects against draining the battery. To restart the 10-minute timer, turn the exterior lamp control to the off position and then back to the parking lamp or headlamp position.

To keep the lamps on for more than 10 minutes, the ignition must be in the ACC/ACCESSORY or ON/RUN position.

Infotainment System

Introduction
Infotainment 7-1

Introduction

Infotainment

See the infotainment manual for information on the radio, audio players, phone, navigation system, and voice or speech recognition. It also includes information on settings and downloadable applications (if equipped).

✍ NOTES

Climate Controls

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Air Vents
Air Vents 8-7

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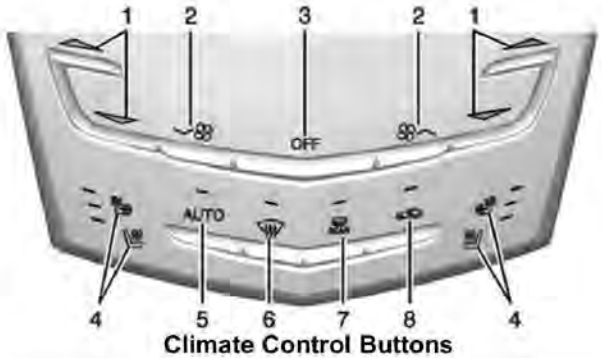
Passenger Compartment Air Filter 8-8

Climate Control Systems

Dual Automatic Climate Control System

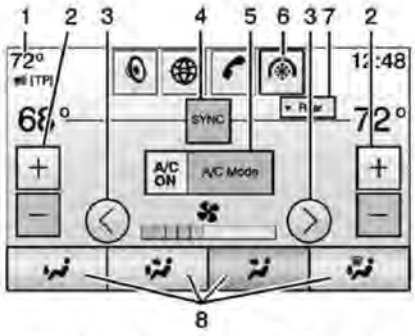
The climate control buttons and the touch screen are used to adjust the heating, cooling, and ventilation.



Climate Control Buttons

1. Driver and Passenger Temperature Controls
2. Fan Control
3. OFF (Fan)
4. Driver and Passenger Heated and Ventilated Seats (If Equipped)
5. AUTO (Automatic Operation)
6. Defrost

7. Rear Window Defogger
8. Recirculation



Climate Touch Screen Controls

1. Outside Temperature Display
2. Driver and Passenger Temperature Controls
3. Fan Control
4. SYNC (Synchronized Temperature)
5. A/C Mode (Air Conditioning)
6. Climate Control Selection (Application Tray Button)
7. Rear (Rear Climate Control Touch Screen)
8. Air Delivery Mode Control

Climate Control Touch Screen

The fan, air delivery mode, air conditioning, driver and passenger temperatures and SYNC settings can be controlled by pressing CLIMATE on the infotainment home screen or the climate button in the touch screen application tray. A selection can then be made on the front climate control page displayed. See the infotainment manual.

Climate Control Status Screen

The climate control status screen appears briefly when the climate control buttons on the faceplate are adjusted. The air delivery mode can be adjusted on the climate control status screen.

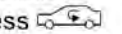
Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation in order to heat or cool the vehicle to the desired temperature.

When the indicator light is on or AUTO is displayed on the touch screen, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and the display will show the selected settings. Auto operation can be turned off individually for climate settings.

For automatic operation:

1. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Then adjust the temperature as needed for best comfort.

To improve fuel efficiency and to cool the vehicle faster, recirculation may be automatically selected in warm weather. The recirculation light will not come on. Press  to select recirculation; press it again to select outside air.

OFF (Fan): Press to turn the fan on or off. The temperature control and air delivery mode can still be adjusted.

△ / ▽ (Driver and Passenger Temperature Controls): The temperature can be adjusted separately for the driver and the passenger. Press to increase or decrease the temperature. Press and hold to rapidly increase or decrease the temperature.

The driver and passenger temperatures can also be adjusted by pressing the controls on the touch screen.

SYNC (Synchronized Temperature): Press SYNC on the touch screen to link all climate zone settings to the driver settings. Adjust the driver side temperature control to change the linked temperature. When the passenger settings are adjusted, the SYNC button is displayed when the temperatures are unlinked.

Manual Operation

∨ or ∧ (Fan Control): Press the fan control buttons or the touch screen fan control, to increase or decrease the fan speed. Press and hold the buttons or the touch screen control to adjust speed more quickly. The fan speed setting displays. Pressing either button cancels automatic fan control and the fan can be controlled manually. Press AUTO to return to automatic operation. To turn off the fan and climate control system, press and hold the fan down button or touch screen fan control until it is off.

Air Delivery Mode Control: When the climate information is displayed, press the desired air delivery mode on the touch screen to change the direction of the airflow. The selected air delivery mode button is lit. Pressing any of the air delivery buttons cancels automatic air delivery control and the direction of the airflow can be controlled manually. Press AUTO to return to automatic operation.

To change the current mode, select one of the following:

(Vent): Air is directed to the instrument panel outlets.

(Bi-Level): Air is divided between the instrument panel outlets and the floor outlets.

(Floor): Air is directed to the floor outlets.

(Defog): Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.

(Defrost): Clears the windshield of fog or frost more quickly. Air is directed to the windshield. Press the button to turn on or off. Changing the air delivery mode also turns the defrost off.

AC Mode (Air Conditioning): Press the AC Mode touch screen control to turn the automatic air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed.

Automatic Air Recirculation: When the AUTO indicator light is on, the air inside the vehicle may automatically recirculate as needed to help quickly cool the inside of the vehicle.

If equipped, an air quality sensor may also activate recirculation when it detects increasing levels of poor quality air outside the vehicle. The air quality sensor will not maintain recirculation for an extended period and may not activate during cold weather. To adjust the sensitivity of the air quality sensor, see "Climate and Air Quality" under *Vehicle Personalization on page 5-40.*

The air quality sensor system does not protect against carbon monoxide (CO), which cannot be seen or smelled. See *Engine Exhaust on page 9-21.*

(Recirculation): Press to alternate between recirculating air inside the vehicle or pulling in outside air. The indicator light on the button is lit when recirculation mode is active. This helps to quickly cool the air inside the vehicle or prevent outside air and odors from entering.

Pressing this button cancels automatic recirculation. Press AUTO to return to automatic operation; recirculation runs automatically as needed.

Manual recirculation mode is not available when in Defrost or Defog modes.

Auto Defog: The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. If the climate control system does not detect possible window fogging, it returns to normal operation. To turn Auto Defog off or on, see "Climate and Air Quality" under *Vehicle Personalization on page 5-40*.

Rear Window Defogger

(Rear Window Defogger): Press to turn the rear window defogger on or off.

The rear window defogger turns off automatically after about 10 minutes. If turned on again, it runs for about five minutes before turning off.

The heated outside mirrors turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirrors.

⚠ Caution

Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect the radio's ability to pick up stations clearly. The repairs would not be covered by the vehicle warranty.

Driver and Passenger Heated and Ventilated Seats (If Equipped): Press or to heat the driver or passenger seat cushion and seatback.

Press or to ventilate the driver or passenger seat. See *Heated and Ventilated Seats on page 1-9*.

Remote Start Climate Control Operation: If equipped, the climate control system may run when the vehicle is started remotely. The system uses the driver's previous settings to heat or cool the inside of the vehicle. The rear defog may come on during remote start based on cold ambient conditions. The rear defog indicator light does not come on during a remote start. If the vehicle has heated or ventilated seats, they may come on during a remote start. See *Remote Vehicle Start on page 2-8* and *Heated and Ventilated Seats on page 1-9*.

The rear window defogger turns on if it is cold outside.

Sensor

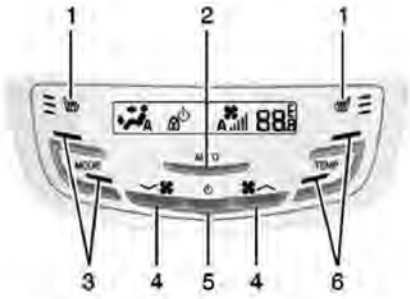
The solar sensor, located on top of the instrument panel near the windshield, monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

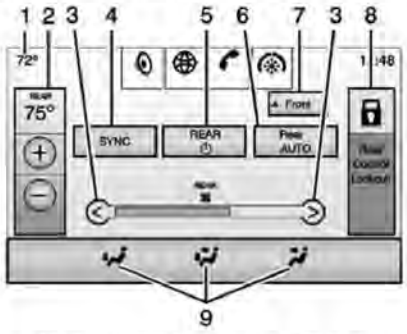
Rear Climate Control System

If equipped with a rear climate control system, the settings can be adjusted with the rear climate control buttons and the touch screen.



Rear Climate Control Buttons

1. Heated Rear Seats (If Equipped)
2. AUTO (Automatic Operation)
3. Air Delivery Mode Control
4. Fan Control
5. ⏻ (On/Off)
6. TEMP (Temperature Control)



Rear Climate Touch Screen Controls

1. Outside Temperature Display
2. Rear Climate Temperature Control
3. Fan Control
4. SYNC (Synchronized Temperatures)
5. REAR ⏻ (On/Off)
6. Rear AUTO (Automatic Operation)
7. Front (Front Climate Control Touch Screen)
8. Rear Control Lockout
9. Air Delivery Mode Control

Rear: Press this button on the front climate control touch screen to open the rear climate control screen. The rear climate control settings can now be adjusted from the front passenger area.

⏻ (On/Off): Press ⏻ or REAR ⏻ to turn the rear climate control on or off. The rear climate control system can also be turned off by pressing the fan down button until the system turns off. If the rear climate control is turned off using REAR ⏻ on the touch screen, the ⏻ button on the rear climate control faceplate must be pressed twice to turn the system back on.

SYNC: Press the SYNC button on the touch screen to match the rear climate control temperature to the front climate control driver temperature. The SYNC button will be lit. Press the TEMP, MODE, or AUTO button twice to unlink the set driver and rear temperatures. The SYNC button turns off.

Rear Control Lockout: Press to lock or unlock control of the rear climate control system from the rear seat passengers. When locked the rear climate control can only be adjusted from the front seat.

Automatic Operation

Rear AUTO: Press to turn on or off. The air delivery and fan speed are controlled automatically. The AUTO indicator appears on the display. If any of the climate control settings are manually adjusted, this cancels full automatic operation.

Manual Operation

< > (Fan Control): Press briefly or press and hold the rear climate control buttons or touch screen to increase or decrease the airflow. Pressing > when the system is off will turn the system on. The air delivery mode remains in its previous setting.

+/− (Temperature Control): Press briefly or press and hold the rear temperature control buttons or touch screen to adjust the rear passenger temperature. Press + for warmer air and press − for cooler air.

/ / (Air Delivery Mode Control): Press the desired mode button on the touch screen or the MODE button on the rear faceplate to change the direction of the airflow in the rear seating area.

or (Heated Rear Seats, If Equipped): Press or to heat the left or right outboard seat cushion and seatback. See *Heated Rear Seats on page 3-11*.

Air Vents

Move the sliding knob on the air outlets up and down or left and right to direct the airflow. Use the thumbwheels near the air outlets to open or close off the airflow.

Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windshield that could block the flow of air into the vehicle.
- Keep the path under the front seats clear of objects to help circulate the air inside the vehicle more effectively.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.
- Do not insert any objects in the outlets, as failure of the mechanism may occur.

Maintenance

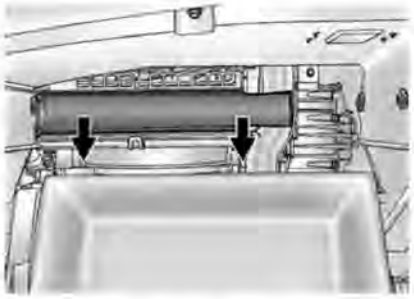
Passenger Compartment Air Filter

The filter removes dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle.

The filter should be replaced as part of routine scheduled maintenance, see *Maintenance Schedule on page 11-4*. To find out what type of filter to use, see *Maintenance Replacement Parts on page 11-14*.

1. Open the glove box completely and remove the four screws along the upper portion of the glove box.
2. When released, lower the upper portion of the glove box.
3. Locate the service door for the passenger compartment air filter.

4. Release the two latches holding the service door. Lower the service door.



5. Remove the old air filter.
6. Install the new air filter.
7. Close the service door and latches.
8. Reinstall the upper portion of the glove box.

See your dealer if additional assistance is needed.

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Driving Information

Distracted Driving

Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgment and do not let other activities divert your attention away from the road. Many local governments have enacted laws regarding driver distraction. Become familiar with the local laws in your area.

To avoid distracted driving, always keep your eyes on the road, hands on the wheel, and mind on the drive.

- Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.
- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.
- Become familiar with vehicle features before driving, such as programming favorite radio stations and adjusting climate control and seat settings. Program all trip information into any navigation device prior to driving.
- Wait until the vehicle is parked to retrieve items that have fallen to the floor.
- Stop or park the vehicle to tend to children.
- Keep pets in an appropriate carrier or restraint.
- Avoid stressful conversations while driving, whether with a passenger or on a cell phone.

⚠ Warning

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Refer to the Infotainment manual for more information on using that system, including pairing and using a cell phone

Defensive Driving

Defensive driving means "always expect the unexpected." The first step in driving defensively is to wear the safety belt. See *Safety Belts on page 3-12*.

- Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready.
- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

Drunk Driving

Death and injury associated with drinking and driving is a global tragedy.

⚠ Warning

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking.

Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power brake assist but it will be used when the brake is applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

Steering

Hydraulic Power Steering

This vehicle has hydraulic power steering. It may require maintenance. See *Power Steering Fluid on page 10-18*.

If power steering assist is lost because the engine stops or because of a system malfunction, the vehicle can be steered but may require increased effort. See your dealer if there is a problem.

⚠ Caution

If the steering wheel is turned until it reaches the end of its travel, and is held in that position for more than 15 seconds, damage may occur to the power steering system and there may be loss of power steering assist.

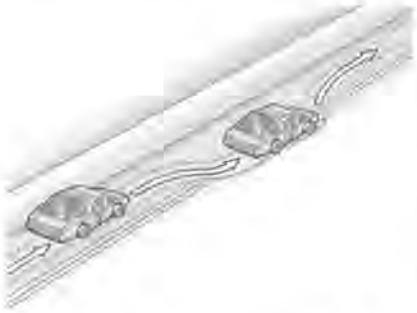
Curve Tips

- Take curves at a reasonable speed.
- Reduce speed before entering a curve.
- Maintain a reasonable steady speed through the curve.
- Wait until the vehicle is out of the curve before accelerating gently into the straightaway.

Steering in Emergencies

- There are some situations when steering around a problem may be more effective than braking.
- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- Antilock Brake System (ABS) allows steering while braking.

Off-Road Recovery



The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

1. Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.
2. Turn the steering wheel about one-eighth of a turn, until the right front tire contacts the pavement edge.
3. Turn the steering wheel to go straight down the roadway.

Loss of Control

Skidding

There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid — wheels are not rolling.
- Steering or Cornering Skid — too much speed or steering in a curve causes tires to slip and lose cornering force.
- Acceleration Skid — too much throttle causes the driving wheels to spin.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

If the vehicle starts to slide, follow these suggestions:

- Ease your foot off the accelerator pedal and steer the way you want the vehicle to go. The vehicle may straighten out. Be ready for a second skid if it occurs.
- Slow down and adjust your driving according to weather conditions. Stopping distance can be longer and vehicle control can be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognize warning clues — such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.
- Try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide.

Remember: Antilock brakes help avoid only the braking skid.

Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

⚠ Warning

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

(Continued)

Warning (Continued)

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

Hydroplaning

Hydroplaning is dangerous. Water can build up under the vehicle's tires so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When the vehicle is hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. The best advice is to slow down when the road is wet.

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires on page 10-42*.
- Turn off cruise control.

Highway Hypnosis

Always be alert and pay attention to your surroundings while driving. If you become tired or sleepy, find a safe place to park the vehicle and rest.

Other driving tips include:

- Keep the vehicle well ventilated.
- Keep the interior temperature cool.

- Keep your eyes moving — scan the road ahead and to the sides.
- Check the rearview mirror and vehicle instruments often.

Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips for driving in these conditions include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

⚠ Warning

Using the brakes to slow the vehicle on a long downhill slope can cause brake overheating, can reduce brake performance, and

(Continued)

Warning (Continued)

could result in a loss of braking. Shift the transmission to a lower gear to let the engine assist the brakes on a steep downhill slope.

⚠ Warning

Coasting downhill in N (Neutral) or with the ignition off is dangerous. This can cause overheating of the brakes and loss of steering. Always have the engine running and the vehicle in gear.

- Stay in your own lane. Do not swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- Be alert on top of hills; something could be in your lane (stalled car, accident).
- Pay attention to special road signs (falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Drive carefully when there is snow or ice between the tires and the road, creating less traction or grip. Wet ice can occur at about 0°C (32°F) when freezing rain begins to fall, resulting in even less traction. Avoid driving on wet ice or in freezing rain until roads can be treated with salt or sand.

Drive with caution, whatever the condition. Accelerate gently so traction is not lost. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick, so there is even less traction.

Try not to break the fragile traction. If you accelerate too fast, the drive wheels will spin and polish the surface under the tires even more.

If equipped, Traction Control should be turned on. See *Traction Control/ Electronic Stability Control on page 9-30*.

The Antilock Brake System (ABS) improves vehicle stability during hard stops on slippery roads, but apply the brakes sooner than when on dry pavement.

Allow greater following distance on any slippery road and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.

See *Antilock Brake System (ABS) on page 9-27*.

Turn off cruise control on slippery surfaces.

Blizzard Conditions

Being stuck in snow can be a serious situation. Stay with the vehicle unless there is help nearby. If possible, use Roadside Service. See *Roadside Service on page 13-5*. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to an outside mirror.

⚠ Warning

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO) which

(Continued)

Warning (Continued)

cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle is stuck in the snow:

- Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust pipe.
- Check again from time to time to be sure snow does not collect there.
- Open a window about 5 cm (2 in) on the side of the vehicle that is away from the wind to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that circulates the air inside the

(Continued)

Warning (Continued)

vehicle and set the fan speed to the highest setting. See "Climate Control Systems".

For more information about carbon monoxide, see *Engine Exhaust on page 9-21*.

To save fuel, run the engine for only short periods as needed to warm the vehicle and then shut the engine off and close the window most of the way to save heat. Repeat this until help arrives but only when you feel really uncomfortable from the cold. Moving about to keep warm also helps.

If it takes some time for help to arrive, now and then when you run the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible to save fuel.

If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method. See *Traction Control/Electronic Stability Control on page 9-30*.

⚠ Warning

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 56 km/h (35 mph).

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a low forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see *Towing the Vehicle on page 10-84*.

Vehicle Load Limits

It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo and all nonfactory-installed options. Two labels on the vehicle show how much weight it may properly carry, the Tire and Loading Information label and the Certification label.

⚠ Warning

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the

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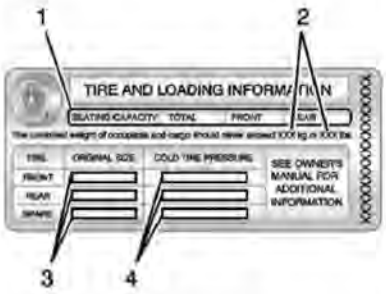
Warning (Continued)

vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Tire and Loading Information Label



Label Example

A vehicle-specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar). With the driver door open, the label is attached near the door lock post. The Tire and Loading Information label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilograms and pounds.

The Tire and Loading Information label also shows the tire size of the original equipment tires (3) and the recommended cold tire inflation pressures (4). For more information on tires and inflation see *Tires on page 10-42* and *Tire Pressure on page 10-49*.

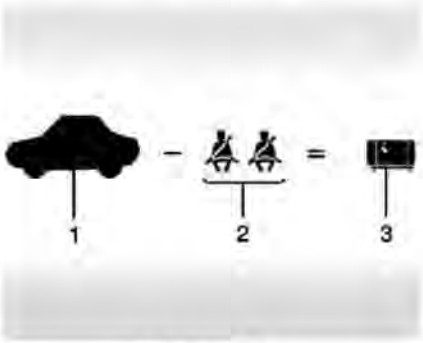
There is also important loading information on the Certification label. It tells you the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight

Rating (GAWR) for the front and rear axle. See "Certification Label" later in this section.

"Steps for Determining Correct Load Limit–

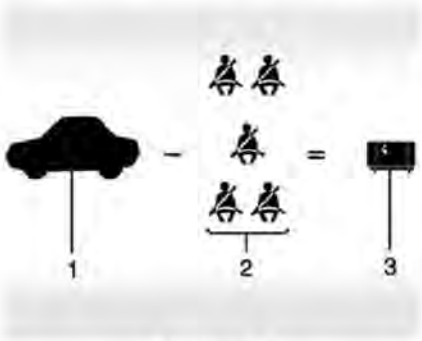
1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.)
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle."

See *Trailer Towing on page 9-65* for important information on towing a trailer, towing safety rules and trailering tips.



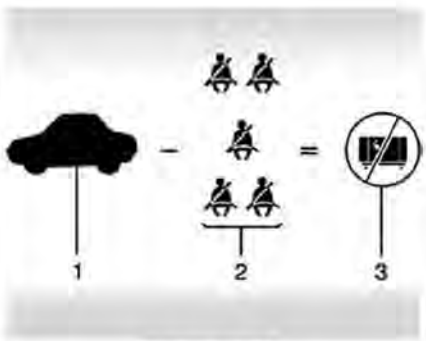
Example 1

1. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).
3. Available Occupant and Cargo Weight = 317 kg (700 lbs).



Example 2

1. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).
3. Available Cargo Weight = 113 kg (250 lbs).

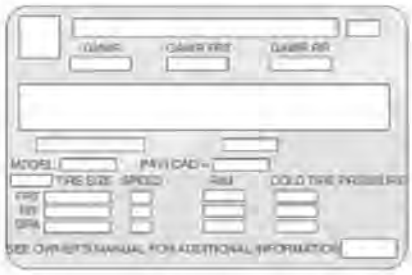


Example 3

1. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).
3. Available Cargo Weight = 0 kg (0 lbs).

Refer to the vehicle's Tire and Loading Information label for specific information about the vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's capacity weight.

Certification Label



Label Example

A vehicle-specific Certification/ Tire label is attached to the driver side center pillar (B-pillar). The label shows the size of the vehicle's original tires and the inflation pressures needed to obtain the gross weight capacity of the vehicle. This is called

Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tire label also tells you the maximum weights for the front and rear axles, called Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, you need to go to a weigh station and weigh the vehicle. Your dealer can help you with this. Be sure to spread out the load equally on both sides of the center line.

Never exceed the GVWR for the vehicle, or the GAWR for either the front or rear axle.

If the vehicle is carrying a heavy load, it should be spread out. See "Steps for Determining Correct Load Limit" earlier in this section.

⚠ Warning

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Your warranty does not cover parts or components that fail because of overloading.

The label will help you decide how much cargo and installed equipment your vehicle can carry.

Using heavier suspension components to get added durability might not change your weight ratings. Ask your dealer to help you load your vehicle the right way.

If you put things inside your vehicle – like suitcases, tools, packages, or anything else – they will go as fast as the vehicle goes. If you have to stop or turn quickly, or if there is a crash, they will keep going.

⚠ Warning

Things inside the vehicle can strike and injure people in a sudden stop or turn, or in a crash.

- Put things in the cargo area of the vehicle. In the cargo area, put them as far forward as possible. Try to spread the weight evenly.
- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.

(Continued)

Warning (Continued)

- Do not leave an unsecured child restraint in the vehicle.
- Secure loose items in the vehicle.
- Do not leave a seat folded down unless needed.

Starting and Operating

New Vehicle Break-In

⚠ Caution

The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:

- Do not drive at any one constant speed, fast or slow, for the first 805 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.
- Avoid making hard stops for the first 322 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this

(Continued)

Caution (Continued)
breaking-in guideline every time you get new brake linings. Following break-in, engine speed and load can be gradually increased.

Adjustable Throttle and Brake Pedal

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.

The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

Adjust the throttle and brake pedals while the vehicle is in P (Park) without pressing on the pedals. The pedals cannot be adjusted while the vehicle is in R (Reverse) or when cruise control is engaged. The throttle and brake pedals can also be adjusted while driving.

Ignition Positions

The vehicle has an electronic keyless ignition with pushbutton start.

Pressing the button cycles it through three modes, ACC/ACCESSORY, ON/RUN/START and STOPPING THE ENGINE/OFF.

If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the keyless entry system. See *Key and Lock Messages on page 5-33*.

To shift out of P (Park), the vehicle must be in ON/RUN mode and the brake pedal must be applied.

STOPPING THE ENGINE/OFF (No Indicator Light): When the vehicle is stopped, press the ENGINE START/STOP button once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 9-19*.

If the vehicle is not in P (Park), the ignition will return to ACC/ ACCESSORY and display the message SHIFT TO PARK in the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 5-26*. When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop, shift to P (Park), and turn the ignition to OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the OFF position.
4. Set the parking brake. See *Parking Brake on page 9-28*.

⚠ Warning

Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over, and must be shut off while driving, press and hold the ENGINE START/ STOP button for longer than two seconds, or press twice in five seconds.

ACC/ACCESSORY (Amber Indicator Light): This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied, will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ ACCESSORY to OFF after ten minutes to prevent battery run down.

ON/RUN/START (Green Indicator Light): This mode is for driving and starting. With the ignition off, and the brake pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Gasoline Engine on page 9-17*. The ignition will then remain in ON/RUN.

Service Only Mode

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off, and the brake pedal not applied, pressing and holding the button for more than five seconds will place the vehicle in Service Only Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Only Mode. Push the button again to turn the vehicle off.

Starting the Gasoline Engine

Place the transmission in the proper gear by moving the shift lever to P (Park) or N (Neutral). To restart the engine when the vehicle is already moving, use N (Neutral).

⚠ Caution

Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.

⚠ Caution

If the steering wheel is turned until it reaches the end of its travel, and is held in that position while starting the vehicle, damage may occur to the hydraulic power steering system and there may be loss of power steering assist.

The Remote Keyless Entry (RKE) transmitter must be inside the vehicle for the ignition to work.

Cell phone chargers can interfere with the operation of the Keyless Access System. Battery chargers should not be plugged in when starting or turning off the engine.

To start the vehicle:

Starting Procedure

1. With the brake pedal applied, press the ENGINE START/ STOP button on the instrument panel. See *Ignition Positions on page 9-15*.

2. When the engine begins cranking, let go of the button and the engine cranks automatically until it starts.

   If the transmitter is not in the vehicle or something is interfering with the transmitter, the Driver Information Center (DIC) will display NO REMOTE DETECTED. See *Driver Information Center (DIC) on page 5-26.*

   If the battery in the RKE transmitter needs replacing, the DIC displays REPLACE BATTERY IN REMOTE KEY. The vehicle can still be driven. See *Remote Keyless Entry (RKE) System Operation on page 2-3.*

3. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

4. If the engine does not start and no DIC message is displayed, wait 15 seconds before trying again to let the cranking motor cool down.

   If the engine does not start after five to 10 seconds, especially in very cold weather (below −18°C or 0°F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor while cranking for up to 15 seconds.

⚠ Caution

Cranking the engine for long periods of time, by pressing the ENGINE START/STOP button immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.

When the engine starts, let go of the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine.

The vehicle has a Computer-Controlled Cranking System. This feature assists in starting the engine and protects components. Once cranking has been initiated, the engine continues cranking for a few seconds or until the vehicle starts. If the engine does not start, cranking automatically stops after 15 seconds to prevent cranking motor damage. To prevent gear damage, this system also prevents cranking if the engine is already running.

⚠ Caution

If you add electrical parts or accessories, you could change the way the engine operates. Any resulting damage would not be

(Continued)

Caution (Continued)

covered by the vehicle warranty. See *Add-On Electrical Equipment on page 9-69*.

Engine Heater

The engine coolant heater, if available, can help in cold weather conditions at or below −18°C (0°F) for easier starting and better fuel economy during engine warm-up. Plug in the coolant heater at least four hours before starting the vehicle. An internal thermostat in the plug end of the cord will prevent engine coolant heater operation at temperatures above −18°C (0°F).

To Use the Engine Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. The cord is located near the air cleaner.
3. Plug it into a normal, grounded 110-volt AC outlet.

⚠ Warning

Plugging the cord into an ungrounded outlet could cause an electrical shock. Also, the wrong kind of extension cord could overheat and cause a fire. You could be seriously injured. Plug the cord into a properly grounded three-prong 110-volt AC outlet. If the cord will not reach, use a heavy-duty three-prong extension cord rated for at least 15 amps.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts. If you do not it could be damaged.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

Retained Accessory Power (RAP)

These accessories can be used after the engine is turned off:

- Infotainment system (up to 10 minutes or until the driver door is opened).
- Power windows, sunroof (if equipped), and power outlets (up to 10 minutes or until any door is opened).

Shifting Into Park

1. Hold the brake pedal down and set the parking brake. See *Parking Brake on page 9-28*.
2. Move the shift lever into P (Park) by pushing the lever all the way toward the front of the vehicle.
3. Turn the ignition off.

Leaving the Vehicle with the Engine Running

⚠ Warning

It can be dangerous to leave the vehicle with the engine running. It could overheat and catch fire.

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 9-19*. If you are towing a trailer, see *Driving Characteristics and Towing Tips on page 9-61*.

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is firmly set before you leave it. After you have moved the shift lever into P (Park), hold down the regular brake pedal. See if you can move the shift lever away from P (Park) without first pulling it toward you. If you can, it means that the shift lever was not fully locked into P (Park).

Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see "Shifting Into P (Park)" listed previously.

If torque lock does occur, your vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 9-61*.

Shifting out of Park

This vehicle is equipped with an automatic transmission shift lock control system. The shift lock control is designed to prevent movement of the shift lever out of P (Park), unless the ignition is in ON/RUN and the brake pedal is applied.

The shift lock control is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting on page 10-80*.

To shift out of P (Park):

1. Apply the brake pedal.
2. Press the ENGINE START/ STOP button.
3. Press the shift lever button.
4. Move the shift lever to the desired position.

If you still are unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.
3. Move the shift lever to the desired position.

If you still cannot move the shift lever from P (Park), consult your dealer or a professional towing service.

Parking over Things That Burn

⚠ Warning

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Engine Exhaust

⚠ Warning

Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or tail pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.
- The vehicle exhaust system has been modified, damaged, or improperly repaired.

(Continued)

Warning (Continued)

- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

Running the Vehicle While Parked

It is better not to park with the engine running.

If the vehicle is left with the engine running, follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park on page 9-19* and *Engine Exhaust on page 9-21*.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-61*.

Automatic Transmission

There are several different positions for the shift lever.

P (Park): This position locks the front wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

⚠ Warning

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 9-19* and *Driving Characteristics and Towing Tips on page 9-61*.

Make sure the shift lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. You must fully apply the regular brakes first and then press the shift lever button before you can shift from P (Park) when the ignition is in ON/RUN. If you cannot shift out of P (Park), ease pressure on the shift lever and push the shift lever all the way into P (Park) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See *Shifting out of Park on page 9-20*.

⚠ Caution

Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.

R (Reverse): Use this gear to back up.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging your transmission. See *If the Vehicle Is Stuck on page 9-9*.

N (Neutral): In this position, the engine does not connect with the wheels. To restart when the vehicle is already moving, use N (Neutral) only. You can also use N (Neutral) when the vehicle is being towed.

⚠ Warning

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

> **⚠ Caution**
>
> Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

D (Drive): This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Going less than 35 mph (55 km/h), push the accelerator pedal about halfway down.
- Going about 35 mph (55 km/h) or more, push the accelerator all the way down.

  The transmission will shift down to a lower gear and have more power.

Downshifting the transmission in slippery road conditions could result in skidding. See "Skidding" under *Loss of Control on page 9-5*

> **⚠ Caution**
>
> Spinning the tires or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. The repair will not be covered by the vehicle warranty. If you are stuck, do not spin the tires. When stopping on a hill, use the brakes to hold the vehicle in place.

Manual Mode

Driver Shift Control (DSC)

> **⚠ Caution**
>
> Driving with the engine at a high rpm without upshifting while using Driver Shift Control (DSC), could
>
> (Continued)

> **Caution (Continued)**
>
> damage the vehicle. Always upshift when necessary while using DSC.

DSC allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).

   If you do not move the shift lever forward or rearward, the vehicle will be in Sport Mode. When you are in Sport Mode the vehicle will still shift automatically. The transmission may remain in a gear longer than it would in the normal driving mode based on braking, throttle input, and vehicle lateral acceleration.

SPORT MODE ON will be displayed in the DIC. See *Ride Control System Messages on page 5-37*. The word "sport" will display below the odometer. The gear position will also be indicated in the tachometer.

Within Sport Mode there is a further performance feature called Performance Mode Lift Foot (PMLF) Mode. The feature is activated automatically when sports oriented driving is detected, based on cornering and on/off throttle application. PMLF allows the transmission to hold the current gear instead of upshifting when the throttle is lifted.

2. To enter M (Manual Mode), press the shift lever forward to upshift or rearward to downshift.

   An M will be displayed in the DIC.

3. To return to Sport Mode from M (Manual Mode), press and briefly hold the shift lever forward.

Gear position is indicated in the bottom right corner of the display area in the instrument cluster. The number indicates the requested gear range when moving the shift lever forward or rearward.

While using the DSC feature, the vehicle will have firmer, quicker shifting. You can use this for sport driving or when climbing or descending hills, to stay in gear longer, or to downshift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine revolutions per minute (rpm). The transmission will not automatically shift to the next lower gear if the engine rpm is too high, nor to the next higher gear when the maximum engine rpm is reached.

If shifting is prevented for any reason, the currently selected gear will flash multiple times, indicating that the transmission has not shifted gears.

While in the DSC mode, the transmission will automatically downshift when the vehicle comes to a stop. This will allow for more power during take-off.

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into second gear. A higher gear ratio allows you to gain more traction on slippery surfaces.

Fuel Economy Mode

Driving habits can affect fuel mileage. For driving tips to get the best fuel economy possible, see *Driving for Better Fuel Economy on page 1-21*.

The vehicle may have a fuel economy mode. When engaged, fuel economy mode can improve the vehicle's fuel economy.

Pressing the eco button by the shift lever will engage fuel economy mode. When activated, the eco light in the instrument cluster will come on. See *Fuel Economy Light on page 5-24*. Pressing the button a second time will turn fuel economy mode off.

When fuel economy mode is on:

- The transmission will upshift sooner, and downshift later.
- The torque converter will lock up sooner, and stay on longer.
- The gas pedal will be less sensitive.
- The vehicle's computers will more aggressively shut off fuel to the engine under deceleration.
- The engine operates at lower rpm's in fuel economy mode, which can increase noise and vibration. This is normal.

Drive Systems

All-Wheel Drive

Vehicles with this feature transfer torque as required to the rear wheels. It is fully automatic, and adjusts itself as needed for road conditions.

AWD system performance will be automatically reduced when you use the compact spare. To restore full AWD operation and prevent excessive wear on the system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire on page 10-79*.

Brakes

Antilock Brake System (ABS)

This vehicle has ABS, an advanced electronic braking system that helps prevent a braking skid.

When the vehicle begins to drive away, ABS checks itself.
A momentary motor or clicking noise might be heard while this test is going on, and it might even be noticed that the brake pedal moves a little. This is normal.

If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light on page 5-20*.

If driving safely on a wet road and it becomes necessary to slam on the brakes and continue braking to avoid a sudden obstacle, a computer senses the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help you steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You may hear the ABS pump or motor operating and feel the brake pedal pulsate. This is normal.

Braking in Emergencies

ABS allows you to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

Parking Brake

The Electric Parking Brake (EPB) switch is on the center console. The EPB can always be activated, even if the ignition is off. To prevent draining the battery, avoid repeated cycles of the EPB when the engine is not running.

The system has a red parking brake status light and an amber parking brake warning light. See *Electric Parking Brake Light on page 5-19* and *Service Electric Parking Brake Light on page 5-20*. There are also parking brake-related Driver Information Center (DIC) messages. See *Brake System Messages on page 5-29*. In case of insufficient electrical power, the EPB cannot be applied or released.

Before leaving the vehicle, check the red parking brake status light to ensure that the parking brake is applied.

EPB Apply

To apply the EPB:

1. Be sure the vehicle is at a complete stop.
2. Lift up the EPB switch momentarily.

The red parking brake status light will flash and then stay on once the EPB is fully applied. If the red parking brake status light flashes continuously, then the EPB is only partially applied or there is a problem with the EPB. A DIC message will display. Release the EPB and try to apply it again. If the light does not come on, or keeps flashing, have the vehicle serviced. Do not drive the vehicle if the red parking brake status light is flashing. See your dealer. See *Electric Parking Brake Light on page 5-19*.

If the amber parking brake warning light is on, lift up on the EPB switch and hold it up. Continue to hold the switch until the red parking brake status light remains on. If the amber parking brake warning light remains on, see your dealer.

If the EPB is applied while the vehicle is moving, the vehicle will decelerate as long as the switch is held up. If the switch is held up until the vehicle comes to a stop, the EPB will remain applied.

The vehicle may automatically apply the EPB in some situations when the vehicle is not moving. This is normal, and is done to periodically check the correct operation of the EPB system.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

EPB Release

To release the EPB:

1. Place the ignition in the ACC/ ACCESSORY or ON/RUN position.
2. Apply and hold the brake pedal.
3. Push down momentarily on the EPB switch.

The EPB is released when the red parking brake status light is off.

If the amber parking brake warning light is on, release the EPB by pushing down on the EPB switch and holding it down. Continue to hold the switch until the red parking brake status light is off. If either light stays on after release is attempted, see your dealer.

⚠ Caution

Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.

Automatic EPB Release

The EPB will automatically release if the vehicle is running, placed into gear, and an attempt is made to drive away. Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

If parking on a hill, or if the vehicle is pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-61*.

Brake Assist

The Brake Assist feature is designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature uses the stability system hydraulic brake control module to supplement the power brake system under conditions where the driver has quickly and forcefully applied the brake pedal in an attempt to quickly stop or slow down the vehicle.

The stability system hydraulic brake control module increases brake pressure at each corner of the vehicle until the ABS activates. Minor brake pedal pulsation or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates The Brake Assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

Hill Start Assist (HSA)

This vehicle has an HSA feature, which may be useful when the vehicle is stopped on a grade. This feature is designed to prevent the vehicle from rolling, either forward or rearward, during vehicle drive off.

After the driver completely stops and holds the vehicle in a complete standstill on a grade, HSA will be automatically activated. During the transition period between when the driver releases the brake pedal and starts to accelerate to drive off on a grade, HSA holds the braking pressure for a maximum of two seconds to ensure that there is no rolling. The brakes will automatically release when the accelerator pedal is applied within the two-second window. It will not activate if the vehicle is in a drive gear and facing downhill, or if the vehicle is facing uphill and in R (Reverse).

Ride Control Systems

Traction Control/ Electronic Stability Control

System Operation

The vehicle has a Traction Control System (TCS) and StabiliTrak®, an electronic stability control system. These systems help limit wheel slip and assist the driver in maintaining control, especially on slippery road conditions.

TCS activates if it senses that any of the drive wheels are spinning or beginning to lose traction. When this happens, TCS applies the brakes to the spinning wheels and reduces engine power to limit wheel spin.

StabiliTrak activates when the vehicle senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak selectively applies braking pressure to any one of the

vehicle wheel brakes to assist the driver in keeping the vehicle on the intended path. Trailer Sway Control (TSC) is also on automatically when the vehicle is started. See *Trailer Sway Control (TSC) on page 9-68.*

If cruise control is being used and traction control or StabiliTrak begins to limit wheel spin, cruise control will disengage. Cruise control may be turned back on when road conditions allow.

Both systems come on automatically when the vehicle is started and begins to move. The systems may be heard or felt while they are operating or while performing diagnostic checks. This is normal and does not mean there is a problem with the vehicle.

It is recommended to leave both systems on for normal driving conditions, but it may be necessary to turn TCS off if the vehicle gets stuck in sand, mud, ice, or snow. See *If the Vehicle Is Stuck on page 9-9* and "Turning the Systems Off and On" later in this section.

The indicator light for both systems is in the instrument cluster. This light will:

- Flash when TCS is limiting wheel spin.
- Flash when StabiliTrak is activated.
- Turn on and stay on when either system is not working.

If either system fails to turn on or to activate, a message displays in the Driver Information Center (DIC), and comes on and stays on to indicate that the system is inactive and is not assisting the driver in maintaining control. The vehicle is safe to drive, but driving should be adjusted accordingly.

If comes on and stays on:

1. Stop the vehicle.
2. Turn the engine off and wait 15 seconds.
3. Start the engine.

Drive the vehicle. If comes on and stays on, the vehicle may need more time to diagnose the problem. If the condition persists, see your dealer.

Turning the Systems Off and On

OFF

The button for TCS and StabiliTrak is on the center stack.

⚠ Caution

Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle driveline could be damaged.

To turn off only TCS, press and release the OFF button. The traction off light displays in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-37.*

To turn TCS on again, press and release the OFF button. The traction off light displayed in the instrument cluster will turn off. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-37.*

If TCS is limiting wheel spin when the OFF button is pressed, the system will not turn off until the wheels stop spinning.

To turn off both TCS and StabiliTrak, press and hold the OFF button until the traction off light and the StabiliTrak OFF light come on and stay on in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-37.*

To turn TCS and StabiliTrak on again, press and release the OFF button. The traction off light and the StabiliTrak OFF light in the instrument cluster turn off. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-37.*

Adding accessories can affect the vehicle performance. See *Accessories and Modifications on page 10-3.*

Limited-Slip Rear Axle

Vehicles with a limited-slip rear axle can give more traction on snow, mud, ice, sand, or gravel. When traction is low, this feature allows the drive wheel with the most traction to move the vehicle. The limited-slip rear axle also gives the driver enhanced control when cornering hard or completing a maneuver, such as a lane change.

Selective Ride Control

The vehicle may have a ride control system called Selective Ride Control. The setting can be changed at any time. Based on road conditions, steering wheel angle, and the vehicle speed, the system automatically adjusts to provide the best handling while providing a smooth ride. The Tour and Sport modes will feel similar on a smooth road.

Tour: Use for normal city and highway driving. This setting provides a smooth, soft ride.

Sport: Use where road conditions or personal preference demand more control. This setting provides more "feel," or response to road conditions through increased steering effort and suspension control. Transmission shift points and shift firmness are also enhanced.

The vehicle is normally in the Tour Mode. To switch from Tour Mode to Sport Mode, move the shift lever to the left while the transmission is in D (Drive). Sport Mode is automatically engaged when the shift lever is moved to the left. Moving the shift lever forward or rearward will put the transmission in the Manual (M) Mode.

The Driver Information Center (DIC) will display SPORT MODE ON when the Sport Mode has been activated. When the shift lever is moved to the right in D (Drive), the system will revert back to Tour Mode. See *Manual Mode on page 9-24* under Automatic Transmission.

If there is a problem detected with Selective Ride Control, SERVICE SUSPENSION SYSTEM displays on the DIC. See *Ride Control System Messages on page 5-37*. Driving should be adjusted accordingly.

Cruise Control

⚠ Warning

Cruise control can be dangerous where you cannot drive safely at a steady speed. Do not use the cruise control on winding roads or in heavy traffic.

Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

With cruise control, a speed of about 40 km/h (25 mph) or more can be maintained without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

If the brakes are applied, the cruise control disengages.

If the StabiliTrak® system begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *Traction Control/Electronic Stability Control on page 9-30*. If a collision alert occurs when cruise control is activated, cruise control is disengaged. See *Forward Collision Alert (FCA) System on page 9-49*. When road conditions allow the cruise control to be safely used, you can apply the cruise control again.

(On/Off): Press to turn the system on and off. A white cruise control indicator appears in the instrument cluster when cruise is turned on.

+RES (Resume/Accelerate): Press the control up briefly to make the vehicle resume to a previously set speed, or press and hold to accelerate. If cruise control is already active, use to increase vehicle speed.

SET− (Set/Coast): Press the control down briefly to set the speed and activate cruise control. If cruise control is already active, use to decrease vehicle speed.

(Cancel): Press to disengage cruise control without erasing the set speed from memory.

Setting Cruise Control

If the cruise button is on when not in use, it could get pressed and go into cruise when not desired. Keep the cruise control button off when cruise is not being used.

1. Press to turn the cruise system on.
2. Get up to the desired speed.
3. Move the control down to SET− and release it.
4. Remove foot from the accelerator.

When the cruise control has been set to the desired speed, the green cruise control indicator appears on the instrument cluster.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle speed reaches about 40 km/h (25 mph) or more, move the control up toward +RES briefly. The vehicle returns to the previous set speed.

Increasing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

- Move the control up toward +RES and hold until the desired speed is reached, then release it.
- To increase vehicle speed in small increments, move the control up toward +RES briefly and then release it. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) faster.

Reducing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

- Move the control toward SET– and hold until the desired lower speed is reached, then release it.
- To decrease the vehicle speed in small increments, move the control toward SET– briefly. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) slower.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previously set cruise speed. While pressing the accelerator pedal or shortly following the release to override cruise control, briefly pressing the SET– button will result in cruise control set to the current vehicle speed.

Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed. When going downhill, you might have to brake or shift to a lower gear to keep the vehicle speed down. If the brake is applied, the cruise control disengages.

Ending Cruise Control

There are three ways to end cruise control:

- Step lightly on the brake pedal.
- Press ⊗ on the steering wheel.
- To turn off the cruise control, press on the steering wheel.

Erasing Speed Memory

The cruise control set speed is erased from memory if is pressed or if the ignition is turned off.

Adaptive Cruise Control

If equipped with Adaptive Cruise Control (ACC), it allows the driver to select the cruise control set speed and following gap. Read this entire section before using this system. The following gap is the following time between your vehicle and a vehicle detected directly ahead in your path moving in the same direction. If no vehicle is detected in your path, ACC works like regular cruise control. ACC uses camera and radar sensors. See *Radio Frequency Statement on page 13-15.*

If a vehicle is detected in your path, ACC can apply acceleration or limited, moderate braking to maintain the selected following gap. To disengage ACC, apply the brake.

If ACC is controlling your vehicle speed when the traction control system (TCS) or electronic stabilty control system activates, the ACC may automatically disengage. See *Traction Control/Electronic Stability Control on page 9-30.* When road conditions allow ACC to be safely used, the ACC can be turned back on.

ACC will not engage if the TCS or StabiliTrak electronic stability control system is disabled.

⚠ Warning

ACC has limited braking ability and may not have time to slow the vehicle down enough to avoid a collision with another vehicle you are following. This can occur when vehicles suddenly slow or stop ahead, or enter your lane. Also see "Alerting the Driver" in this section. Complete attention is always required while driving and

(Continued)

Warning (Continued)

you should be ready to take action and apply the brakes. See *Defensive Driving on page 9-3.*

⚠ Warning

Adaptive Cruise Control will not detect or brake for children, pedestrians, animals, or other objects.

Do not use Adaptive Cruise Control when:

- On winding and hilly roads or when the sensors are blocked by snow, ice, or dirt. The system may not detect a vehicle ahead. Keep the entire front of the vehicle clean.

(Continued)

Warning (Continued)

- Visibility is low, such as in fog, rain, or snow conditions. Adaptive Cruise Control performance is limited under these conditions.
- On slippery roads where fast changes in tire traction can cause excessive wheel slip.

(On/Off): Press to turn the system on or off. A white cruise control indicator comes on.

+RES (Resume/Accelerate): Press the control up briefly to resume to the previous set speed or hold upwards to accelerate. If cruise control is already active, use to increase vehicle speed.

SET– (Set/Coast): Press the control down briefly to set the speed and activate ACC. If cruise control is already active, use to decrease vehicle speed.

(Cancel): Press to disengage ACC without erasing the set speed from memory.

(Follow Distance Gap): Press to select a following gap time (or distance) setting for ACC of Far, Medium, or Near.

Setting Adaptive Cruise Control

If cruise control is on when not in use, the cruise control on/off control could get pressed and cruise control could become active when not desired. Keep the cruise control off when cruise is not being used.

Select the set speed desired for cruise. This is the vehicle speed when no vehicle is detected in its path slower than the set speed.

ACC will not set at a speed less than 25 km/h (16 mph), although it can be resumed when driving at lower speeds.

To set ACC:

1. Press .
2. Get up to the desired speed.
3. Press and release the SET– control on the steering wheel.
4. Remove foot from the accelerator.

After ACC is set, it may immediately apply the brakes if a vehicle ahead is detected closer than the selected following gap.

The ACC indicator displays on the instrument cluster. When the ACC is active, the indicator turns green.

Be mindful of speed limits, surrounding traffic speeds, and weather conditions when selecting the set speed.

Resuming a Set Speed

If the ACC is set at a desired speed and then the brakes are applied, the ACC is disengaged without erasing the set speed from memory.

To begin using ACC again, press +RES up briefly on the steering wheel. The vehicle returns to the previous set speed.

Increasing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the accelerator to get to the higher speed. Press SET– down. Release the control and the accelerator pedal. The vehicle will now cruise at the higher speed.

  When the accelerator pedal is pressed, ACC will not brake because it is overridden. A warning message will appear on the Driver Information Center (DIC). See *Cruise Control Messages on page 5-30*.
- Press and hold +RES up until the desired set speed appears on the display, then release it.
- To increase vehicle speed in small increments, press +RES up briefly. For each press, the vehicle goes to the next 1 km/h (1 mph) faster mark on the speedometer.

When it is determined that there is no vehicle ahead or the vehicle ahead is beyond the selected following gap, then the vehicle speed will increase to the set speed.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster on page 5-10*. The increment value used depends on the units displayed.

Reducing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the brake to get to the desired lower speed. Press SET– down and release the accelerator pedal. The vehicle will now cruise at the lower speed.
- Press and hold SET– down until the desired lower speed is reached, then release it.

- To decrease the vehicle speed in smaller increments, press SET− down briefly. For each press, the vehicle goes to the next 1 km/h (1 mph) slower mark on the speedometer.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster on page 5-10*. The increment value used depends on the units displayed.

Selecting the Follow Distance

When a slower moving vehicle is detected ahead within the selected following gap, ACC will adjust the vehicle's speed and attempt to maintain the follow distance gap selected.

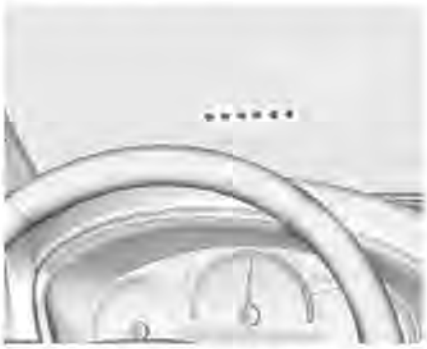
Press on the steering wheel to adjust the following gap. When pressed, the current gap setting displays briefly on the instrument cluster. Subsequent presses cycle the gap button through three settings: Far, Medium, or Near.

When pressed, the current gap setting displays briefly on the instrument cluster. The gap setting will be maintained until it is changed.

Since each gap setting corresponds to a following time (Far, Medium, or Near), the following distance will vary based on vehicle speed. The faster the vehicle speed, the further back your vehicle will follow a vehicle detected ahead. Consider traffic and weather conditions when selecting the following gap. The range of selectable gaps may not be appropriate for all drivers and driving conditions.

Changing the gap setting automatically changes the alert timing sensitivity (Far, Medium, or Near) for the Forward Collision Alert (FCA) feature. See *Forward Collision Alert (FCA) System on page 9-49*.

Alerting the Driver



If ACC is engaged, driver action may be required when ACC cannot apply sufficient braking because of approaching a vehicle too rapidly.

When this condition occurs, six red lights will flash on the windshield and either eight beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. See "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*.

See *Defensive Driving on page 9-3*.

Approaching and Following a Vehicle

The vehicle ahead symbol is in the instrument cluster.

The vehicle ahead symbol only displays when a vehicle is detected in your vehicle's path moving in the same direction.

If this symbol is not displaying, ACC will not respond to or brake to vehicles ahead.

ACC automatically slows the vehicle down and adjusts vehicle speed to follow the vehicle in front at the selected follow gap. The vehicle speed increases or decreases to follow the vehicle in front of you, but will not exceed the set speed. It may apply limited braking, if necessary. When braking is active, the brake lights will come on. The automatic braking may feel or sound different than if the brakes were applied manually. This is normal.

Stationary or Very Slow-Moving Objects

⚠ Warning

Adaptive Cruise Control (ACC) may not detect and react to stopped or slow-moving vehicles ahead of you. For example, the system may not brake for a vehicle that it has never detected moving. This can occur in stop-and-go traffic or when a vehicle suddenly appears due to a vehicle ahead changing lanes. Your vehicle may not stop and could cause a crash. Use caution when using ACC. Your complete attention is always required while driving and you should be ready to take action and apply the brakes.

ACC Automatically Disengages

ACC may automatically disengage and the driver will need to manually apply the brakes to slow the vehicle when:

- The sensors are blocked.
- The Traction Control System (TCS) or electronic stability control system has activated or been disabled.
- There is no traffic and nothing to detect on the side of the road.
- There is a fault in the system.
- The brakes get heated.

The ACC active symbol will not be displayed when ACC is no longer active.

Notification to Resume ACC

ACC will maintain a follow time/ distance gap behind a detected vehicle and slow your vehicle to a stop behind that vehicle.

If the vehicle ahead has driven away and ACC has not resumed, the vehicle ahead symbol will flash as a reminder. In addition, the left and right sides of the Safety Alert Seat will pulse three times, or three beeps will sound. See "Alert Type" and "Go Notifier" in "Collision/ Detection Systems" under *Vehicle Personalization on page 5-40*.

When the vehicle ahead drives away, press +RES or the accelerator pedal to resume ACC. If stopped for more than two minutes or if the driver door is opened and the driver safety belt is unbuckled, the ACC automatically applies the electric parking brake to hold the vehicle. The electric parking brake status light will turn on. See *Parking Brake on page 9-28*. To release the electric parking brake, press the accelerator pedal.

A DIC warning message may display indicating to shift to P (Park) before exiting the vehicle. See *Vehicle Messages on page 5-29*.

⚠ Warning

If ACC has stopped the vehicle, and if ACC is disengaged, turned off, or canceled, the vehicle will no longer be held at a stop. The vehicle can move. When ACC is holding the vehicle at a stop, always be prepared to manually apply the brakes.

⚠ Warning

Leaving the vehicle without placing it in P (Park) can be dangerous. Do not leave the vehicle while it is being held at a stop by ACC. Always place the vehicle in P (Park) and turn off the ignition before leaving the vehicle.

ACC Override

If using the accelerator pedal while ACC is active, a warning message on the DIC will indicate that automatic braking will not occur. See *Vehicle Messages on page 5-29*. ACC will resume operation when the accelerator pedal is not being pressed.

⚠ Warning

The ACC will not automatically apply the brakes if your foot is resting on the accelerator pedal. You could crash into a vehicle ahead of you.

Curves in the Road

⚠ Warning

On curves, ACC may not detect a vehicle ahead in your lane. You could be startled if the vehicle

(Continued)

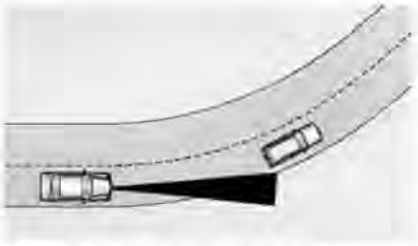
Warning (Continued)

accelerates up to the set speed, especially when following a vehicle exiting or entering exit ramps. You could lose control of the vehicle or crash. Do not use ACC while driving on an entrance or exit ramp. Always be ready to use the brakes if necessary.

⚠ Warning

On curves, ACC may respond to a vehicle in another lane, or may not have time to react to a vehicle in your lane. You could crash into a vehicle ahead of you, or lose control of your vehicle. Give extra attention in curves and be ready to use the brakes if necessary. Select an appropriate speed while driving in curves.

ACC may operate differently in a sharp curve. It may reduce the vehicle speed if the curve is too sharp.



When following a vehicle and entering a curve, ACC may not detect the vehicle ahead and accelerate to the set speed. When this happens the vehicle ahead symbol will not appear.

ACC may detect a vehicle that is not in your lane and apply the brakes.

ACC may occasionally provide an alert and/or braking that is considered unnecessary. It could respond to vehicles in different lanes, signs, guardrails, and other stationary objects when entering or exiting a curve. This is normal operation. The vehicle does not need service.

Other Vehicle Lane Changes

ACC will not detect a vehicle ahead until it is completely in the lane. The brake may need to be manually applied.

Do Not Use ACC on Hills and When Towing a Trailer

Do not use ACC when driving on steep hills or when towing a trailer. ACC will not detect a vehicle in the lane while driving on steep hills. The driver will often need to take over acceleration and braking on steep hills, especially when towing a trailer. If the brakes are applied, the ACC disengages.

Ending ACC

There are three ways to end ACC:

- Step lightly on the brake pedal.
- Press .
- Press .

Erasing Speed Memory

The cruise control set speed is erased from memory if is pressed or if the ignition is turned off.

Cleaning the Sensing System

The camera sensor on the back of the rearview mirror and the radar sensors on the front of the vehicle can become blocked by snow, ice, dirt, or mud. These areas need to be cleaned for ACC to operate properly.

For cleaning instructions, see "Washing the Vehicle" under *Exterior Care on page 10-87*.

System operation may also be limited under snow, heavy rain or road spray conditions.

Driver Assistance Systems

This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, backing, and parking. Read this entire section before using these systems.

⚠ Warning

Do not rely on the Driver Assistance Systems. These systems do not replace the need for paying attention and driving safely. You may not hear or feel alerts or warnings provided by these systems. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving on page 9-3*.

(Continued)

Warning (Continued)

Under many conditions, these systems will not:

- Detect children, pedestrians, bicyclists, or animals.
- Detect vehicles or objects outside the area monitored by the system.
- Work at all driving speeds.
- Warn you or provide you with enough time to avoid a crash.
- Work under poor visibility or bad weather conditions.
- Work if the detection sensor is not cleaned or is covered by ice, snow, mud, or dirt.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

Audible or Safety Alert Seat

Some driver assistance features alert the driver of obstacles by beeping. To change the volume of the warning chime, see "Comfort and Convenience" under *Vehicle Personalization on page 5-40*.

If equipped with the Safety Alert Seat, the driver seat cushion may provide a vibrating pulse alert instead of beeping. To change this, see "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*.

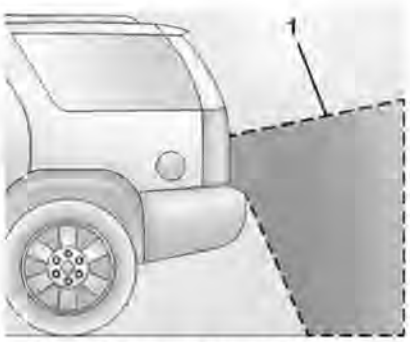
Assistance Systems for Parking or Backing

When the vehicle is in R (Reverse), the Rear Vision Camera (RVC) and Rear Parking Assist may help the driver to avoid a crash or to reduce crash damage while backing and parking. Some models may also have the Rear Automatic Braking and Backing Warning System, Rear Cross Traffic Alert (RCTA), and/or Front Parking Assist.

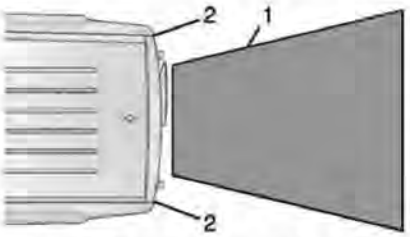
When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the center stack display.

⚠ Warning

The RVC system does not display children, pedestrians, bicyclists, animals, or any other object located outside the camera's field of view, below the bumper, or under the vehicle. Perceived distances may be different from actual distances. Do not back the vehicle using only the RVC screen, during longer, higher speed backing maneuvers, or where there could be cross traffic. Failure to use proper care before backing may result in injury, death, or vehicle damage. Always check behind and around the vehicle before backing.



1. View Displayed by the Camera



1. View Displayed by the Camera
2. Corners of the Rear Bumper

Displayed images may be farther or closer than they appear. The area displayed is limited and objects that are close to either corner of the bumper or under the bumper do not display.

A warning triangle may display on the RVC screen to show where the Ultrasonic Rear Parking Assist (URPA) has detected an object. This triangle changes from amber to red and increases in size the closer the object.

On vehicles with the Rear Cross Traffic Alert (RCTA), a triangle with an arrow may also display on the RVC screen to warn of traffic coming from either direction. This system detects objects coming from up to 20 m (65 ft) from the left or right side, behind the vehicle. When an object is detected, either three beeps sound or three Safety Alert Seat pulses occur on the left or right side, depending on the direction of the detected vehicle.

Use caution while backing up when towing a trailer, as the RCTA detection zones that extend out from the back of the vehicle do not move further back when a trailer is towed.

With Rear Park Assist, and if equipped with Front Park Assist, as the vehicle moves at speeds of less than 8 km/h (5 mph) the sensors on the bumpers detect objects up to 2.5 m (8 ft) behind and 1.2 m (4 ft) in front of the vehicle within a zone 25 cm (10 in) high off the ground and below bumper level. These detection distances may be less during warmer or humid weather.

⚠ Warning

The parking assist system does not detect children, pedestrians, bicyclists, animals, or objects located below the bumper or that are too close or too far from the vehicle. It is not available at

(Continued)

Warning (Continued)

speeds greater than 8 km/h (5 mph). To prevent injury, death, or vehicle damage, even with parking assist, always check the area around the vehicle and check all mirrors before moving forward or backing.

The vehicle may have an instrument cluster parking assist display with bars that show "distance to object" and object location information for URPA, and on some vehicles, for the Front Parking Assist system. As the object gets closer, more bars light up.

When an object is first detected in the rear, one beep will be heard from the rear, or both sides of the Safety Alert Seat will pulse two times. When an object is very close (<0.6 m (2 ft) in the vehicle rear, or <0.3 m (1 ft) in the vehicle front), five beeps will sound from the rear or front, or both sides of the Safety Alert Seat will pulse five times. Beeps for Front Parking Assist are higher pitched than for Rear Parking Assist.

Vehicles with Adaptive Cruise Control (ACC) have the Backing Warning System, which is designed to help avoid or reduce the harm caused by backing crashes. The system can warn of rear objects when backing up at speeds greater than 8 km/h (5 mph).

The Backing Warning System will beep once from the rear when a potential object threat is first

detected, or pulse twice on both sides of the Safety Alert Seat. When the system detects a potential imminent crash, beeps will be heard from the rear, or five pulses will be felt on both sides of the Safety Alert Seat. There may also be a brief, sharp application of the brakes.

⚠ Warning

The Backing Warning System only operates at speeds greater than 8 km/h (5 mph). It does not detect children, pedestrians, bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. In some situations, such as at higher backing speeds, there may not be enough time for the short, sharp application of the vehicle brake system to occur. To prevent injury, death, or vehicle damage, even with the Backing Warning

(Continued)

Warning (Continued)

System, always check the area around the vehicle and check all mirrors before backing.

Vehicles with Adaptive Cruise Control (ACC) have the Rear Automatic Braking system, which is designed to help avoid or reduce the harm caused by backing crashes. If the system detects the vehicle is backing too fast to avoid a crash with a detected object, it may automatically brake hard to a stop.

⚠ Warning

Rear Automatic Braking may not avoid many types of backing crashes. Do not wait for the automatic braking to apply. This system is not designed to replace driver braking, but only acts when the vehicle may not stop in time.

(Continued)

Warning (Continued)

The system, in some situations or environments, may not brake or may not brake in time to avoid a crash. It does not detect children, pedestrians, bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. To prevent injury, death, or vehicle damage, even with Rear Automatic Braking, always check the area around the vehicle before and while backing.

Pressing the brake pedal after the vehicle comes to a stop will release the Rear Automatic Braking. If the brake pedal is not pressed within two seconds after the stop, the electric parking brake is set. See *Parking Brake on page 9-28* to release the electric parking brake. When it is safe, pressing the accelerator pedal firmly at any time will override the Rear Automatic Braking.

⚠ Warning

There may be instances where unexpected or undesired automatic braking occurs. If this happens, either press the brake pedal or firmly press the accelerator pedal to release the brakes from the Rear Automatic Braking system. Before releasing the brakes, check the RVC screen and check the area around the vehicle to make sure it is safe to proceed.

Turn off parking assist and Rear Automatic Braking when towing a trailer.

Turning the Features On or Off

The P button near the shift lever is used to turn on or off the Front and Rear Parking Assist, Rear Automatic Braking, and Backing Warning System at the same time. The indicator light next to the button comes on when the features are on and turns off when the features have been disabled.

The parking assist symbols, guidance lines, and Rear Cross Traffic Alert (RCTA) can be turned on or off through the Settings menu on the infotainment system. To turn the symbols, guidance lines, or RCTA on or off:

1. On the infotainment system, press the Settings screen button, or turn the MENU knob to highlight Settings and press MENU.
2. Select Rear Camera.
3. Press Park Assist Symbols, Guidance Lines, or Rear Cross Traffic Alert and then select OFF or ON.

Assistance Systems for Driving

If equipped, when driving the vehicle forward, Forward Collision Alert (FCA), Lane Departure Warning (LDW), Side Blind Zone Alert (SBZA), and/or the Active Emergency Braking System can help to avoid a crash or reduce crash damage.

Forward Collision Alert (FCA) System

If equipped, the FCA system may help to avoid or reduce the harm caused by front-end crashes. When approaching a vehicle ahead too quickly, FCA provides a red flashing alert on the windshield and rapidly beeps or pulses the driver seat. FCA also lights an amber visual alert if following another vehicle much too closely.

FCA detects vehicles within a distance of approximately 60 m (197 ft) and operates at speeds above 40 km/h (25 mph). If the vehicle has Adaptive Cruise Control (ACC), it can detect vehicles to distances of approximately 110 m (360 ft) and operates at all speeds. See *Adaptive Cruise Control on page 9-36*.

⚠ Warning

FCA is a warning system and does not apply the brakes. When approaching a slower-moving or stopped vehicle ahead too rapidly, or when following a vehicle too closely, FCA may not provide a warning with enough time to help avoid a crash. FCA does not warn of pedestrians, animals, signs, guardrails, bridges, construction barrels, or other objects. Be ready to take action and apply the brakes. For more information, see *Defensive Driving on page 9-3*.

FCA can be disabled with the FCA steering wheel control, or if your vehicle is equipped with Adaptive Cruise Control (ACC), through vehicle personalization. See the "Auto Collision Preparation" portion of "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*.

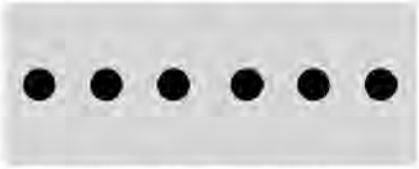
Detecting the Vehicle Ahead

FCA warnings will not occur unless the FCA system detects a vehicle ahead. When a vehicle is detected, the vehicle-ahead indicator will display green. Vehicles may not be detected on curves, highway exit ramps, or hills; or due to poor visibility. FCA will not detect another vehicle ahead until it is completely in the driving lane.

⚠ Warning

FCA does not provide a warning to help avoid a crash, unless it detects a vehicle. FCA may not detect a vehicle ahead if the FCA sensor is blocked by dirt, snow, or ice, or if the windshield is damaged. It may also not detect a vehicle on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and FCA sensors clean and in good repair.

Collision Alert



When your vehicle approaches another detected vehicle too rapidly, the red FCA display will flash on the windshield. Also, eight rapid high-pitched beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. When this Collision Alert occurs, the brake system may prepare for driver braking to occur more rapidly which can cause a brief, mild deceleration. Continue to apply the brake pedal as needed. Cruise control may be disengaged when the Collision Alert occurs.

Tailgating Alert

The vehicle-ahead indicator will display amber when you are following a detected vehicle ahead much too closely.

Selecting the Alert Timing

With Adaptive Cruise Control

Without Adaptive Cruise Control

The Collision Alert control is on the steering wheel. Press or on the steering wheel to set the FCA timing to far, medium, near, or on some vehicles, off. The first button press shows the current setting on the DIC. Additional button presses will change this setting. The chosen setting will remain until it is changed and will affect the timing of both the Collision Alert and the Tailgating Alert features. The timing of both alerts will vary based on vehicle speed. The faster the vehicle speed, the farther away the alert will occur. Consider traffic and weather conditions when selecting the alert timing. The range of selectable alert timing may not be appropriate for all drivers and driving conditions.

If your vehicle is equipped with Adaptive Cruise Control (ACC), changing the FCA timing setting automatically changes the following gap setting (Far, Medium, or Near).

Unnecessary Alerts

FCA may provide unnecessary alerts for turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.

Cleaning the System

If the FCA system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor on the back of the rearview mirror, and cleaning the front of the vehicle where radar sensors are located, may correct the issue.

Active Emergency Braking System

If the vehicle has Adaptive Cruise Control (ACC) it also has the Active Emergency Braking System, which includes Intelligent Brake Assist (IBA) and the Automatic Collision Preparation (ACP) System. These systems can provide a boost to braking or automatically brake the vehicle to help avoid or lessen the severity of crashes.

Intelligent Brake Assist (IBA)

IBA may activate when the brake pedal is applied quickly by providing a boost to braking based on the speed of approach and distance to a vehicle ahead.

Minor brake pedal pulsations or pedal movement during this time is normal and the brake pedal should continue to be applied as needed.

IBA will automatically disengage only when the brake pedal is released.

⚠ Warning

IBA may increase vehicle braking in situations when it may not be necessary. You could block the flow of traffic. If this occurs, take your foot off the brake pedal and then apply the brakes as needed.

Automatic Collision Preparation (ACP) System

ACP may help reduce crash damage by applying the vehicle's brake system and has a detection range of approximately 60 m (197 ft). Braking can only occur if a vehicle is detected ahead in your path. This is shown by the FCA vehicle-ahead indicator being lit. See *Forward Collision Alert (FCA) System on page 9-49*.

⚠ Warning

ACP is an emergency crash preparation feature and is not designed to avoid crashes. Do not rely on ACP to brake the vehicle.

ACP may not:

- Respond to stopped vehicles, pedestrians, or animals.
- Detect a vehicle ahead on winding or hilly roads.
- Detect a stopped or slow-moving vehicle or other object ahead.
- Detect a vehicle when weather limits visibility, such as in fog, rain, or snow. In these situations, ACP sensor performance is limited.

(Continued)

Warning (Continued)

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

Brake Preparation

When quickly approaching a vehicle ahead, Brake Preparation reduces brake response time by having the brake system prepared for driver braking to occur more rapidly.

Automatic Braking

In some imminent front-end crash situations, if the driver has not applied the brakes, Automatic Braking applies the brakes to help reduce crash damage. It may even help avoid some very low speed crashes.

Automatic Braking may slow the vehicle to a complete stop to try to avoid a potential crash. If this

happens, Automatic Braking may engage the Electric Parking Brake (EPB) to hold the vehicle at a stop. To release the EPB, press the EPB button. A firm press of the accelerator pedal will also release Automatic Braking and the EPB.

⚠ Warning

Automatic Braking may automatically brake the vehicle in situations where it may be unnecessary. It could respond to a turning vehicle ahead, guardrails, signs, and other non-moving objects. This could be uncomfortable and startling. To override Automatic Braking, firmly press the accelerator pedal, if it is safe to do so.

Automatic Braking can be disabled or reduced through vehicle personalization. See the "Auto Collision Preparation" portion of "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*.

⚠ Warning

Using the Automatic Collision Preparation System while towing a trailer could cause you to lose control of the vehicle and crash. Turn the system off when towing a trailer.

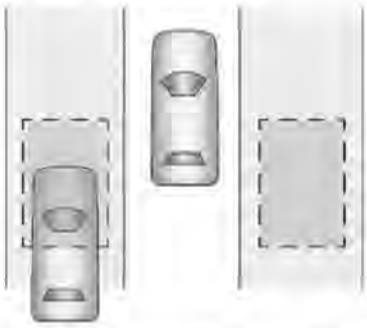
Side Blind Zone Alert (SBZA)

If equipped, the SBZA system is a lane-changing aid that assists drivers with avoiding crashes that occur with vehicles in the side blind zone (or spot) areas. The SBZA warning display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

⚠ Warning

SBZA does not alert the driver to vehicles rapidly approaching outside of the side blind zones, pedestrians, bicyclists, or animals. It may not provide alerts when changing lanes under all driving conditions. Failure to use proper care when changing lanes may result in injury, death, or vehicle damage. Before making a lane change, always check mirrors, glance over your shoulder, and use the turn signals.

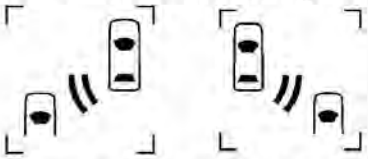
SBZA Detection Zones



The SBZA sensor covers a zone of approximately one lane over from both sides of the vehicle, or 3.5 m (11 ft). The height of the zone is approximately between 0.5 m (1.5 ft) and 2 m (6 ft) off the ground. This zone starts at approximately the middle of the vehicle and goes back 5 m (16 ft).

How the System Works

The SBZA symbol lights up in the side mirrors when the system detects a vehicle in the next lane over that is in the side blind zone. This indicates it may be unsafe to change lanes. Before making a lane change, check the SBZA display, check mirrors, glance over your shoulder, and use the turn signals.



Left Side Mirror Display **Right Side Mirror Display**

When the vehicle is started, both outside mirror SBZA displays will briefly come on to indicate the system is operating. When the vehicle is moving forward, the left- or right-side mirror display will light up if a vehicle is detected in that blind zone. If the turn signal is activated in the same direction of a detected vehicle, this display will flash as an extra warning not to change lanes.

SBZA can be disabled through vehicle personalization. See "Collision/Detection Systems" under *Vehicle Personalization on page 5-40*. If SBZA is disabled by the driver, the SBZA mirror displays will not light up.

When the System Does Not Seem to Work Properly

SBZA displays may not come on when passing a vehicle quickly or when towing a trailer. The SBZA detection zones that extend back from the side of the vehicle do not move further back when a trailer is towed. Use caution while changing lanes when towing a trailer. SBZA may alert to objects attached to the vehicle, such as a trailer, bicycle, or object extending out to either side of the vehicle. This is normal system operation; the vehicle does not need service.

SBZA may not always alert the driver to vehicles in the side blind zone, especially in wet conditions. The system does not need to be

serviced. The system may light up due to guardrails, signs, trees, shrubs, and other non-moving objects. This is normal system operation; the vehicle does not need service.

SBZA may not operate when the SBZA sensors in the left or right corners of the rear bumper are covered with mud, dirt, snow, ice, or slush, or in heavy rainstorms. For cleaning instructions, see "Washing the Vehicle" under *Exterior Care on page 10-87*. If the DIC still displays the system unavailable message after cleaning both sides of the vehicle toward the rear corners of the vehicle, see your dealer.

If the SBZA displays do not light up when vehicles are in the blind zone and the system is clean, the system may need service. Take the vehicle to your dealer.

When SBZA is disabled for any reason other than the driver turning it off, the Side Blind Zone Alert On option will not be available on the personalization menu.

FCC Information

See *Radio Frequency Statement on page 13-15*.

Lane Departure Warning (LDW)

If equipped, LDW may help avoid crashes due to unintentional lane departures. It may provide a warning if the vehicle is crossing a detected lane marker without using a turn signal in the lane departure direction. LDW uses a camera sensor to detect the lane markings. It only operates at speeds of 56 km/h (35 mph) or greater.

When the vehicle crosses a detected lane marking, the LDW indicator will flash and either three beeps will be sounded from the left or right side, or three Safety Alert Seat pulses will occur on the left or right side of the seat, depending on the lane departure direction. LDW will not warn if the turn signal is on in the departure direction, or if a sharp maneuver is made.

⚠ Warning

The LDW system is an aid to help the vehicle stay in the driving lane. It does not steer the vehicle. The LDW system may not:

- Provide enough time to avoid a crash.
- Detect lane markings under bad weather conditions or if the windshield is dirty.
- Detect lane markings and will not detect road edges.
- Warn that the vehicle is crossing a lane marking if the system does not detect the lane marking.

(Continued)

Warning (Continued)

If LDW only detects lane markings on one side of the road, it will only warn you when departing the lane on the side where it has detected a lane marker. Even with LDW, always keep your attention on the road and maintain proper vehicle position within the lane, or vehicle damage, injury, or death could occur. Always keep the windshield clean and do not use LDW in bad weather conditions.

How the System Works

The LDW camera sensor is on the windshield ahead of the rearview mirror.

To turn LDW on and off, press near the shift lever. The control indicator will light when LDW is on.

When the vehicle is started, the LDW indicator on the instrument cluster will come on briefly.

If LDW is on, the LDW indicator will appear green if the system detects a left or right lane marking while the vehicle is traveling at 56 km/h (35 mph) or greater. If the vehicle crosses a detected lane marking without using the turn signal in the lane departure direction, this indicator will change to amber and flash. In addition, three beeps will be sounded from the left or right side, or the Safety Alert Seat will pulse three times on either the left or right side of the seat, depending on the lane departure direction.

When the System Does Not Seem to Work Properly

If the LDW symbol does not appear when the system is on and the vehicle is traveling at least 56 km/h (35 mph):

- The lane markings on the road may not be seen.
- The camera sensor may be blocked by dirt, snow, or ice.
- The windshield may be damaged.
- The weather may be limiting visibility.

This is normal operation; the vehicle does not need service.

Lane markings may not be detected on curves, highway exit ramps, or hills; or due to poor visibility.

If the LDW camera system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor may correct the issue.

⚠ Warning

LDW does not provide a warning to help avoid a crash, unless it detects the lane markings. LDW may not detect the lane markings if the camera sensor is blocked by dirt, snow, or ice, or if the windshield is damaged. It may also not detect a lane on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and camera sensors clean and in good repair.

LDW warnings may occur due to tar marks, shadows, cracks in the road, or other road imperfections. This is normal system operation; the vehicle does not need service.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of this vehicle. When driving in the U.S., to help keep the engine clean and maintain optimum vehicle performance, we recommend using TOP TIER Detergent Gasolines. See www.toptiergas.com for a list of TOP TIER Detergent Gasolines.

TOP TIER Detergent Gasoline

CATEGORIE SUPERIEURE Essences Detergentes

Recommended Fuel

Use regular unleaded gasoline with a posted octane rating of 87 or higher. If the octane rating is less than 87, an audible knocking noise may be heard. If this occurs, use a gasoline rated at 87 octane or higher as soon as possible. If heavy knocking is heard when using gasoline with a higher octane rating, the engine needs service.

Use of Seasonal Fuels

Use summer and winter fuels in the appropriate season. Driving or starting could be affected if the incorrect fuel is used. Drive the vehicle with the engine running until the fuel is a half tank or less, then refuel with the current seasonal fuel.

Prohibited Fuels

Gasolines containing oxygenates, such as ethers and ethanol, as well as reformulated gasolines are available in some cities. If these gasolines comply with the previously described specification,

then they are acceptable to use. However, E85 and other fuels containing more than 15% ethanol must be used only in FlexFuel vehicles.

⚠ Caution

Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.

Some gasolines that are not reformulated for low emissions can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). Do not use gasolines with MMT as they can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp may turn on. If this occurs, see your dealer for service.

Gasoline Specifications

At a minimum, gasoline should meet ASTM specification D 4814. Some gasolines contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). We recommend against the use of gasolines containing MMT. See "Prohibited Fuels" in *Recommended Fuel on page 9-57*.

California Fuel Requirements

If the vehicle is certified to meet California Emissions Standards, it is designed to operate on fuels that meet California specifications. See the underhood emission control label. If this fuel is not available in states adopting California Emissions Standards, the vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system performance might be affected. The malfunction indicator lamp could turn on and the vehicle may not pass a smog-check test. See *Malfunction Indicator Lamp on page 5-16*. If this occurs, return to your authorized dealer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs may not be covered by the vehicle warranty.

Fuels in Foreign Countries

If planning to drive in countries outside the U.S. or Canada, the proper fuel might be hard to find. Check regional auto club or fuel retail brand websites for availability in the country where driving. Never use leaded gasoline, fuel containing methanol, or any other fuel not recommended. Costly repairs caused by use of improper fuel would not be covered by the vehicle warranty.

Fuel Additives

To keep fuel systems clean, TOP TIER Detergent Gasoline is recommended. See *Fuel on page 9-57*.

If TOP TIER Detergent Gasoline is not available, one bottle of Fuel System Treatment PLUS, part number 88861013, added to the fuel tank at every engine oil change, can help. Fuel System Treatment PLUS is the only gasoline additive recommended by General Motors. It is available at your dealer.

Filling the Tank

⚠ Warning

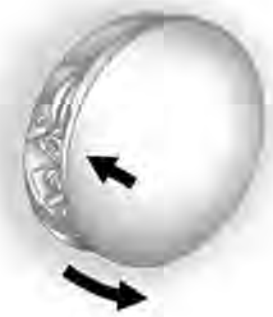
Fuel vapors and fuel fires burn violently and can cause injury or death.

- To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island.
- Turn off the engine when refueling.
- Keep sparks, flames, and smoking materials away from fuel.
- Do not leave the fuel pump unattended.
- Do not reenter the vehicle while pumping fuel.
- Keep children away from the fuel pump and never let children pump fuel.

(Continued)

Warning (Continued)

- Fuel can spray out if the fuel cap is opened too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop then unscrew the cap all the way.



The tethered fuel cap is located behind a hinged fuel door on the passenger side of the vehicle. To open the fuel door, push and release the rearward center edge of the door.

To remove the fuel cap, turn it slowly counterclockwise.

While refueling, hang the tethered fuel cap from the hook on the fuel door.

When reinstalling the cap, turn it clockwise until it clicks once, otherwise the malfunction indicator lamp could turn on. See *Malfunction Indicator Lamp on page 5-16*.

Be careful not to spill fuel. Do not top off or overfill the tank and wait a few seconds after you have finished pumping before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care on page 10-87*.

When replacing the fuel cap, turn it clockwise until it clicks once. Make sure the cap is fully installed. The diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See *Malfunction Indicator Lamp on page 5-16*.

⚠ Warning

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

⚠ Caution

If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap might not fit properly, might cause the malfunction indicator lamp to light, and could damage the fuel tank and

(Continued)

Caution (Continued)

emissions system. See *Malfunction Indicator Lamp on page 5-16*.

Filling a Portable Fuel Container

⚠ Warning

Filling a portable fuel container while it is in the vehicle can cause fuel vapors that can ignite either by static electricity or other means. You or others could be badly burned and the vehicle could be damaged. Always:

- Use approved fuel containers.
- Remove the container from the vehicle, trunk, or pickup bed before filling.

(Continued)

Warning (Continued)

- Place the container on the ground.
- Place the nozzle inside the fill opening of the container before dispensing fuel, and keep it in contact with the fill opening until filling is complete.
- Fill the container no more than 95% full to allow for expansion.
- Do not smoke, light matches, or use lighters while pumping fuel.
- Avoid using cell phones or other electronic devices.

Trailer Towing

General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer. Read the entire section before towing a trailer.

For towing a disabled vehicle, see *Towing the Vehicle on page 10-84*. For towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing on page 10-84*.

Driving Characteristics and Towing Tips

Driving with a Trailer

When towing a trailer:

- Become familiar with the state and local laws that apply specifically to trailer towing.
- Do not tow a trailer during the first 800 km (500 mi), to prevent damage to the engine, axle or other parts.
- Then, during the first 800 km (500 mi) trailer towing, do not drive over 80 km/h (50 mph) and do not make starts at full throttle.
- The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.
- Do not use Adaptive Cruise Control when towing.

- The Automatic Collision Preparation System should be set to "Off" when towing. See *Active Emergency Braking System on page 9-51*.
- Turn off Park Assist when towing.

⚠ Warning

When towing a trailer, exhaust gases may collect at the rear of the vehicle and enter if the liftgate, trunk/hatch, or rear-most window is open.

When towing a trailer:

- Do not drive with the liftgate, trunk/hatch, or rear-most window open.
- Fully open the air outlets on or under the instrument panel.

(Continued)

Warning (Continued)

- Also adjust the Climate Control system to a setting that brings in only outside air. See "Climate Control Systems" in the Index.

For more information about Carbon Monoxide, see *Engine Exhaust on page 9-21*.

Towing a trailer requires a certain amount of experience. The combination you are driving is longer and not as responsive as the vehicle itself. Get acquainted with the handling and braking of the rig before setting out for the open road.

Before starting, check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tires, and mirrors. If the trailer has electric brakes, start the combination moving and then apply the trailer brake controller by hand to be sure the brakes work.

During the trip, check occasionally to be sure that the load is secure and the lamps and any trailer brakes still work.

Towing with a Stability Control System

When towing, the sound of the stability control system might be heard. The system is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid situations that require heavy braking and sudden turns.

Passing

More passing distance is needed when towing a trailer. Because the rig is longer, it is necessary to go farther beyond the passed vehicle before returning to the lane.

Backing Up

Hold the bottom of the steering wheel with one hand. To move the trailer to the left, move your hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

Making Turns

⚠ Caution

Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.

When turning with a trailer, make wider turns than normal so the trailer will not strike soft shoulders, curbs, road signs, trees or other objects. Use the turn signal well in advance and avoid jerky or sudden maneuvers.

Turn Signals When Towing a Trailer

The turn signal indicators on the instrument cluster flash whenever signaling a turn or lane change. Properly hooked up, the trailer lamps also flash, telling other drivers the vehicle is turning, changing lanes, or stopping.

When towing a trailer, the arrows on the instrument cluster flash for turns even if the bulbs on the trailer are burned out. Check occasionally to be sure the trailer bulbs are still working.

Driving on Grades

Reduce speed and shift to a lower gear before starting down a long or steep downgrade. If the transmission is not shifted down, the brakes might have to be used so much that they would get hot and no longer work well.

The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.

When towing at high altitude on steep uphill grades, engine coolant boils at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle could show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating on page 10-17*.

Parking on Hills

⚠ Warning

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the brake pedal until the chocks absorb the load.
4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
5. Release the brake pedal.

Leaving After Parking on a Hill

1. Apply and hold the brake pedal while you:
   - Start the engine.
   - Shift into a gear.
   - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance When Trailer Towing

The vehicle needs service more often when pulling a trailer. See the *Maintenance Schedule on page 11-4*. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system, and brake system. Inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Engine Cooling When Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating on page 10-17*.

Trailer Towing

Before pulling a trailer, there are three important considerations that have to do with weight:

- The weight of the trailer.
- The weight of the trailer tongue.
- The total weight on the vehicle's tires.

Weight of the Trailer

How heavy can a trailer safely be?

It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature and how much the vehicle is used to pull a trailer are all important. It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry. See "Weight of the Trailer Tongue" later in this section.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Use the following chart to determine how much the vehicle can weigh, based upon the vehicle model and options.

Vehicle	Maximum Trailer Weight	GCWR*	Maximum Tongue Weight
3.6L Engine, FWD without Trailering Package	1 134 kg (2,500 lb)	3 185 kg (7,022 lb)	113 kg (250 lb)
3.6L Engine, FWD with Trailering Package	1 588 kg (3,500 lb)	3 640 kg (8,025 lb)	159 kg (350 lb)
3.6L Engine, AWD without Trailering Package	1 134 kg (2,500 lb)	3 270 kg (7,209 lb)	113 kg (250 lb)
3.6L Engine, AWD with Trailering Package	1 588 kg (3,500 lb)	3 725 kg (8,212 lb)	159 kg (350 lb)
*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversions. The GCWR for the vehicle should not be exceeded.			

Ask your dealer for trailering information or advice.

Weight of the Trailer Tongue

The tongue load (1) of any trailer is an important weight to measure because it affects the total gross weight of the vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo carried in it, and the people who will be riding in the vehicle. If there are a lot of options, equipment, passengers or cargo in the vehicle, it will reduce the tongue weight the vehicle can carry, which will also reduce the trailer weight the vehicle can tow. If towing a trailer, the tongue load must be added to the GVW because the vehicle will be carrying that weight, too. See *Vehicle Load Limits on page 9-10* for more information about the vehicle's maximum load capacity.

1 2

If a weight-carrying hitch or a weight-distributing hitch is being used, the trailer tongue (1) should weigh 10-15 percent of the total loaded trailer weight (2).

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

Trailering may be limited by the vehicle's ability to carry tongue weight. Tongue weight cannot cause the vehicle to exceed the GVWR (Gross Vehicle Weight Rating) or the RGAWR (Rear Gross Axle Weight Rating). The effect of additional weight may reduce the trailering capacity more than the total of the additional weight.

It is important that the vehicle does not exceed any of its ratings — GCWR, GVWR, RGAWR, Maximum Trailer Rating or Tongue Weight. The only way to be sure it is not exceeding any of these ratings is to weigh the vehicle and trailer.

Total Weight on the Vehicle's Tires

Be sure the vehicle's tires are inflated to the upper limit for cold tires. These numbers can be found on the Certification label or see *Vehicle Load Limits on page 9-10.* Make sure not to go over the GVW limit for the vehicle, or the GAWR, including the weight of the trailer tongue. If using a weight distributing hitch, make sure not to go over the rear axle limit before applying the weight distribution spring bars.

Towing Equipment

Hitches

It is important to have the correct hitch equipment. Crosswinds, large trucks going by and rough roads are a few reasons why the right hitch is needed.

- The rear bumper on the vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will any holes be made in the body of the vehicle when the trailer hitch is installed? If there are, then be sure to seal the holes later when the hitch is removed. If the holes are not sealed, dirt, water, and deadly carbon monoxide (CO) from the exhaust can get into the vehicle. See *Engine Exhaust on page 9-21.*

Hitch Cover

The vehicle may have a hitch cover. To remove the hitch cover:

1. Turn the fasteners on the lower tabs 90 degrees counterclockwise.
2. Lift the lower edge of the cover about 45 degrees.
3. Pull the cover downward to disengage the upper attachments.

To reinstall the hitch cover:

1. Hold the cover at a 45 degree angle to the vehicle and push the upper tabs in the hitch cover into the slots in the fascia.
2. Move the bottom of the cover forward until the lower tabs line up with the lower fascia slots.
3. Snap the hitch cover into place by pushing the upper corners forward.
4. Turn the fasteners on the lower tabs 90 degrees clockwise to lock the cover in place.

Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Always leave just enough slack so the rig can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

A loaded trailer that weighs more than 450 kg (1,000 lb) needs to have its own brake system that is adequate for the weight of the trailer. Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted and maintained properly.

Because the vehicle has anti-lock brakes, do not tap into the vehicle's brake system. If you do, both brake systems will not work well, or at all.

Trailer Sway Control (TSC)

The vehicle has a TSC feature as part of the StabiliTrak system. If TSC detects that the trailer is swaying, the vehicle's brakes are automatically applied.

When TSC is applying the brakes, the TCS/StabiliTrak indicator light flashes to notify the driver to reduce speed. If the trailer continues to sway, StabiliTrak will reduce engine torque to help slow the vehicle.

TSC will not function if StabiliTrak is turned off. See *Traction Control/ Electronic Stability Control on page 9-30*.

Conversions and Add-Ons

Add-On Electrical Equipment

⚠ Caution

Some electrical equipment can damage the vehicle or cause components to not work and would not be covered by the warranty. Always check with your dealer before adding electrical equipment.

Add-on equipment can drain the vehicle's 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see *Servicing the Airbag-Equipped Vehicle on page 3-31* and *Adding Equipment to the Airbag-Equipped Vehicle on page 3-31*.

✍ NOTES

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General Information

For service and parts needs, visit your dealer. You will receive genuine GM parts and GM-trained and supported service people.

Genuine GM parts have one of these marks:

ACDelco

Genuine GM | Parts

GM Accessories

California Proposition 65 Warning

Most motor vehicles, including this one, contain and/or emit chemicals known to the State of California to

cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems, many fluids, and some component wear by-products contain and/or emit these chemicals.

California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, safety belt pretensioners, and lithium batteries contained in Remote Keyless Entry transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.

Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorize the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle on page 3-31.*

Vehicle Checks

Doing Your Own Service Work

⚠ Warning

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner manual procedures and consult the service manual for your vehicle before doing any service work.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can. To order the proper service manual, see *Service Publications Ordering Information on page 13-11.*

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle on page 3-31*.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records on page 11-15*.

⚠ Caution

Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.

Hood

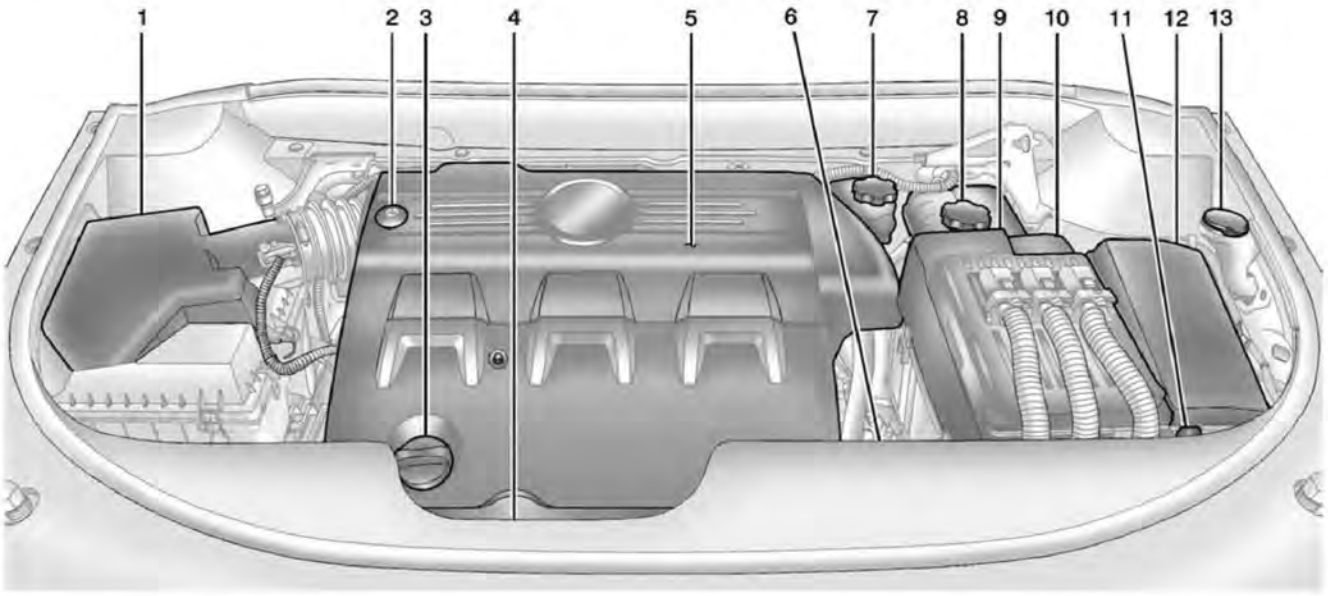
To open the hood:

1. Pull the release handle with the above symbol on it. It is located below the instrument panel to the left of the steering wheel.

2. Move the secondary hood release lever up to release the striker. The lever is located near the middle of the hood.
3. Lift the hood.

Before closing the hood, be sure all the filler caps are on properly.

Engine Compartment Overview



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1. *Engine Air Cleaner/Filter on page 10-10.*
2. Power Steering Reservoir and Cap (Under Engine Cover). See *Power Steering Fluid on page 10-18.*
3. Engine Oil Fill Cap. See *Engine Oil on page 10-7.*
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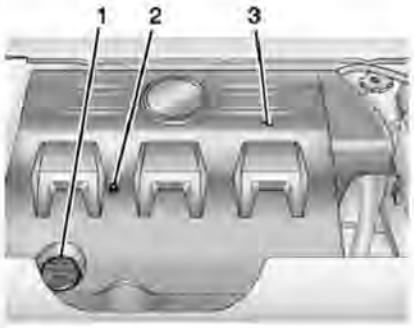
7. Brake Fluid Reservoir. See *Brakes on page 10-20.*
8. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 10-13.*
9. Battery (Out of View). See *Battery on page 10-22.*
10. Remote Positive (+) Terminal. See *Jump Starting on page 10-80.*
11. Remote Negative (−) Terminal (Out of View). See *Jump Starting on page 10-80.*
12. *Engine Compartment Fuse Block on page 10-34.*
13. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 10-19.*

Engine Cover



1. Oil Fill Cap
2. Engine Cover Bolt
3. Engine Cover

To remove:

1. Remove the oil fill cap (1).
2. Remove the engine cover bolt (2).
3. Raise the engine cover (3) to release from the retainers.

4. Lift and remove the engine cover.
5. Reverse Steps 1–4 to reinstall engine cover.

Engine Oil

To ensure proper engine performance and long life, careful attention must be paid to engine oil. Following these simple, but important steps will help protect your investment:

- Always use engine oil approved to the proper specification and of the proper viscosity grade. See "Selecting the Right Engine Oil" in this section.
- Check the engine oil level regularly and maintain the proper oil level. See "Checking Engine Oil" and "When to Add Engine Oil" in this section.
- Change the engine oil at the appropriate time. See *Engine Oil Life System on page 10-9*.
- Always dispose of engine oil properly. See "What to Do with Used Oil" in this section.

Checking Engine Oil

It is a good idea to check the engine oil level at each fuel fill. In order to get an accurate reading, the vehicle must be on level ground. The engine oil dipstick handle is a loop. See *Engine Compartment Overview on page 10-5* for the location of the engine oil dipstick.

1. If the engine has been running recently, turn off the engine and allow several minutes for the oil to drain back into the oil pan. Checking the oil level too soon after engine shutoff will not provide an accurate oil level reading.

⚠ Warning

The engine oil dipstick handle may be hot; it could burn you. Use a towel or glove to touch the dipstick handle.

2. Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

When to Add Engine Oil

If the oil is below the cross-hatched area at the tip of the dipstick, add 1 L (1 qt) of the recommended oil and then recheck the level. See "Selecting the Right Engine Oil" in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications on page 12-2*.

⚠ Caution

Do not add too much oil. Oil levels above or below the acceptable operating range shown on the dipstick are harmful to the engine. If you find that you have an oil level above the operating range, i.e., the engine has so much oil that the oil level gets above the cross-hatched area that shows the proper operating range, the engine could be damaged. You should drain out the excess oil or limit driving of the vehicle and seek a service professional to remove the excess amount of oil.

See *Engine Compartment Overview on page 10-5* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when finished.

Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade. See *Recommended Fluids and Lubricants on page 11-13*.

Specification

Use and ask for licensed engine oils with the dexos1® approved certification mark. Engine oils meeting the requirements for the vehicle should have the dexos1 approved certification mark. This certification mark indicates that the oil has been approved to the dexos1 specification.

⚠ Caution

Failure to use the recommended engine oil can result in engine damage not covered by the vehicle warranty. Check with your dealer or service provider on whether the oil is approved to the dexos1 specification.

Viscosity Grade

SAE 5W-30 is the best viscosity grade for the vehicle. Do not use other viscosity grade oils such as SAE 10W-30, 10W-40, or 20W-50.

Cold Temperature Operation: In an area of extreme cold, where the temperature falls below −29°C (−20°F), an SAE 0W-30 oil may be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, always select an oil of the correct

specification. See "Specification" earlier in this section for more information.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils with the dexos specification and displaying the dexos certification mark are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Engine Oil Life System

When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. See *Engine Oil Messages on page 5-32*. Change the oil as soon as possible within the next 1 000 km (600 mi). It is possible that, if driving under the best conditions, the oil life system might indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. To reset the system:

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-26*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-32*.
2. Press SEL on the DIC controls and hold SEL down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

The system is reset when the CHANGE ENGINE OIL SOON message is off.

If the CHANGE ENGINE OIL SOON message comes back on when the vehicle is started, the engine oil life system has not been reset. Repeat the procedure.

Automatic Transmission Fluid

A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer and have it repaired as soon as possible.

Change the fluid and filter at the intervals listed in *Maintenance Schedule on page 11-4*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants on page 11-13*.

Engine Air Cleaner/Filter

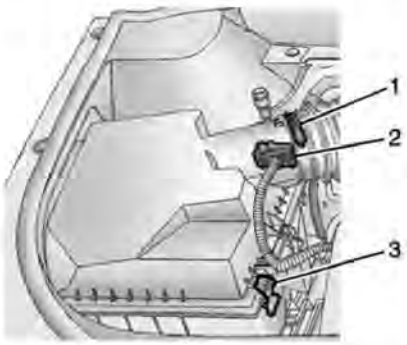
See *Engine Compartment Overview on page 10-5* for the location of the engine air cleaner/filter.

When to Inspect the Engine Air Cleaner/Filter

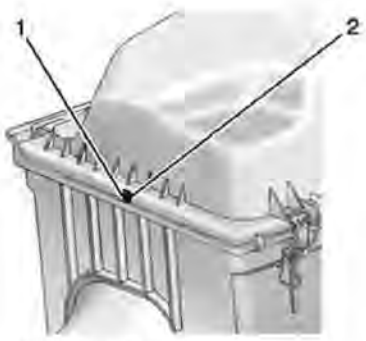
Inspect the air cleaner/filter at the scheduled maintenance intervals and replace it at the first oil change after each 80 000 km (50,000 mi) interval. See *Maintenance Schedule on page 11-4*. If driving in dusty/dirty conditions, inspect the filter at each engine oil change.

How to Inspect the Engine Air Cleaner/Filter

To inspect the air cleaner/filter, remove the filter from the vehicle and lightly shake the filter to release loose dust and dirt. If the filter remains covered with dirt, a new filter is required. Never use compressed air to clean the filter.



1. Air Duct Clamp
2. Electrical Connector
3. Retaining Clips



1. Cover Cut Outs
2. Air Filter Tabs

To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood on page 10-4*.
2. Locate the air filter housing on the front of the passenger side of the engine compartment. See *Engine Compartment Overview on page 10-5*.
3. Disconnect the outlet duct by loosening the air duct clamp (1).

4. Disconnect the electrical connector (2). First, remove the connector lock clip at the bottom of the connector, then press on the top and bottom of the connector to remove.
5. Lift the retaining clips (3) on the air filter housing.
6. Tilt and lift the cover slightly upward and slide the cover away from outside edge of the vehicle. Remove the air filter.
7. To install the air filter, place filter inside box where the pleats fit in between the tabs inside the lower box. Ensure that the cover cut outs (1) on both sides match the air filter tabs (2) on both sides.
8. Replace air cleaner cover by inserting the four tabs into the slots. Lower cover to meet bottom of the box. Place the retaining clips (3) on the retention features and clip closed.
9. Reconnect outlet duct to the cover and tighten the air duct clamp (1).
10. Reconnect the electrical connector (2). Install connector lock clip to bottom of connector.

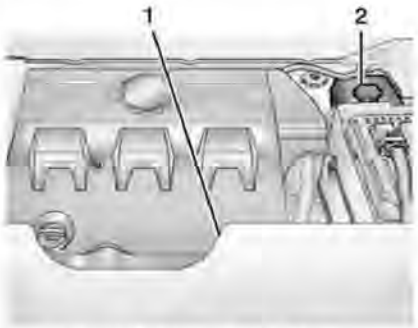
⚠ Warning

Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

⚠ Caution

If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when you are driving.

Cooling System



1. Engine Cooling Fan (Out of View)
2. Engine Coolant Surge Tank and Pressure Cap

⚠ Warning

An electric engine cooling fan under the hood can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood electric fan.

If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. The vehicle should be parked on a level surface.

The coolant level should be between the MIN and MAX lines. If it is not, the vehicle may have a leak at the radiator hoses, heater hoses, radiator, water pump, or somewhere else in the cooling system.

⚠ Warning

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.

If there seems to be no leak, with the engine on, check to see if the engine cooling fan is running. If the engine is overheating, the fan should be running. If it is not, the vehicle needs service. Turn off the engine.

⚠ Caution

Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner. Any repairs would not be covered by the vehicle warranty. Always use DEX-COOL (silicate-free) coolant in the vehicle.

Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL® engine coolant. This coolant needs to be checked and replaced at appropriate intervals. See *Maintenance Schedule on page 11-4*.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating on page 10-17*.

What to Use

⚠ Warning

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. If using this mixture, nothing else needs to be added. This mixture:

- Gives freezing protection down to −37°C (−34°F), outside temperature.
- Gives boiling protection up to 129°C (265°F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminum parts.
- Helps keep the proper engine temperature.

⚠ Caution

If improper coolant mixture, inhibitors, or additives are used in the vehicle cooling system, the engine could overheat and be damaged. Too much water in the

(Continued)

Caution (Continued)

mixture can freeze and crack engine cooling parts. The repairs would not be covered by the vehicle warranty. Use only the proper mixture of engine coolant for the cooling system. See *Recommended Fluids and Lubricants on page 11-13*.

Never dispose of engine coolant by putting it in the trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

Checking Coolant

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. If coolant is visible but the coolant level is not at the indicated mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system is cool before this is done. See *Engine Overheating on page 10-17*.

The coolant surge tank is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview on page 10-5*.

How to Add Coolant to the Coolant Surge Tank

⚠ Caution

This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.

⚠ Warning

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. Never turn the cap when the cooling system, including the surge tank pressure cap, is hot. Wait for the cooling system and surge tank pressure cap to cool.

⚠ Warning

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine

(Continued)

Warning (Continued)

could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

⚠ Caution

In cold weather, water can freeze and crack the engine, radiator, heater core, and other parts. Use the recommended coolant and the proper coolant mixture.

⚠ Warning

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.

1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This will allow any pressure still left to be vented out the discharge hose.
2. Keep turning the pressure cap slowly and remove it.
3. Fill the coolant surge tank with the proper mixture to the indicated level mark.
4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper mixture to the coolant surge tank until the level reaches the indicated level mark.
5. Replace the pressure cap tightly.
6. Verify coolant level after the engine is shut off and the coolant is cold. If necessary, repeat coolant fill procedure Steps 1–6.

   If the coolant still is not at the proper level when the system cools down again, see your dealer.

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⚠ Caution

If the pressure cap is not tightly installed, coolant loss and possible engine damage may occur. Be sure the cap is properly and tightly secured.

Engine Overheating

The vehicle has an indicator to warn of engine overheating.

There is an engine coolant temperature warning light on the vehicle's instrument cluster. See *Engine Coolant Temperature Gauge on page 5-13*.

If the decision is made not to lift the hood when this warning appears, but instead get service help right away. See *Roadside Service on page 13-5*.

If the decision is made to lift the hood, make sure the vehicle is parked on a level surface.

Then check to see if the engine cooling fans are running. If the engine is overheating, both fans should be running. If they are not, do not continue to run the engine and have the vehicle serviced.

⚠ Caution

Running the engine without coolant may cause damage or a fire. Vehicle damage would not be covered by the vehicle warranty.

If Steam Is Coming from the Engine Compartment

⚠ Warning

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down.

(Continued)

Warning (Continued)

Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when the engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop the engine if it overheats, and get out of the vehicle until the engine is cool.

If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day.
- Stops after high-speed driving.

- Idles for long periods in traffic.
- Tows a trailer.

If the overheat warning displays with no sign of steam:

1. Turn the air conditioning off.
2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
3. When it is safe to do so, pull off the road, shift to P (Park) or N (Neutral), and let the engine idle.

If the temperature overheat gauge is no longer in the overheat zone or an overheat warning no longer displays, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe vehicle distance from the vehicle in front. If the warning does not come back on, continue to drive normally and have the cooling system checked for proper fill and function.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

Power Steering Fluid

See *Engine Compartment Overview on page 10-5* for reservoir location.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless a leak is suspected in the system or unusual noise is heard. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

To check the power steering fluid:

1. Turn the engine off and let the engine compartment cool down.
2. Remove the engine cover, if required. See *Engine Cover on page 10-6*.
3. Wipe the cap and the top of the reservoir clean.
4. Unscrew the cap and wipe the dipstick with a clean rag.
5. Replace the cap and completely tighten it.
6. Remove the cap again and look at the fluid level on the dipstick.

The level should be within the HOT mark. If necessary, add only enough fluid to bring the level within the mark.

What to Use

⚠ Caution

Use of the incorrect fluid may damage the vehicle and the damages may not be covered by the vehicle warranty. Always use the correct fluid listed in *Recommended Fluids and Lubricants on page 11-13*.

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants on page 11-13*. Always use the proper fluid.

Washer Fluid

What to Use

When windshield washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid

The WASHER FLUID LOW ADD FLUID message appears on the Driver Information Center (DIC) when the fluid level is low. See *Washer Fluid Messages on page 5-39*.

Open the cap with the washer symbol on it. Add washer fluid up to the fill mark. See *Engine Compartment Overview on page 10-5* for reservoir location.

⚠ Caution

- Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.
- Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.
- When using concentrated washer fluid, follow the manufacturer instructions for adding water.
- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.

Brakes

This vehicle has disc brakes. Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or be heard all the time when the vehicle is moving, except when applying the brake pedal firmly.

⚠ Warning

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

⚠ Caution

Continuing to drive with worn-out brake pads could result in costly brake repair.

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications. See *Capacities and Specifications on page 12-2*.

Brake pads should be replaced as complete sets.

Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service might be required.

Brake Adjustment

Every time the brakes are applied, with or without the vehicle moving, the brakes adjust for wear.

Replacing Brake System Parts

The braking system on a vehicle is complex. Its many parts have to be of top quality and work well together if the vehicle is to have really good braking. The vehicle was designed and tested with top-quality brake parts. When parts of the braking system are replaced, be sure to get new, approved replacement parts. If this is not done, the brakes might not work properly. For example, installing disc brake pads that are wrong for the vehicle, can change the balance between the front and rear brakes — for the worse. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed.

Brake Fluid

The brake master cylinder reservoir is filled with DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview on page 10-5* for the location of the reservoir.

There are only two reasons why the brake fluid level in the reservoir might go down:

- The brake fluid level goes down because of normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake hydraulic system can also cause a low fluid level. Have the brake hydraulic system fixed, since a leak means that sooner or later the brakes will not work well.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove brake fluid, as necessary, only when work is done on the brake hydraulic system.

⚠ Warning

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light on page 5-19*.

What to Add

Use only new DOT 3 brake fluid from a sealed container. See *Recommended Fluids and Lubricants on page 11-13*.

Always clean the brake fluid reservoir cap and the area around the cap before removing it. This helps keep dirt from entering the reservoir.

⚠ Warning

With the wrong kind of fluid in the brake hydraulic system, the brakes might not work well. This could cause a crash. Always use the proper brake fluid.

⚠ Caution

- Using the wrong fluid can badly damage brake hydraulic system parts. For example, just a few drops of mineral-based oil, such as engine oil, in the brake hydraulic system can damage brake hydraulic system parts so badly that they will have to be replaced. Do not let someone put in the wrong kind of fluid.
- If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on the vehicle. If you do, wash it off immediately.

Battery

Refer to the replacement number shown on the original battery label when a new battery is needed. See *Engine Compartment Overview on page 10-5* for battery location.

⚠ Warning

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Vehicle Storage

⚠ Warning

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. See *Jump Starting on page 10-80* for tips on working around a battery without getting hurt.

Infrequent Usage: Remove the black, negative (−) cable from the battery to keep the battery from running down.

Extended Storage: Remove the black, negative (−) cable from the battery or use a battery trickle charger.

All-Wheel Drive

Transfer Case

Under normal driving conditions, transfer case fluid does not require changing or checking unless there is a fluid leak or unusual noise. If required, have the transfer case serviced by your dealer.

Starter Switch Check

⚠ Warning

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.
2. Apply both the parking brake and the regular brake.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

Automatic Transmission Shift Lock Control Function Check

⚠ Warning

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.
2. Apply the parking brake. Be ready to apply the regular brake immediately if the vehicle begins to move.
3. With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the shift lever out of P (Park) with normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

Park Brake and P (Park) Mechanism Check

⚠ Warning

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

Wiper Blade Replacement

Windshield wiper blades should be inspected for wear or cracking.

It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn. For proper windshield wiper blade length and type, see *Maintenance Replacement Parts on page 11-14.*

⚠ Caution

Allowing the wiper arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that

(Continued)

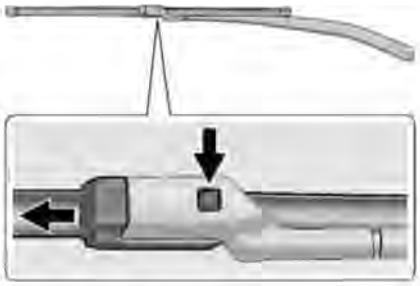
Caution (Continued)

occurs would not be covered by your warranty. Do not allow the wiper arm to touch the windshield.

Front Wiper Blade Replacement

To replace the wiper blade assembly:

1. Pull the windshield wiper assembly away from the windshield.



2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
3. Remove the wiper blade.
4. Reverse steps 1–3 for wiper blade replacement.

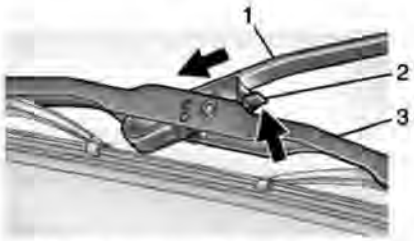
Rear Wiper Blade Replacement

The rear wiper blade and wiper arm have a cover for protection. The cover must be removed before the wiper blade can be replaced.

To remove the cover:

1. Slide a plastic tool under the cover and push upward to unsnap.
2. Slide the cover toward the wiper blade tip to unhook it from the blade assembly.
3. Remove the cover.
4. After wiper blade replacement, ensure that the cover hook slides into the slot in the blade assembly.
5. Snap the cover down to secure.

To remove the wiper blade:



1. Lift the wiper arm away from the window.
2. Push the release lever (2) to disengage the hook and push the wiper arm (1) out of the blade assembly (3).
3. Push the new blade assembly securely on the wiper arm until the release lever clicks into place.
4. Replace the wiper cover.

Headlamp Aiming

Headlamp aim has been preset and should need no further adjustment.

If the vehicle is damaged in a crash, the headlamp aim may be affected. If adjustment to the headlamps is necessary, see your dealer.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs on page 10-33.*

For any bulb changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

⚠ Warning

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

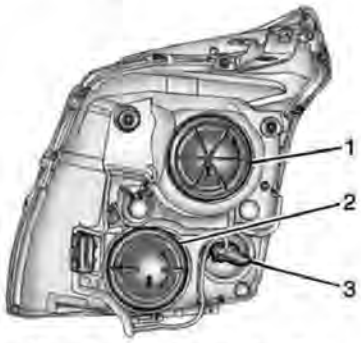
High Intensity Discharge (HID) Lighting

⚠ Warning

The high intensity discharge lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.

After an HID headlamp bulb has been replaced, the beam might be a slightly different shade than it was originally. This is normal.

Headlamps



Base Headlamp Assembly (Rear View Passenger Side)

1. Low-Beam Headlamp/Daytime Running Lamp (DRL)
2. High-Beam Headlamp
3. Turn Signal Lamp

Uplevel Headlamp Assembly (Rear View Driver Side)

1. High/Low-Beam Headlamp (To be replaced at dealer only)
2. Daytime Running Lamp (DRL)
3. Turn Signal Lamp

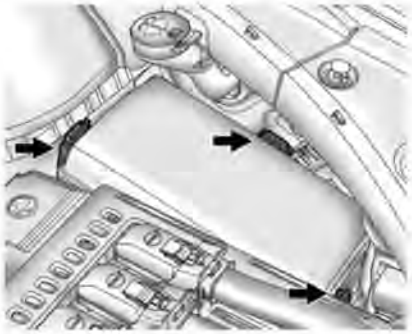
Driver Side

The removal of the underhood electrical center cover is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-4*.

⚠ Warning

Liquids from environment or spillage and/or tools placed on top of or used in the underhood electrical center while the cover is removed can pose a risk of electrical shock/burn to anyone in the vicinity. These conditions can also cause damage to electrical components on the vehicle. Keep liquids and tools away from the underhood electrical center when the cover is removed.



2. Unlatch three clips and lift up the underhood electrical center cover to remove.

Passenger Side

The removal of the air filter/cleaner assembly and base is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-4*.
2. Remove the air cleaner/filter cover. See *Engine Air Cleaner/ Filter on page 10-10*.
3. Lift the air cleaner/filter base to disengage from the three pins.

Low-Beam Headlamps/Daytime Running Lamps (DRL), High-Beam Headlamps (Base)

1. From the back side of the headlamp assembly, remove the top cap to replace the low-beam headlamp/DRL bulb.

2. From the back side of the headlamp assembly, remove the bottom cap to replace the high-beam headlamp bulb.
3. Disconnect the electrical connector.
4. Remove the bulb socket from the headlamp assembly.
5. Replace the bulb in the bulb socket.
6. Install the bulb socket in the headlamp assembly.
7. Connect the electrical connector.

8. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
9. For the driver side, reinstall the underhood electrical center cover by latching three clips.
10. For the passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

High/Low-Beam Headlamps (Uplevel)

The high/low beam headlamps on the uplevel are High Intensity Discharge (HID) and should be replaced at the dealer.

Daytime Running Lamp (DRL) (Uplevel)

1. From the back side of the headlamp assembly, remove the bottom cap to replace the DRL bulb.
2. Disconnect electrical connector.
3. Remove the DRL bulb socket from the headlamp assembly.
4. Replace the bulb in the bulb socket.
5. Install the bulb socket in the headlamp assembly.
6. Connect the electrical connector.
7. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
8. For driver side, reinstall the underhood electrical center cover by latching three clips.
9. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat . Verify the base is seated securely, then install the engine air filter/cleaner assembly.

Front Turn Signal Lamp (Base and Uplevel)

To replace the front turn signal lamp:

1. Remove the turn signal lamp bulb socket from the headlamp assembly.
2. Remove the turn signal lamp bulb from the socket.
3. Replace the bulb in the bulb socket.

4. Install the bulb socket in the headlamp assembly.
5. For the driver side, reinstall the underhood electrical center cover by latching three clips.
6. For the passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

Turn Signal Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-13.*

2. Remove the push pin (1) on the taillamp cover (2).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten the snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.

6. Turn the turn signal lamp bulb socket counterclockwise to remove it from the taillamp assembly.
7. Pull the bulb straight out from the socket.
8. Press a new bulb into the socket, insert it into the taillamp assembly, and turn the bulb socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

Back-Up Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-13*.

2. Remove the push pin (1) on the taillamp cover (2).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from the snap tabs.

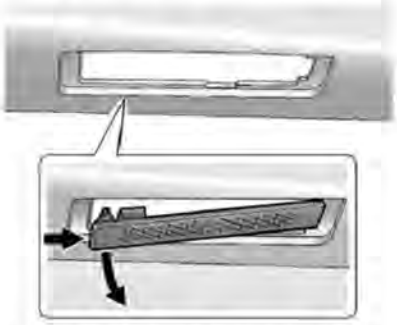
4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.

6. Disconnect the wiring harness connector from the back-up bulb/socket assembly.
7. Turn the back-up bulb socket counterclockwise to remove it from the taillamp assembly.
8. Install a new bulb/socket assembly into the taillamp assembly, and turn the bulb/socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

License Plate Lamp

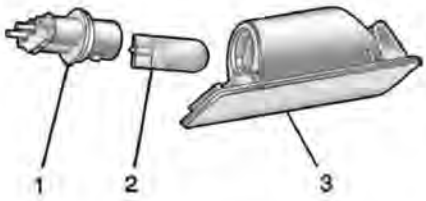
To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-13*.



Passenger Side Shown, Driver Side Similar

2. Push the left end of the lamp assembly toward the right.
3. Turn the lamp assembly down to remove it from the liftgate.



4. Turn the bulb socket (1) counterclockwise to remove it from the lamp assembly (3).
5. Pull the bulb (2) straight out of the bulb socket.
6. Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install into the lamp assembly.
7. Turn the lamp assembly into the liftgate, engaging the clip side first.

8. Push on the lamp side opposite the clip until the lamp assembly snaps into place.

Replacement Bulbs

Exterior Lamp	Bulb Number
Back-up Lamp	Hyperclick PH16W
Daytime Running Lamp	7443 ULL
Headlamp High-Beam	9005LL
Headlamp Low-Beam	H11LL
License Plate Lamp	W5WLL
Turn Signal Front	7444NA
Tail/Turn Signal Rear	7440

For replacement bulbs not listed here, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect power devices in the vehicle.

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

Windshield Wipers

If the wiper motor overheats due to heavy snow or ice, the windshield wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windshield before using the windshield wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

Fuses and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit breakers. This greatly reduces the chance of damage caused by electrical problems.

To check a fuse, look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating.

Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as possible.

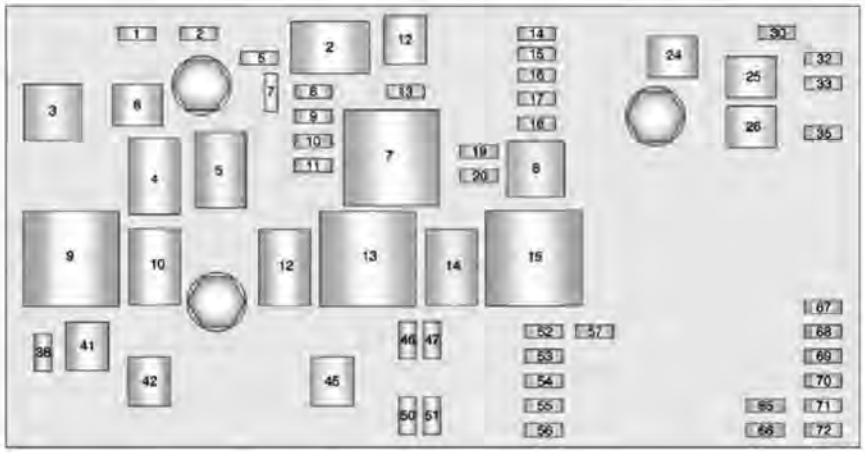
To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse Block on page 10-34*, *Instrument Panel Fuse Block on page 10-37*, and *Rear Compartment Fuse Block on page 10-39*.

Engine Compartment Fuse Block

To remove the fuse block cover, press the clips on the cover and lift it straight up.

⚠ Caution

Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.



Engine Compartment Fuse Block

The vehicle may not be equipped with all of the fuses, relays, and features shown.

J-Case Fuses	Usage
6	Wiper
12	Vacuum Pump

J-Case Fuses	Usage
24	Antilock Brake System Pump
25	Rear Electrical Center 1

J-Case Fuses	Usage
26	Rear Electrical Center 2
41	Cooling Fan 2
42	Starter
45	Cooling Fan 1

Mini Fuses	Usage
1	Engine Control Module Battery
2	Transmission Control Module Battery
5	Engine Control Module Run Crank
7	Post-Catalytic Converter O2 Sensor
8	Pre-Catalytic Converter O2 Sensor

Mini Fuses	Usage
9	Engine Control Module Powertrain
10	Fuel Injectors – Even
11	Fuel Injectors – Odd
13	Washer
14	Heated Steering Wheel
15	Heads Up Display
16	Instrument Cluster/ Malfunction Indicator Lamp/Ignition
17	Air Quality Sensor
18	Headlamp Washer
19	Transmission Control Module Run Crank
20	Rear Electrical Center Run Crank
30	Switch Back Light

Mini Fuses	Usage
32	Battery Sense (Regulated Voltage Control)
33	Adaptive Forward Lighting/Adaptive Headlamp Leveling Module
35	Electronic Brake Control Module
36	Air Conditioning Compressor Clutch
46	Low-Beam Headlamp – Right
47	Low-Beam Headlamp – Left
50	Front Fog Lamps
51	Horn
52	Fuel System Control Module
53	Headlamp Level

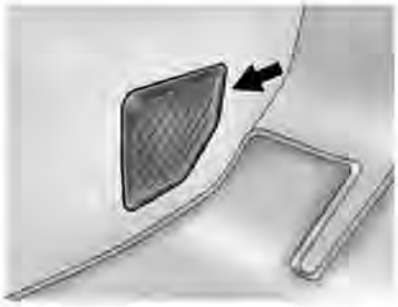
Mini Fuses	Usage
54	Sensing Diagnostic Module Ignition
55	High-Beam Headlamp – Right
56	High-Beam Headlamp – Left
57	Ignition Steering Column Lock
65	Trailer Right Stoplamp
66	Trailer Left Stoplamp
67	Spare
68	Spare
69	Spare
70	Spare
71	Spare
72	Spare

Mini Relays	Usage
7	Powertrain
9	Cooling Fan 2
13	Cooling Fan 1
15	Run/Crank

Micro Relays	Usage
2	Vacuum Pump
4	Wiper Control
5	Wiper Speed
10	Starter
12	Cool Fan 3
14	Low Beam/HID

U Micro Relays	Usage
3	Air Conditioning Compressor Clutch
8	Headlamp Washer

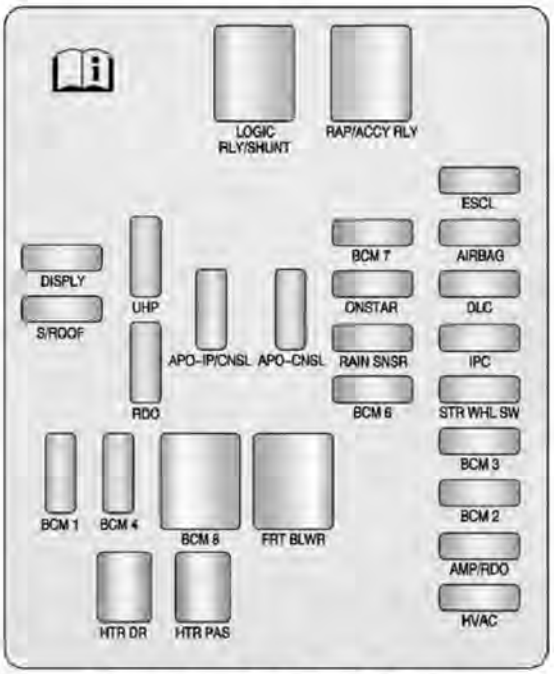
Instrument Panel Fuse Block



The instrument panel fuse block is located in the center console between the driver and passenger seats. To access the fuses, open the fuse panel door from the passenger side by pulling it out.

To reinstall the door, push the door back into its original location.

The vehicle may not be equipped with all of the fuses, relays and features shown.



Instrument Panel Fuse Block

Mini Fuses	Usage
DISPLY	Display
S/ROOF	Sunroof
UHP	Universal Handsfree Phone (If Equipped)
RDO	Radio
APO – IP/CNSL	Auxiliary Power Outlet – Instrument Panel/Console
APO – CNSL	Auxiliary Power Outlet – Floor Console
BCM 1	Body Control Module 3
BCM 4	Body Control Module 4
BCM 7	Body Control Module 7
ONSTAR	OnStar® System (If Equipped)
RAIN SNSR	Rain Sensor

Mini Fuses	Usage
BCM 6	Body Control Module 6
ESCL	Electronic Steering Column Lock
AIRBAG	Sensing and Diagnostic Module
DLC	Data Link Connector
IPC	Instrument Cluster
STR WHL SW	Steering Wheel Switch
BCM 3	Body Control Module 1
BCM 2	Body Control Module 2
AMP/RDO	Amplifier/Radio
HVAC	Heating Ventilation & Air Conditioning

J-Case Fuses	Usage
BCM 8	Body Control Module 8
FRT BLWR	Front Blower

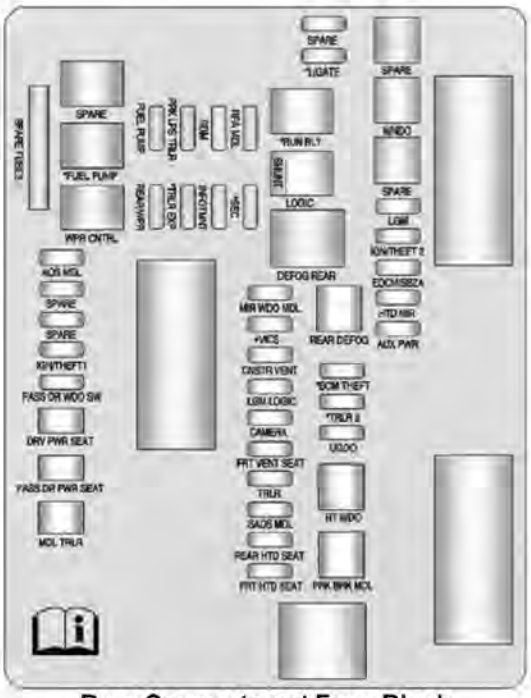
Relays	Usage
LOGIC RLY/ SHUNT	Logistics Relay/ Shunt
RAP/ ACCY RLY	Retained Accessory Power/ Accessory Relay

Breakers	Usage
HTR DR	Heated Driver Seat
HTR PAS	Heated Passenger Seat

Rear Compartment Fuse Block

The rear compartment fuse block is in the cargo area, on the driver side of the vehicle behind the lower trim panel. To open, turn the latch with a flat bladed tool and pull the trim panel from the edges to fold it down.

The vehicle may not be equipped with all of the fuses, relays, and features shown.



Rear Compartment Fuse Block

Fuses	Usage
AOS MDL	Automatic Occupant Sensing Module
AUX PWR	Auxiliary Power Outlet
* BCM THEFT	Body Control Module Theft
CAMERA	Rear Vision Camera
CNSTR VENT	Canister Vent
DRV PWR SEAT	Driver Power Seat
EOCM/ SBZA	External Object Calculating Module/ Side Blind Zone Alert
FRT HTD SEAT	Front Heated Seats
FRT VENT SEAT	Front Ventilated Seats
FUEL PUMP	Fuel Pump
HTD MIR	Heated Mirror

Fuses	Usage
IGN/ THEFT 1	Ignition/Theft 1
IGN/ THEFT 2	Ignition/Theft 2
INFOTMNT	Infotainment
* L/GATE	Liftgate
LGM	Liftgate Module
LGM LOGIC	Liftgate Module Logic
MDL TRLR	Trailer Module
MIR WDO MDL	Mirror Window Module
PRK BRK MDL	Park Brake Module
PASS DR WDO SW	Passenger Door Window Switch
PASS DR PWR SEAT	Passenger/Driver Power Seats
PRK LPS TRLR	Trailer Park Lamps
RDM	Rear Drive Module

Fuses	Usage
REAR DEFOG	Rear Defog
REAR HTD SEAT	Rear Heated Seats
REAR/WPR	Rear Wiper
RT WDO	Right Window
RPA MDL	Rear Parking Assist Module
SADS MDL	Semi Active Damping System Module
* SEC	Security
SHUNT	Shunt
SPARE	Not Used
SPARE FUSES	Spare Fuses
* TRLR EXP	Trailer Export
TRLR	Trailer Module
* TRLR 2	Trailer 2

Fuses	Usage
UGDO	Universal Garage Door Opener
VICS	Vehicle Information Communications System (Export)
WNDO	Power Window

Relays	Usage
DEFOG REAR	Rear Window Defogger
* FUEL PUMP	Fuel Pump
LOGIC	Logistic Relay (Export)
* RUN RLY	Run Relay
SPARE	Not Used
WPR CONTRL	Wiper Control

*Denotes uplevel content.

Wheels and Tires

Tires

Every new GM vehicle has high-quality tires made by a leading tire manufacturer. See the warranty manual for information regarding the tire warranty and where to get service. For additional information refer to the tire manufacturer.

⚠ Warning

- Poorly maintained and improperly used tires are dangerous.
- Overloading the tires can cause overheating as a result of too much flexing. There could be a blowout

(Continued)

Warning (Continued)

and a serious crash. See *Vehicle Load Limits on page 9-10*.

- Underinflated tires pose the same danger as overloaded tires. The resulting crash could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when the tires are cold.
- Overinflated tires are more likely to be cut, punctured, or broken by a sudden impact — such as when hitting a pothole. Keep tires at the recommended pressure.

(Continued)

Warning (Continued)

- Worn or old tires can cause a crash. If the tread is badly worn, replace them.
- Replace any tires that have been damaged by impacts with potholes, curbs, etc.
- Improperly repaired tires can cause a crash. Only the dealer or an authorized tire service center should repair, replace, dismount, and mount the tires.
- Do not spin the tires in excess of 56 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tires to explode.

See *Tire Pressure for High-Speed Operation on page 10-51* for inflation pressure adjustment for high-speed driving.

All-Season Tires

This vehicle may come with all-season tires. These tires are designed to provide good overall performance on most road surfaces and weather conditions. Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. Original equipment all-season tires can be identified by the last two characters of this TPC code, which will be "MS."

Consider installing winter tires on the vehicle if frequent driving on snow or ice-covered roads is expected. All-season tires provide adequate performance for most winter driving conditions, but they may not offer the same level of traction or performance as winter tires on snow or ice-covered roads. See *Winter Tires on page 10-43*.

Winter Tires

This vehicle was not originally equipped with winter tires. Winter tires are designed for increased traction on snow and ice-covered roads. Consider installing winter tires on the vehicle if frequent driving on ice or snow covered roads is expected. See your dealer for details regarding winter tire availability and proper tire selection. Also, see *Buying New Tires on page 10-58*.

With winter tires, there may be decreased dry road traction, increased road noise, and shorter tread life. After changing to winter tires, be alert for changes in vehicle handling and braking.

If using winter tires:

- Use tires of the same brand and tread type on all four wheel positions.
- Use only radial ply tires of the same size, load range, and speed rating as the original equipment tires.

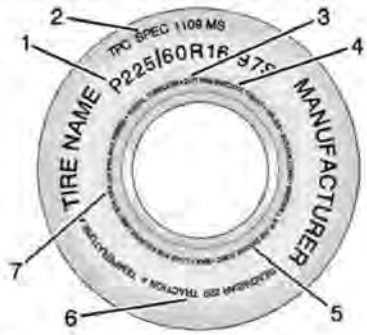
Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y, and ZR speed rated tires. If winter tires with a lower speed rating are chosen, never exceed the tire's maximum speed capability.

Summer Tires

This vehicle may come with high performance summer tires. These tires have a special tread and compound that are optimized for maximum dry and wet road performance. This special tread and compound will decrease performance in cold climates, and on ice and snow. We recommend installing winter tires on the vehicle if frequent driving in cold temperatures or on snow or ice covered roads is expected. See *Winter Tires on page 10-43*.

Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples show a typical passenger vehicle tire and a compact spare tire sidewall.



Passenger (P-Metric) Tire Example

(1) Tire Size : The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type, and service description. See the "Tire Size" illustration later in this section.

(2) TPC Spec (Tire Performance Criteria Specification) : Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

(3) DOT (Department of Transportation) : The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

DOT Tire Date of Manufacture : The last four digits of the TIN indicate the tire manufactured date. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

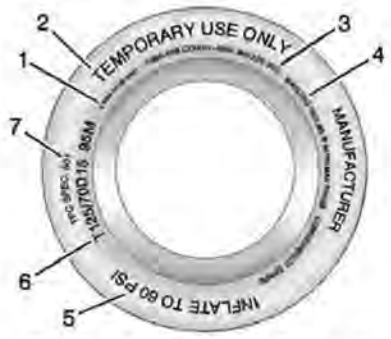
(4) Tire Identification Number (TIN) : The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(5) Tire Ply Material : The type of cord and number of plies in the sidewall and under the tread.

(6) Uniform Tire Quality Grading (UTQG) : Tire manufacturers are required to grade tires based on three

performance factors: treadwear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading on page 10-60*.

(7) Maximum Cold Inflation Load Limit : Maximum load that can be carried and the maximum pressure needed to support that load.



Compact Spare Tire Example

(1) Tire Ply Material : The type of cord and number of plies in the sidewall and under the tread.

(2) Temporary Use Only : The compact spare tire or temporary use tire should not be driven at speeds over 80 km/h (50 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If the vehicle has a compact spare tire, see *Compact Spare Tire on page 10-79* and *If a Tire Goes Flat on page 10-63*.

(3) Tire Identification Number (TIN) : The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(4) Maximum Cold Inflation Load Limit : Maximum load that can be carried and the maximum pressure needed to support that load.

(5) Tire Inflation : The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure on page 10-49*.

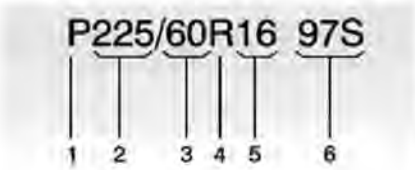
(6) Tire Size : A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(7) TPC Spec (Tire Performance Criteria Specification) : Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

Tire Designations

Tire Size

The following is an example of a typical passenger vehicle tire size.



(1) Passenger (P-Metric) Tire : The United States version of a metric tire sizing system. The letter P as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

(2) Tire Width : The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(3) Aspect Ratio : A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item 3 of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(4) Construction Code : A letter code is used to indicate the type of ply construction in the tire. The letter R means radial ply construction; the letter D means diagonal or bias ply construction; and the letter B means belted-bias ply construction.

(5) Rim Diameter : Diameter of the wheel in inches.

(6) Service Description : These characters represent the load index and speed rating of the tire. The load index represents the load carrying capacity a tire is certified to carry. The speed rating is the maximum speed a tire is certified to carry a load.

Tire Terminology and Definitions

Air Pressure : The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in kPa (kilopascal) or psi (pounds per square inch).

Accessory Weight : The combined weight of optional accessories. Some examples of optional accessories are automatic transmission, power windows, power seats, and air conditioning.

Aspect Ratio : The relationship of a tire's height to its width.

Belt : A rubber coated layer of cords between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead : The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire : A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure : The amount of air pressure in a tire, measured in kPa (kilopascal) or psi (pounds per square inch) before a tire has built up heat from driving. See *Tire Pressure on page 10-49*.

Curb Weight : The weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil, and coolant, but without passengers and cargo.

DOT Markings : A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation (DOT) Motor Vehicle Safety Standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand, and date of production.

GVWR : Gross Vehicle Weight Rating. See *Vehicle Load Limits on page 9-10.*

GAWR FRT : Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits on page 9-10.*

GAWR RR : Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits on page 9-10.*

Intended Outboard Sidewall : The side of an asymmetrical tire that must always face outward when mounted on a vehicle.

Kilopascal (kPa) : The metric unit for air pressure.

Light Truck (LT-Metric) Tire : A tire used on light duty trucks and some multipurpose passenger vehicles.

Load Index : An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

Maximum Inflation Pressure : The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.

Maximum Load Rating : The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum Loaded Vehicle Weight : The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Normal Occupant Weight : The number of occupants a vehicle is designed to seat multiplied by 68 kg (150 lb). See *Vehicle Load Limits on page 9-10.*

Occupant Distribution : Designated seating positions.

Outward Facing Sidewall : The side of an asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The side of the tire that contains a whitewall, bears white lettering, or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the other sidewall of the tire.

Passenger (P-Metric) Tire : A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

Recommended Inflation Pressure : Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Tire Pressure on page 10-49* and *Vehicle Load Limits on page 9-10.*

Radial Ply Tire : A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

Rim : A metal support for a tire and upon which the tire beads are seated.

Sidewall : The portion of a tire between the tread and the bead.

Speed Rating : An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

Traction : The friction between the tire and the road surface. The amount of grip provided.

Tread : The portion of a tire that comes into contact with the road.

Treadwear Indicators : Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1.6 mm (1/16 in) of tread remains. See *When It Is Time for New Tires on page 10-57.*

UTQGS (Uniform Tire Quality Grading Standards) : A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading on page 10-60.*

Vehicle Capacity Weight : The number of designated seating positions multiplied by 68 kg (150 lb) plus the rated cargo load. See *Vehicle Load Limits on page 9-10.*

Vehicle Maximum Load on the Tire : Load on an individual tire due to curb weight, accessory weight, occupant weight, and cargo weight.

Vehicle Placard : A label permanently attached to a vehicle showing the vehicle capacity weight and the original equipment tire size and recommended inflation pressure. See "Tire and Loading Information Label" under *Vehicle Load Limits on page 9-10.*

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

⚠ Caution

Neither tire underinflation nor overinflation is good. Underinflated tires, or tires that do not have enough air, can result in:

- Tire overloading and overheating which could lead to a blowout.
- Premature or irregular wear.
- Poor handling.
- Reduced fuel economy.

(Continued)

Caution (Continued)

Overinflated tires, or tires that have too much air, can result in:

- Unusual wear.
- Poor handling.
- Rough ride.
- Needless damage from road hazards.

The Tire and Loading Information label on the vehicle indicates the original equipment tires and the correct cold tire inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity. See *Vehicle Load Limits on page 9-10*.

How the vehicle is loaded affects vehicle handling and ride comfort. Never load the vehicle with more weight than it was designed to carry.

When to Check

Check the tires once a month or more. Do not forget the compact spare, if the vehicle has one. The cold compact spare tire pressure should be at 420 kPa (60 psi). See *Compact Spare Tire on page 10-79*.

How to Check

Use a good quality pocket-type gauge to check tire pressure. Proper tire inflation cannot be determined by looking at the tire. Check the tire inflation pressure when the tires are cold, meaning the vehicle has not been driven for at least three hours or no more than 1.6 km (1 mi).

Remove the valve cap from the tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement. If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until the recommended pressure is reached. If the inflation pressure is high, press on the metal stem in the center of the tire valve to release air.

Recheck the tire pressure with the tire gauge.

Return the valve caps on the valve stems to prevent leaks and keep out dirt and moisture.

Tire Pressure for High-Speed Operation

⚠ Warning

Driving at high speeds, 160 km/h (100 mph) or higher, puts an additional strain on tires. Sustained high-speed driving causes excessive heat buildup and can cause sudden tire failure. You could have a crash and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for high-speed operation. When speed limits and road conditions are such that a vehicle can be driven at high speeds, make sure the tires are rated for high-speed operation, in excellent condition, and set to the correct cold tire inflation pressure for the vehicle load.

Vehicles with P235/65R18, P235/55R20, or 235/55R20 size tires require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold inflation pressure to the maximum inflation pressure shown on the tire sidewall, or 260 kPa (38 psi), whichever is lower. Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See *Vehicle Load Limits on page 9-10* and *Tire Pressure on page 10-49*.

The maximum load and inflation pressure is molded on the tire sidewall, in small letters, near the rim flange. It will read something like this: Maximum load 690 kg (1521 lbs) 300 kPa (44 psi) Max. Press.

Tire Pressure Monitor System

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS sensors monitor the air pressure in your tires and transmit tire pressure readings to a receiver located in the vehicle.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated.

Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them

to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated.

This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

See *Tire Pressure Monitor Operation on page 10-52*.

See *Radio Frequency Statement on page 13-15*.

Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the tires and transmits the tire pressure readings to a receiver located in the vehicle.

When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the

tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-10*.

A message to check the pressure in a specific tire displays in the Driver Information Center (DIC). The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure. Using the DIC, tire pressure levels can be viewed. For additional information and details about the DIC operation and displays see *Driver Information Center (DIC) on page 5-26*.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tire and Loading Information label, attached to your vehicle, shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See *Vehicle Load Limits on page 9-10*, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure on page 10-49*.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection on page 10-55*, *Tire Rotation on page 10-56* and *Tires on page 10-42*.

⚠ Caution

Tire sealant materials are not all the same. A non-approved tire sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tire sealant is not covered by the

(Continued)

Caution (Continued)

vehicle warranty. Always use only the GM approved tire sealant available through your dealer or included in the vehicle.

Factory-installed Tire Inflator Kits use a GM approved liquid tire sealant. Using non-approved tire sealants could damage the TPMS sensors. See *Tire Sealant and Compressor Kit on page 10-65* for information regarding the inflator kit materials and instructions.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tire warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also

displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and DIC message should go off after the road tire is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.
- The TPMS sensor matching process was not done or not completed successfully after rotating the tires. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tires or wheels do not match the original equipment tires or wheels. Tires and wheels other than those recommended could prevent the TPMS from functioning properly. See *Buying New Tires on page 10-58*.
- Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning properly it cannot detect or signal a low tire condition. See your dealer for service if the TPMS malfunction light and DIC message comes on and stays on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the vehicle's tires or replacing one or more of the TPMS sensors. The TPMS sensor matching process should also be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message should go off at the next ignition cycle. The sensors are matched to the tire/wheel positions, using a TPMS relearn tool, in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear. See your dealer for service or to purchase a relearn tool.

There are two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is:

1. Set the parking brake.
2. Place the vehicle power mode in ON/RUN/START. See *Ignition Positions on page 9-15*.
3. Make sure the Tire Pressure info display option is turned on. The info displays on the DIC can be turned on and off through the Settings menu. See *Driver Information Center (DIC) on page 5-26*.
4. Use the five-way DIC control on the right side of the steering wheel to scroll to the Tire Pressure screen under the DIC info page. See *Driver Information Center (DIC) on page 5-26*.
5. Press and hold the SEL button in the center of the five-way DIC control.

   The horn sounds twice to signal the receiver is in relearn mode and the TIRE LEARNING ACTIVE message displays on the DIC screen.
6. Start with the driver side front tire.
7. Place the relearn tool against the tire sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tire and wheel position.
8. Proceed to the passenger side front tire, and repeat Step 7.
9. Proceed to the passenger side rear tire, and repeat Step 7.
10. Proceed to the driver side rear tire, and repeat Step 7. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
11. Shut the ignition off.
12. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

Tire Inspection

We recommend that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.

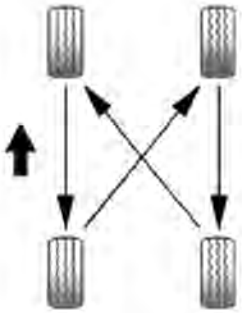
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Tire Rotation

Tires should be rotated every 12 000 km (7,500 mi). See *Maintenance Schedule on page 11-4*.

Tires are rotated to achieve a uniform wear for all tires. The first rotation is the most important.

Anytime unusual wear is noticed, rotate the tires as soon as possible, check for proper tire inflation pressure, and check for damaged tires or wheels. If the unusual wear continues after the rotation, check the wheel alignment. See *When It Is Time for New Tires on page 10-57* and *Wheel Replacement on page 10-62*.



Use this rotation pattern when rotating the tires.

Do not include the compact spare tire in the tire rotation.

Adjust the front and rear tires to the recommended inflation pressure on the Tire and Loading Information label after the tires have been rotated. See *Tire Pressure on page 10-49* and *Vehicle Load Limits on page 9-10*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 10-52*.

Check that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications on page 12-2*.

⚠ Warning

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

Lightly coat the center of the wheel hub with wheel bearing grease after a wheel change or tire rotation to prevent corrosion or rust build-up. Do not get grease on the flat wheel mounting surface or on the wheel nuts or bolts.

When It Is Time for New Tires

Factors such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tires.

Treadwear indicators are one way to tell when it is time for new tires. Treadwear indicators appear when the tires have only 1.6 mm (1/16 in) or less of tread remaining. See *Tire Inspection on page 10-55* and *Tire Rotation on page 10-56*.

The rubber in tires ages over time. This also applies to the spare tire, if the vehicle has one, even if it is never used. Multiple factors including temperatures, loading conditions, and inflation pressure maintenance affect how fast aging takes place. GM recommends that tires, including the spare if equipped, be replaced after six years, regardless of tread wear. The tire manufacture date is the last four digits of the DOT Tire Identification Number (TIN) which is molded into one side of the tire sidewall. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

Vehicle Storage

Tires age when stored normally mounted on a parked vehicle. Park a vehicle that will be stored for at least a month in a cool, dry, clean area away from direct sunlight to slow aging. This area should be free of grease, gasoline, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tires that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tires or raise the vehicle to reduce the weight from the tires.

Buying New Tires

GM has developed and matched specific tires for the vehicle. The original equipment tires installed were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. When replacement tires are needed, GM strongly recommends buying tires with the same TPC Spec rating.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of the vehicle, including brake system performance, ride and handling, traction control, and tire pressure monitoring performance. GM's TPC Spec number is molded onto the tire's sidewall near the tire size. If the tires have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow. See *Tire Sidewall Labeling on page 10-44*.

GM recommends replacing worn tires in complete sets of four. Uniform tread depth on all tires will help to maintain the performance of the vehicle. Braking and handling performance may be adversely affected if all the tires are not replaced at the same time. If proper rotation and maintenance have been done, all four tires should wear out at about the same time. See *Tire Rotation on page 10-56*. However, if it is necessary to replace only one axle set of worn tires, place the new tires on the rear axle.

Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y and ZR speed rated tires. Never exceed the winter tires' maximum speed capability when using winter tires with a lower speed rating.

⚠ Warning

Tires could explode during improper service. Attempting to mount or dismount a tire could cause injury or death. Only your dealer or authorized tire service center should mount or dismount the tires.

⚠ Warning

Mixing tires of different sizes, brands, or types may cause loss of control of the vehicle, resulting in a crash or other vehicle damage. Use the correct size, brand, and type of tires on all wheels.

⚠ Warning

Using bias-ply tires on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tire and/or wheel could fail suddenly and cause a crash. Use only radial-ply tires with the wheels on the vehicle.

If the vehicle tires must be replaced with a tire that does not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction (radial) as the original tires.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed. See *Tire Pressure Monitor System on page 10-51*.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See *Vehicle Load Limits on page 9-10*.

Different Size Tires and Wheels

If wheels or tires are installed that are a different size than the original equipment wheels and tires, vehicle performance, including its braking, ride and handling characteristics, stability, and resistance to rollover may be affected. If the vehicle has electronic systems such as antilock brakes, rollover airbags, traction control, electronic stability control, or All-Wheel Drive, the performance of these systems can also be affected.

⚠ Warning

If different sized wheels are used, there may not be an acceptable level of performance and safety if tires not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tire systems developed for the vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires on page 10-58* and *Accessories and Modifications on page 10-3*.

Uniform Tire Quality Grading

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter tires, compact spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving

habits, service practices and differences in road characteristics and climate.

Traction

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

Wheel Alignment and Tire Balance

The tires and wheels were aligned and balanced at the factory to provide the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing are not necessary on a regular basis. Consider an alignment check if there is unusual tire wear or the vehicle is significantly pulling to one side or the other. Some slight pull to the left or right, depending on the crown of the road and/or other road surface variations such as troughs or ruts, is normal. If the vehicle is vibrating when driving on a smooth road, the tires and wheels may need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it. Some aluminum wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

⚠ Warning

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tires can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

⚠ Caution

The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tire or tire chain clearance to the body and chassis.

Used Replacement Wheels

⚠ Warning

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

Tire Chains

⚠ Warning

Do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes, suspension, or other vehicle

(Continued)

Warning (Continued)

parts. The area damaged by the tire chains could cause loss of control and a crash.

Use another type of traction device only if its manufacturer recommends it for the vehicle's tire size combination and road conditions. Follow that manufacturer's instructions. To avoid vehicle damage, drive slow and readjust or remove the traction device if it contacts the vehicle. Do not spin the wheels. If traction devices are used, install them on the front tires.

If a Tire Goes Flat

It is unusual for a tire to blow out while driving, especially if the tires are maintained properly. See *Tires on page 10-42*. If air goes out of a tire, it is much more likely to leak out slowly. But if there is ever a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

⚠ Warning

Driving on a flat tire will cause permanent damage to the tire. Re-inflating a tire after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tire that has been driven on while severely underinflated or flat. Have your dealer or an authorized tire service center repair or replace the flat tire as soon as possible.

⚠ Warning

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-6*.

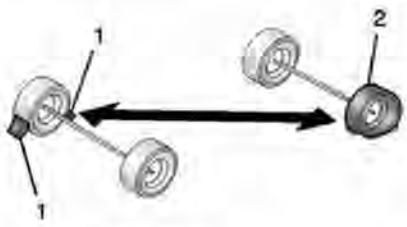
⚠ Warning

Changing a tire can be dangerous. The vehicle can slip off the jack and roll over or fall causing injury or death. Find a level place to change the tire. To help prevent the vehicle from moving:

1. Set the parking brake firmly.
2. Put an automatic transmission in P (Park) or a manual transmission in 1 (First) or R (Reverse).
3. Turn off the engine and do not restart while the vehicle is raised.
4. Do not allow passengers to remain in the vehicle.
5. Place wheel blocks on both sides of the tire at the opposite corner of the tire being changed.

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. To use the jacking equipment to change a spare tire safely, follow the instructions below. Then see *Tire Changing on page 10-73*. To use the tire sealant and compressor kit, see *Tire Sealant and Compressor Kit on page 10-65*.

When the vehicle has a flat tire (2), use the following example as a guide to assist you in the placement of wheel blocks (1).



1. Wheel Block
2. Flat Tire

The following information explains how to repair or change a tire.

Tire Sealant and Compressor Kit

⚠ Warning

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 9-21*.

⚠ Warning

Overinflating a tire could cause the tire to rupture and you or others could be injured. Be sure to read and follow the tire sealant and compressor kit instructions and inflate the tire to its recommended pressure. Do not exceed the recommended pressure.

⚠ Warning

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

If this vehicle has a tire sealant and compressor kit, there may not be a spare tire or tire changing equipment, and on some vehicles there may not be a place to store a tire.

The tire sealant and compressor can be used to temporarily seal punctures up to 6 mm (0.25 in) in the tread area of the tire. It can also be used to inflate an underinflated tire.

If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Service on page 13-5*.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

Tire Sealant

Read and follow the safe handling instructions on the label adhered to the sealant canister.

Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date.

Replacement sealant canisters are available at your local dealer. See "Removal and Installation of the Sealant Canister" following.

There is only enough sealant to seal one tire. After usage, the sealant canister and sealant/air hose assembly must be replaced. See "Removal and Installation of the Sealant Canister" following.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

When using the tire sealant and compressor kit during cold temperatures, warm the kit in a heated environment for five minutes. This will help to inflate the tire faster.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-6*.

See *If a Tire Goes Flat on page 10-63* for other important safety warnings.

Do not remove any objects that have penetrated the tire.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-72*.
2. Unwrap the sealant/air hose (6) and the power plug (8).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the sealant/air hose (6) onto the tire valve stem. Turn it clockwise until it is tight.

6. Plug the power plug (8) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-7*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Press and turn the selector switch (1) counterclockwise to the Sealant + Air position.
9. Press the on/off button (2) to turn the tire sealant and compressor kit on.

   The compressor will inject sealant and air into the tire.

   The pressure gauge (3) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.
10. Inflate the tire to the recommended inflation pressure using the pressure gauge (3). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-49*.

    The pressure gauge (3) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

⚠ Caution

If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tire is too severely damaged and the tire sealant and compressor kit cannot inflate the tire. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Service on page 13-5*.

11. Press the on/off button (2) to turn the tire sealant and compressor kit off.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire, therefore, Steps 12–18 must be done immediately after Step 11.

Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (8) from the accessory power outlet in the vehicle.
13. Turn the sealant/air hose (6) counterclockwise to remove it from the tire valve stem.
14. Replace the tire valve stem cap.
15. Replace the sealant/air hose (6), and the power plug (8) back in their original location.

16. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (5) and place it in a highly visible location. Do not exceed the speed on this label until the damaged tire is repaired or replaced.
17. Return the equipment to its original storage location in the vehicle.
18. Immediately drive the vehicle 8 km (5 mi) to distribute the sealant in the tire.
19. Stop at a safe location and check the tire pressure. Refer to Steps 1–11 under "Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)."

    If the tire pressure has fallen more than 68 kPa (10 psi) below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant cannot seal the tire. See *Roadside Service on page 13-5*.

    If the tire pressure has not dropped more than 68 kPa (10 psi) from the recommended inflation pressure, inflate the tire to the recommended inflation pressure.
20. Wipe off any sealant from the wheel, tire, and vehicle.
21. Dispose of the used sealant canister (5) and sealant/air hose (6) assembly at a local dealer or in accordance with local state codes and practices.

22. Replace with a new canister assembly available from your dealer.
23. After temporarily sealing the tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within 161 km (100 mi) of driving to have the tire repaired or replaced.

Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-6.*

See *If a Tire Goes Flat on page 10-63* for other important safety warnings.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-72.*
2. Unwrap the air only hose (7) and the power plug (8).

3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.

4. Remove the tire valve stem cap from the flat tire by turning it counterclockwise.

5. Attach the air only hose (7) onto the tire valve stem by turning it clockwise until it is tight.

6. Plug the power plug (8) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-7*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.

7. Start the vehicle. The vehicle must be running while using the air compressor.

8. Press and turn the selector switch (1) clockwise to the Air Only position.

9. Press the on/off button (2) to turn the compressor on.

   The compressor will inflate the tire with air only.

10. Inflate the tire to the recommended inflation pressure using the pressure gauge (3). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-49*.

    The pressure gauge (3) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on/off until the correct pressure is reached.

    If you inflate the tire higher than the recommended pressure you can adjust the excess pressure by pressing the pressure deflation button (4) until the proper pressure reading is reached. This option is only functional when using the air only hose (7).

11. Press the on/off button (2) to turn the tire sealant and compressor kit off.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (8) from the accessory power outlet in the vehicle.

13. Disconnect the air only hose (7) from the tire valve stem, by turning it counterclockwise, and replace the tire valve stem cap.

14. Replace the air only hose (7) and the power plug (8) and cord back in its original location.

15. Place the equipment in the original storage location in the vehicle.

The tire sealant and compressor kit has an accessory adapter located in a compartment on the bottom of its housing that may be used to inflate air mattresses, balls, etc.

Removal and Installation of the Sealant Canister

To remove the sealant canister:

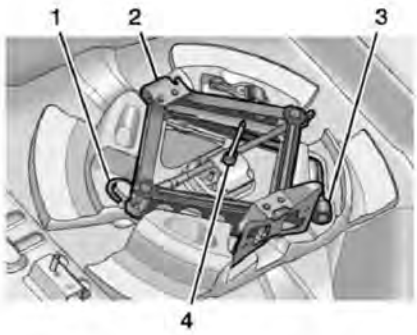
1. Unwrap the sealant hose.
2. Press the canister release button (9).
3. Pull up and remove the canister.
4. Replace with a new canister which is available from your dealer.
5. Push the new canister into place.

Storing the Tire Sealant and Compressor Kit

This vehicle may have a tire sealant and compressor kit in place of a jack or spare tire. It is located in a foam container in the rear compartment storage area. If the vehicle has a cargo cover, see *Cargo Management System on page 4-5* for instructions on how to access the tire sealant and compressor kit.

Tire Changing

Removing the Spare Tire and Tools



1. Extension
2. Jack
3. Wheel Wrench
4. Wing Nut

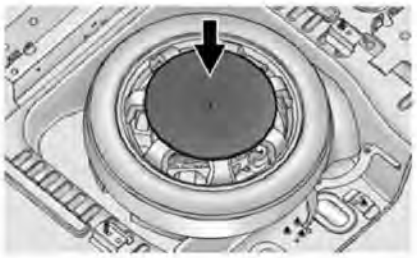
To access the spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-13*.

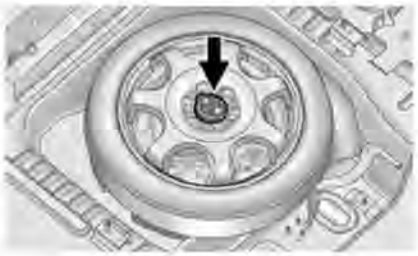
2. Press on the bottom of the handle assembly to unlatch it and lift up on the handle.

   The prop rod locks into place when open.

3. Remove the spare tire cover.



4. Remove the rubber cover.



5. Remove the nut retaining the spare tire.
6. Remove the spare tire and place it next to the tire being changed.
7. Remove the wing nut.
8. Remove the extension, jack, and wheel wrench and place them near the tire being changed.

Removing the Flat Tire and Installing the Spare Tire

Take off the wheel cover or center cap, if the vehicle has one, to reach the wheel bolts.

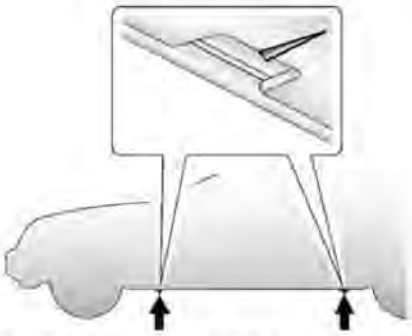
1. Do a safety check before proceeding. See *If a Tire Goes Flat on page 10-63* for more information.
2. Turn the wheel wrench counterclockwise to loosen and remove the wheel nut caps.

   Do not try to remove plastic caps from the cover or center cap.
3. Pull the cover or center cap away from the wheel. Store the wheel cover in the cargo area until you have the flat tire repaired or replaced.

4. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
5. Place the jack near the flat tire.

⚠ Caution

Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.



6. Position the jack lift head at the jack location nearest the flat tire.

   The jacking location is indicated by a V-shaped notch in the plastic molding. The jack must not be used in any other position.

7. Insert the hooked end of the extension handle through the jack and the flat end through the wheel wrench.

⚠ Warning

Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

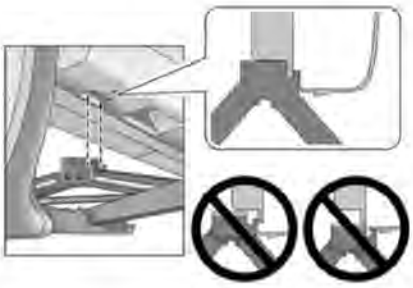
⚠ Warning

Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

⚠ Warning

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

8. Turn the extension with the wheel wrench clockwise to raise the jack lift head until the jack just fits under the vehicle.

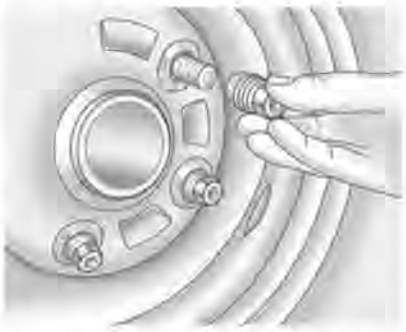


9. Raise the vehicle by turning the wheel wrench clockwise until the slots in the jack head fit into the metal flange located behind the triangle on the plastic moulding.

⚠ Caution

Using a jack to raise the vehicle without positioning it correctly could damage your vehicle. When raising your vehicle on a jack, be sure to position it correctly under the frame and avoid contact with the plastic molding.

10. Put the compact spare tire near you.



Remove all of the wheel nuts.

11. Remove the flat tire.

⚠ Warning

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

12. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
13. Place the compact spare tire on the wheel-mounting surface.

⚠ Warning

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

14. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
15. Lower the vehicle by turning the jack handle counterclockwise.

⚠ Warning

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench to the proper torque specification after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications on page 12-2* for original equipment wheel nut torque specifications.

⚠ Caution

Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See Capacities and Specifications for the wheel nut torque specification.

16. Tighten the wheel nuts firmly in a crisscross sequence, as shown.
17. Lower the jack all the way and remove the jack from under the vehicle.
18. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or center cap on the full-size tire, tighten all six plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

⚠ Caution

Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.

Storing a Flat or Spare Tire and Tools

⚠ Warning

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

To store the flat or spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-13* for more information.
2. Put back all tools as they were stored in the rear storage compartment and put the compartment cover back on. For more information, see "Storing the Compact Spare Tire and Tools" next in this section.
3. Install the cargo cover. For more information, see *Cargo Management System on page 4-5*.
4. Place the tire, lying flat, in the rear storage compartment.

5. Attach the strap to the cargo tie-down in the rear of the vehicle.

6. Route the strap through the wheel, as shown.
7. Attach the strap to the other cargo tie-down in the rear of the vehicle.
8. Tighten the strap.
9. Replace the rubber cover.

The compact spare is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can.

Compact Spare Tire

⚠ Warning

Driving with more than one compact spare tire at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tire at a time.

If this vehicle has a compact spare tire, it was fully inflated when new; however, it can lose air over time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

Stop as soon as possible and check that the spare tire is correctly inflated after being installed on the vehicle. The compact spare tire is designed for temporary use only. The vehicle will perform differently with the spare tire installed and it is recommended that the vehicle speed be limited to 80 km/h (50 mph). To conserve the tread of the spare tire, have the standard tire repaired or replaced as soon as convenient and return the spare tire to the storage area.

When using a compact spare tire, the ABS and Traction Control systems may engage until the spare tire is recognized by the vehicle, especially on slippery roads. Adjust driving to reduce possible wheel slip.

⚠ Caution

When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tire, wheel, and other parts of the vehicle.

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

⚠ Caution

Tire chains will not fit the compact spare. Using them can damage the vehicle and the chains. Do not use tire chains on the compact spare.

Jump Starting

For more information about the vehicle battery, see *Battery on page 10-22*.

If the vehicle battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠ Warning

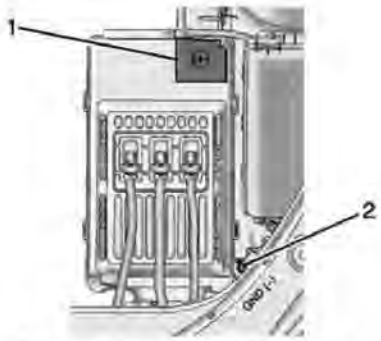
Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

⚠ Caution

Ignoring these steps could result in costly damage to the vehicle that would not be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.



1. Remote Positive (+) Terminal
2. Remote Negative (−) Terminal

Your vehicle is equipped with a remote positive (+) terminal (1) and a remote negative (−) terminal (2). The remote positive (+) terminal is located in the engine compartment on the driver side of the vehicle, above the rear of the battery. The remote negative (−) terminal is a stud located in the engine compartment on the driver side of the vehicle, on the front tie bar. See *Engine Compartment Overview on page 10-5*.

To uncover the remote positive (+) terminal, lift open the access panel on the battery cover indicated by the (+) sign.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

⚠ Caution

If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be

(Continued)

Caution (Continued)

damaged. Only use a vehicle that has a 12-volt system with a negative ground for jump starting.

2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start your vehicle, and the bad grounding could damage the electrical systems.

   To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the transmission in P (Park) before setting the parking brake.

⚠ Caution

If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs would not be covered by the vehicle warranty. Whenever possible, turn off or unplug all accessories on either vehicle when jump starting.

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or the accessory power outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks, helping save both batteries and the radio.
4. Open the hood on the other vehicle and locate the positive (+) and negative (−) terminal locations on that vehicle.

Open the hood on your vehicle and find the remote positive (+) and remote negative (−) jump starting terminals.

⚠ Warning

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.

⚠ Warning

Using an open flame near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.

Be sure the battery has enough water. You do not need to add water to the battery installed in

(Continued)

Warning (Continued)

your new vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you do not, explosive gas could be present.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

⚠ Warning

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could also be damaged.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the vehicle has one. Negative (−) will go to a heavy, unpainted metal engine part or to a remote negative (−) terminal if the vehicle has one.

   Do not connect positive (+) to negative (−) or you will get a short that would damage the battery and maybe other parts. Do not connect the negative (−) cable to the negative (−) terminal on the dead battery because this can cause sparks.

6. Connect the red positive (+) cable to the positive (+) terminal on the vehicle with the dead battery. Use a remote positive (+) terminal if the vehicle has one.
7. Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.
8. Now connect the black negative (−) cable to the negative (−) terminal of the good battery. Use a remote negative (−) terminal if the vehicle has one.

   Do not let the other end touch anything until the next step. The other end of the negative (−) cable does not go to the dead battery. It goes to a heavy, unpainted metal engine part or to a remote negative (−) terminal on the vehicle with the dead battery.
9. Connect the other end of the negative (−) cable away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, and the chance of sparks getting back to the battery is much less.

   Your vehicle has a remote (−) terminal for this purpose.
10. Now start the vehicle with the good battery and run the engine for a while.
11. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

⚠ Caution

If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.

Jumper Cable Removal

Reverse the sequence exactly when removing the jumper cables.

Towing the Vehicle

⚠ Caution

Incorrectly towing a disabled vehicle may cause damage. The damage would not be covered by the vehicle warranty. Do not lash or hook to the chassis components — including the front and rear subframes, suspension control arms, and links — during towing and recovery of a disabled vehicle, or when securing the vehicle. Use the proper nylon strap harnesses around the tires to secure the vehicle.

Have the vehicle towed on a flatbed car carrier. A wheel lift tow truck could damage the vehicle.

Consult your dealer or a professional towing service if the disabled vehicle must be towed.

To tow the vehicle behind another vehicle for recreational purposes, such as behind a motor home, see "Recreational Vehicle Towing" following.

Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle, such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

- The towing capacity of the towing vehicle. Be sure to read the tow vehicle manufacturer's recommendations.
- How far the vehicle will be towed. Some vehicles have restrictions on how far and how long they can tow.
- The proper towing equipment. See your dealer or trailering professional for additional advice and equipment recommendations.
- If the vehicle is ready to be towed. Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

Dinghy Towing

Front-wheel-drive and all-wheel-drive vehicles may be dinghy towed from the front. These vehicles can also be towed by placing them on a platform trailer with all four wheels off of the ground. For other towing options, see the information on dolly towing that follows.

⚠ Caution

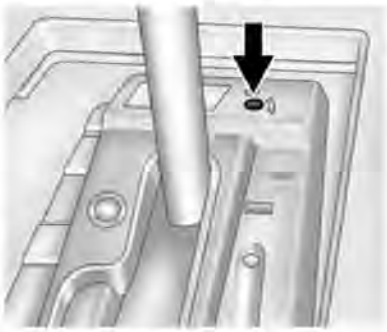
If 105 km/h (65 mph) is exceeded while towing the vehicle, it could be damaged. Never exceed 105 km/h (65 mph) while towing the vehicle.

For vehicles being dinghy towed, the vehicle should be run at the beginning of each day and at each RV fuel stop for about five minutes. This will ensure proper lubrication of transmission components.

To tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle that will be towed and secure it to the towing vehicle.

2. Remove the shift lever boot by pulling up on the rear of the trim plate.



3. Use a small screwdriver or tool to press and hold the manual release button on the front right.
4. Put the vehicle in N (Neutral).

⚠ Caution

If the vehicle is towed without performing each of the steps listed under "Dinghy Towing," the automatic transmission could be damaged. Be sure to follow all steps of the dinghy towing procedure prior to and after towing the vehicle.

Once the destination has been reached:

1. Shift the vehicle to P (Park).
2. Reinstall the shift lever boot by inserting the front edge and pressing the rear of the trim plate until it snaps into place.
3. Start the engine and let it idle for more than three minutes before driving the vehicle.

⚠ Caution

Too much or too little fluid can damage the transmission. Be sure that the transmission fluid is at the proper level before towing with all four wheels on the ground.

⚠ Caution

Do not tow a vehicle with the front drive wheels on the ground if one of the front tires is a compact spare tire. Towing with two different tire sizes on the front of the vehicle can cause severe damage to the transmission.

Dolly Towing (All-Wheel-Drive Vehicles)

All-wheel-drive vehicles should not be towed with two wheels on the ground. To properly tow these vehicles, they should be placed on a platform trailer with all four wheels off of the ground or dinghy towed from the front. See "Dinghy Towing" earlier in this section.

Dolly Towing (Front-Wheel-Drive Vehicles)

To tow the vehicle from the front with the rear wheels on the ground:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park). See *Shifting Into Park on page 9-19*.
3. Set the parking brake.
4. Secure the vehicle to the dolly.

5. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.
6. Release the parking brake.

Towing the Vehicle from the Rear

⚠ Caution

Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.

Appearance Care

Exterior Care

Locks

Locks are lubricated at the factory. Use a de-icing agent only when absolutely necessary, and have the locks greased after using. See *Recommended Fluids and Lubricants on page 11-13*.

Washing the Vehicle

To preserve the vehicle's finish, wash it often and out of direct sunlight.

⚠ Caution

Do not use petroleum-based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle warranty. Approved cleaning

(Continued)

Caution (Continued)

products can be obtained from your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

⚠ Caution

Avoid using high-pressure washes closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.

The symbol is on any underhood compartment electrical center that should not be power washed. This could cause damage that would not be covered by the vehicle warranty.

If using an automatic car wash, follow the car wash instructions. The windshield wiper and rear window wiper, if equipped, must be off. Remove any accessories that may be damaged or interfere with the car wash equipment.

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

Finish Care

Application of aftermarket clearcoat sealant/wax materials is not recommended. If painted surfaces are damaged, see your dealer to have the damage assessed and repaired. Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Occasional hand waxing or mild polishing should be done to remove residue from the paint finish. See your dealer for approved cleaning products.

Do not apply waxes or polishes to uncoated plastic, vinyl, rubber, decals, simulated wood, or flat paint as damage can occur.

⚠ Caution

Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/clearcoat paint finish on the vehicle.

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Moldings

⚠ Caution

Failure to clean and protect the bright metal moldings can result in a hazy white finish or pitting. This damage would not be covered by the vehicle warranty.

The bright metal moldings on the vehicle are aluminum. To prevent damage always follow these cleaning instructions:

- Be sure the molding is cool to the touch before applying any cleaning solution.
- Use a cleaning solution approved for aluminum. Some cleaners are highly acidic or contain alkaline substances and can damage the moldings.
- Always dilute a concentrated cleaner according to the manufacturer's instructions.
- Do not use chrome cleaners.
- Do not use cleaners that are not intended for automotive use.
- Use a nonabrasive wax on the vehicle after washing to protect and extend the molding finish.

Cleaning Exterior Lamps/ Lenses, Emblems, Decals and Stripes

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps, lenses, emblems, decals and stripes. Follow instructions under "Washing the Vehicle" previously in this section.

Lamp covers are made of plastic, and some have a UV protective coating.

Use only lukewarm water, a soft cloth, and mild car washing soap to clean exterior lamps and lenses. Do not clean or wipe them while they are dry.

Do not use any of the following on lamp covers:

- Abrasive or caustic agents.
- Washer fluids and other cleaning agents in higher concentrations than suggested by the manufacturer.

- Solvents, alcohols, fuels, or other harsh cleaners.
- Ice scrapers or other hard items.
- Aftermarket appearance caps or covers while the lamps are illuminated, due to excessive heat generated.

⚠ Caution

Failure to clean lamps properly can cause damage to the lamp cover that would not be covered by the vehicle warranty.

⚠ Caution

Using wax on low gloss black finish stripes can increase the gloss level and create a non-uniform finish. Clean low gloss stripes with soap and water only.

Air Intakes

Clear debris from the air intakes, between the hood and windshield when washing the vehicle.

Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean rubber blades using a lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking.

Replace the wiper blades if they are worn or damaged. Damage can be caused by extreme dusty conditions, sand, salt, heat, sun, snow, and ice.

Weatherstrips

Apply Dielectric silicone grease on weatherstrips to make them last longer, seal better, and not stick or squeak. Lubricate weatherstrips at least once a year. Hot, dry climates may require more frequent application. Black marks from rubber material on painted surfaces can be removed by rubbing with a clean cloth. See *Recommended Fluids and Lubricants on page 11-13*.

Tires

Use a stiff brush with tire cleaner to clean the tires.

⚠ Caution

Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on the vehicle.

Wheels and Trim — Aluminum or Chrome

Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

⚠ Caution

Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium, or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.

⚠ Caution

To avoid surface damage, do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels. Use only approved cleaners. Also, never drive a vehicle with aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.

Steering, Suspension, and Chassis Components

Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear at least once a year.

Inspect power steering for proper hook-up, binding, leaks, cracks, chafing, etc.

Visually check constant velocity joint boots and axle seals for leaks.

Body Component Lubrication

Lubricate all key lock cylinders, hood hinges, liftgate hinges, and the fuel door hinge unless the components are plastic. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

Underbody Maintenance

At least twice a year, Spring and Fall, use plain water to flush dirt and debris from the vehicle's underbody. Your dealer or an underbody car washing system can do this. If not removed, rust and corrosion can develop.

Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

Finish Damage

Quickly repair minor chips and scratches with touch-up materials available from your dealer to avoid corrosion. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

Chemical Paint Spotting

Airborne pollutants can fall upon and attack painted vehicle surfaces causing blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface. See "Finish Care" previously in this section.

Interior Care

To prevent dirt particle abrasions, regularly clean the vehicle's interior. Immediately remove any soils. Note that newspapers or dark garments that can transfer color to home furnishings can also permanently transfer color to the vehicle's interior.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. Using a mild soap solution, immediately remove hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

Your dealer may have products for cleaning the interior. Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage. Apply all cleaners directly to the cleaning cloth. Do not spray cleaners directly on any switches or controls. Cleaners should be removed quickly. Never allow cleaners to remain on the surface being cleaned for extended periods of time.

Cleaners may contain solvents that can become concentrated in the interior. Before using cleaners, read and adhere to all safety instructions on the label. While cleaning the interior, maintain adequate ventilation by opening the doors and windows.

To prevent damage, do not clean the interior using the following cleaners or techniques:

- Never use a razor or any other sharp object to remove a soil from any interior surface.
- Never use a brush with stiff bristles.
- Never rub any surface aggressively or with excessive pressure.

- Do not use laundry detergents or dishwashing soaps with degreasers. For liquid cleaners, use approximately 20 drops per 3.8 L (1 gal) of water.
  A concentrated soap solution will leave a residue that creates streaks and attracts dirt. Do not use solutions that contain strong or caustic soap.
- Do not heavily saturate the upholstery when cleaning.
- Do not use solvents or cleaners containing solvents.

Interior Glass

To clean, use a terry cloth fabric dampened with water. Wipe droplets left behind with a clean dry cloth. Commercial glass cleaners may be used, if necessary, after cleaning the interior glass with plain water.

⚠ Caution

To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window defogger.

Cleaning the windshield with water during the first three to six months of ownership will reduce tendency to fog.

Speaker Covers

Vacuum around a speaker cover gently, so that the speaker will not be damaged. Clean spots with just water and mild soap.

Coated Moldings

Coated moldings should be cleaned.

- When lightly soiled, wipe with a sponge or soft lint-free cloth dampened with water.
- When heavily soiled, use warm soapy water.

Fabric/Carpet/Suede

Start by vacuuming the surface using a soft brush attachment. If a rotating brush attachment is being used during vacuuming, only use it on the floor carpet. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- Gently blot liquids with a paper towel. Continue blotting until no more soil can be removed.
- For solid soils, remove as much as possible prior to vacuuming.

To clean:

1. Saturate a clean lint-free colorfast cloth with water. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.

3. Start on the outside edge of the soil and gently rub toward the center. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
4. Continue gently rubbing the soiled area until there is no longer any color transfer from the soil to the cleaning cloth.
5. If the soil is not completely removed, use a mild soap solution followed only by plain water.

If the soil is not completely removed, it may be necessary to use a commercial upholstery cleaner or spot lifter. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If ring formation occurs, clean the entire fabric or carpet.

Following the cleaning process, a paper towel can be used to blot excess moisture.

Cleaning High Gloss Surfaces and Vehicle Information and Radio Displays

For vehicles with high gloss surfaces or vehicle displays, use a microfiber cloth to wipe surfaces. Before wiping the surface with the microfiber cloth, use a soft bristle brush to remove dirt that could scratch the surface. Then use the microfiber cloth by gently rubbing to clean. Never use window cleaners or solvents. Periodically hand wash the microfiber cloth separately, using mild soap. Do not use bleach or fabric softener. Rinse thoroughly and air dry before next use.

⚠ Caution

Do not attach a device with a suction cup to the display. This may cause damage and would not be covered by the warranty.

Instrument Panel, Leather, Vinyl, Other Plastic Surfaces, Low Gloss Paint Surfaces and Natural Open Pore Wood Surfaces

Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfiber cloth dampened with a mild soap solution.

⚠ Caution

Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to dry naturally. Never use heat, steam, spot lifters, or spot removers. Do not use cleaners that contain silicone or wax-based products. Cleaners containing

(Continued)

Caution (Continued)

these solvents can permanently change the appearance and feel of leather or soft trim and are not recommended.

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windshield under certain conditions.

⚠ Caution

Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.

Cargo Cover and Convenience Net

Wash with warm water and mild detergent. Do not use chlorine bleach. Rinse with cold water, and then dry completely.

Care of Safety Belts

Keep belts clean and dry.

⚠ Warning

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Floor Mats

⚠ Warning

If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

Use the following guidelines for proper floor mat usage.

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that certified floor mats be purchased. Non-certified floor mats may not fit properly and may interfere with the pedals. Always check that the floor mats do not interfere with the pedals.

- Use the floor mat with the correct side up. Do not turn it over.
- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

Removing and Replacing the Floor Mats

The driver side floor mat is held in place by two button-type retainers. The passenger side floor mat is held in place by one button-type retainer.

1. Pull up on the rear of the floor mat to unlock each retainer and remove.
2. Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.
3. Make sure the floor mat is properly secured and verify that it does not interfere with the pedals.

Service and Maintenance

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General Information

Your vehicle is an important investment. This section describes the required maintenance for the vehicle. Follow this schedule to help protect against major repair expenses resulting from neglect or inadequate maintenance. It may also help to maintain the value of the vehicle if it is sold. It is the responsibility of the owner to have all required maintenance performed.

Your dealer has trained technicians who can perform required maintenance using genuine replacement parts. They have up-to-date tools and equipment for fast and accurate diagnostics. Many dealers have extended evening and Saturday hours, courtesy transportation, and online scheduling to assist with service needs.

Your dealer recognizes the importance of providing competitively priced maintenance and repair services. With trained technicians, the dealer is the place for routine maintenance such as oil changes and tire rotations and additional maintenance items like tires, brakes, batteries, and wiper blades.

⚠ Caution

Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.

The Tire Rotation and Required Services are the responsibility of the vehicle owner. It is recommended to have your dealer perform these services every 12 000 km/7,500 mi. Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions.

Because of the way people use vehicles, maintenance needs vary. There may need to be more frequent checks and services. The Additional Required Services - Normal are for vehicles that:

- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-10*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Recommended Fuel on page 9-57*.

Refer to the information in the Maintenance Schedule Additional Required Services - Normal chart.

The Additional Required Services - Severe are for vehicles that are:

- Mainly driven in heavy city traffic in hot weather.
- Mainly driven in hilly or mountainous terrain.
- Frequently towing a trailer.
- Used for high speed or competitive driving.
- Used for taxi, police, or delivery service.

Refer to the information in the Maintenance Schedule Additional Required Services - Severe chart.

⚠ Warning

Performing maintenance work can be dangerous and can cause serious injury. Perform maintenance work only if the required information, proper tools, and equipment are available. If they are not, see your dealer to have a trained technician do the work. See *Doing Your Own Service Work on page 10-3*.

Cadillac Premium Care Maintenance

Your vehicle comes with the Cadillac Premium Care Maintenance. It is a maintenance program that covers select maintenance services during the first 4 years or 80 000 km (50,000 mi), whichever comes first.

Cadillac Premium Care Maintenance covers routine maintenance services, when scheduled in accordance with the owner manual, including:

- Oil changes based on the vehicle's oil life monitor system.
- Tire rotation every 12 000 km (7,500 mi).
- Engine air cleaner filter replacement.
- Passenger compartment air filter replacement.
- Multi-point vehicle inspection (MPVI) performed by a qualified technician.

Cadillac requires that all Cadillac Premium Care Maintenance services be performed by a Cadillac authorized service dealer.

Maintenance Schedule

Owner Checks and Services

At Each Fuel Stop

- Check the engine oil level. See *Engine Oil on page 10-7*.

Once a Month

- Check the tire inflation pressures. See *Tire Pressure on page 10-49*.
- Inspect the tires for wear. See *Tire Inspection on page 10-55*.
- Check the windshield washer fluid level. See *Washer Fluid on page 10-19*.

Engine Oil Change

When the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km/600 mi. If driven under the best conditions, the engine oil life system might not indicate the need for vehicle service for more than a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your trained dealer technician can perform this work. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 mi since the last service. Reset the oil life system when the oil is changed. See *Engine Oil Life System on page 10-9*.

Tire Rotation and Required Services Every 12 000 km/ 7,500 mi

Rotate the tires, if recommended for the vehicle, and perform the following services. See *Tire Rotation on page 10-56*.

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. See *Engine Oil on page 10-7* and *Engine Oil Life System on page 10-9*.
- Check engine coolant level. See *Engine Coolant on page 10-13*.
- Check windshield washer fluid level. See *Washer Fluid on page 10-19*.

- Visually inspect windshield wiper blades for wear, cracking, or contamination. See *Exterior Care on page 10-87*. Replace worn or damaged wiper blades. See *Wiper Blade Replacement on page 10-24*.
- Check tire inflation pressures. See *Tire Pressure on page 10-49*.
- Inspect tire wear. See *Tire Inspection on page 10-55*.
- Visually check for fluid leaks.
- Inspect engine air cleaner filter. See *Engine Air Cleaner/Filter on page 10-10*.
- Inspect brake system.
- Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear. See *Exterior Care on page 10-87*.
- Check restraint system components. See *Safety System Check on page 3-18*.
- Visually inspect fuel system for damage or leaks.
- Visually inspect exhaust system and nearby heat shields for loose or damaged parts.
- Lubricate body components. See *Exterior Care on page 10-87*.
- Check starter switch. See *Starter Switch Check on page 10-23*.
- Check automatic transmission shift lock control function. See *Automatic Transmission Shift Lock Control Function Check on page 10-23*.
- Check parking brake and automatic transmission park mechanism. See *Park Brake and P (Park) Mechanism Check on page 10-24*.
- Check accelerator pedal for damage, high effort, or binding. Replace if needed.
- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. See your dealer if service is required.
- Check tire sealant expiration date, if equipped. See *Tire Sealant and Compressor Kit on page 10-65*.
- Inspect sunroof track and seal, if equipped. See *Sunroof on page 2-25*.

Maintenance Schedule Additional Required Services - Normal	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter. (1)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (2)						✓						✓						✓		
Replace engine air cleaner filter. (3)						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Change automatic transmission fluid. Change filter if serviceable.													✓							
Drain and fill engine cooling system. (5)																				✓
Visually inspect accessory drive belts. (6)																				✓
Replace brake fluid. (7)																				✓

Footnotes — Maintenance Schedule Additional Required Services - Normal

(1) Or every two years, whichever comes first. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

(2) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition.

(3) Or every four years, whichever comes first.

(4) Do not directly power wash the transfer case output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and should be replaced.

(5) Or every five years, whichever comes first. See *Cooling System on page 10-12*.

(6) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

(7) Or every 10 years, whichever comes first.

Maintenance Schedule Additional Required Services - Severe	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter. (1)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (2)						✓						✓						✓		
Replace engine air cleaner filter. (3)						✓						✓						✓		
Change automatic transmission fluid. Change filter if serviceable.						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Drain and fill engine cooling system. (5)																				✓
Visually inspect accessory drive belts. (6)																				✓
Replace brake fluid. (7)																				✓

Footnotes — Maintenance Schedule Additional Required Services - Severe

(1) Or every two years, whichever comes first. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

(2) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition.

(3) Or every four years, whichever comes first.

(4) Do not directly power wash the transfer case output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and should be replaced.

(5) Or every five years, whichever comes first. See *Cooling System on page 10-12*.

(6) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

(7) Or every 10 years, whichever comes first.

Special Application Services

- Severe Commercial Use Vehicles Only: Lubricate chassis components every 5 000 km/ 3,000 mi.
- Have underbody flushing service performed. See "Underbody Maintenance" in *Exterior Care on page 10-87*.

Additional Maintenance and Care

Your vehicle is an important investment and caring for it properly may help to avoid future costly repairs. To maintain vehicle performance, additional maintenance services may be required.

It is recommended that your dealer perform these services — their trained dealer technicians know your vehicle best. Your dealer can also perform a thorough assessment with a multi-point inspection to recommend when your vehicle may need attention.

The following list is intended to explain the services and conditions to look for that may indicate services are required.

Battery

The battery supplies power to start the engine and operate any additional electrical accessories.

- To avoid break-down or failure to start the vehicle, maintain a battery with full cranking power.
- Trained dealer technicians have the diagnostic equipment to test the battery and ensure that the connections and cables are corrosion-free.

Belts

- Belts may need replacing if they squeak or show signs of cracking or splitting.
- Trained dealer technicians have access to tools and equipment to inspect the belts and recommend adjustment or replacement when necessary.

Brakes

Brakes stop the vehicle and are crucial to safe driving.

- Signs of brake wear may include chirping, grinding, or squealing noises, or difficulty stopping.
- Trained dealer technicians have access to tools and equipment to inspect the brakes and recommend quality parts engineered for the vehicle.

Fluids

Proper fluid levels and approved fluids protect the vehicle's systems and components. See *Recommended Fluids and Lubricants on page 11-13* for GM approved fluids.

- Engine oil and windshield washer fluid levels should be checked at every fuel fill.
- Instrument cluster lights may come on to indicate that fluids may be low and need to be filled.

Hoses

Hoses transport fluids and should be regularly inspected to ensure that there are no cracks or leaks. With a multi-point inspection, your dealer can inspect the hoses and advise if replacement is needed.

Lamps

Properly working headlamps, taillamps, and brake lamps are important to see and be seen on the road.

- Signs that the headlamps need attention include dimming, failure to light, cracking, or damage. The brake lamps need to be checked periodically to ensure that they light when braking.
- With a multi-point inspection, your dealer can check the lamps and note any concerns.

Shocks and Struts

Shocks and struts help aid in control for a smoother ride.

- Signs of wear may include steering wheel vibration, bounce/sway while braking, longer stopping distance, or uneven tire wear.
- As part of the multi-point inspection, trained dealer technicians can visually inspect the shocks and struts for signs of leaking, blown seals, or damage, and can advise when service is needed.

Tires

Tires need to be properly inflated, rotated, and balanced. Maintaining the tires can save money and fuel, and can reduce the risk of tire failure.

- Signs that the tires need to be replaced include three or more visible treadwear indicators; cord or fabric showing through the rubber; cracks or cuts in the tread or sidewall; or a bulge or split in the tire.
- Trained dealer technicians can inspect and recommend the right tires. Your dealer can also provide tire/wheel balancing services to ensure smooth vehicle operation at all speeds. Your dealer sells and services name brand tires.

Vehicle Care

To help keep the vehicle looking like new, vehicle care products are available from your dealer. For information on how to clean and protect the vehicle's interior and exterior, see *Interior Care on page 10-92* and *Exterior Care on page 10-87*.

Wheel Alignment

Wheel alignment is critical for ensuring that the tires deliver optimal wear and performance.

- Signs that the alignment may need to be adjusted include pulling, improper vehicle handling, or unusual tire wear.
- Your dealer has the required equipment to ensure proper wheel alignment.

Windshield

For safety, appearance, and the best viewing, keep the windshield clean and clear.

- Signs of damage include scratches, cracks, and chips.
- Trained dealer technicians can inspect the windshield and recommend proper replacement if needed.

Wiper Blades

Wiper blades need to be cleaned and kept in good condition to provide a clear view.

- Signs of wear include streaking, skipping across the windshield, and worn or split rubber.
- Trained dealer technicians can check the wiper blades and replace them when needed.

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Usage	Fluid/Lubricant
Engine Oil	Use only engine oil licensed to the dexos1® specification of the proper SAE viscosity grade. ACDelco dexos1 Synthetic Blend is recommended. See *Engine Oil on page 10-7*.
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL Coolant. See *Engine Coolant on page 10-13*.
Fuel Additive	Fuel System Treatment PLUS (Part No. 88861013).
Hydraulic Brake System	DOT 3 Hydraulic Brake Fluid (GM Part No. 19299818, in Canada 19299819).
Windshield Washer	Automotive windshield washer fluid that meets regional freeze protection requirements.
Hydraulic Power Steering System	DEXRON®-VI Automatic Transmission Fluid.
Automatic Transmission	DEXRON®-VI Automatic Transmission Fluid.
Transfer Case (All-Wheel Drive)	Transfer Case Fluid (GM Part No. 19256084, in Canada 19256085).
Chassis Lubrication	Chassis Lubricant (GM Part No. 12377985, in Canada 88901242) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Key Lock Cylinders, Hood, and Door Hinges	Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).

Usage	Fluid/Lubricant
Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl	Lubriplate Lubricant Aerosol (GM Part No. 89021668, in Canada 89021674) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Power Liftgate Actuator Ball Joint	Multi-Purpose Lubricant (GM Part No. 89021668, in Canada 89021674).
Weatherstrip Conditioning	Weatherstrip Lubricant (GM Part No. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. 12345579, in Canada 10953481).

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

Part	GM Part Number	ACDelco Part Number
Engine Air Cleaner/Filter	20897358	A3147C
Engine Oil Filter	89017525	PF63
Passenger Compartment Air Filter Element	13271191	CF176
Spark Plugs	12622561	41–109
Wiper Blades		
Driver Side – 65.0 cm (25.6 in)	22870539	—
Passenger Side – 42.5 cm (16.7 in)	22870540	—
Rear – 30.0 cm (11.8 in)	20825882	—

Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Technical Data

Vehicle Identification
Vehicle Identification Number (VIN) 12-1
Service Parts Identification Label 12-1

Vehicle Data
Capacities and Specifications 12-2
Engine Drive Belt Routing ... 12-4

Vehicle Identification

Vehicle Identification Number (VIN)

This legal identifier is in the front corner of the instrument panel, on the left side of the vehicle. It can be seen through the windshield from outside. The VIN also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under *Capacities and Specifications on page 12-2* for the vehicle's engine code.

Service Parts Identification Label

This label, on the inside of the rear side cargo management cover, has the following information:

- Vehicle Identification Number (VIN).
- Model designation.
- Paint information.
- Production options and special equipment.

Do not remove this label from the vehicle.

Vehicle Data

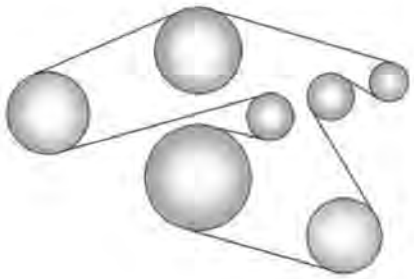
Capacities and Specifications

Application	Capacities	
	Metric	English
Air Conditioning Refrigerant	For the air conditioning system refrigerant type, and charge amount, see the refrigerant label located under the hood. See your dealer for more information.	
Engine Cooling System		
3.6L V6 Engine	12.8 L	13.5 qt
Engine Oil with Filter	5.7 L	6.0 qt
Fuel Tank	79.5 L	21.0 gal
Transfer Case Fluid	0.65 L	0.69 qt
Wheel Nut Torque	190 N•m	140 lb ft
All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.		

Engine Specifications

Engine	VIN Code	Transmission	Spark Plug Gap
3.6L V6 (LFX)	3	Automatic	0.95–1.10 mm (0.037–0.043 in)

Engine Drive Belt Routing



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Customer Information

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Customer Information

Customer Satisfaction Procedure

Your satisfaction and goodwill are important to your dealer and to Cadillac. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by your dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

STEP ONE: Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service or parts manager, contact the owner of your dealership or the general manager.

STEP TWO: If after contacting a member of dealership management, it appears your concern cannot be resolved by your dealership without further help, in the U.S., call the Cadillac Customer Assistance Center at 1-800–458–8006. In Canada, call the Canadian Cadillac Customer Care Centre at 1-888-446-2000.

We encourage you to call the toll-free number in order to give your inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Cadillac, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

STEP THREE — U.S. Owners: Both General Motors and your dealer are committed to making sure you are completely satisfied with the new vehicle. However, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you can file with the Better Business Bureau (BBB) Auto Line® Program to enforce your rights.

The BBB Auto Line Program is an out-of-court program administered by the Council of Better Business Bureaus to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you.

You may contact the BBB Auto Line Program using the toll-free telephone number or write them at the following address:

BBB Auto Line Program
Council of Better Business Bureaus, Inc.
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203-1838

Telephone: 1-800-955-5100
www.dr.bbb.org/goauto

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage, and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

STEP THREE — Canadian Owners: In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps One and Two, General Motors of Canada Limited wants you to be aware of its participation in a no-charge mediation/arbitration program. General Motors of Canada Limited has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in approximately 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call the General Motors Customer Care Centre, 1-888-446-2000 (English), 1-800-263-7854 (French), or write to:

Mediation/Arbitration Program
c/o Customer Care Centre
General Motors of Canada Limited
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

The inquiry should be accompanied by the Vehicle Identification Number (VIN).

Customer Assistance Offices

Cadillac encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Cadillac, the letter should be addressed to:

United States and Puerto Rico

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169
www.Cadillac.com

1-800-458-8006
1-800-833-2622 (For Text Telephone devices (TTYs))
Roadside Service: 1-800-224-1400

From U.S. Virgin Islands:

1-800-496-9994

Canada

General Motors of Canada Limited
Canadian Cadillac Customer Care Centre, Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
www.gm.ca

1-888-446-2000 (English)
1-800-263-7854 (French)
Roadside Service: 1-800-882-1112

Overseas

Contact the local General Motors Business Unit.

Customer Assistance for Text Telephone (TTY) Users

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Cadillac has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Cadillac by dialing: 1-800-833-2622. TTY users in Canada can dial 1-800-263-3830.

Online Owner Center

Online Owner Experience (U.S.) my.cadillac.com

The Cadillac online owner experience is a one-stop resource that allows interaction with Cadillac and keeps important vehicle-specific information in one place.

Membership Benefits

(Vehicle Information): Download owner manuals and view vehicle-specific how-to videos.

(Maintenance Information): View maintenance schedules, required alerts, OnStar onboard vehicle diagnostic information, and schedule service appointments.

(Service History): View printable dealer-recorded service records and self-recorded service records.

(Preferred Dealer Information): Select a preferred dealer and view dealer location, maps, phone numbers, and hours.

(Warranty Tracking Information): Track the vehicle's warranty information.

(Recall Information): View active recalls or search by Vehicle Identification Number (VIN). See *Vehicle Identification Number (VIN) on page 12-1*.

(Other Account Information): View GM Card, SiriusXM Satellite radio, and OnStar account information.

(Live Chat Support): Chat live with online help representatives.

Visit my.cadillac.com to register your vehicle.

Cadillac Owner Centre (Canada) cadillacowner.ca

Take a trip to the Cadillac Owner Centre:

- Chat live with online help representatives.
- Locate owner resources such as lease-end, financing, and warranty information.
- Retrieve favorite articles, quizzes, tips, and multimedia galleries organized into the Features and Auto Care Sections.
- Download owner manuals.
- Find Cadillac-recommended maintenance services.

Roadside Service

U.S.: 1-800-224-1400.

Canada: 1-800-882-1112.

Text Telephone (TTY) Users (U.S. Only): 1-888-889-2438.

Service is available 24 hours a day, 365 days a year.

Calling for Service

When calling Roadside Service, have the following information ready:

- Your name, home address, and home telephone number.
- Telephone number of your location.
- Location of the vehicle.
- Model, year, color, and license plate number of the vehicle.
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle.
- Description of the problem.

Coverage

Services are provided up to 6 years/ 110 000 km (70,000 mi), whichever comes first.

In the U.S., anyone driving the vehicle is covered. In Canada, a person driving the vehicle without permission from the owner is not covered.

Roadside Service is not a part of the New Vehicle Limited Warranty. General Motors North America and Cadillac reserve the right to make any changes or discontinue the Roadside Service program at any time without notification.

General Motors North America and Cadillac reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

Cadillac Owner Privileges™

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.

- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.
- **Emergency Tow from a Public Road or Highway:** Tow to the nearest Cadillac dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is also given when the vehicle is stuck in the sand, mud, or snow.
- **Flat Tire Change:** Service to change a flat tire with a spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is your responsibility for the repair or replacement of the tire if it is not covered by the warranty.
- **Battery Jump Start:** Service to jump start a dead battery.
- **Trip Interruption Benefits and Service:** If your trip is interrupted due to a warranty failure, incidental expenses may be reimbursed during the 6 years/110 000 km (70,000 mi) Powertrain warranty period. Items considered are hotel, meals, and rental car.

Cadillac Technician Roadside Service (U.S. Only)

Cadillac's exceptional Roadside Service is more than an auto club or towing service. It provides every Cadillac owner in the United States with the advantage of contacting a Cadillac advisor and, where available, a Cadillac trained dealer technician who can provide on-site service.

A dealer technician will travel to your location within a 30-mile radius of a participating Cadillac dealership. If beyond this radius, we will arrange to have your car towed to the nearest Cadillac dealership. Each technician travels with a specially equipped service vehicle complete with the necessary Cadillac parts and tools required to handle most roadside repairs.

Services Not Included in Roadside Service

- Impound towing caused by violation of any laws.
- Legal fines.
- Mounting, dismounting, or changing of snow tires, chains, or other traction devices.
- Towing or services for vehicles driven on a non-public road or highway.

Services Specific to Canadian-Purchased Vehicles

- **Fuel delivery:** Reimbursement is up to 7 liters. Diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.
- **Lock-Out Service:** Vehicle registration is required.

- **Trip Interruption Benefits and Service:** Pre-authorization, original detailed receipts, and a copy of the repair orders are required. Once authorization has been received, the Roadside Service advisor will help you make arrangements and explain how to receive payment.
- **Alternative Service:** If assistance cannot be provided right away, the Roadside Service advisor may give you permission to get local emergency road service. You will receive payment, up to $100, after sending the original receipt to Roadside Service. Mechanical failures may be covered, however any cost for parts and labor for repairs not covered by the warranty are the owner responsibility.

Scheduling Service Appointments

When the vehicle requires warranty service, contact your dealer and request an appointment. By scheduling a service appointment and advising the service consultant of your transportation needs, your dealer can help minimize your inconvenience.

If the vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety related. If it is, please call your dealership, let them know this, and ask for instructions.

If your dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for same-day repair.

Courtesy Transportation Program

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper-to-Bumper (Base Warranty Coverage period in Canada), extended powertrain, and/or hybrid-specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled "Limited Warranty and Owner Assistance Information" furnished with each new vehicle provides detailed warranty coverage information.

Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to wait, GM helps to minimize inconvenience by providing several transportation options. Depending on the circumstances, your dealer can offer one of the following:

Shuttle Service

Shuttle service is the preferred means of offering Courtesy Transportation. Dealers may provide shuttle service to get you to your destination with minimal interruption of your daily schedule. This includes one-way or round-trip shuttle service within reasonable time and distance parameters of your dealer's area.

Public Transportation or Fuel Reimbursement

If the vehicle requires overnight warranty repairs, and public transportation is used instead of your dealer's shuttle service, the expense must be supported by original receipts and can only be up to the maximum amount allowed by GM for shuttle service. In addition, for U.S. customers, should you arrange transportation through a friend or relative, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information regarding the allowance amounts for reimbursement of fuel or other transportation costs.

Courtesy Rental Vehicle

Your dealer may arrange to provide you with a courtesy rental vehicle or reimburse you for a rental vehicle that you obtain if the vehicle is kept for an overnight warranty repair. Rental reimbursement will be limited and must be supported by original receipts. This requires that you sign and complete a rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. You are responsible for fuel usage charges and may also be responsible for taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair.

It may not be possible to provide a like vehicle as a courtesy rental.

Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Please contact your dealer for specific information about availability. All Courtesy Transportation arrangements will be administered by appropriate dealer personnel.

General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

Collision Damage Repair

If the vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish the vehicle resale value, and safety performance can be compromised in subsequent collisions.

Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine GM Collision parts are the best choice to ensure that the vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain the GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain the vehicle's originally designed appearance and safety performance; however, the history of these parts is not known. Such parts are not covered by the GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for the vehicle. As a result, these parts may fit poorly, exhibit premature durability/ corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by the GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

Repair Facility

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

Insuring the Vehicle

Protect your investment in the GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to the GM vehicle by limiting compensation for damage repairs by using aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts.

When purchasing insurance, we recommend that you ensure that the vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If the vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read the lease carefully, as you may be charged at the end of the lease for poor quality repairs.

If a Crash Occurs

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see *Roadside Service on page 13-5*.

Gather the following information:

- Driver name, address, and telephone number.
- Driver license number.
- Owner name, address, and telephone number.
- Vehicle license plate number.
- Vehicle make, model, and model year.
- Vehicle Identification Number (VIN).
- Insurance company and policy number.
- General description of the damage to the other vehicle.

Choose a reputable repair facility that uses quality replacement parts. See "Collision Parts" earlier in this section.

If the airbag has inflated, see *What Will You See after an Airbag Inflates? on page 3-25*.

Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take the vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by the GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with the repair professional, and insist on Genuine GM parts. Remember, if the vehicle is leased, you may be

obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

Service Publications Ordering Information

Service Manuals

Service Manuals have the diagnosis and repair information on the engines, transmission, axle, suspension, brakes, electrical, steering, body, etc.

Service Bulletins

Service Bulletins give additional technical service information needed to knowledgeably service General Motors cars and trucks. Each bulletin contains instructions to assist in the diagnosis and service of the vehicle.

Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The Owner Manual includes the Maintenance Schedule for all models.

In-Portfolio: Includes a Portfolio, Owner Manual, and Warranty Manual.

RETAIL SELL PRICE:
$35.00 (U.S.) plus handling and shipping fees.

Without Portfolio: Owner Manual only.

RETAIL SELL PRICE:
$25.00 (U.S.) plus handling and shipping fees.

Current and Past Models

Technical Service Bulletins and Manuals are available for current and past model GM vehicles.

ORDER TOLL FREE:
1-800-551-4123 Monday – Friday
8:00 AM – 6:00 PM Eastern Time

For Credit Card Orders Only (VISA-MasterCard-Discover), see Helm, Inc. at: www.helminc.com.

Or write to:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

All listed prices are quoted in U.S. funds. Make checks payable in U.S. funds.

Reporting Safety Defects

Reporting Safety Defects to the United States Government

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign.

However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to *http://www.safercar.gov;* or write to:

Administrator, NHTSA
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from *http://www.safercar.gov.*

Reporting Safety Defects to the Canadian Government

If you live in Canada, and you believe that the vehicle has a safety defect, notify Transport Canada immediately, and notify General Motors of Canada Limited. Call Transport Canada at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
80 rue Noel
Gatineau , QC J8Z 0A1

Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify General Motors.

Call 1-800-458-8006, or write:

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit , MI 48232-5169

In Canada, call 1-888-446-2000, or write:

Canadian Cadillac Customer Care Centre, Mail Code: CA1-163-005
General Motors of Canada Limited
1908 Colonel Sam Drive
Oshawa , Ontario L1H 8P7

Vehicle Data Recording and Privacy

The vehicle has a number of computers that record information about the vehicle's performance and how it is driven. For example, the vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy them in a crash, and, if equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help the dealer technician service the vehicle. Some modules may also store data about how the vehicle is operated, such as rate of fuel consumption or average speed. These modules may retain personal preferences, such as radio presets, seat positions, and temperature settings.

Event Data Recorders

This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur. NOTE: EDR data are recorded by your vehicle only if a non-trivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access this data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request by police or similar government office; as part of GM's defense of litigation through the discovery process; or, as required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

OnStar®

If the vehicle is equipped with OnStar® and has an active subscription, additional data may be collected through the OnStar system. This includes information about the vehicle's operation; collisions involving the vehicle; the use of the vehicle and its features; and, in certain situations, the location and approximate GPS speed of the vehicle. Refer to the OnStar Terms and Conditions and Privacy Statement on the OnStar website.

Infotainment System

If the vehicle is equipped with a navigation system as part of the infotainment system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. See the infotainment manual for information on stored data and for deletion instructions.

Radio Frequency Identification (RFID)

RFID technology is used in some vehicles for functions such as tire pressure monitoring and ignition system security, as well as in connection with conveniences such as Remote Keyless Entry (RKE) transmitters for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in

GM vehicles does not use or record personal information or link with any other GM system containing personal information.

Radio Frequency Statement

This vehicle has systems that operate on a radio frequency that comply with Part 15 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-GEN/210/220/310.

Operation is subject to the following two conditions:

1. The device may not cause harmful interference.
2. The device must accept any interference received, including interference that may cause undesired operation of the device.

Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

✍ NOTES

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OnStar Overview

If equipped, this vehicle has a comprehensive, in-vehicle system that can connect to a live Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services.

The OnStar system status light is next to the OnStar buttons. If the status light is:

- Solid Green: System is ready.
- Flashing Green: On a call.
- Red: Indicates a problem.

Press or call 1-888-4-ONSTAR (1-888-466-7827) to speak to an Advisor.

Press to:

- Make a call, end a call, or answer an incoming call.
- Give OnStar Hands-Free Calling voice commands.
- Give OnStar Turn-by-Turn Navigation voice commands. Requires the available Directions and Connections service plan.

Press to connect to a live Advisor to:

- Verify account information or update contact information.
- Get driving directions. Requires the available Directions and Connections service plan.
- Receive On-Demand Diagnostics for a check of the vehicle's key operating systems.
- Receive Roadside Assistance.

Press the OnStar Emergency button to get a priority connection to an Emergency Advisor available 24/7 to:

- Get help for an emergency.
- Be a Good Samaritan or respond to an AMBER Alert.
- Get assistance in severe weather or other crisis and evacuation routes.

OnStar Services

Emergency

With Automatic Crash Response, the built-in system can automatically connect to help in most crashes, even if help cannot be requested.

Press to connect to an Emergency Advisor. GPS technology is used to identify the vehicle location and can provide critical information to emergency personnel. The Advisor is also trained to offer critical assistance in emergency situations.

Security

OnStar provides services like Stolen Vehicle Assistance, Remote Ignition Block, and Roadside Assistance, if equipped. OnStar can unlock the vehicle doors remotely, if equipped with automatic door locks, and can help police locate the vehicle if it is stolen.

Navigation

OnStar navigation requires the Directions and Connections service plan.

Press to receive directions or have them sent to the vehicle navigation screen, if equipped. Destinations can also be forwarded to the vehicle from MapQuest.com. The OnStar mapping database is continuously updated. For coverage maps, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

Turn-by-Turn Navigation

1. Press to connect to a live Advisor.
2. Request directions.
3. Directions are downloaded to the vehicle.
4. Follow the voice-guided commands.

Using Voice Commands During a Planned Route

Cancel Route

1. Press . System responds: "OnStar ready," then a tone. Say "Cancel route." System responds: "Do you want to cancel directions?"
2. Say "Yes." System responds: "OK, request completed, thank you, goodbye."

Route Preview

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Route preview." System responds with the next three maneuvers.

Repeat

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Repeat." System responds with the last direction given, then responds with "OnStar ready," then a tone.

Get My Destination

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Get my destination." System responds with the address and the distance to the destination, then responds with "OnStar ready," then a tone.

Other Navigation Services Available from OnStar

OnStar eNav: Allows subscribers to send destinations from MapQuest.com to their Turn-by-Turn Navigation or screen-based navigation system. When ready, the directions will be downloaded to the vehicle.

Destination Download: Press , then request the Advisor to download directions to the navigation system in the vehicle.

After the call ends, press the "Go" button on the navigation screen to begin driving directions.

If directions are downloaded to the navigation system, the route can only be canceled through the navigation system.

Destinations can also be downloaded on the go. For information about eNav, Destination Download, and coverage maps see www.onstar.com (U.S.) or www.onstar.ca (Canada).

Connections

OnStar Hands-Free Calling allows calls to be made and received from the vehicle. The vehicle can also be controlled through the OnStar RemoteLink® mobile app. For coverage maps, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

OnStar Mobile App

Download the OnStar RemoteLink mobile app to select Apple®, Android™, and BlackBerry® devices to check vehicle fuel level, oil life, or tire pressure; to start the vehicle (if equipped) or unlock it; or to connect to an OnStar Advisor. For OnStar RemoteLink information and compatibility, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

Hands-Free Calling

1. Press . System responds: "OnStar ready."
2. Say "Call." System responds: "Please say the name or number to call."
3. Say the entire number without pausing, including a "1" and the area code. System responds: "OK calling."

Calling 911 Emergency

1. Press . System responds: "OnStar ready," followed by a tone.
2. Say "Call." System responds: "Please say the name or number to call."
3. Say "911" without pausing. System responds: "911."
4. Say "Call." System responds: "OK, dialing 911."

Retrieve My Number

1. Press . System responds: "OnStar ready."
2. Say "My number." System responds: "Your OnStar Hands-Free Calling number is," then says the number.

End a Call

Press . System responds: "Call ended."

Store a Name Tag for Speed Dialing

1. Press . System responds: "OnStar ready."
2. Say "Store." System responds: "Please say the number you would like to store."
3. Say the entire number without pausing. System responds: "Please say the name tag."
4. Pick a name tag. System responds: "About to store <name tag>. Does that sound OK?"
5. Say "Yes" or say "No" to try again. System responds: "OK, storing <name tag>."

Place a Call Using a Stored Number

1. Press . System responds: "OnStar ready."
2. Say "Call <name tag>." System responds: "OK, calling <name tag>."

Verify Minutes and Expiration

Press and say "Minutes" then "Verify" to check how many minutes remain and their expiration date.

Vehicle Diagnostics

OnStar Vehicle Diagnostics will perform a vehicle check every month. It will check the engine, transmission, antilock brakes, and major vehicle systems. It also checks the tire pressures, if the vehicle is equipped with the Tire Pressure Monitoring System. If an On-Demand Diagnostics check is needed between e-mails, press , and an Advisor can run a check.

OnStar Additional Information

Transferring Service

Press to request account transfer eligibility information. The Advisor can assist in canceling or removing account information. If OnStar receives information that vehicle ownership has changed, OnStar may send a voice message to the vehicle, requesting updated account information.

Reactivation for Subsequent Owners

Press and follow the prompts to speak to an Advisor as soon as possible after acquiring the vehicle. The Advisor will update vehicle records and will explain the OnStar service offers and options available.

How OnStar Service Works

Automatic Crash Response, Emergency Services, Crisis Assist, Stolen Vehicle Assistance, Vehicle Diagnostics, Remote Door Unlock, Roadside Assistance, Turn-by-Turn Navigation, and Hands-Free Calling are available on most vehicles. Not all OnStar services are available everywhere or on all vehicles. For more information, a full description of OnStar services, system limitations, and OnStar terms and conditions:

- Call 888-4-ONSTAR (888-466-7827).
- See www.onstar.com (U.S.).
- See www.onstar.ca (Canada).
- Call TTY 1-877-248-2080.
- Press to speak with an Advisor.

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

OnStar service cannot work unless your vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area, and the wireless service provider has coverage, network capacity, reception, and technology compatible with OnStar service. Service involving location information about the vehicle cannot work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. OnStar service may not work if the OnStar equipment is not properly installed or it has not been properly maintained. If equipment or software is added, connected, or modified, OnStar service may not work. Other problems beyond the control of OnStar may prevent service such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage to the vehicle in a crash, or wireless phone network congestion or jamming.

See *Radio Frequency Statement on page 13-15*.

Services for People with Disabilities

Advisors provide services to help subscribers with physical disabilities and medical conditions.

Press On for help with:

- Locating a gas station with an attendant to pump gas.
- Finding a hotel, restaurant, etc., that meets accessibility needs.
- Providing directions to the closest hospital or pharmacy in urgent situations.

TTY Users

OnStar has the ability to communicate to the deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available dealer-installed TTY system can provide in-vehicle access to all of the OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

OnStar.com (U.S.) or OnStar.ca (Canada)

The website provides access to account information, allows management of the OnStar subscription, and viewing of videos of each service. Get subscription plan pricing and sign up for OnStar Vehicle Diagnostics. Click on the "My Account" tab on the home page. The website navigation and services provided may vary by country.

OnStar Personal Identification Number (PIN)

A PIN is needed to access some of the OnStar services, like Remote Door Unlock and Stolen Vehicle Assistance. You will be prompted to change the PIN the first time when speaking with an Advisor. To change the OnStar PIN, call OnStar and provide the Advisor with the current number.

Warranty

OnStar equipment may be warranted as part of the New Vehicle Limited Warranty. The manufacturer of the vehicle furnishes detailed warranty information.

Languages

The vehicle can be programmed to respond in multiple languages. Press and ask an Advisor. Advisors are available in English, Spanish and French. Available languages may vary by country.

Potential Issues

OnStar cannot perform Remote Door Unlock or Stolen Vehicle Assistance after the vehicle has been off continuously for five days. After five days, OnStar can contact Roadside Assistance and a locksmith to help gain access to the vehicle.

Global Positioning System (GPS)

- Obstruction of the GPS can occur in a large city with tall buildings; in parking garages; around airports; in tunnels, underpasses, or parking garages; or in an area with very dense trees. If GPS signals are not available, the OnStar system should still operate to call OnStar. However, OnStar could have difficulty identifying the exact location.
- In emergency situations, OnStar can use the last stored GPS location to send to emergency responders.
- A temporary loss of GPS can cause loss of the ability to send a Turn-by-Turn Navigation route. The Advisor may give a verbal route or may ask for a call back after the vehicle is driven into an open area.

Cellular and GPS Antennas

Avoid placing items over or near the antenna to prevent blocking cellular and GPS signal reception. Cellular reception is required for OnStar to send remote signals to the vehicle.

Unable to Connect to OnStar Message

If there is limited cellular coverage or the cellular network has reached maximum capacity, this message may come on. Press to try the call again or try again after driving a few miles into another cellular area.

Vehicle and Power Issues

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

Add-on Electrical Equipment

The OnStar system is integrated into the electrical architecture of the vehicle. Do not add any electrical equipment. See *Add-On Electrical Equipment on page 9-69*. Added electrical equipment may interfere with the operation of the OnStar system and cause it to not operate.

Privacy

The complete OnStar Privacy Statement may be found at www.onstar.com (U.S.), or www.onstar.ca (Canada). Privacy-sensitive users of wireless communications are cautioned that the privacy of any information sent via wireless cellular communications cannot be assured. Third parties may unlawfully intercept or access transmissions and private communications without consent.

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✍ NOTES

2015

Cadillac

SRX

cadillac.com (U.S.)
cadillac.gm.ca (Canada)
cadillac.com.mx (Mexico)

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For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Cadillac Motor Car Division wherever it appears in this manual.

This manual describes features that may or may not be on the vehicle because of optional equipment that was not purchased on the vehicle, model variants, country specifications, features/applications that may not be available in your region, or changes subsequent to the printing of this owner manual.

Refer to the purchase documentation relating to your specific vehicle to confirm the features.

Keep this manual in the vehicle for quick reference.

Canadian Vehicle Owners

Propriétaires Canadiens

A French language manual can be obtained from your dealer, at www.helminc.com, or from:

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire ou à l'adresse savant:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Using this Manual

To quickly locate information about the vehicle, use the Index in the back of the manual. It is an alphabetical list of what is in the manual and the page number where it can be found.

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Danger, Warnings, and Cautions

Warning messages found on vehicle labels and in this manual describe hazards and what to do to avoid or reduce them.

⚠ Danger

Danger indicates a hazard with a high level of risk which will result in serious injury or death.

⚠ Warning

Warning indicates a hazard that could result in injury or death.

⚠ Caution

Caution indicates a hazard that could result in property or vehicle damage.

A circle with a slash through it is a safety symbol which means "Do Not," "Do not do this," or "Do not let this happen."

Symbols

The vehicle has components and labels that use symbols instead of text. Symbols are shown along with the text describing the operation or information relating to a specific component, control, message, gauge, or indicator.

: This symbol is shown when you need to see your owner manual for additional instructions or information.

: This symbol is shown when you need to see a service manual for additional instructions or information.

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. For more information on the symbol, refer to the Index.

: Airbag Readiness Light

: Air Conditioning

: Antilock Brake System (ABS)

: Audio Steering Wheel Controls or OnStar®

: Brake System Warning Light

: Charging System

: Cruise Control

: Engine Coolant Temperature

: Exterior Lamps

: Fog Lamps

: Fuel Gauge

: Fuses

: Headlamp High/Low-Beam Changer

: Heated Steering Wheel

: LATCH System Child Restraints

: Malfunction Indicator Lamp

: Oil Pressure

: Outside Power Foldaway Mirrors

: Power

: Remote Vehicle Start

: Safety Belt Reminders

: Tire Pressure Monitor

: Traction Control/StabiliTrak®

: Windshield Washer Fluid

✍ NOTES

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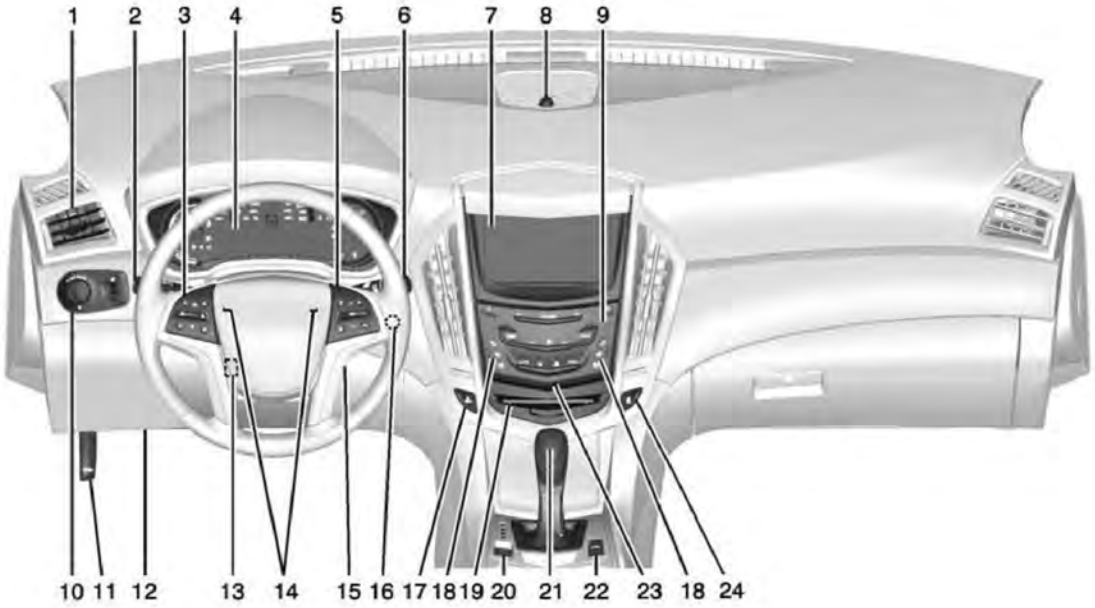
Instrument Panel



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   Driver Information Center (DIC) Controls. See *Driver Information Center (DIC) on page 5-25.*
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    Blu-Ray® Optical Drive (If Equipped). See *Infotainment on page 7-1.*
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21. Shift Lever. See *Automatic Transmission on page 9-22.*
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    Parking Assist (If Equipped). See *Driver Assistance Systems on page 9-43.*

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24. *Traction Control/Electronic Stability Control on page 9-30.*

Initial Drive Information

This section provides a brief overview about some of the important features that may or may not be on your specific vehicle.

For more detailed information, refer to each of the features which can be found later in this owner manual.

Remote Keyless Entry (RKE) System

The RKE transmitter may be used to lock and unlock the doors from up to 60 m (197 ft) away from the vehicle.

: Press to lock all doors.

: Press to unlock the driver door or all doors depending on the vehicle personalization settings.

Lock and unlock feedback can be personalized.

See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-39*.

: Press and release one time to initiate vehicle locator.

Press and hold for three seconds to sound the panic alarm.

: Press twice to open or close the liftgate. Press once to stop the liftgate from moving.

Press the key release button near the bottom of the transmitter to remove the key. The key can be used for the driver door and the glove box.

See *Keys on page 2-1* and *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Remote Vehicle Start

If available, this feature allows the engine to be started from outside of the vehicle.

Starting the Vehicle

1. Press and release on the RKE transmitter.
2. Immediately press and hold for at least four seconds or until the turn signal lamps flash.

When the vehicle starts, the parking lamps will remain on as long as the engine is running. The doors will be locked and the climate control system may come on.

The engine will continue to run for 10 minutes. After 30 seconds, repeat the steps if a 10-minute extension is desired. Remote start can be extended only once.

Canceling a Remote Start

To cancel a remote start, do any of the following:

- Press and hold Ω until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

See *Remote Vehicle Start on page 2-9*.

Door Locks

Keyless Access

When the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door, pressing the lock/unlock button on that door handle will lock/unlock the doors. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Remote Keyless Entry (RKE)

To lock or unlock the doors from the outside, press 🔒 or 🔓 on the RKE transmitter. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Key

To lock or unlock the door, use the key in the driver door. Turn the key counterclockwise once to unlock the driver door; turning the key again will unlock the passenger doors.

Inside the Vehicle

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks

There is a power door lock switch on the front door panels.

: Press to lock the doors.

: Press to unlock the doors.

See *Power Door Locks on page 2-12*.

Liftgate

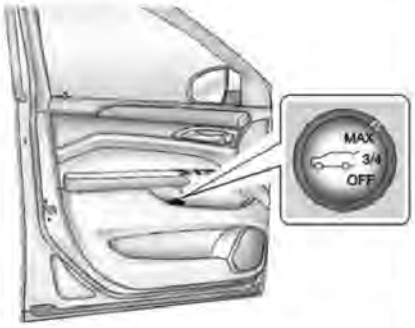
Manual Liftgate Operation

For vehicles without Keyless Access, unlock the vehicle before opening the liftgate.

Press the touch pad in the handle of the liftgate above the license plate and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Power Liftgate Operation



On vehicles with a power liftgate, the switch is on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

Choose a power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position. Press the center of the switch.

The three modes are:

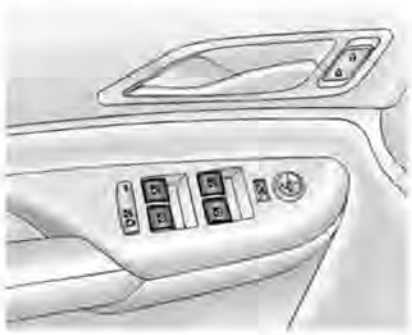
MAX: The liftgate opens to the full open height.

3/4: The liftgate opens to a reduced height that can be set by the vehicle operator in a range of approximately three-quarters open to full open.

OFF: The liftgate only operates manually in this position.

See *Liftgate on page 2-14*.

Windows



Press or pull the switch part of the way to open or close the window.

Fully press the front of the switch down and release it to express-down the window.
If equipped, the front windows have an express-up feature. Fully pull the switch up and release it.

Press to activate the window lockout on the rear doors.

See *Power Windows on page 2-24*.

Remote Window Operation

If equipped, remote operating windows will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

See *Power Windows on page 2-24*.

Seat Adjustment

Manual Seats

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

To raise or recline the seatback, use the lever on the outboard side of the seat.

See *Seat Adjustment on page 3-3* and *Reclining Seatbacks on page 3-5*.

Power Seats

1. Seat Position Control
2. Seatback Adjustment Control
3. Lumbar Adjustment Control

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control (1) forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control (1) up or down.
- Raise or lower the entire seat by moving the rear of the control (1) up or down.

  See *Power Seat Adjustment on page 3-4*.
- Raise or recline the seatback by tilting control (2) forward or rearward.

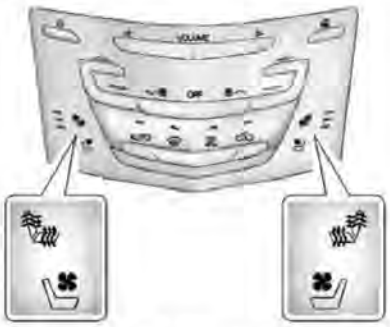
  See *Reclining Seatbacks on page 3-5*.
- Increase or decrease the lumbar support by pressing and holding the front or rear of the control (3). See *Lumbar Adjustment on page 3-4*.

Memory Features

If equipped, the "1," "2," and MEM buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions.

See *Memory Seats on page 3-6* and *Vehicle Personalization on page 5-39*.

Heated and Ventilated Seats



Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the center stack. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights next to the buttons indicate three for the highest setting and one for the lowest. If the front heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

See *Heated and Ventilated Front Seats on page 3-8*.

The heated and ventilated front seats can also be programmed to come on during a remote start. See *Vehicle Personalization on page 5-39*.

Head Restraint Adjustment

Do not drive until the head restraints for all occupants are installed and adjusted properly.

To achieve a comfortable seating position, change the seatback recline angle as little as necessary while keeping the seat and the head restraint height in the proper position.

See *Head Restraints on page 3-2* and *Seat Adjustment on page 3-3*.

Safety Belts

Refer to the following sections for important information on how to use safety belts properly:

- *Safety Belts on page 3-12*.
- *How to Wear Safety Belts Properly on page 3-13*.
- *Lap-Shoulder Belt on page 3-14*.
- *Lower Anchors and Tethers for Children (LATCH System) on page 3-40*.

Passenger Sensing System

United States

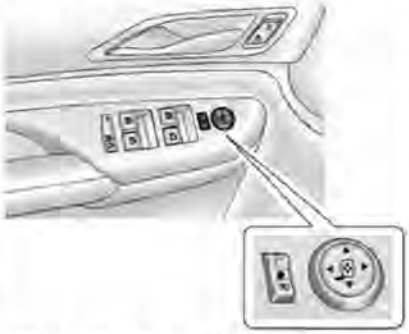
Canada and Mexico

The passenger sensing system will turn off the front outboard passenger frontal airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger airbag status indicator will be visible on the overhead console when the vehicle is started. See *Passenger Sensing System on page 3-26*.

Mirror Adjustment

Exterior



Manual Folding Mirrors Shown, Power Folding Similar

To adjust the mirror:

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror to the desired position.
3. Return the selector switch to the center position.

See *Folding Mirrors on page 2-21*.

Automatic Dimming Mirror

If equipped, the driver outside mirror and the inside rearview mirror automatically adjust for the glare of headlamps behind you. See *Automatic Dimming Mirror on page 2-22* or *Automatic Dimming Rearview Mirror on page 2-23*.

Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Throttle and Brake Pedal Adjustment

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.

The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

See *Adjustable Throttle and Brake Pedal on page 9-14*.

Interior Lighting

Dome Lamp

To change the dome lamp settings, press the following:

: Turns the lamp off, even when a door is open.

: The lamp comes on when a door is opened.

: Turns the dome lamp on.

Reading Lamps

There are reading lamps on the overhead console and over the rear passenger doors. These lamps come on when any door is opened.

To manually turn the reading lamps on or off:

- For the overhead console reading lamps, press the or next to each lamp.
- For the rear passenger reading lamps, press the lamp lens.

For more information on interior lighting, see *Instrument Panel Illumination Control on page 6-7*.

Exterior Lighting

The exterior lamp control is on the instrument panel to the left of the steering column.

Turn the control to the following positions:

: Briefly turn to this position to turn the automatic light control off or on again.

AUTO: Automatically turns the exterior lamps on and off, depending on outside lighting.

: Turns on the parking lamps including all lamps, except the headlamps.

: Turns on the headlamps together with the parking lamps and instrument panel lights. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

: If equipped with fog lamps, press to turn the lamps on or off.

See:

- *Exterior Lamp Controls on page 6-1*.
- *Daytime Running Lamps (DRL) on page 6-3*.

Windshield Wiper/Washer

With the ignition in ACC/ ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI: Use for fast wipes.

LO: Use for slow wipes.

INT: Use for intermittent wipes. To adjust wipe frequency, turn the INT band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see *Windshield Wiper/Washer on page 5-3*.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

OFF: Use to turn the wipers off.

1X : For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON: Press the upper portion of the button for continuous rear window wipes.

OFF: The rear wiper turns off when the button is returned to the middle position.

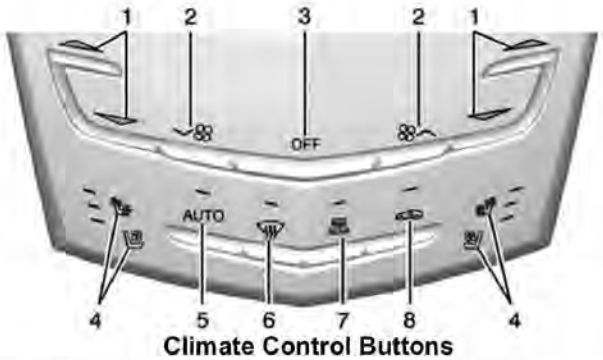
INT: Press the lower portion of the button to set a delay between wipes.

REAR : Push the windshield wiper lever forward to spray washer fluid on the rear window.

See *Windshield Wiper/Washer on page 5-3* and *Rear Window Wiper/Washer on page 5-4*.

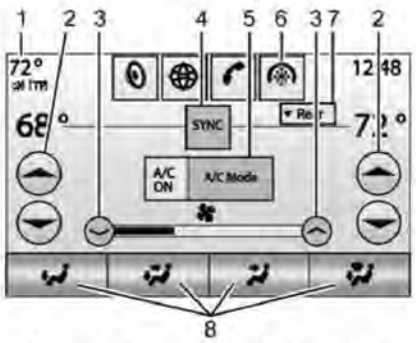
Climate Controls

The climate control buttons and the touch screen are used to adjust the heating, cooling, and ventilation.



Climate Control Buttons

1. Driver and Passenger Temperature Controls
2. Fan Control
3. OFF (Fan)
4. Driver and Passenger Heated and Ventilated Seats
5. AUTO (Automatic Operation)
6. Defrost
7. Rear Window Defogger
8. Recirculation



Climate Touch Screen Controls

1. Outside Temperature Display
2. Driver and Passenger Temperature Controls
3. Fan Control
4. SYNC (Synchronized Temperature)
5. A/C Mode (Air Conditioning)
6. Climate Control Selection (Application Tray Button)
7. Rear (Rear Climate Control Touch Screen)
8. Air Delivery Mode Control

See *Dual Automatic Climate Control System on page 8-1* and *Rear Climate Control System on page 8-6* (if equipped).

Transmission

Driver Shift Control (DSC)

DSC allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to Sport Mode.
2. To enter M (Manual Mode), press the shift lever forward to upshift or rearward to downshift.

See *Manual Mode on page 9-24*.

Vehicle Features

Infotainment System

See the infotainment manual for information on the radio, audio players, phone, navigation system, and voice or speech recognition. It also includes information on settings and downloadable applications (if equipped).

Steering Wheel Controls

The infotainment system can be operated by using the steering wheel controls. See "Steering Wheel Controls" in the infotainment manual.

Cruise Control

: Press to turn the system on and off. A white indicator appears in the instrument cluster when cruise is turned on.

+RES: If there is a set speed in memory, press the control up briefly to resume to that speed or press and hold to accelerate. If cruise control is already active, use to increase vehicle speed.

SET−: Press the control down briefly to set the speed and activate cruise control or to decrease vehicle speed if the cruise control is already activated.

: Press to disengage cruise control without erasing the set speed from memory.

See *Cruise Control on page 9-33* or *Adaptive Cruise Control on page 9-35* (if equipped).

Driver Information Center (DIC)

The DIC display is in the instrument cluster. It shows the status of many vehicle systems.

∧ or ∨: Move SEL up or down to go to the previous or next selection.

< or >: Press to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL: Press to open a menu or select a menu item. Press and hold to reset values on certain screens.

See *Driver Information Center (DIC) on page 5-25.*

Forward Collision Alert (FCA) System

If equipped, FCA may help avoid or reduce the harm caused by front-end crashes. FCA provides a green indicator, , when a vehicle is detected ahead. This indicator displays amber if you follow a vehicle much too closely. When approaching a vehicle ahead too quickly, FCA provides a flashing red alert on the windshield and rapidly beeps or pulses the driver seat.

See *Forward Collision Alert (FCA) System on page 9-48.*

Lane Departure Warning (LDW)

If equipped, LDW may help avoid unintentional lane departures at speeds of 56 km/h (35 mph) or greater. LDW uses a camera sensor to detect the lane markings. The LDW light, , is green if a lane marking is detected. If the vehicle departs the lane, the light will

change to amber and flash. In addition, beeps will sound or the driver seat will pulse.

See *Lane Departure Warning (LDW) on page 9-54.*

Side Blind Zone Alert (SBZA)

If equipped, SBZA will detect vehicles in the next lane over in the vehicle's side blind zone area. When this happens, the SBZA display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

See *Side Blind Zone Alert (SBZA) on page 9-52.*

Rear Vision Camera (RVC)

If equipped, RVC displays a view of the area behind the vehicle on the center stack display when the vehicle is shifted into R (Reverse) to aid with parking and low-speed backing maneuvers.

See *Assistance Systems for Parking or Backing on page 9-44.*

Rear Cross Traffic Alert (RCTA) System

If equipped, the RCTA system uses a triangle with an arrow displayed on the RVC screen to warn of traffic behind your vehicle that may cross your vehicle's path while in R (Reverse). In addition, beeps will sound, or the driver seat will pulse.

See *Assistance Systems for Parking or Backing on page 9-44.*

Parking Assist

If equipped, Rear Parking Assist (RPA) uses sensors on the rear bumper to assist with parking and avoiding objects while in R (Reverse). It operates at speeds less than 8 km/h (5 mph). RPA may display a warning triangle on the Rear Vision Camera screen and a graphic on the instrument cluster to provide the object distance. In addition, multiple beeps or seat pulses may occur if very close to an object.

The vehicle may also have the Front Parking Assist system.

See *Assistance Systems for Parking or Backing on page 9-44.*

Rear Automatic Braking (RAB) System

If the vehicle has Adaptive Cruise Control (ACC) it also has the Rear Automatic Braking (RAB) system, which is designed to help avoid or reduce the harm caused by backing crashes when the vehicle is shifted into R (Reverse). If the system detects the vehicle is backing too fast to avoid a crash with a detected object behind your vehicle in your path, it may automatically brake hard to a stop.

See *Assistance Systems for Parking or Backing on page 9-44.*

Active Emergency Braking System

If the vehicle has Adaptive Cruise Control (ACC) it also has the Active Emergency Braking System, which includes Intelligent Brake Assist (IBA) and the Automatic Collision Preparation (ACP) System. These systems can provide a boost to braking or automatically brake the vehicle to help avoid or lessen the severity of crashes when driving in a forward gear.

See *Active Emergency Braking System on page 9-51.*

Storage Compartments

The glove box is air conditioned and can be used to store items at a lower temperature. Move the slide control to open or close the opening to adjust the air flow. See *Glove Box on page 4-1.*

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle may have up to five accessory power outlets.

The accessory power outlets are:

- Below the climate control system inside the front storage bin.
- Inside the center floor console.
- On the rear of the center floor console. For vehicles with a rear climate control system, there will be two accessory power outlets on the rear of the center floor console.
- In the rear cargo area.

These are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

See *Power Outlets on page 5-6.*

Universal Remote System

If available, this system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Read the instructions completely before attempting to program the Universal Remote system. Because of the steps involved, it may be helpful to have another person available to assist you with programming the Universal Remote system.

See *Universal Remote System on page 5-46.*

Performance and Maintenance

Traction Control/ Electronic Stability Control

The Traction Control System (TCS) limits wheel spin. The system turns on automatically when the vehicle is started.

The StabiliTrak system assists with directional control of the vehicle in difficult driving conditions. The system turns on automatically when the vehicle is started.

- To turn off traction control, press and release OFF on the center stack. illuminates in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-36*.
- Press and release OFF again to turn traction control back on. goes out in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-36*.
- To turn off both traction control and StabiliTrak, press and hold OFF on the center stack until OFF and illuminate in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-36*.
- Press OFF again to turn on both systems. OFF and go out in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-36*.

See *Traction Control/Electronic Stability Control on page 9-30*.

Tire Pressure Monitor

This vehicle may have a Tire Pressure Monitor System (TPMS).

The low tire pressure warning light alerts to a significant loss in pressure of one of the vehicle's tires. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-9*. The warning light will remain on until the tire pressure is corrected.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This may be an early indicator that the

tire pressures are getting low and the tires need to be inflated to the proper pressure.

The TPMS does not replace normal monthly tire maintenance. Maintain the correct tire pressures.

See *Tire Pressure Monitor System on page 10-50*.

Engine Oil Life System

The engine oil life system calculates engine oil life based on vehicle use and displays the CHANGE ENGINE OIL SOON message when it is time to change the engine oil and filter. The oil life system should be reset to 100% only following an oil change.

Resetting the Oil Life System

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-25*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-31*.
2. Press SEL on the DIC controls and hold SEL down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

See *Engine Oil Life System on page 10-9*.

Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tires properly inflated.
- Combine several trips into a single trip.

- Replace the vehicle's tires with the same TPC Spec number molded into the tire's sidewall near the size.
- Follow recommended scheduled maintenance.

Roadside Service

U.S.: 1-800-224-1400

Canada: 1-800-882-1112

TTY Users (U.S. Only): 1-888-889-2438

New Cadillac owners are automatically enrolled in the Roadside Service Program.

See *Roadside Service on page 13-5*.

OnStar®

This vehicle may be equipped with a comprehensive, in-vehicle system that can connect to a live OnStar Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services. OnStar services may require a paid subscription. See *OnStar Overview on page 14-1*.

✍ NOTES

Keys, Doors, and Windows

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Keys and Locks

Keys

⚠ Warning

Leaving children in a vehicle with a Remote Keyless Entry (RKE) transmitter is dangerous and children or others could be seriously injured or killed. They could operate the power windows or other controls or make the vehicle move. The windows will function with the RKE transmitter in the vehicle, and children or others could be caught in the path of a closing window. Do not leave children in a vehicle with an RKE transmitter.

The key, inside the Remote Keyless Entry (RKE) transmitter, is used for the driver door and glove box.

To remove the key, press the button near the bottom of the transmitter, and pull the key out. Never pull the key out without pressing the button.

If it becomes difficult to turn the key, inspect the key blade for debris.

See your dealer if a new key is needed.

Contact Roadside Service if locked out of the vehicle. See *Roadside Service on page 13-5*.

With an active OnStar subscription, an OnStar Advisor may remotely unlock the vehicle. See *OnStar Overview on page 14-1*.

Remote Keyless Entry (RKE) System

See *Radio Frequency Statement on page 13-12*.

If there is a decrease in the RKE operating range:

- Check the distance. The transmitter may be too far from the vehicle.
- Check the location. Other vehicles or objects may be blocking the signal.
- Check the transmitter's battery. See "Battery Replacement" later in this section.
- If the transmitter is still not working correctly, see your dealer or a qualified technician for service.

Remote Keyless Entry (RKE) System Operation

The Keyless Access system allows for vehicle entry when the transmitter is within range. See "Keyless Access Operation" following.

The RKE transmitter functions may work up to 60 m (197 ft) away from the vehicle.

Keep in mind that other conditions, such as those previously stated, can impact the performance of the transmitter.

With Remote Start and Power Liftgate Shown, Without Similar

(Lock): Press to lock all doors. The turn signal indicators may flash and/or the horn may sound on the second press to indicate locking. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-39*.

If the driver door is open when is pressed, all doors lock except the driver door, if Unlocked Door Anti Lock Out is enabled through the vehicle personalization. If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the theft-deterrent system. See *Vehicle Alarm System on page 2-17*.

If equipped, pressing will also lock the fuel door.

(Unlock): Press to unlock the driver door or all doors. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-39*. When remotely unlocking the vehicle at night the fog lamps and back-up lamps will come on for about 20 seconds to light your approach to the vehicle. The turn signal indicators may flash to indicate unlocking. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-39*.

Memory seat positions may be recalled when unlocking the vehicle. See "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-39*.

Pressing 🔓 will disarm the theft-deterrent system. See *Vehicle Alarm System on page 2-17*.

On some models, pressing and holding 🔓 will open all of the windows.

If equipped, pressing 🔓 will also unlock the fuel door.

(Remote Start): For vehicles with this feature, press and release 🔒 and then immediately press and hold for at least four seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 2-9*.

(Vehicle Locator/Panic Alarm): Press and release one time to initiate vehicle locator. The exterior lamps flash and the horn chirps three times. Press and hold for three seconds to sound the panic alarm. The horn sounds and the turn signal lamps flash for 30 seconds, or until is pressed again or the vehicle is started.

(Remote Liftgate Release): Press twice to open or close the liftgate.

Press once to stop the liftgate from moving.

Keyless Access Operation

With the Keyless Access system, you can lock and unlock the doors and access the hatch without removing the RKE transmitter from your pocket, purse, briefcase, etc. The RKE transmitter should be within 1 m (3 ft) of the door or hatch being opened.

Keyless Access can be programmed to unlock all doors on the first lock/unlock press from the driver door. See *Vehicle Personalization on page 5-39*.

Keyless Unlocking/Locking from the Driver Door

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the driver door handle, pressing the lock/unlock button on the driver door handle will unlock the driver door. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock.

Passenger Shown, Driver Similar

Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

- It has been more than five seconds since the first lock/unlock button press.
- Two lock/unlock button presses were used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

Keyless Unlocking/Locking from Passenger Doors

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the door handle, pressing the lock/unlock button on that door handle will unlock all doors. Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

- The lock/unlock button was used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

Passive Locking

If equipped with Keyless Access, this vehicle will lock several seconds after all doors are closed if the vehicle is off and at least one RKE transmitter has been removed or none remain in the interior.

If equipped with a locking fuel door, the fuel door will also lock at this time.

If other electronic devices interfere with the RKE transmitter signal, the vehicle may not detect the RKE transmitter inside the vehicle. If passive locking is enabled, the doors may lock with the RKE transmitter inside the vehicle. Do not leave the RKE transmitter in an unattended vehicle.

Temporary Disable Passive Locking Feature

Temporarily disable the passive locking by pressing and holding on the interior door switch with a door open for at least four seconds, or until three chimes are heard. Passive locking will then remain disabled until on the interior door is pressed, or until the vehicle is turned on.

To customize the doors to automatically lock when exiting the vehicle, see "Remote Lock, Unlock, Start" under *Vehicle Personalization on page 5-39*.

Keyless Liftgate Opening

Press the touch pad on the liftgate handle to open the liftgate if the RKE transmitter is within 1 m (3 ft).

Programming Transmitters to the Vehicle

Only RKE transmitters programmed to the vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen transmitters no longer work. Each vehicle can have up to eight transmitters matched to it.

Programming with a Recognized Transmitter

A new transmitter can be programmed to the vehicle when there is one recognized transmitter.

To program, the vehicle must be off and all of the transmitters, both currently recognized and new, must be with you.

1. Place the recognized transmitter(s) in the cupholder.
2. Insert the vehicle key of the transmitter into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

   The Driver Information Center (DIC) displays READY FOR REMOTE #2, 3, 4, ETC.

3. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
4. Press the ENGINE START/STOP button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
5. Remove the transmitter from the transmitter pocket and press the transmitter 🔓 or 🔒 button.

   To program additional transmitters, repeat Steps 3–5.

   When all additional transmitters are programmed, press and hold the ENGINE START/STOP button for 12 seconds to exit programming mode.

Programming without a Recognized Transmitter

If there are no currently recognized transmitters available, follow this procedure to program up to eight transmitters. This feature is not available in Canada. This procedure will take approximately 30 minutes to complete. The vehicle must be off and all of the transmitters you wish to program must be with you.

1. Insert the vehicle key of the transmitter into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

   The Driver Information Center (DIC) displays REMOTE LEARN PENDING, PLEASE WAIT.

2. Wait for 10 minutes until the DIC displays PRESS ENGINE START BUTTON TO LEARN and then press the ENGINE START/STOP button.

   The DIC displays will again show REMOTE LEARN PENDING, PLEASE WAIT.

3. Repeat Step 2 two additional times. After the third time all previously known transmitters will no longer work with the vehicle. Remaining transmitters can be relearned during the next steps.

   The DIC display should now show READY FOR REMOTE # 1.

4. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
5. Press the ENGINE START/ STOP button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.

6. Remove the transmitter from the transmitter pocket and press the transmitter or button.

   To program additional transmitters, repeat Steps 4–6.

   When all additional transmitters are programmed, press and hold the ENGINE START/STOP button for 12 seconds to exit programming mode.

Starting the Vehicle with a Low Transmitter Battery

When the vehicle is started, if the transmitter battery is weak, the DIC may display NO REMOTE DETECTED or NO REMOTE KEY WAS DETECTED PLACE KEY IN TRANSMITTER POCKET THEN START YOUR VEHICLE. The REPLACE BATTERY IN REMOTE KEY message may also be displayed at this time.

To start the vehicle:

1. Open the center console storage area and the storage tray.

2. Place the transmitter in the transmitter pocket.
3. With the vehicle in P (Park) or N (Neutral), press the brake pedal and the ENGINE START/STOP button.

   Replace the transmitter battery as soon as possible.

Battery Replacement

⚠ Caution

When replacing the battery, do not touch any of the circuitry on the transmitter. Static from your body could damage the transmitter.

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC.

1. Press the button on the side of the transmitter near the bottom and pull the key out.

2. Separate the two halves of the transmitter using a flat tool inserted into the bottom center of the transmitter. Do not use the key slot.

3. Remove the old battery. Do not use a metal object.
4. Insert the new battery on the back housing, positive side facing down. Replace with a CR2032 or equivalent battery.
5. Align the front and back housing then snap the transmitter together.

Remote Vehicle Start

If available, this feature allows the engine to be started from outside of the vehicle.

(Remote Vehicle Start): This button will be on the RKE transmitter if the vehicle has remote start.

The climate control system will use the previous settings during a remote start. The rear defog may come on during remote start based on cold ambient conditions. The rear fog indicator light does not come on during remote start.

If the vehicle has heated seats, they may come on during a remote start. See *Heated and Ventilated Front Seats on page 3-8*

Laws in some local communities may restrict the use of remote starters. For example, some laws may require a person using remote start to have the vehicle in view. Check local regulations for any requirements.

Other conditions can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System on page 2-2* for additional information.

Starting the Engine Using Remote Start

1. Press and release on the RKE transmitter.
2. Immediately press and hold for at least four seconds or until the turn signal lamps flash. The turn signal lamps flashing confirms the request to remote start the vehicle has been received.

   During the remote start the doors will be locked and the parking lamps will remain on as long as the engine is running.

   The engine will shut off after 10 minutes unless a time extension is done or the ignition is put in ON/RUN/START.
3. With the remote in the vehicle, press the brake pedal and select the ON/RUN/START ignition mode to drive.

Extending Engine Run Time

The engine run time can also be extended by another 10-minutes, if during the first 10 minutes Steps 1–2 are repeated while the engine is still running. An extension can be requested, 30 seconds after starting. This provides a total of 20 minutes.

The remote start can only be extended once.

When the remote start is extended, the second 10-minute period is added on to the first 10 minutes for a total of 20 minutes.

A maximum of two remote starts, or a remote start with an extension, are allowed between ignition cycles.

The vehicle's ignition must be changed to ON/RUN/START and then back to OFF before the remote start procedure can be used again.

Shutting the Engine Off After a Remote Start

To cancel a remote start, do any of the following:

- Press and hold until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

Conditions in Which Remote Start Will Not Work

The remote start will not operate if any of the following occur:

- The transmitter is in the vehicle.
- The hood is not closed.
- The hazard warning flashers are on.
- There is an emission control system malfunction.
- The engine coolant temperature is too high.
- The oil pressure is low.

- Two remote vehicle starts or a start with an extension have already been used.
- The vehicle is not in P (Park).

Door Locks

⚠ Warning

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked. So, all passengers should wear safety belts properly and the doors should be locked whenever the vehicle is driven.

(Continued)

Warning (Continued)

- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.
- Outsiders can easily enter through an unlocked door when slowing or stopping the vehicle. Lock the doors to help prevent this from happening.

Keyless Access

When the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door, pressing the lock/unlock button on that door handle will lock/unlock the doors. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock. See *Remote Keyless Entry (RKE) System Operation on page 2-3.*

Key

To lock or unlock the door, use the key in the driver door. Turn the key counterclockwise once to unlock the driver door; turning the key again will unlock the passenger doors.

Inside the Vehicle

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks

(Lock): Press to lock the doors.

(Unlock): Press to unlock the doors.

Delayed Locking

This feature delays the locking of the doors until five seconds after all doors are closed.

When is pressed on the power door lock switch while the door is open, a chime will sound three times indicating delayed locking is active.

The doors will lock automatically five seconds after all doors are closed. If a door is reopened before that time, the five-second timer will reset when all doors are closed again.

Press on the door lock switch again or press on the RKE transmitter to lock doors immediately.

This feature can also be programmed. See *Vehicle Personalization on page 5-39*.

Automatic Door Locks

The doors will lock automatically when all doors are closed, the ignition is on, and the shift lever is moved out of P (Park). The doors will automatically unlock when the vehicle is stopped and the shift lever is moved into P (Park).

Use the manual or power door locks to unlock the doors if someone needs to exit, and to lock the doors again.

The power door locks can be programmed through the Driver Information Center (DIC). See *Vehicle Personalization on page 5-39*.

Lockout Protection

Lockout protection decreases the chances that the keys may be accidentally locked in the vehicle.

When door locking is requested by pressing on the front door panels or the RKE transmitter and the driver door is open, all doors will lock and the driver door will immediately unlock. The driver door must be closed when is pressed for all doors to remain locked.

This feature can be programmed to provide the lockout protection feature only when the ignition mode is ACC/ACCESSORY, or ON/RUN/START. See "Power Door Locks" in *Vehicle Personalization on page 5-39*.

Safety Locks

The rear door safety locks prevent passengers from opening the rear doors from inside the vehicle.

Press to activate the safety locks. The indicator light comes on when activated.

The rear door power windows are also disabled. See *Power Windows on page 2-24*.

Press again to deactivate the safety locks and power windows.

If a rear door handle is being pulled when the safety lock is deactivated, that door will remain locked and the indicator light may flash. Release the handle, then press the safety lock twice to deactivate the safety locks.

Doors

Liftgate

⚠ Warning

Exhaust gases can enter the vehicle if it is driven with the liftgate or trunk/hatch open, or with any objects that pass through the seal between the body and the trunk/hatch or liftgate. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle must be driven with the liftgate or trunk/hatch open:

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.

(Continued)

Warning (Continued)

- Adjust the climate control system to a setting that brings in only outside air and set the fan speed to the highest setting. See "Climate Control Systems" in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

See *Engine Exhaust on page 9-21*.

⚠ Caution

To avoid damage to the liftgate or liftgate glass, make sure the area above and behind the liftgate is clear before opening it.

Manual Liftgate

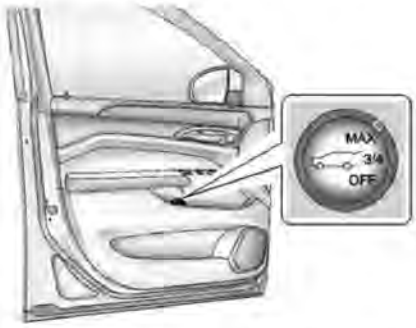
For vehicles without Keyless Access, unlock the vehicle before opening the liftgate.

Press the touch pad in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Always close the liftgate before driving.

Power Liftgate



If equipped, the power liftgate switch is on the driver door. The vehicle must be in P (Park). The taillamps flash when the power liftgate moves.

⚠ Warning

You, or others, could be injured if caught in the path of the power liftgate. Make sure there is no one in the way of the liftgate as it is opening and closing.

Choose the power liftgate mode and press the center of the switch.

The modes are:

MAX: Opens to maximum height.

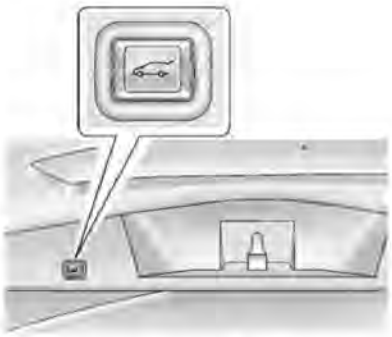
3/4: Opens to a reduced height that can be set from 3/4 to fully open. Use to prevent the liftgate from opening into overhead objects such as a garage door or roof-mounted cargo. The liftgate can be opened all the way manually.

OFF: Opens manually only.

Manual operation of a liftgate that also has power operation requires more effort than with a standard manual liftgate.

To open or close the liftgate, select MAX or the 3/4 mode and then:

- Press x2 twice on the RKE transmitter.
- Press on the center of the liftgate mode switch on the driver door, with the driver door unlocked.
- Press the touch pad on the liftgate outside handle after unlocking all doors.



Press and release on the liftgate next to the latch to close the liftgate.

Pressing any liftgate button, or the touch pad while the liftgate is moving, stops it. Pressing again reverses the direction. There is a minimum distance that the power liftgate must already be open for the

system to hold it open. If movement is stopped below that minimum, the liftgate closes.

Do not force the liftgate open or closed during a power cycle.

The power liftgate may be temporarily disabled under extreme temperatures or low battery conditions. If this occurs, the liftgate can still be operated manually.

If you shift the transmission out of P (Park) while the power function is in progress, the liftgate power function will continue to completion. If you shift the transmission out of P (Park) and accelerate before the power liftgate latch is closed, the liftgate may reverse to the open position. Cargo could fall out of the vehicle. Always make sure the power liftgate is closed and latched before you drive away.

If you power open the liftgate and the liftgate support struts have lost pressure, the turn signals flash and a chime sounds. The liftgate stays open temporarily, then slowly closes. See your dealer for service before using the liftgate.

Obstacle Detection Features

If the liftgate encounters an obstacle during a power open or close cycle, a warning chime will sound and the liftgate will automatically reverse direction to the full closed or open position. After removing the obstruction, the power liftgate operation can be used again. If the liftgate encounters multiple obstacles on the same power cycle, the power function will deactivate. After removing the obstructions, the liftgate will resume normal power operation.

The vehicle has pinch sensors on the side edges of the liftgate. If an object is caught between the liftgate and the body and presses against one of these sensors, the liftgate will reverse direction and open fully. The liftgate will remain open until it is activated again or closed manually.

Setting the 3/4 Mode

To change the liftgate stop position:

1. Select MAX or 3/4 mode and open the liftgate.
2. Stop the liftgate movement at the desired height by pressing any liftgate switch. Manually adjust the liftgate position if needed.
3. Press and hold on the liftgate next to the latch until the turn signals flash and a beep sounds. This indicates the setting has been recorded.

The liftgate cannot be set below a minimum programmable height. If there is no light flash or sound, then the height adjustment may be too low.

Manual Operation of Power Liftgate

To change the liftgate to manual operation, turn the mode switch to the OFF position.

With the power liftgate disabled and all of the doors unlocked, the liftgate can be manually opened and closed. The effort required to operate a power liftgate is greater than the effort required to operate a non-power liftgate.

To open the liftgate, press the touch pad on the handle on the outside of the liftgate, and lift the gate open. To close the liftgate, use the pull cup to lower the liftgate and close. With the power liftgate disabled, the liftgate electric latch will still power latch once contact is made with the striker. Always close the liftgate before driving.

If the RKE button is pressed while power operation is disabled, the turn signals flash and the liftgate will not move.

The liftgate has an electric latch. If the battery is disconnected or has low voltage, the liftgate will not open. The liftgate will resume operation when the battery is reconnected and charged.

Vehicle Security

This vehicle has theft-deterrent features; however, they do not make the vehicle impossible to steal.

Vehicle Alarm System

This vehicle has an anti-theft alarm system.

The indicator light, on the instrument panel near the windshield, indicates the status of the system.

Off: Alarm system is disarmed.

On Solid: Vehicle is secured during the delay to arm the system.

Fast Flash: Vehicle is unsecured. A door, the hood, or the liftgate is open.

Slow Flash: Alarm system is armed.

Arming the Alarm System

1. Close the liftgate and the hood. Turn off the vehicle.
2. Lock the vehicle in one of three ways:
   - Use the RKE transmitter.
   - Use the Keyless Access system.
   - With a door open, press the inside 🔒.
3. After 30 seconds the alarm system will arm, and the indicator light will begin to slowly flash indicating the alarm system is operating. Pressing 🔒 on the RKE transmitter a second time

will bypass the 30-second delay and immediately arm the alarm system.

The vehicle alarm system will not arm if the doors are locked with the key.

If the driver door is opened without first unlocking with the RKE transmitter, the horn will chirp and the lights will flash to indicate pre-alarm. If the vehicle is not started, or the door is not unlocked by pressing on the RKE transmitter during the 10-second pre-alarm, the alarm will be activated.

The alarm will also be activated if a passenger door, the liftgate, or the hood is opened without first disarming the system. When the alarm is activated, the turn signals flash and the horn sounds for about 30 seconds. The alarm system will then re-arm to monitor for the next unauthorized event.

Disarming the Alarm System

To disarm the alarm system or turn off the alarm if it has been activated:

- Press on the RKE transmitter.
- Unlock the vehicle using the Keyless Access system.
- Start the vehicle.

To avoid setting off the alarm by accident:

- Lock the vehicle after all occupants have left the vehicle and all doors are closed.
- Always unlock a door with the RKE transmitter or use the Keyless Access system.

Unlocking the driver door with the key will not disarm the system or turn off the alarm.

How to Detect a Tamper Condition

If is pressed and the horn chirps and the lights flash three times, the alarm was activated while the alarm system was armed.

If the alarm system has been activated, a message will appear on the DIC. See *Security Messages on page 5-37*.

Power Sounder, Inclination Sensor, and Intrusion Sensor

In addition to the standard theft-deterrent system features, this system also has an inclination sensor and intrusion sensor.

The power sounder provides an audible alarm which is different from the vehicle's horn. It has its own power source, and can sound an alarm when the vehicle's battery is compromised.

The inclination sensor can set off the alarm if it senses movement of the vehicle, such as a change in vehicle orientation.

The intrusion sensor monitors the vehicle interior, and can set off the alarm it if senses an unauthorized entry into the vehicle's interior. Do not allow passengers or pets to remain in the vehicle when the intrusion sensor is activated.

Before arming the theft-deterrent system and activating the intrusion sensor:

- Make sure all doors and windows are completely closed.
- Secure any loose items such as a sunshades.
- Make sure there are no obstructions blocking the sensors in the front overhead console.

Inclination, and Intrusion Sensors Disable Switch

It is recommended that the inclination and intrusion sensors be deactivated if pets are left in the vehicle or the vehicle is being transported.

With the vehicle turned off, press in the overhead console. The indicator light will come on momentarily, indicating that the sensor has been disabled until the next time the alarm system is armed.

Immobilizer

See *Radio Frequency Statement on page 13-12*.

Immobilizer Operation

This vehicle has a passive theft-deterrent system.

The system does not have to be manually armed or disarmed.

The vehicle is automatically immobilized when the vehicle is turned off.

The immobilization system is disarmed when the pushbutton start is activated to enter the ACC/ ACCESSORY mode or the ON/ RUN/START mode and a valid transmitter is present in the vehicle.

The security light, in the instrument cluster, comes on if there is a problem with arming or disarming the theft-deterrent system.

The system has one or more RKE transmitters matched to an immobilizer control unit in your vehicle. Only a correctly matched RKE transmitter will start the

vehicle. If the transmitter is ever damaged, you may not be able to start your vehicle.

When trying to start the vehicle, the security light comes on briefly when the ignition is turned on.

If the engine does not start and the security light stays on, there is a problem with the system. Turn the ignition off and try again.

If the vehicle will not change ignition modes (ACC/ACCESSORY, ON/RUN/START, OFF), and the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket located in the center console. See "NO REMOTE DETECTED" under *Key and Lock Messages on page 5-32*.

If the ignition mode will not change with the other transmitter, your vehicle needs service. If the ignition does change modes, the first transmitter may be faulty. See your dealer who can service the theft-deterrent system and have a new RKE transmitter programmed to the vehicle.

It is possible for the immobilizer system to learn new or replacement RKE transmitters. Up to eight transmitters can be programmed for the vehicle. To program additional transmitters, see "Programming Transmitters to the Vehicle" under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Do not leave the key or device that disarms or deactivates the theft-deterrent system in the vehicle.

Exterior Mirrors

Convex Mirrors

⚠ Warning

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on the right. Check the inside mirror or glance over your shoulder before changing lanes.

The passenger side mirror is convex shaped. A convex mirror's surface is curved so more can be seen from the driver seat.

Power Mirrors

Manual Folding Mirrors Shown, Power Folding Similar

To adjust the mirror:

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror in the desired direction.
3. Return the selector switch to the center position.

Side Blind Zone Alert (SBZA)

The vehicle may have side blind zone alert. See *Side Blind Zone Alert (SBZA) on page 9-52*.

Memory Mirrors

If equipped, the vehicle may have memory mirrors. See *Memory Seats on page 3-6*.

Folding Mirrors

Manual Folding Mirrors

If equipped, manually fold the mirrors inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

Power Folding Mirrors

To fold the mirrors, if equipped:

1. With the selector switch in the ● position, press the down arrow on the control pad. Both mirrors will automatically fold.
2. Press the down arrow again to return the mirrors to their original position.

Resetting the Power Folding Mirrors

Reset the power folding mirrors if:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.
- The mirrors do not stay in the unfolded position.
- The mirrors vibrate at normal driving speeds.

Fold and unfold the mirrors one time using the mirror controls to reset them to their normal position.
A noise may be heard during the resetting of the power folding mirrors. This sound is normal after a manual folding operation.

Heated Mirrors

(Rear Window Defogger):
Press to heat the mirrors.

See "Rear Window Defogger" under *Dual Automatic Climate Control System on page 8-1*.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror automatically adjusts for the glare of headlamps behind you.

Reverse Tilt Mirrors

If equipped with memory seats, the passenger and/or driver mirror tilts to a preselected position when the vehicle is in R (Reverse). This allows the curb to be seen when parallel parking.

The mirror(s) return to the original position when:

- The vehicle is shifted out of R (Reverse), or remains in R (Reverse) for about 30 seconds.
- The ignition is turned off.
- The vehicle is driven in R (Reverse) above a set speed.

To turn this feature on or off, see *Vehicle Personalization on page 5-39*.

Interior Mirrors

Interior Rearview Mirrors

Adjust the rearview mirror for a clear view of the area behind your vehicle.

If equipped with OnStar, there are three buttons at the bottom of the mirror. See your dealer for more information on the system and how to subscribe to OnStar. See *OnStar Overview on page 14-1.*

To avoid accidental OnStar calls, clean the mirror with the ignition off. Do not spray glass cleaner directly on the mirror. Use a soft towel dampened with water.

Manual Rearview Mirror

Push the tab forward for daytime use and pull it rearward for nighttime use to avoid glare of the headlamps from behind.

Automatic Dimming Rearview Mirror

If equipped, automatic dimming reduces the glare of headlamps from behind. The dimming feature comes on when the vehicle is started.

Windows

⚠ Warning

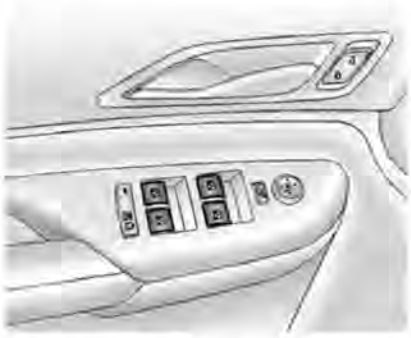
Never leave a child, a helpless adult, or a pet alone in a vehicle, especially with the windows closed in warm or hot weather. They can be overcome by the extreme heat and suffer permanent injuries or even death from heat stroke.

The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a pulsing sound when either rear window is down and the front windows are up. To reduce the sound, open either a front window or the sunroof, if equipped.

Power Windows

⚠ Warning

Children could be seriously injured or killed if caught in the path of a closing window. Never leave the Remote Keyless Entry (RKE) transmitter in a vehicle with children. When there are children in the rear seat, use the window lockout switch to prevent operation of the windows. See *Keys on page 2-1*.



The power windows:

- Can be operated with the ignition in ACC/ACCESSORY or ON/RUN/START.
- Can be operated within 10 minutes of switching the ignition off. See *Retained Accessory Power (RAP) on page 9-19*.
- Will stop operation when any door is opened.

Press or pull the switch part of the way to open or close the window.

Express-Down/Up Windows

Windows that have the express-down/up feature allow the windows to be lowered and raised fully without holding the window switch. Press the window switch fully and release it to activate the express-down feature. Pull the window switch fully up and release it to activate the express-up feature. The express mode can be canceled at any time by briefly pressing or pulling the switch.

Programming the Power Windows

Programming the power windows may be necessary if the vehicle's battery has been disconnected or discharged.

If the window will not express up after power has been restored and a message is displayed in the Driver Information Center:

1. Close all doors.

2. Place the ignition in ACC/ ACCESSORY or ON/RUN/ START.
3. From any partial open position, close the window and continue to pull the switch briefly after the window has fully closed.

Obstacle Detection Feature

The Obstacle Detection Feature is part of the express-up feature and is active:

- In the middle and upper portions of the window opening.
- During window up movements.
- In ignition OFF during all window up movements and during express-up window movements in ignition ON/RUN/START.

If there is something blocking the window during automatic closing, the window will reverse direction for a short distance. Weather conditions such as extreme cold and/or ice may cause the window to auto-reverse. The window will return to normal operation once the object or condition is removed.

If conditions prevent the window from closing and the window continues to auto-reverse, it is possible to close the window with the ignition in ON/RUN/START by holding the window switch in the partially or fully pulled up position. Release of the switch from the partially pulled up position will cause the window to stop. Release of the switch from the fully pulled up position will activate the express-up and related obstacle detection features.

Overload

If the windows are repeatedly operated within a short time, the window operation is disabled for a short time.

Remote Window Operation

If equipped, the remote operating windows will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

Window Lockout

This feature prevents the rear passenger windows from operating except from the driver position.

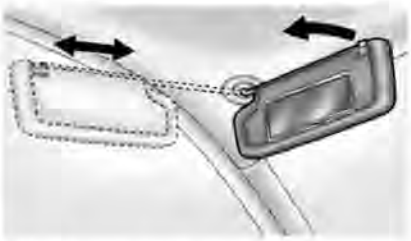
Press to activate the rear window lockout. The indicator light in the switch illuminates.

The rear door safety locks are also enabled. See *Safety Locks on page 2-13*.

Press again to deactivate the rear window lockout.

If an inside rear door handle is being pulled at the same time a safety lock is deactivated, only that door will remain locked and the indicator light may flash. Release the handle, then press the safety lock twice to deactivate the safety locks.

Sun Visors



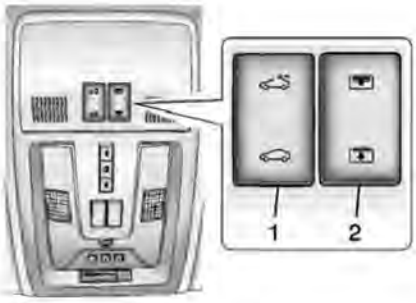
Pull the sun visor down to block glare. Detach the sun visor from the center mount to pivot to the side window or, if equipped, extend along the rod.

Roof

Sunroof

On vehicles with a sunroof, the switches are on the overhead console.

The sunroof only operates when the ignition is in ON/RUN/START or ACC/ACCESSORY, or in Retained Accessory Power (RAP). See *Ignition Positions on page 9-15* and *Retained Accessory Power (RAP) on page 9-19*.



1. Sunroof Switch
2. Sunshade Switch

Sunroof Switch

Vent: To vent the sunroof, press the rear of the sunroof switch (1) to the first detent and release. The sunroof will open to the vent position.

Open/Close: To open or close the sunroof, press the front or rear of the sunroof switch (1) to the first detent and hold to open or close the sunroof to a desired position.

Comfort Stop: The sunroof has a comfort stop feature that stops the sunroof from opening to the full-open position. Press the rear of the sunroof switch (1) to the second detent and release to open the sunroof to the comfort open position. Press and release the rear of the sunroof switch (1) again to fully open the sunroof. Press the front of the sunroof switch (1) to the second detent and release to express close the sunroof.

Sunshade Switch

Open/Close: To open or close the sunshade, press the front or back of the sunshade switch (2) to the first detent and hold to open or close the sunshade to a desired position.

Express Open/Express Close: To express open or close the sunshade, press the sunshade switch (2) to the second detent and release.

Fully close the sunroof before fully closing the sunshade.

Anti-Pinch Feature

If an object is in the path of the sunroof when it is closing, the anti-pinch feature detects the object and stops the sunroof from closing at the point of the obstruction. The sunroof then returns to the full-open position.

Dirt and debris may collect on the sunroof seal or in the track. This could cause an issue with sunroof operation or noise. It could also plug the water drainage system. Periodically open the sunroof and remove any obstacles or loose debris. Wipe the sunroof seal and roof sealing area using a clean cloth, mild soap, and water. Do not remove grease from the sunroof.

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Head Restraints

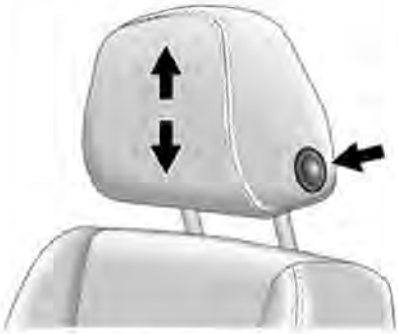
⚠ Warning

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.

Front Seats

The vehicle's front seats have adjustable head restraints in the outboard seating positions.



The height of the head restraint can be adjusted. To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down, and release the button. Pull and push on the head restraint after the button is released to make sure that it is locked in place.

The front seat outboard head restraints are not removable.

Rear Seats

The vehicle's rear seats have adjustable head restraints in the outboard seating positions.

The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure that it is locked in place.

To lower the head restraint, press the button, located on the top of the seatback, and push the head restraint down. Try to move the head restraint after the button is released to make sure that it is locked in place.

The vehicle's rear seat has an adjustable headrest in the center seating position that can be adjusted the same way as the outboard head restraints.

If you are installing a child restraint in the rear seat, see "Securing a Child Restraint Designed for the LATCH System" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-40.*

Front Seats

Seat Adjustment

⚠ Warning

You can lose control of the vehicle if you try to adjust a driver seat while the vehicle is moving. Adjust the driver seat only when the vehicle is not moving.

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

Power Seat Adjustment

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control up or down.
- Raise or lower the entire seat by moving the rear of the control up or down.

To adjust the seatback, see *Reclining Seatbacks on page 3-5*.

To adjust the lumbar support, see *Lumbar Adjustment on page 3-4*.

Some vehicles are equipped with a feature that activates a vibration in the driver seat to help the driver avoid crashes. See *Driver Assistance Systems on page 9-43*.

Lumbar Adjustment

Power Lumbar

If available, press and hold the front or rear of the control to increase or decrease lumbar support. Release the control when the seatback reaches the desired level of lumbar support.

Thigh Support Adjustment

If available, adjust the manual leg extension by pulling up on the lever, and then pulling or pushing on the support to lengthen or shorten it. Release the lever to lock it in place.

Reclining Seatbacks

⚠ Warning

Sitting in a reclined position when the vehicle is in motion can be dangerous. Even when buckled up, the safety belts cannot do their job.

The shoulder belt will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

The lap belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.

For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the safety belt properly.

Do not have a seatback reclined if the vehicle is moving.

Manual Reclining Seatbacks

⚠ Warning

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

To recline a manual seatback:

1. Lift the lever.
2. Move the seatback to the desired position, and then release the lever to lock the seatback in place.
3. Push and pull on the seatback to make sure it is locked.

To return the seatback to the upright position:

1. Lift the lever fully without applying pressure to the seatback, and the seatback will return to the upright position.
2. Push and pull on the seatback to make sure it is locked.

Power Reclining Seatbacks

To adjust a power seatback, if available:

- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

Memory Seats

If equipped, the "1," "2," and MEM buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions (if equipped).

Storing Memory Positions

To save positions to the "1" and "2" buttons:

1. Adjust the driver seat, seatback recliner, both outside mirrors, and adjustable pedals (if equipped) to the desired driving positions.
2. Press and hold MEM (Memory). A beep will sound.
3. Press "1" until two beeps sound.
4. Repeat Steps 1 and 2 for a second driver using "2."

Manually Recalling Memory Positions

If the vehicle is OFF or not in P (Park), press and hold "1" or "2" to manually recall the previously stored memory positions. Releasing "1" or "2" before the stored positions are reached stops the recall.

If the vehicle is ON and in P (Park), press and release "1" or "2" to manually recall the previously stored memory positions. Placing the ignition in OFF before the stored positions are reached stops the recall.

Automatically Recalling Memory Positions (Auto Memory Recall)

The Auto (Automatic) Memory Recall feature automatically recalls the current driver's previously stored "1" or "2" position when entering the vehicle.

Depending upon the Auto Memory Recall feature enabled in the vehicle personalization menu, memory "1" or "2" positions are recalled in the following ways:

To activate the recall when On - Driver Door Open is selected in the vehicle personalization menu:

- On vehicles with RKE, press on the RKE transmitter and open the door.
- On vehicles with Keyless Access, press the lock/unlock button on the outside driver door handle and open the driver door. The RKE transmitter must be present for the recall to activate.
- If the driver door is already open, press on the RKE transmitter to activate the recall.

To activate the recall when On - At Ignition On is selected in the vehicle personalization menu:

- Place the ignition in ON/RUN/START.

See *Vehicle Personalization on page 5-39*.

To stop recall movement, press one of the memory, power mirror, or power seat controls; or press the adjustable pedal switch (if equipped). If On - At Ignition On is selected in the vehicle personalization menu, placing the ignition in OFF also stops the recall.

Easy Exit Recall

If programmed on in the vehicle personalization menu, this feature moves the seat approximately 7 cm (3 in) rearward automatically allowing the driver more room to exit the vehicle.

Easy Exit recall activates when one of the following occurs:

- The vehicle is turned off and the driver door is opened within a short time.
- The vehicle is turned off with the driver door open.

See *Vehicle Personalization on page 5-39*.

To stop recall movement, press one of the memory, power mirror, power seat controls, or the adjustable pedal switch (if equipped).

Obstructions

If something has blocked the driver seat and adjustable pedals (if equipped) while recalling a memory position, the recall may stop. Remove the obstruction. Then do one of the following:

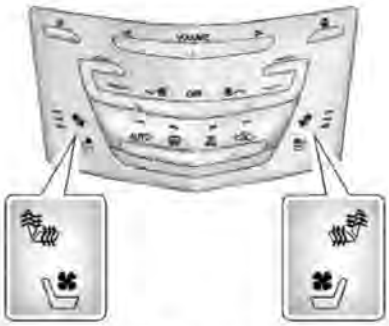
- If manually recalling the position, press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling again by pressing the appropriate memory button.
- If automatically recalling the position, press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling again by opening the driver door and pressing on the RKE transmitter.
- If recalling the exit position, press and hold the power seat control rearward for two seconds. Then try recalling the exit position again.

If the memory position is still not recalling, see your dealer for service.

Heated and Ventilated Front Seats

⚠ Warning

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns. To reduce the risk of burns, people with such a condition should use care when using the seat heater, especially for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket, cushion, cover, or similar item. This may cause the seat heater to overheat. An overheated seat heater may cause a burn or may damage the seat.



Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the center stack. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

When this feature is off, the symbols on the buttons are white. When a heated seat is turned on, the symbol turns red. When a ventilated seat (if available) is turned on, the symbol turns blue.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights next to the buttons indicate three for the highest setting and one for the lowest. If the front heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

The passenger seat may take longer to heat up.

Remote Start Heated and Ventilated Seats

During a remote start, the heated or ventilated seats can be turned on automatically. When it is cold outside, the heated seats turn on, and when it is hot outside the ventilated seats turn on. This feature is canceled when the ignition is turned on. Press the button to use the heated or ventilated seats after the vehicle is started.

The heated or ventilated seat indicator lights on the button do not turn on during a remote start.

The temperature performance of an unoccupied seat may be reduced. This is normal.

The heated or ventilated seats will not turn on during a remote start unless they are enabled in the vehicle personalization menu. See *Remote Vehicle Start on page 2-9* and *Vehicle Personalization on page 5-39*.

Rear Seats

Split Folding Seatbacks

With this feature, either side of the rear seatback can be folded down for more cargo space.

Folding the Seatbacks

⚠ Caution

Folding a rear seat with the safety belts still fastened may cause damage to the seat or the safety belts. Always unbuckle the safety belts and return them to their normal stowed position before folding a rear seat.

To fold the seatback:

1. Unbuckle the rear safety belts and move the front seatbacks to the upright position. See *Reclining Seatbacks on page 3-5*.
2. Make sure that there is nothing under, in front of, or on the seat.

3. Lift the lever on the top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.
4. Fold the seatback forward. A tab near the seatback lever retracts when the seatback is locked in place.

Keep the seatback in the upright, locked position when not in use.

Raising the Seatbacks

⚠ Warning

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

⚠ Warning

A safety belt that is improperly routed, not properly attached, or twisted will not provide the protection needed in a crash. The person wearing the belt could be seriously injured. After raising the rear seatback, always check to be sure that the safety belts are properly routed and attached, and are not twisted.

To raise the seatback:

1. Lift the lever on top of the seatback. Raise the seatback and release the lever. A tab near the seatback lever raises when the seatback is unlocked.
2. Push the seatback rearward until it locks in the upright position. A tab near the seatback lever retracts when the seatback is locked in place.
3. Make sure the rear safety belts are not twisted or caught between the seat cushion and the seatback.

Reclining the Seatbacks

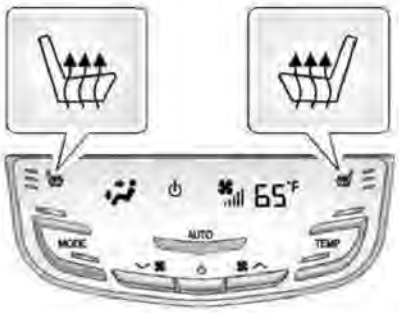
To recline the seatback:

1. Lift and hold the lever on top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.
2. Tilt the seatback rearward, and then release the lever when the seatback is in the desired position. A tab near the seatback lever retracts when the seatback is locked in place.

Heated Rear Seats

⚠ Warning

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns. See the Warning under *Heated and Ventilated Front Seats on page 3-8.*



If available, the buttons are on the rear climate control panel on the rear of the center console.

With the ignition in ON/RUN/START, press or to heat the left or right outboard seat cushion and seatback. An indicator on the climate control display appears when this feature is on.

Press the button once for the highest setting. With each press of the button, the heated seat changes to the next lower setting, and then

the off setting. Three lights indicate the highest setting, and one light indicates the lowest.

Rear Seat Pass-Through Door

There is a rear seat pass-through door in the center of the rear seatback. Fold down the center armrest and push down on the latch to open the door.

Safety Belts

This section of the manual describes how to use safety belts properly. It also describes some things not to do with safety belts.

⚠ Warning

Do not let anyone ride where a safety belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing safety belts, injuries can be much worse than if you are wearing safety belts. You can be seriously injured or killed by hitting things inside the vehicle harder or by being ejected from the vehicle. In addition, anyone who is not buckled up can strike other passengers in the vehicle.

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, passengers riding in these areas

(Continued)

Warning (Continued)

are more likely to be seriously injured or killed. Do not allow passengers to ride in any area of the vehicle that is not equipped with seats and safety belts.

Always wear a safety belt, and check that all passenger(s) are restrained properly too.

This vehicle has indicators as a reminder to buckle the safety belts. See *Safety Belt Reminders on page 5-12*.

Why Safety Belts Work

When riding in a vehicle, you travel as fast as the vehicle does. If the vehicle stops suddenly, you keep going until something stops you. It could be the windshield, the instrument panel, or the safety belts!

When you wear a safety belt, you and the vehicle slow down together. There is more time to stop because you stop over a longer distance and, when worn properly, your strongest bones take the forces from the safety belts. That is why wearing safety belts makes such good sense.

Questions and Answers About Safety Belts

Q: Will I be trapped in the vehicle after a crash if I am wearing a safety belt?

A: You *could* be — whether you are wearing a safety belt or not. Your chance of being conscious during and after a crash, so you *can* unbuckle and get out, is *much* greater if you are belted.

Q: If my vehicle has airbags, why should I have to wear safety belts?

A: Airbags are supplemental systems only; so they work *with* safety belts — not instead of them. Whether or not an airbag is provided, all occupants still have to buckle up to get the most protection.

Also, in nearly all states and in all Canadian provinces, the law requires wearing safety belts.

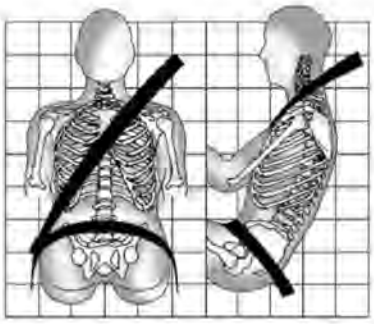
How to Wear Safety Belts Properly

This section is only for people of adult size.

There are special things to know about safety belts and children. And there are different rules for smaller children and infants. If a child will be riding in the vehicle, see *Older Children on page 3-33* or *Infants and Young Children on page 3-35*. Follow those rules for everyone's protection.

It is very important for all occupants to buckle up. Statistics show that unbelted people are hurt more often in crashes than those who are wearing safety belts.

There are important things to know about wearing a safety belt properly.



- Sit up straight and always keep your feet on the floor in front of you.
- Always use the correct buckle for your seating position.
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries.
- Wear the shoulder belt over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces. The shoulder belt locks if there is a sudden stop or crash.

⚠ Warning

You can be seriously injured, or even killed, by not wearing your safety belt properly.

- Never allow the lap or shoulder belt to become loose or twisted.
- Never wear the shoulder belt under both arms or behind your back.
- Never route the lap or shoulder belt over an armrest.

Lap-Shoulder Belt

All seating positions in the vehicle have a lap-shoulder belt.

The following instructions explain how to wear a lap-shoulder belt properly.

1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see "Seats" in the Index.
2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

   The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. If this happens, let the belt go back all the way and start again.

If the webbing locks in the latch plate before it reaches the buckle, tilt the latch plate flat to unlock.

3. Push the latch plate into the buckle until it clicks.

   Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Safety Belt Extender on page 3-19*.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. If equipped with a shoulder belt height adjuster, move it to the height that is right for you. See "Shoulder Belt Height Adjuster" later in this section for instructions on use and important safety information.

5. To make the lap part tight, pull up on the shoulder belt.

To unlatch the belt, just push the button on the buckle.

Before a door is closed, be sure the safety belt is out of the way. If a door is slammed against a safety belt, damage can occur to both the safety belt and the vehicle.

Shoulder Belt Height Adjuster

The vehicle has a shoulder belt height adjuster for the driver and front outboard passenger seating positions.

Adjust the height so that the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash. See *How to Wear Safety Belts Properly on page 3-13*.

Move the height adjuster up to the desired position by pushing up on the height adjuster.

After the height adjuster is set to the desired position, try to move it down without pressing the release button to make sure it has locked into position. Press the release button to lower the height adjuster.

Safety Belt Pretensioners

This vehicle has safety belt pretensioners for front outboard occupants. Although the safety belt pretensioners cannot be seen, they are part of the safety belt assembly. They can help tighten the safety belts during the early stages of a moderate to severe frontal, near frontal, or rear crash if the threshold conditions for pretensioner activation are met. Safety belt pretensioners can also help tighten the safety belts in a side crash or a rollover event.

Pretensioners work only once. If the pretensioners activate in a crash, they will need to be replaced, and the vehicle's safety belt system will probably need other new parts. See *Replacing Safety Belt System Parts after a Crash on page 3-19*.

Rear Safety Belt Comfort Guides

Rear safety belt comfort guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, the comfort guide positions the shoulder belt away from the neck and head.

This vehicle has rear safety belt comfort guides in the rear outboard seating positions.

To install:

1. Remove the guide from its storage pocket on the side of the seat.

2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.

3. Be sure that the belt is not twisted and it lies flat. The elastic cord must be behind the belt with the plastic guide on the front.

⚠ Warning

A safety belt that is not properly worn may not provide the protection needed in a crash. The person wearing the belt could be seriously injured. The shoulder belt should go over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces.

4. Buckle, position, and release the safety belt as described previously in this section. Make sure the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck.

To remove and store the comfort guide, squeeze the belt edges together so that the safety belt can be removed from the guide. Slide the guide back into its storage pocket on the side of the seatback.

Safety Belt Use During Pregnancy

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear safety belts.

A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

The best way to protect the fetus is to protect the mother. When a safety belt is worn properly, it is more likely that the fetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child seats. To wear it, attach it to the regular safety belt. See the instruction sheet that comes with the extender.

Safety System Check

Now and then, check that the safety belt reminder light, safety belts, buckles, latch plates, retractors, and anchorages are all working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from doing its job. See your dealer to have it repaired. Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Make sure the safety belt reminder light is working. See *Safety Belt Reminders on page 5-12.*

Keep safety belts clean and dry. See *Safety Belt Care on page 3-19.*

Safety Belt Care

Keep belts clean and dry.

⚠ Warning

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Replacing Safety Belt System Parts after a Crash

⚠ Warning

A crash can damage the safety belt system in the vehicle. A damaged safety belt system may not properly protect the person using it, resulting in serious injury or even death in a crash. To help make sure the safety belt systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

After a minor crash, replacement of safety belts may not be necessary. But the safety belt assemblies that were used during any crash may have been stressed or damaged.

See your dealer to have the safety belt assemblies inspected or replaced.

New parts and repairs may be necessary even if the safety belt system was not being used at the time of the crash.

Have the safety belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light on page 5-13.*

Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver.
- A frontal airbag for the front outboard passenger.
- A seat-mounted side impact airbag for the driver.
- A seat-mounted side impact airbag for the front outboard passenger.
- A roof-rail airbag for the driver and for the second row passenger seated directly behind the driver.
- A roof-rail airbag for the front outboard passenger and the second row passenger seated directly behind the front outboard passenger.

All vehicle airbags have the word AIRBAG on the trim or on an attached label near the deployment opening.

For frontal airbags, the word AIRBAG is on the center of the steering wheel for the driver and on the instrument panel for the front outboard passenger.

For seat-mounted side impact airbags, the word AIRBAG is on the side of the seatback closest to the door.

For roof-rail airbags, the word AIRBAG is on the ceiling or trim.

Airbags are designed to supplement the protection provided by safety belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating bag, all airbags must inflate very quickly to do their job.

Here are the most important things to know about the airbag system:

⚠ Warning

You can be severely injured or killed in a crash if you are not wearing your safety belt, even with airbags. Airbags are designed to work with safety belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes safety belts are the only restraint. See *When Should an Airbag Inflate? on page 3-23*.

Wearing your safety belt during a crash helps reduce the chance of hitting things inside the vehicle or being ejected from it. Airbags are "supplemental restraints" to the safety belts. Everyone in the vehicle should wear a safety belt properly, whether or not there is an airbag for that person.

⚠ Warning

Because airbags inflate with great force and faster than the blink of an eye, anyone who is up against, or very close to any airbag when it inflates can be seriously injured or killed. Do not sit unnecessarily close to any airbag, as you would be if sitting on the edge of the seat or leaning forward. Safety belts help keep you in position before and during a crash. Always wear a safety belt, even with airbags. The driver should sit as far back as possible while still maintaining control of the vehicle.

Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

⚠ Warning

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Always secure children properly in the vehicle. To read how, see *Older Children on page 3-33* or *Infants and Young Children on page 3-35*.

There is an airbag readiness light on the instrument cluster, which shows the airbag symbol.

The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light on page 5-13* for more information.

Where Are the Airbags?

The driver frontal airbag is in the center of the steering wheel.

The front outboard passenger frontal airbag is in the passenger side instrument panel.

Driver Side Shown, Passenger Side Similar

The driver and front outboard passenger seat-mounted side impact airbags are in the side of the seatbacks closest to the door.

Driver Side Shown, Passenger Side Similar

The roof-rail airbags for the driver, right front passenger, and second row outboard passengers are in the ceiling above the side windows.

⚠ Warning

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury

(Continued)

Warning (Continued)

or even death. The path of an inflating airbag must be kept clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

Do not use seat accessories that block the inflation path of a seat-mounted side impact airbag.

Never secure anything to the roof of a vehicle with roof-rail airbags by routing a rope or tie-down through any door or window opening. If you do, the path of an inflating roof-rail airbag will be blocked.

When Should an Airbag Inflate?

This vehicle is equipped with airbags. See *Airbag System on page 3-20.* Airbags are designed to inflate if the impact exceeds the specific airbag system's deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants. The vehicle has electronic sensors that help the airbag system determine the severity of the impact. Deployment thresholds can vary with specific vehicle design.

Frontal airbags are designed to inflate in moderate to severe frontal or near frontal crashes to help reduce the potential for severe injuries, mainly to the driver's or front outboard passenger's head and chest.

Whether the frontal airbags will or should inflate is not based primarily on how fast the vehicle is traveling.

It depends on what is hit, the direction of the impact, and how quickly the vehicle slows down.

Frontal airbags may inflate at different crash speeds depending on whether the vehicle hits an object straight on or at an angle, and whether the object is fixed or moving, rigid or deformable, narrow or wide.

Frontal airbags are not intended to inflate during vehicle rollovers, in rear impacts, or in many side impacts.

In addition, the vehicle has advanced technology frontal airbags. Advanced technology frontal airbags adjust the restraint according to crash severity.

Seat-mounted side impact airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. Seat-mounted side impact airbags are not designed to inflate in frontal impacts, near frontal impacts, rollovers, or rear impacts.

A seat-mounted side impact airbag is designed to inflate on the side of the vehicle that is struck.

Roof-rail airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. In addition, these roof-rail airbags are designed to inflate during a rollover or in a severe frontal impact. Roof-rail airbags are not designed to inflate in rear impacts. Both roof-rail airbags will inflate when either side of the vehicle is struck, if the sensing system predicts that the vehicle is about to roll over on its side, or in a severe frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the vehicle damage or repair costs.

What Makes an Airbag Inflate?

In a deployment event, the sensing system sends an electrical signal triggering a release of gas from the inflator. Gas from the inflator fills the airbag causing the bag to break out of the cover. The inflator, the airbag, and related hardware are all part of the airbag module.

For airbag locations, see *Where Are the Airbags? on page 3-22*.

How Does an Airbag Restrain?

In moderate to severe frontal or near frontal collisions, even belted occupants can contact the steering wheel or the instrument panel. In moderate to severe side collisions, even belted occupants can contact the inside of the vehicle.

Airbags supplement the protection provided by safety belts by distributing the force of the impact more evenly over the occupant's body.

Rollover capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the

first and second rows. The rollover capable roof-rail airbags are designed to help reduce the risk of full or partial ejection in rollover events, although no system can prevent all such ejections.

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate? on page 3-23*.

Airbags should never be regarded as anything more than a supplement to safety belts.

What Will You See after an Airbag Inflates?

After the frontal airbags and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realize an airbag inflated. Roof-rail airbags may still be at least partially inflated for some time after they inflate. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags? on page 3-22*.

The parts of the airbag that come into contact with you may be warm, but not too hot to touch. There may be some smoke and dust coming from the vents in the deflated airbags. Airbag inflation does not prevent the driver from seeing out of the windshield or being able to steer the vehicle, nor does it prevent people from leaving the vehicle.

⚠ Warning

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone in the vehicle should get out as soon as it is safe to do so. If you have breathing problems but cannot get out of the vehicle after an

(Continued)

Warning (Continued)

airbag inflates, then get fresh air by opening a window or a door. If you experience breathing problems following an airbag deployment, you should seek medical attention.

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps and hazard warning flashers, and shut off the fuel system after the airbags inflate. The feature may also activate, without airbag inflation, after an event that exceeds a predetermined threshold. You can lock the doors, and turn off the interior lamps, and turn off the hazard warning flashers by using the controls for those features.

⚠ Warning

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel system, brake and steering systems, etc. Even if the vehicle appears to be drivable after a moderate crash, there may be concealed damage that could make it difficult to safely operate the vehicle.

Use caution if you should attempt to restart the engine after a crash has occurred.

In many crashes severe enough to inflate the airbag, windshields are broken by vehicle deformation. Additional windshield breakage may also occur from the front outboard passenger airbag.

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for the vehicle covers the need to replace other parts.
- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy on page 13-13* and *Event Data Recorders on page 13-14*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

Passenger Sensing System

The vehicle has a passenger sensing system for the front outboard passenger position. The passenger airbag status indicator will light on the overhead console when the vehicle is started.

United States

Canada and Mexico

The words ON and OFF, or the symbol for on and off, are visible during the system check. When the system check is complete, either the

word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator on page 5-14*.

The passenger sensing system turns off the front outboard passenger frontal airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger sensing system works with sensors that are part of the front outboard passenger seat. The sensors are designed to detect the presence of a properly-seated occupant and determine if the front outboard passenger frontal airbag should be allowed to inflate or not.

According to accident statistics, children are safer when properly secured in a rear seat in the correct child restraint for their weight and size.

Whenever possible, children aged 12 and under should be secured in a rear seating position.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not

(Continued)

Warning (Continued)

inflate under some unusual circumstance, even though the airbag is off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the front outboard passenger seat, always move the seat as far back as it will go. It is better to secure the child restraint in a rear seat.

The passenger sensing system is designed to turn off the front outboard passenger airbag if:

- The front outboard passenger seat is unoccupied.
- The system determines that an infant is present in a child restraint.

- A front outboard passenger takes his/her weight off of the seat for a period of time.
- There is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the front outboard passenger frontal airbag, the off indicator will light and stay lit as a reminder that the airbag is off. See *Passenger Airbag Status Indicator on page 5-14*.

The passenger sensing system is designed to turn on the front outboard passenger frontal airbag anytime the system senses that a person of adult size is sitting properly in the front outboard passenger seat.

When the passenger sensing system has allowed the airbag to be enabled, the on indicator will light and stay lit as a reminder that the airbag is active.

For some children, including children in child restraints, and for very small adults, the passenger sensing system may or may not turn off the front outboard passenger frontal airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a safety belt properly — whether or not there is an airbag for that person.

⚠ Warning

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 5-13* for more information, including important safety information.

If the On Indicator Is Lit for a Child Restraint

The passenger sensing system is designed to turn off the front outboard passenger frontal airbag if the system determines that an infant is present in a child restraint. If a child restraint has been installed and the on indicator is lit:

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to *Securing Child Restraints (Rear Seat) on page 3-48* or *Securing Child Restraints (Front Passenger Seat) on page 3-51*.

5. If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion.

   Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints on page 3-2*.

6. Restart the vehicle.

The passenger sensing system may or may not turn off the airbags for a child in a child restraint depending upon the child's size. It is better to secure a child restraint in a rear seat.

If the Off Indicator Is Lit for an Adult-Sized Occupant

If a person of adult size is sitting in the front outboard passenger seat, but the off indicator is lit, it could be because that person is not sitting properly in the seat. Use the following steps to allow the system to detect that person and enable the front outboard passenger frontal airbag:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat massagers. Also remove laptops or other electronic devices.
3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. Restart the vehicle and have the person remain in this position for two to three minutes after the on indicator is lit.

⚠ Warning

If the front outboard passenger airbag is turned off for an adult-sized occupant, the airbag will not be able to inflate and help protect that person in a crash, resulting in an increased risk of

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Warning (Continued)

serious injury or even death. An adult-sized occupant should not ride in the front outboard passenger seat, if the passenger airbag off indicator is lit.

Additional Factors Affecting System Operation

Safety belts help keep the passenger in position on the seat during vehicle maneuvers and braking, which helps the passenger sensing system maintain the passenger airbag status. See "Safety Belts" and "Child Restraints" in the Index for additional information about the importance of proper restraint use.

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment except when approved by GM for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle on page 3-31* for more information about modifications that can affect how the system operates.

A wet seat can affect the performance of the passenger sensing system. Here's how:

- The passenger sensing system may turn off the passenger airbag when liquid is soaked into the seat. If this happens, the off indicator will be lit, and the airbag readiness light will also be lit.
- Liquid pooled on the seat that has not soaked in may make it more likely that the passenger sensing system will turn on the passenger airbag while a child restraint or child occupant is on the seat. If the passenger airbag is turned on, the on indicator will be lit.

If the front passenger seat gets wet, dry it immediately. If the airbag readiness light is lit, do not install a child restraint or allow anyone to occupy the seat. See *Airbag Readiness Light on page 5-13* for important safety information.

The on indicator may be lit if an object, such as a briefcase, handbag, grocery bag, laptop, or other electronic device, is put on an unoccupied seat. If this is not desired, remove the object from the seat.

⚠ Warning

Stowing of articles under the passenger seat or between the passenger seat cushion and seatback may interfere with the proper operation of the passenger sensing system.

Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the service manual have information about servicing the vehicle and the airbag system. To purchase a service manual, see *Service Publications Ordering Information on page 13-10*.

⚠ Warning

For up to 10 seconds after the vehicle is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow

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Warning (Continued)

proper service procedures, and make sure the person performing work for you is qualified to do so.

Adding Equipment to the Airbag-Equipped Vehicle

Adding accessories that change the vehicle's frame, bumper system, height, front end, or side sheet metal may keep the airbag system from working properly.

The operation of the airbag system can also be affected by changing or moving any parts of the front seats, safety belts, airbag sensing and diagnostic module, steering wheel, instrument panel, any of the airbag modules, ceiling or pillar garnish trim, overhead console, front sensors, side impact sensors, rollover sensor module, airbag wiring, or cargo restraint system and convenience net.

Your dealer and the service manual have information about the location of the airbag sensors, sensing and diagnostic module, and airbag wiring.

In addition, the vehicle has a passenger sensing system that includes sensors as part of the front outboard passenger seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery, or trim; or with GM covers, upholstery, or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort-enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See *Passenger Sensing System on page 3-26*.

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels on page 10-58* for additional important information.

If you have to modify your vehicle because you have a disability and you have questions about whether the modifications will affect the vehicle's airbag system, or if you have questions about whether the airbag system will be affected if the vehicle is modified for any other reason, call Customer Assistance. See *Customer Assistance Offices on page 13-3*.

Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See *Airbag Readiness Light on page 5-13*.

⚠ Caution

If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag coverings, have the airbag covering and/or airbag module replaced. For the location of the airbags, see *Where Are the Airbags? on page 3-22*. See your dealer for service.

Replacing Airbag System Parts after a Crash

⚠ Warning

A crash can damage the airbag systems in the vehicle.
A damaged airbag system may not work properly and may not
(Continued)

Warning (Continued)

protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See *Airbag Readiness Light on page 5-13*.

Child Restraints

Older Children

Older children who have outgrown booster seats should wear the vehicle safety belts.

The manufacturer instructions that come with the booster seat state the weight and height limitations for that booster. Use a booster seat with a lap-shoulder belt until the child passes the fit test below:

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide, if available. See "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-14*. If a comfort guide is not available, or if the shoulder belt still does not rest on the shoulder, then return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.
- Can proper safety belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.

Q: What is the proper way to wear safety belts?

A: An older child should wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide. The shoulder belt should not cross the face or neck. The lap belt should fit snugly below the hips, just touching the top of the thighs. This applies belt force to the child's pelvic bones in a crash. It should never be worn over the abdomen, which could cause severe or even fatal internal injuries in a crash.

Also see "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-14*.

According to accident statistics, children are safer when properly restrained in a rear seating position.

In a crash, children who are not buckled up can strike other people who are buckled up, or can be thrown out of the vehicle. Older children need to use safety belts properly.

⚠ Warning

Never allow more than one child to wear the same safety belt. The safety belt cannot properly spread the impact forces. In a crash, they can be crushed together and seriously injured. A safety belt must be used by only one person at a time.

⚠ Warning

Never allow a child to wear the safety belt with the shoulder belt behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt. The child could move too far forward increasing the chance of head and neck injury. The child might also slide under the lap

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Warning (Continued)

belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance traveled nor the age and size of the traveler changes the need, for everyone, to use safety restraints. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

⚠ Warning

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck. The shoulder belt can tighten but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all

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Warning (Continued)

the way back into the retractor, but it cannot do this if it is wrapped around a child's neck. If the shoulder belt is locked and tightened around a child's neck, the only way to loosen the belt is to cut it.

Never leave children unattended in a vehicle and never allow children to play with the safety belts.

Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints. Neither the vehicle's safety belt system nor its airbag system is designed for them.

Children who are not restrained properly can strike other people, or can be thrown out of the vehicle.

⚠ Warning

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash. For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's arms. An infant should be secured in an appropriate restraint.

⚠ Warning

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Never put a rear-facing child restraint in the front outboard seat. Secure a rear-facing child restraint in a rear seat. It is also better to secure a forward-facing child restraint in a rear seat. If you must secure a forward-facing child restraint in

(Continued)

Warning (Continued)

the front outboard seat, always move the front passenger seat as far back as it will go.

Q: What are the different types of add-on child restraints?

A: Add-on child restraints, which are purchased by the vehicle owner, are available in four basic types. Selection of a particular restraint should take into consideration not only the child's weight, height, and age but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.

For most basic types of child restraints, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle. If it is, the restraint will have a label saying that it meets federal motor vehicle safety standards.

The restraint manufacturer instructions that come with the restraint state the weight and height limitations for a particular child restraint. In addition, there are many kinds of restraints available for children with special needs.

⚠ Warning

To reduce the risk of neck and head injury during a crash, infants need complete support. In a crash, if an infant is in a rear-facing child restraint, the crash forces can be distributed across the strongest part of an infant's body, the back and shoulders. Infants should always be secured in rear-facing child restraints.

⚠ Warning

A young child's hip bones are still so small that the vehicle's regular safety belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's abdomen. In a crash, the belt would apply force on a body area that is unprotected by any bony structure. This alone could cause serious or fatal injuries. To reduce the risk of serious or fatal injuries during a crash, young children should always be secured in appropriate child restraints.

Child Restraint Systems

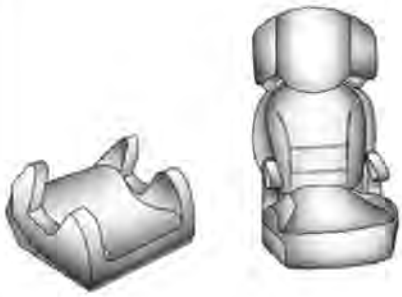
Rear-Facing Infant Seat

A rear-facing infant seat provides restraint with the seating surface against the back of the infant.

The harness system holds the infant in place and, in a crash, acts to keep the infant positioned in the restraint.

Forward-Facing Child Seat

A forward-facing child seat provides restraint for the child's body with the harness.



Booster Seats

A booster seat is a child restraint designed to improve the fit of the vehicle's safety belt system.
A booster seat can also help a child to see out the window.

Securing an Add-On Child Restraint in the Vehicle

⚠ Warning

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Secure the child restraint properly in the vehicle using the vehicle safety belt or LATCH system, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the LATCH system. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-40.*

Children can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, refer to the instructions that come with the restraint which may be on the restraint itself or in a booklet, or both, and to this manual. The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

In some areas of the United States and Canada, Certified Child Passenger Safety Technicians (CPSTs) are available to inspect and demonstrate how to correctly use and install child restraints. In the U.S., refer to the National Highway Traffic Safety Administration (NHTSA) website to locate the nearest child safety seat inspection station. For CPST availability in Canada, check with Transport Canada or the Provincial Ministry of Transportation office.

Securing the Child Within the Child Restraint

⚠ Warning

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Secure the child properly following the instructions that came with that child restraint.

Where to Put the Restraint

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. Whenever possible, children aged 12 and under should be secured in a rear seating position.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great if the airbag deploys.

⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the front passenger frontal airbag, no

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Warning (Continued)

system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-26* for additional information.

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others.

Depending on where you place the child restraint and the size of the child restraint, you may not be able to access adjacent safety belt assemblies or LATCH anchors for additional passengers or child restraints. Adjacent seating positions should not be used if the child restraint prevents access to or interferes with the routing of the safety belt.

Wherever a child restraint is installed, be sure to secure the child restraint properly.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

Lower Anchors and Tethers for Children (LATCH System)

The LATCH system secures a child restraint during driving or in a crash. LATCH attachments on the child restraint are used to attach the child restraint to the anchors in the vehicle. The LATCH system is designed to make installation of a child restraint easier.

In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. LATCH-compatible rear-facing and forward-facing child seats can be properly installed using either the LATCH anchors or the vehicle's safety belts. Do not use both the safety belts and the LATCH anchorage system to secure a rear-facing or forward-facing child seat.

Booster seats use the vehicle's safety belts to secure the child in the booster seat. If the manufacturer

recommends that the booster seat be secured with the LATCH system, this can be done as long as the booster seat can be positioned properly and there is no interference with the proper positioning of the lap-shoulder belt on the child.

Make sure to follow the instructions that came with the child restraint, and also the instructions in this manual.

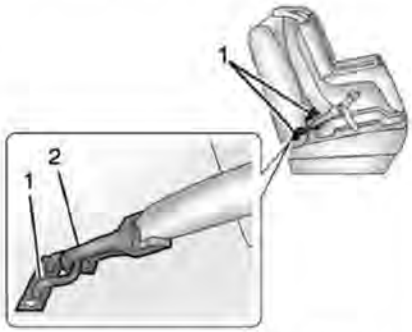
When installing a child restraint with a top tether, you must also use either the lower anchors or the safety belts to properly secure the child restraint. A child restraint must never be installed using only the top tether and anchor.

The LATCH anchorage system can be used until the combined weight of the child plus the child restraint is 29.5 kg (65 lbs). Use the safety belt alone instead of the LATCH anchorage system once the combined weight is more than 29.5 kg (65 lbs).

The following explains how to attach a child restraint with these attachments in the vehicle.

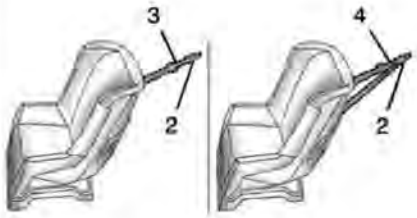
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

Lower Anchors



Lower anchors (1) are metal bars built into the vehicle. There are two lower anchors for each LATCH seating position that will accommodate a child restraint with lower attachments (2).

Top Tether Anchor



A top tether (3, 4) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (2) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during driving or in a crash.

The child restraint may have a single tether (3) or a dual tether (4). Either will have a single attachment (2) to secure the top tether to the anchor.

Some child restraints that have a top tether are designed for use with or without the top tether being attached. Others require the top tether always to be attached. In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached. Be sure to read and follow the instructions for your child restraint.

Lower Anchor and Top Tether Anchor Locations

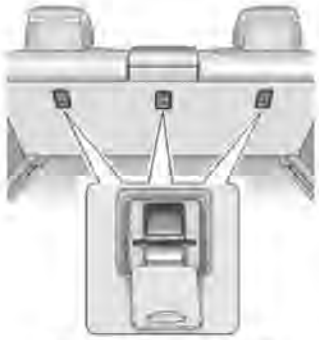
Rear Seat

(Top Tether Anchor): Seating positions with top tether anchors.

(Lower Anchor): Seating positions with two lower anchors.

To assist in locating the lower anchors, each seating position with lower anchors has two labels, near the crease between the seatback and the seat cushion.

To assist in locating the top tether anchors, the top tether anchor symbol is located on the cover.



Top Tether Anchors

The top tether anchors for each rear seating position are located under the covers, on the back of the rear seatback. Be sure to use an anchor located on the same side of the vehicle as the seating position where the child restraint will be placed.

Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether be attached, or if the instructions that come with the child restraint say that the top tether must be attached.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. See *Where to Put the Restraint on page 3-39* for additional information.

Securing a Child Restraint Designed for the LATCH System

⚠ Warning

If a LATCH-type child restraint is not attached to anchors or with the safety belt, the child restraint will not be able to protect the child correctly. In a crash, the child could be seriously injured or killed. Install a LATCH-type child restraint properly using the

(Continued)

Warning (Continued)

anchors, or use the vehicle safety belts to secure the restraint, following the instructions that came with the child restraint and the instructions in this manual.

⚠ Warning

To reduce the risk of serious or fatal injuries during a crash, do not attach more than one child restraint to a single anchor. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured.

⚠ Warning

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck. The shoulder belt can tighten but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all the way back into the retractor, but it cannot do this if it is wrapped around a child's neck. If the shoulder belt is locked and tightened around a child's neck, the only way to loosen the belt is to cut it.

Buckle any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, and tighten the belt behind the child restraint after the child restraint has been installed.

⚠ Caution

Do not let the LATCH attachments rub against the vehicle's safety belts. This may damage these parts. If necessary, move buckled safety belts to avoid rubbing the LATCH attachments.

Do not fold the empty rear seat with a safety belt buckled. This could damage the safety belt or the seat. Unbuckle and return the safety belt to its stowed position, before folding the seat.

If you need to secure more than one child restraint in the rear seat, see *Where to Put the Restraint on page 3-39*.

This system is designed to make installation of child restraints easier. When using lower anchors, do not use the vehicle's safety belts. Instead use the vehicle's anchors and child restraint attachments to secure the restraints. Some restraints also use another vehicle anchor to secure a top tether.

1. Attach and tighten the lower attachments to the lower anchors. If the child restraint does not have lower attachments or the desired seating position does not have lower anchors, secure the child restraint with the top tether and the safety belts. Refer to your child restraint manufacturer instructions and the instructions in this manual.
   1.1. Find the lower anchors for the desired seating position.
   1.2. Put the child restraint on the seat.

   For the outboard rear seating positions, if the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head

Restraint Removal and Reinstallation" at the end of this section.

1.3. Attach and tighten the lower attachments on the child restraint to the lower anchors.

2. If the child restraint manufacturer recommends that the top tether be attached, attach and tighten the top tether to the top tether anchor, if equipped. Refer to the child restraint instructions and the following steps:

2.1. Find the top tether anchor and open its cover to expose the anchor.

2.2. Route, attach, and tighten the top tether according to your child restraint instructions and the following instructions:

If you are using a dual tether in the rear outboard seating position with an adjustable head restraint, route the dual tether around the head restraint.

If you are using a dual tether in the rear outboard seating position and the head restraint has been removed, route the dual tether over the seatback.

If you are using a single tether in the rear outboard seating position with an adjustable head restraint, route the single tether under the head restraint and in between the head restraint posts.

If you are using a single tether in the rear outboard seating position and the head restraint has been removed, route the single tether over the seatback.

If you are using a dual tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the dual tether over the headrest.

If you are using a single tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the single tether over the headrest.

3. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the LATCH path and attempt to move it side to side and back and forth. There should be no more than 2.5 cm (1 in) of movement for proper installation.

Head Restraint Removal and Reinstallation

The rear outboard head restraints can be removed if they interfere with the proper installation of the child restraint. The headrest in the rear center seating position is not removable and should be lowered to the stowed position for child restraint installation.

To remove the head restraint:

1. Partially fold the seatback forward. See *Rear Seats on page 3-10* for additional information.

2. Press both buttons on the head restraint posts at the same time, and pull up on the head restraint.
3. Store the head restraint in the cargo area of the vehicle.
4. When the child restraint is removed, reinstall the head restraint before the seating position is used.

⚠ Warning

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

To reinstall the head restraint:

1. Insert the head restraint posts into the holes in the top of the seatback. The notches on the posts must face the driver side of the vehicle.
2. Push the head restraint down.

   If necessary, press the height adjustment release button to further lower the head restraint. See *Head Restraints on page 3-2*.
3. Try to move the head restraint to make sure that it is locked in place.

Replacing LATCH System Parts After a Crash

⚠ Warning

A crash can damage the LATCH system in the vehicle. A damaged LATCH system may not properly secure the child restraint, resulting in serious injury or even

(Continued)

Warning (Continued)

death in a crash. To help make sure the LATCH system is working properly after a crash, see your dealer to have the system inspected and any necessary replacements made as soon as possible.

If the vehicle has the LATCH system and it was being used during a crash, new LATCH system parts may be needed.

New parts and repairs may be necessary even if the LATCH system was not being used at the time of the crash.

Securing Child Restraints (Rear Seat)

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-40* for how and where to install the child restraint using LATCH. If a child restraint is secured in the vehicle using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-40* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

If the child restraint or vehicle seat position does not have the LATCH system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint on page 3-39*.

1. Put the child restraint on the seat.

   If the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-40*.
2. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

3. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 4 and 5.

6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-40*.
7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it. If the head restraint was removed, reinstall it before the seating position is used. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH*

System) on page 3-40 for additional information on installing the head restraint properly.

Securing Child Restraints (Front Passenger Seat)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint on page 3-39*.

In addition, the vehicle has a passenger sensing system which is designed to turn off the front outboard passenger frontal airbag under certain conditions. See *Passenger Sensing System on page 3-26* and *Passenger Airbag Status Indicator on page 5-14* for more information, including important safety information.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the front outboard passenger frontal airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the front outboard passenger frontal airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the front outboard passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

(Continued)

Warning (Continued)

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-26* for additional information.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

If the child restraint uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-40* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

When using the lap-shoulder belt to secure the child restraint in this position, follow the instructions that came with the child restraint and the following instructions:

1. Move the seat as far back as it will go before securing the forward-facing child restraint.

   When the passenger sensing system has turned off the front outboard passenger frontal airbag, the off indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator on page 5-14*.

2. Put the child restraint on the seat.
3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

Tilt the latch plate to adjust the belt if needed.

4. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle, so that the safety belt could be quickly unbuckled if necessary.

5. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 5 and 6.

7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

If the airbag is off, the off indicator in the passenger airbag status indicator will come on and stay on when the vehicle is started.

If a child restraint has been installed and the on indicator is lit, see "If the On Indicator is Lit for a Child Restraint" under *Passenger Sensing System on page 3-26*.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position.

✍ NOTES

Storage

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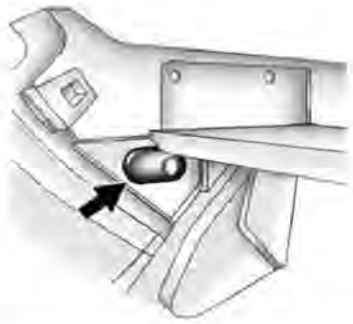
Storage Compartments

⚠ Warning

Do not store heavy or sharp objects in storage compartments. In a crash, these objects may cause the cover to open and could result in injury.

Glove Box

Lift the glove box handle up to open it. Use the key to lock and unlock the glove box.



The glove box is air conditioned and can be used to store items at a lower temperature. The vehicle air conditioning must be turned on for the maximum cool air to enter the glove box. Move the slide control to allow cool air into the glove box. After opening the air flow, close the glove box door to keep the cold air from entering the vehicle.

Cupholders

The front cupholder has a divider that can be adjusted to accommodate large or small containers.

For large containers, press the button to move aside the divider and make the cupholder deeper. For small containers, push down on the top edge of the divider to lock it back in place and make the cupholder shorter.

Front Storage

There is storage behind the climate control system. Touch the chrome bar at the bottom of the climate control system panel to open. There is a USB port inside. See "USB/SD Port" in the infotainment manual.

Keep the storage area door closed while driving.

Touch the chrome bar at the bottom of the climate control system panel again to close.

A storage area is located in front of the shift lever. Push upward on the top of the door and release; the door automatically opens.

There is an accessory power outlet inside. See *Power Outlets on page 5-6*.

Armrest Storage

For vehicles with a rear seat armrest, pull the rear seat armrest forward to access cupholders with removable liners. For vehicles with a rear storage area, pull the lever to access.

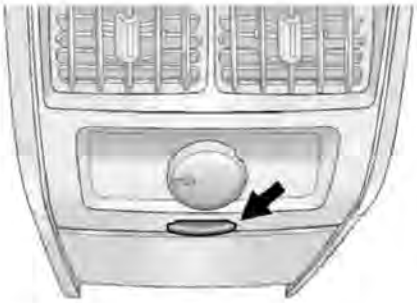
Center Console Storage

The center console has an armrest, upper storage tray, and lower storage area.

The armrest can be adjusted. Slide the top of the armrest to adjust to the desired position.

Press the driver side button to access the upper storage tray. Press the passenger side button to access the lower storage area.

There are two USB ports and an accessory power outlet inside the center console. There may be an SD card reader and auxiliary jack. See *Power Outlets on page 5-6* and the infotainment manual.



Press the button to open the storage area on the rear of the center console. If equipped with Rear Seat Entertainment (RSE), the audio/video jacks, USB port, and SD card reader may be inside. See the infotainment manual.

Additional Storage Features

Cargo Cover

For vehicles with the dual position cargo cover, it can be used to cover items in the cargo area of the vehicle.

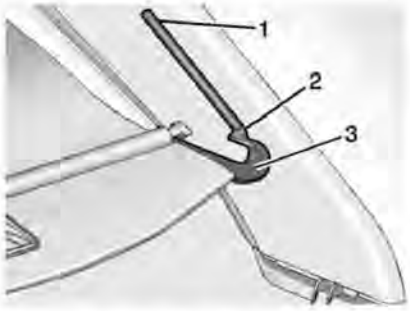
The shade can be set in two positions. It can be set in a halfway open (1) position for loading objects

into the rear compartment, or the lower (2) position to conceal objects in the rear compartment.

Install the Cargo Cover

1. Hold the cartridge so that the pull-out shade faces the rear of the vehicle.

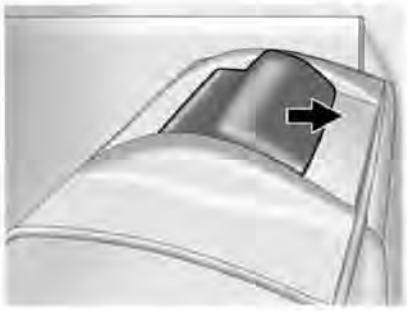
2. Align the cartridge over the pins on the trim panels of the vehicle.
3. Push down on the cartridge to snap it into place.
4. Unroll the shade toward the rear of the vehicle.



5. Insert the shade pins in the channels (3) on both sides.
6. Slide the shade to the lower (2) position, or the halfway open (1) position.

Remove the Cargo Cover

1. Remove the cover from the channels and carefully roll it back up.



2. Slide the button on the top to release the cartridge.
3. Pull up to remove the cartridge from the pins.

⚠ Warning

An unsecured cargo cover could strike people in a sudden stop or turn, or in a crash. Store the cargo cover securely or remove it from the vehicle.

Cargo Tie-Downs

For vehicles equipped with cargo tie-downs, the four tie-downs are located in the rear compartment of the vehicle. Use the tie-downs to secure small loads.

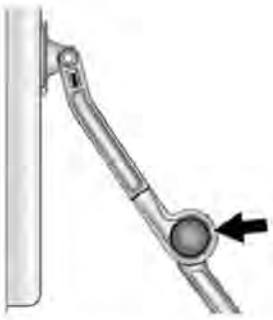
Cargo Management System

To open the cargo management system, press the rear of the handle to unlatch it and then lift the handle up.

A prop rod locks to hold the cover up when opened.

Four hooks are located on the inside cover and can be used for storing items.

There may be additional storage compartments on each side of the cargo management system. Lift the panel up to open.



Press the red button on the prop rod to close the cover.

Rear Storage Area

⚠ Warning

An improperly latched and closed cargo cover, or cargo cover left in the open position, could be thrown about the vehicle during a crash or sudden maneuver. Someone could be injured. Be sure to return the cover to the

(Continued)

Warning (Continued)

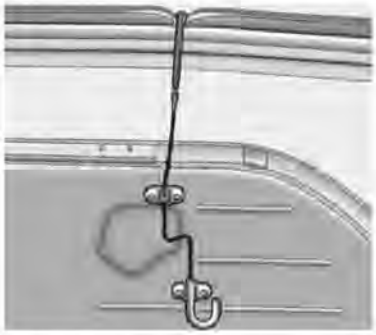
closed position and latch before driving. If the cover is removed, always store it outside of the vehicle. When it is replaced, always be sure that it is securely reattached.

To access the rear storage areas of the cargo management system, and the tire sealant and compressor kit:

1. Remove the cargo cover, if equipped.
2. Open the cargo management system cover.

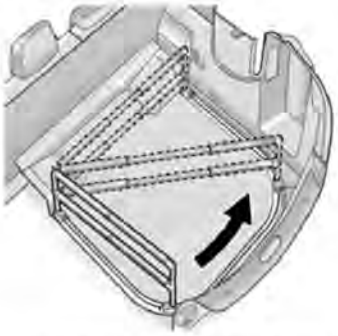
3. Release the prop rod from the inside cover by sliding the red clip down.

   Unhook the prop rod from the pin on the inside cover. Store the unhooked prop rod by folding it into the cargo management compartment.

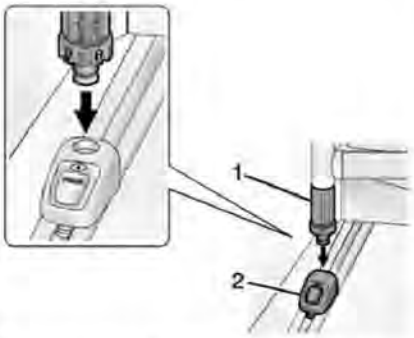


4. Store the cargo management system cover by hooking it onto the weatherstrip.

U-Rail



If equipped with a u-rail system, the fence can be moved to different positions on the u-rail track to secure cargo.



Press both adapter buttons to move the adapters (2) on the straight part of the u-rail.

To move the fence around the u-rail, disconnect one side:

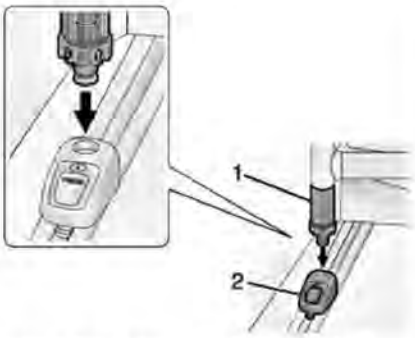
1. Unlock by turning the latch (1) to align 🔓 with the arrow on the adapter (2).
2. Press the adapter button to move the adapters (2) to the desired position.
3. Reinstall the fence and lock both latches (1) by turning to align 🔒 with the arrow on the adapter (2).

Use the fence to secure items in place.

Removing the Fence

Unlock by turning both latches (1) to align 🔓 with the arrow on the adapter (2). Lift and remove the fence.

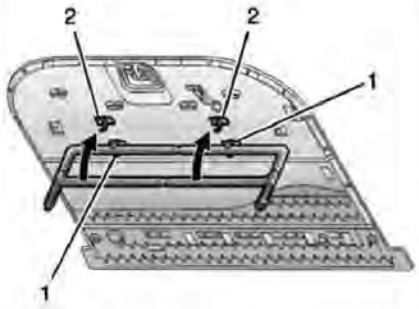
Installing the Fence



Insert the fence into the adapters and lock both latches (1) by turning to align 🔒 with the arrow on the adapter (2).

Storing the Fence

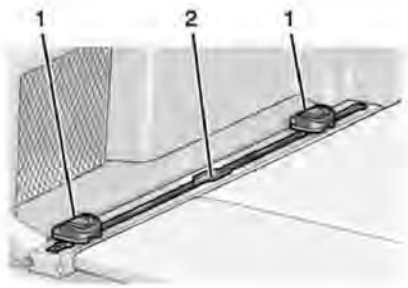
1. Lift the cargo management system cover.
2. Release the cover from the prop rod as described in the previous steps.



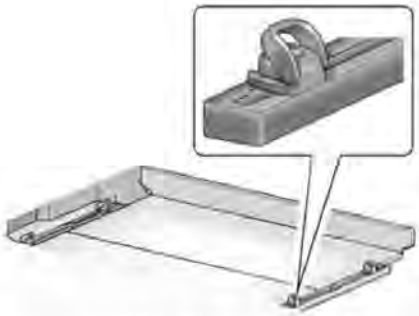
3. Insert the top of the fence into the lower two clips (1).
4. Turn the bottom of the fence up and insert it into the upper two clips (2).

D-Ring Sliders

If equipped with a D-ring system, there are four D-ring sliders that move along rails. These can be used as tie-downs when storing cargo.



Insert the D-ring sliders (1) into the channel (2) located in the middle of the rail. Press the button to move the D-ring slider along the rail.



The loop of the D-ring slider must be facing inward toward the storage area and the ring must be in the up position for proper usage.

Cargo Net

⚠ Warning

Do not stack items higher than the upper end of the cargo net or hang anything from the net. Avoid items that have sharp edges or that apply excessive force to the

(Continued)

Warning (Continued)

net. If items are not properly stored, damage to the net could occur and items can be thrown about the vehicle. You or others could be injured. Always store items behind the net.

If equipped, the cargo net can be used to store light loads, keeping them from falling over or being thrown into the cabin during heavy braking.

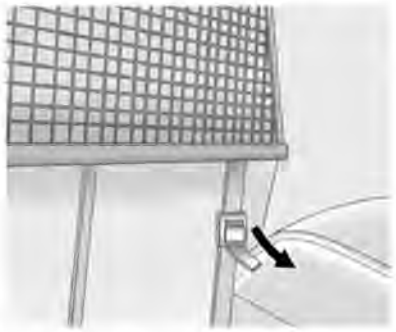
The net should not be overloaded or used to store heavy loads.

There are four openings in the headliner: two behind the front seats and two behind the rear seats.

1. Insert the top corners of the cargo net into the large openings in the headliner and secure by sliding them into the small openings.
2. The rear seatbacks should be folded down when the net is installed in the headliner opening behind the front seats.

3. Mount the cargo net to the rear seat tethers on the back of the folded down rear seats and pull on the straps to tighten the net.
4. When the net is installed in the headliner opening behind the rear seats, the rear seatbacks should be upright.

5. Mount the cargo net to the cargo tie-downs on the lower side panels.



6. Pull on the straps to tighten the net.

Cargo Net Storage

The cargo net can be removed from the vehicle and stored in the cargo management system.

1. Disconnect the net from the roof openings and the tethers.
2. Press the red button on the center of the net to fold it in half.
3. Roll up the cargo net and store it in the attached vinyl bag.

4. Open the cargo management system cover.
5. If equipped with a tire sealant and compressor kit, store the cargo net in the available space next to the kit.

Convenience Net

This vehicle may have a convenience net located in the rear of the vehicle. Attach it to the cargo tie-downs for storing small loads.

Do not use the net to store heavy loads.

Roof Rack System

⚠ Warning

If something is carried on top of the vehicle that is longer or wider than the roof rack — like paneling, plywood, or a mattress — the wind can catch it while the vehicle is being driven. The item being carried could be violently torn off, and this could cause a collision and damage the vehicle. Never carry something longer or wider than the roof rack on top of the vehicle unless using a GM certified accessory carrier.

If equipped, the roof rack can be used to load items. For roof racks that do not have crossrails included, GM Certified crossrails can be purchased as an accessory. See your dealer for additional information.

⚠ Caution

Loading cargo on the roof rack that weighs more than 100 kg (220 lb) or hangs over the rear or sides of the vehicle may damage the vehicle. Load cargo so that it rests evenly between the crossrails, making sure to fasten cargo securely.

To prevent damage or loss of cargo when driving, check to make sure crossrails and cargo are securely fastened. Loading cargo on the roof rack will make the vehicle's center of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt maneuvers; otherwise it may result in loss of control. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place. Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits on page 9-9*.

Instruments and Controls

Controls

Steering Wheel Adjustment ... 5-2
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Controls

Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Steering Wheel Controls

The infotainment system can be operated by using the steering wheel controls. See "Steering Wheel Controls" in the infotainment manual.

Heated Steering Wheel

(Heated Steering Wheel):
If equipped with a heated steering wheel, press to turn on or off. An indicator next to the button is lit when the feature is turned on.

The steering wheel takes about three minutes to start heating.

Horn

Press on the steering wheel pad to sound the horn.

Windshield Wiper/Washer

With the ignition in ACC/ ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI: Use for fast wipes.

LO: Use for slow wipes.

INT (Intermittent Wipes/Rainsense Wipe Sensitivity Control): Use for intermittent wipes. To adjust wipe frequency, turn the INT band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see the following Rainsense information.

OFF: Use to turn the wipers off.

1X (Mist): For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Clear snow and ice from the wiper blades before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement on page 10-23.*

Heavy snow or ice can overload the wiper motor.

Wipe Parking

If the ignition is changed to STOPPING THE ENGINE/OFF mode while the wipers are on LO, HI, or INT, they will immediately stop.

If the windshield wiper lever is then moved to off before the driver door is opened or within 10 minutes, the wipers will restart and move to the base of the windshield.

If the ignition is changed to STOPPING THE ENGINE/OFF while the wipers are performing wipes due to windshield washing, the wipers continue to run until they reach the base of the windshield.

Rainsense™

If equipped, there is a sensor near the top center of the windshield that detects the amount of water on the windshield and automatically controls the frequency of the windshield wiper.

Keep this area of the windshield clear of debris to allow for best system performance.

INT (Rainsense Wipe Sensitivity Control): Move the windshield wiper lever to INT. Turn the INT band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

Wiper Arm Assembly Protection

When using an automatic car wash, move the windshield wiper lever to OFF. This disables the automatic Rainsense windshield wipers and/or manual windshield wipers.

With Rainsense, if the transmission is in N (Neutral) and the vehicle speed is very slow, the wipers will automatically stop at the base of the windshield.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers. The wipers will continue until the lever is released or the maximum wash time is reached. When the windshield wiper lever is released, additional wipes may occur depending on how long the windshield washer had been activated. See *Washer Fluid on page 10-18* for information on filling the windshield washer fluid reservoir.

⚠ Warning

In freezing weather, do not use the washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Rear Window Wiper/ Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON: Press the upper portion of the button for continuous rear window wipes.

OFF: The rear wiper turns off when the button is returned to the middle position.

INT (Intermittent Rear Wipes): Press the lower portion of the button to set a delay between wipes.

(Rear Washer): Push the windshield wiper lever forward to spray washer fluid on the rear window. The lever automatically returns to its original position when released.

Rear Wiper Arm Assembly Protection

When using an automatic car wash, move the rear wiper control to OFF. This disables the rear wiper.

If the transmission is in N (Neutral) and the vehicle speed is very slow, the rear wiper will automatically stop at the base of the rear window. The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Reverse Gear Wipes

If the rear wiper control is off, the rear wiper will automatically operate continuously when the shift lever is in R (Reverse), and the front windshield wiper is performing low or high speed wipes. If the rear wiper control is off, the shift lever is in R (Reverse), and the front windshield wiper is performing interval wipes, then the rear wiper automatically performs interval wipes.

This feature can be changed. See *Vehicle Personalization on page 5-39*.

The windshield washer reservoir is used for the windshield and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid on page 10-18*.

Compass

The vehicle may have a compass display on the Driver Information Center (DIC). The compass receives its heading and other information from the Global Positioning System (GPS) antenna, StabiliTrak®, and vehicle speed information.

The compass system is designed to operate for a certain number of miles or degrees of turn before needing a signal from the GPS satellites. When the compass display shows CAL, drive the vehicle for a short distance in an open area where it can receive a GPS signal. The compass system will automatically determine when a GPS signal is restored and provide a heading again. See *Compass Messages on page 5-29* for the messages that may be displayed for the compass.

Clock

The infotainment system controls are used to access the time and date settings through the menu system. See "Home Page" in the infotainment manual for information about how to use the menu system.

Setting the Time

To set the time:

1. From the Home Page, press the SETTINGS screen button and press Time and Date.
2. Press Set Time and press + or − to increase or decrease hours, minutes, and AM or PM. Press 12Hr or 24Hr for 12 or 24 hour clock.
3. Press ⬅ to go back to the previous menu.

If auto timing is set, the time displayed on the clock may not update immediately when driving into a new time zone.

To set the date:

1. Press the SETTINGS screen button and press Time and Date.
2. Press Set Date and press + or − to increase or decrease month, day, or year.
3. Press ⬅ to go back to the previous menu.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle may have five accessory power outlets.

The accessory power outlets are:

- Below the climate control system inside the front storage bin.
- Inside the center floor console.
- On the rear of the center floor console. For vehicles with a rear climate control system, there will be two accessory power outlets on the rear of the center floor console.
- In the rear cargo area.

These are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

There is a small cap that must be removed to access the accessory power outlet. When not using the outlet be sure to cover it with the protective cap.

⚠ Caution

Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the battery. Power is always supplied to the rear cargo outlet. Always unplug electrical

(Continued)

Caution (Continued)

equipment when not in use and do not plug in equipment that exceeds the maximum 20 ampere rating.

Certain accessory power plugs may not be compatible with the accessory power outlet and could overload vehicle or adapter fuses. If a problem is experienced, see your dealer.

When adding electrical equipment, be sure to follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment on page 9-68.*

⚠ Caution

Hanging heavy equipment from the power outlet can cause damage not covered by the vehicle warranty. The power

(Continued)

Caution (Continued)

outlets are designed for accessory power plugs only, such as cell phone charge cords.

Cigarette Lighter

There may be a cigarette lighter under the climate control system, inside the front storage bin.

To activate the cigarette lighter, push it into the heating element and let go. The lighter pops out when it is ready to be used.

⚠ Caution

Holding a cigarette lighter in while it is heating does not let the lighter back away from the heating element when it is hot. Damage from overheating can occur to the lighter or heating

(Continued)

Caution (Continued)

element, or a fuse could be blown. Do not hold a cigarette lighter in while it is heating.

Ashtrays

There may be an ashtray under the climate control system on the center stack. Press the door to release the ashtray.

To empty the ashtray, remove it from the instrument panel by holding the edges and pulling straight out. To reinstall, push the tray back into place.

There may also be ashtrays on the center floor console behind the shift lever and in the rear doors.

⚠ Caution

If papers, pins, or other flammable items are put in the ashtray, hot cigarettes or other smoking materials could ignite them and possibly damage the vehicle. Never put flammable items in the ashtray.

Warning Lights, Gauges, and Indicators

Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury.

Warning lights come on when there could be a problem with a vehicle function. Some warning lights come on briefly when the engine is started to indicate they are working.

Gauges can indicate when there could be a problem with a vehicle function. Often gauges and warning lights work together to indicate a problem with the vehicle.

When one of the warning lights comes on and stays on while driving, or when one of the gauges shows there may be a problem, check the section that explains what to do. Waiting to do repairs can be costly and even dangerous.

Instrument Cluster

English Shown, Metric Similar

Cluster Application Displays

The cluster has three interactive display zones.

Use the five-way control on the right steering wheel control to move between the different display zones and scroll through the different displays.

The left and right zones display Driver Information Center (DIC) information. See *Driver Information Center (DIC) on page 5-25*.

The center zone displays application information for navigation, audio, phone, or settings. A speedometer can also be displayed in this center zone.

Navigation

If there is no active route, a compass will be displayed. If there is an active route, press SEL to end route guidance or turn the voice prompts on or off.

Audio

While the Audio application page is displayed, press SEL to enter the Audio menu. In the Audio menu search for music, select from favorites, or change the audio source.

Phone

While the Phone application page is displayed, press SEL to enter the Phone menu. In the Phone menu, if there is no active phone call, view recent calls, select from favorites, or scroll through contacts. If there is an active call, mute the phone or switch to handset operation.

Settings

Press SEL while the Settings application page is displayed to enter the Settings menu.

Units: Press SEL while Units is highlighted to enter the Units menu. Choose English or metric units by pressing SEL while the desired item is highlighted. A checkmark will be displayed next to the selected item.

Info Pages: Press SEL while Info Pages is highlighted to select the items to be displayed in the DIC information displays. See *Driver Information Center (DIC) on page 5-25*.

Open Source Software: Press SEL while Open Source Software is highlighted to display open source software information.

Speedometer

The speedometer shows the vehicle's speed in either kilometers per hour (km/h) or miles per hour (mph).

Odometer

The odometer shows how far the vehicle has been driven, in either kilometers or miles.

Trip Odometer

The trip odometer shows how far the vehicle has been driven since the trip odometer was last reset.

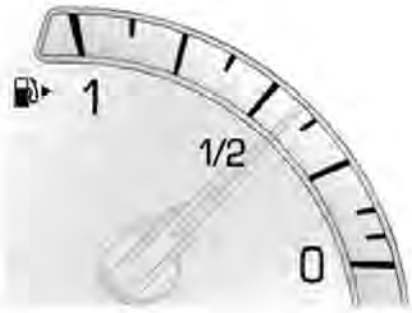
The trip odometer is accessed and reset through the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 5-25*.

Tachometer

The tachometer displays the engine speed in revolutions per minute (rpm).

> **⚠ Caution**
>
> If the engine is operated with the rpm's in the warning area at the high end of the tachometer, the vehicle could be damaged, and the damage would not be covered by the vehicle warranty. Do not operate the engine with the rpm's in the warning area.

Fuel Gauge



When the ignition is on, the fuel gauge indicates about how much fuel is left in the tank.

There is an arrow near the fuel gauge pointing to the side of the vehicle the fuel door is on.

When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refueled soon.

Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

- At the service station, the fuel pump shuts off before the gauge reads full.
- It takes a little more or less fuel to fill up than the gauge indicated. For example, the gauge may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gauge moves a little while turning a corner or speeding up.
- The gauge takes a few seconds to stabilize after the ignition is turned on, and goes back to empty when the ignition is turned off.

Engine Coolant Temperature Gauge

Metric

English

This gauge measures the temperature of the vehicle's engine.

While driving under normal operating conditions, if the needle moves into the shaded area, the engine is too hot. Pull off the road, stop the vehicle, and turn off the engine as soon as possible.

Safety Belt Reminders

Driver Safety Belt Reminder Light

There is a driver safety belt reminder light on the instrument cluster.

When the vehicle is started this light flashes and a chime comes on to remind drivers to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the driver remains or becomes unbuckled while the vehicle is moving.

If the driver safety belt is buckled, neither the light nor chime comes on.

Passenger Safety Belt Reminder Light

There is a passenger safety belt reminder light near the passenger airbag status indicator. See *Passenger Sensing System on page 3-26*.

When the vehicle is started this light flashes and a chime may come on to remind the front passenger to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the passenger remains or becomes unbuckled while the vehicle is moving.

If the front passenger safety belt is buckled, neither the chime nor the light comes on.

The front passenger safety belt reminder light and chime may turn on if an object is put on the seat such as a briefcase, handbag, grocery bag, laptop, or other electronic device. To turn off the reminder light and/or chime, remove the object from the seat or buckle the safety belt.

Second Row Passenger Belt Reminder Light

Second row seating positions monitored for safety belt use are represented by a colored symbol in the Driver information Center (DIC) indicating safety belt status. When the vehicle is started, three safety belt symbols come on and stay on for several seconds in the instrument cluster to alert the driver that passengers may need to fasten their safety belts. After the passenger safety belt is buckled, the corresponding safety belt symbol in the instrument cluster turns green. If a safety belt is not initially buckled, the instrument cluster displays a gray safety belt symbol. While the vehicle is moving, if a second row passenger that was previously buckled becomes unbuckled, the corresponding safety belt symbol will change to flashing red and a chime may sound.

Airbag Readiness Light

This light shows if there is an electrical problem with the airbag system. The system check includes the airbag sensor(s), passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System on page 3-20*.

The airbag readiness light comes on for several seconds when the vehicle is started. If the light does not come on then, have it fixed immediately.

⚠ Warning

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

If there is a problem with the airbag system, a Driver Information Center (DIC) message may also come on. See *Airbag System Messages on page 5-36*.

Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System on page 3-26* for important safety information. The overhead console has a passenger airbag status indicator.

United States

Canada and Mexico

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol to let you know the status of the front outboard passenger frontal airbag.

If the word ON or the on symbol is lit on the passenger airbag status indicator, it means that the front outboard passenger frontal airbag is allowed to inflate.

If the word OFF or the off symbol is lit on the passenger airbag status indicator, it means that the passenger sensing system has turned off the front outboard passenger frontal airbag.

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the passenger sensing system. See your dealer for service.

⚠ Warning

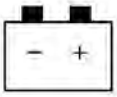
If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right

(Continued)

Warning (Continued)

away. See *Airbag Readiness Light on page 5-13* for more information, including important safety information.

Charging System Light



The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. It should go out when the engine is started.

If the light stays on, or comes on while driving, there may be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

When this light comes on, or is flashing, the Driver Information Center (DIC) also displays a message.

See *Battery Voltage and Charging Messages on page 5-28*.

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

Malfunction Indicator Lamp

A computer system called OBD II (On-Board Diagnostics-Second Generation) monitors the operation of the vehicle to ensure emissions are at acceptable levels, helping to maintain a clean environment. The malfunction indicator lamp comes on when the vehicle is placed in ON/RUN for Key Access or Service Only Mode for Keyless Access, as a

check to show it is working. If it does not, have the vehicle serviced by your dealer. See *Ignition Positions on page 9-15* for more information.

If the malfunction indicator lamp comes on while the engine is running, this indicates that the OBD II system has detected a problem and diagnosis and service might be required.

Malfunctions often are indicated by the system before any problem is apparent. Being aware of the light can prevent more serious damage to the vehicle. This system also assists the dealer technician in correctly diagnosing any malfunction.

⚠ Caution

If the vehicle is continually driven with this light on, the emission controls might not work as well, the vehicle fuel economy might not be as good, and the engine might not run as smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.

⚠ Caution

Modifications made to the engine, transmission, exhaust, intake, or fuel system of the vehicle or the replacement of the original tires with other than those of the same Tire Performance Criteria (TPC) can affect the vehicle's emission controls and can cause this light to come on. Modifications to these systems

(Continued)

Caution (Continued)

could lead to costly repairs not covered by the vehicle warranty. This could also result in a failure to pass a required Emission Inspection/Maintenance test. See *Accessories and Modifications on page 10-3*.

This light comes on during a malfunction in one of two ways:

Light Flashing: A misfire condition has been detected. A misfire increases vehicle emissions and could damage the emission control system on the vehicle. Diagnosis and service might be required.

To prevent more serious damage to the vehicle:

- Reduce vehicle speed.
- Avoid hard accelerations.
- Avoid steep uphill grades.

If the light continues to flash, find a safe place to stop and park the vehicle. Turn the vehicle off, wait at least 10 seconds, and restart the engine. If the light is still flashing, follow the previous steps and see your dealer for service as soon as possible.

Light On Steady: An emission control system malfunction has been detected on the vehicle. Diagnosis and service might be required.

The following may correct an emission control system malfunction:

- Check that the fuel cap is fully installed. See *Filling the Tank on page 9-58*. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap allows fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn the light off.
- Check that good quality fuel is used. Poor fuel quality causes the engine not to run as efficiently as designed and may cause stalling after start-up, stalling when the vehicle is changed into gear, misfiring, hesitation on acceleration, or stumbling on acceleration. These conditions might go away once the engine is warmed up.

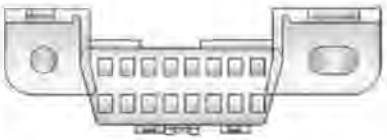
If one or more of these conditions occurs, change the fuel brand used. It may require at least one full tank of the proper fuel to turn the light off.

See *Fuel on page 9-56*.

If none of the above have made the light turn off, your dealer can check the vehicle. The dealer has the proper test equipment and diagnostic tools to fix any mechanical or electrical problems that might have developed.

Emissions Inspection and Maintenance Programs

Depending on where you live, your vehicle may be required to participate in an emission control system inspection and maintenance program. For the inspection, the emission system test equipment will likely connect to the vehicle's Data Link Connector (DLC).



The DLC is under the instrument panel next to the steering wheel. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The malfunction indicator lamp is on while the engine is running, or the malfunction indicator lamp

is not on while the vehicle is in ON/RUN or Service Only Mode. See your dealer for assistance in verifying proper operation of the malfunction indicator lamp.

- The OBD II (On-Board Diagnostics) system determines that critical emission control systems have not been completely diagnosed by the system. If this were to occur, the vehicle would be considered not ready for inspection. This can happen if the 12-volt battery has recently been replaced or run down.

  The diagnostic system is designed to evaluate critical emission control systems during normal driving. This can take several days of driving. If this has been done and the vehicle still does not pass the inspection for lack of OBD II system readiness, your dealer can prepare the vehicle for inspection.

Brake System Warning Light

The vehicle brake system consists of two hydraulic circuits. If one circuit is not working, the remaining circuit can still work to stop the vehicle. For normal braking performance, both circuits need to be working.

If the warning light comes on, there is a brake problem. Have the brake system inspected right away.

BRAKE

Metric **English**

This light comes on briefly when the vehicle is turned on. If it does not come on then, have it fixed so it will be ready to warn if there is a problem.

If the light comes on and stays on, there is a base brake problem.

⚠ Warning

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to a crash. If the light is still on after the vehicle has been pulled off the road and carefully stopped, have the vehicle towed for service.

Electric Parking Brake Light

PARK

Metric **English**

This light comes on when the parking brake is applied. If the light continues flashing after the parking

brake is released, or while driving, there is a problem with the Electric Parking Brake system or another system. A message may also display in the Driver Information Center (DIC). See *Brake System Messages on page 5-28.*

If the light does not come on, or remains flashing, see your dealer.

Service Electric Parking Brake Light

This light should come on briefly when starting the vehicle. If it does not come on, have it fixed so it will be ready to warn if there is a problem.

If this light stays on, there is a problem with the Electric Parking Brake system or another system on the vehicle that is causing the parking brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See the information for the Electric Parking Brake under *Parking Brake on page 9-27.* If a message displays in the Driver Information Center (DIC), see *Brake System Messages on page 5-28.*

Antilock Brake System (ABS) Warning Light

This light comes on briefly when the engine is started.

If the light does not come on, have it fixed so it will be ready to warn if there is a problem.

If the light comes on while driving, stop as soon as it is safely possible and turn off the vehicle. Then start the engine again to reset the system. If the ABS light stays on, or comes on again while driving, the vehicle needs service. A chime may also sound when the light comes on steady.

If the ABS light is the only light on, the vehicle has regular brakes, but the antilock brakes are not functioning.

If both the ABS and the brake system warning light are on, the vehicle's antilock brakes are not functioning and there is a problem with the regular brakes. See your dealer for service.

See *Brake System Warning Light on page 5-18* and *Brake System Messages on page 5-28.*

Lane Departure Warning (LDW) Light

If equipped, this light comes on briefly while starting the vehicle.

If it does not come on, have the vehicle serviced.

This light is green if LDW is on and ready to operate.

This light changes to amber and flashes to indicate that the lane marking has been crossed without using a turn signal in that direction.

See *Lane Departure Warning (LDW) on page 9-54*.

Vehicle Ahead Indicator

If equipped, this indicator will display green when a vehicle is detected ahead and amber when you are following a vehicle ahead much too closely.

See *Forward Collision Alert (FCA) System on page 9-48*.

Traction Off Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

The traction off light comes on when the Traction Control System (TCS) has been turned off by pressing and releasing the TCS/StabiliTrak button.

This light and the StabiliTrak OFF light come on when StabiliTrak is turned off.

If the TCS is off, wheel spin is not limited. Adjust driving accordingly.

See *Traction Control/Electronic Stability Control on page 9-30*.

StabiliTrak® OFF Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer.

This light comes on when the StabiliTrak system is turned off. If StabiliTrak is off, the Traction Control System (TCS) is also off.

If the StabiliTrak and TCS are off, the system does not assist in controlling the vehicle. Turn on the TCS and the StabiliTrak systems and the warning light turns off.

See *Traction Control/Electronic Stability Control on page 9-30.*

Traction Control System (TCS)/StabiliTrak® Light

This light comes on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light is on and not flashing, the TCS and potentially the StabiliTrak system have been disabled. A DIC message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service.

If the indicator/warning light is on and flashing, the TCS and/or the StabiliTrak system is actively working.

See *Traction Control/Electronic Stability Control on page 9-30.*

Engine Coolant Temperature Warning Light

This light comes on briefly while starting the vehicle.

If it does not, have the vehicle serviced by your dealer. If the system is working normally the indicator light goes off.

⚠ Caution

The engine coolant temperature warning light indicates that the vehicle has overheated. Driving with this light on can damage the engine and it may not be covered

(Continued)

Caution (Continued)
by the vehicle warranty. See *Engine Overheating on page 10-16*.

The engine coolant temperature warning light comes on when the engine has overheated.

If this happens, pull over and turn off the engine as soon as possible. See *Engine Overheating on page 10-16*.

Tire Pressure Light

For vehicles with the Tire Pressure Monitor System (TPMS), this light comes on briefly when the engine is started. It provides information about tire pressures and the TPMS.

When the Light Is On Steady

This indicates that one or more of the tires are significantly underinflated.

A Driver Information Center (DIC) tire pressure message may also display. See *Tire Messages on page 5-37*. Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information label. See *Tire Pressure on page 10-48*.

When the Light Flashes First and Then Is On Steady

If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on at every ignition cycle. See *Tire Pressure Monitor Operation on page 10-51*.

Engine Oil Pressure Light

⚠ Caution
Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the vehicle serviced. Always follow the maintenance schedule for changing engine oil.

This light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

Fuel Economy Light

This light is in the Driver Information Center (DIC) display.

For vehicles with the fuel economy mode light, it comes on when the eco (economy) button, located next to the shift lever, is pressed. Press the button again to turn off the light and exit the fuel economy mode.

See *Driving for Better Fuel Economy on page 1-20* and *Fuel Economy Mode on page 9-25* for more information.

Low Fuel Warning Light

This light is near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

Security Light

The security light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system. See *Immobilizer Operation on page 2-19*.

High-Beam On Light

This light comes on when the high-beam headlamps are in use.

See *Headlamp High/Low-Beam Changer on page 6-3.*

IntelliBeam® Light

This light comes on when the IntelliBeam system, if equipped, is enabled.

See *Exterior Lamp Controls on page 6-1.*

Adaptive Forward Lighting (AFL) Light

This light should come on briefly as the vehicle is started. If it does not come on, have the vehicle serviced by your dealer.

This light comes on solid when there is a problem with the AFL system. It flashes when the system is switching between lighting modes. See *Adaptive Forward Lighting (AFL) on page 6-4.*

Front Fog Lamp Light

The fog lamp light comes on when the fog lamps are in use.

The light goes out when the fog lamps are turned off. See *Front Fog Lamps on page 6-6* for more information.

Lamps On Reminder

This light comes on when the exterior lamps are in use. See *Exterior Lamp Controls on page 6-1.*

Cruise Control Light

The cruise control light is white when the cruise control is on and ready, and turns green when the cruise control is set and active.

See *Cruise Control on page 9-33*.

Adaptive Cruise Control Light

This light in the Driver Information Center (DIC) comes on when the Adaptive Cruise Control (if equipped) is active. See *Adaptive Cruise Control on page 9-35*.

Information Displays

Driver Information Center (DIC)

The DIC displays are shown in the left and right interactive display zones on the instrument cluster. The displays show the status of many vehicle systems. The controls for the DIC are on the right steering wheel control.

∧ or ∨: Press the five-way control to move up or down in a list.

< or >: Press the five-way control to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL (Select): Press the center to open a menu or select a menu item. Press and hold to reset values on certain screens.

DIC Information Display Options

The information displays on the DIC can be turned on or off through the Settings menu.

1. Press SEL while viewing the Settings page in the center display zone on the cluster.
2. Scroll to Info Pages and press SEL.
3. Press ∧ or ∨ to move through the list of possible information displays.

4. Press SEL while an item is highlighted to select or deselect that item. When an item is selected, a checkmark will appear next to it.

DIC Information Displays

The following is the list of all possible DIC information displays. Some of the information displays may not be available for your particular vehicle.

Speed: Shows the vehicle speed in either kilometers per hour (km/h) or miles per hour (mph).

Trip 1 and Trip 2: Shows the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset. The trip odometer can be reset by pressing and holding SEL while this display is active.

Fuel Range: Shows the approximate distance the vehicle can be driven without refueling. LOW will be displayed when the vehicle is low on fuel. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank.

Average Fuel Economy: Shows the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. This number reflects only the approximate average fuel economy that the vehicle has right now, and will change as driving conditions change. The Average Fuel Economy can be reset by pressing and holding SEL while this display is active.

Instantaneous Fuel Economy: Shows the current fuel economy in either liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the approximate fuel economy that the vehicle has right now and changes frequently as driving conditions change.

Average Speed: Shows the average speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. The average speed can be reset by pressing and holding SEL while this display is active.

Timer: This display can be used as a timer. To start the timer, press SEL while this display is active. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press SEL briefly while this display is active and the timer is running. To reset the timer to zero, press and hold SEL while this display is active.

Compass: Shows the direction the vehicle is driving.

Turn Arrow: Shows the next maneuver when using route guidance.

Travel Time: Shows the estimated time duration remaining for the current route.

Distance to Destination: Shows the distance to the destination when using route guidance.

Speed Limit: Shows sign information, which comes from a roadway database in the onboard navigation.

Speed Warning: Allows the driver to set a speed that they do not want to exceed. To set the Speed Warning, press SEL when Speed Warning is displayed. Press ∧ or ∨ to adjust the value. This feature can be turned off by pressing and holding SEL while viewing this page. If the selected speed limit is exceeded, a pop-up warning is displayed with a chime.

Cruise Set Speed: Shows the speed the cruise control or Adaptive Cruise Control is set to.

Follow Distance: Shows the current following distance to the vehicle ahead.

Battery Voltage: Shows the current battery voltage.

Oil Life: Shows an estimate of the oil's remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-31*. The oil should be changed as soon as possible. See *Engine Oil on page 10-7*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule. See *Maintenance Schedule on page 11-3*.

The Oil Life display must be reset after each oil change. It will not reset itself. Do not to reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system, press and hold SEL for several seconds while the Oil Life display is active. See *Engine Oil Life System on page 10-9*.

Tire Pressure: Shows the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tire is shown in amber. See *Tire Pressure Monitor System on page 10-50* and *Tire Pressure Monitor Operation on page 10-51*.

Blank Page: Allows for no information to be displayed in the DIC display zone(s).

Vehicle Messages

Messages displayed on the DIC indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may display one after the other.

The messages that do not require immediate action can be acknowledged and cleared by pressing SET/CLR. The messages that require immediate action cannot be cleared until that action is performed. All messages should be taken seriously and clearing the messages does not correct the problem.

The following are some of the vehicle messages that may be displayed depending on your vehicle content.

Battery Voltage and Charging Messages

BATTERY SAVER ACTIVE

This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing features of the vehicle that may be noticed. At the point that features are disabled, this message displays. Turn off unnecessary accessories to allow the battery to recharge.

LOW BATTERY

This message is displayed when the battery voltage is low. See *Battery on page 10-21*.

SERVICE BATTERY CHARGING SYSTEM

This message is displayed when there is a fault in the battery charging system. Take the vehicle to your dealer for service.

TRANSPORT MODE ON

This message is displayed when the vehicle is in transport mode. Some features can be disabled while in this mode, including Remote Keyless Entry (RKE), remote start, and the vehicle alarm system. Take the vehicle to your dealer for service to turn transport mode off.

Brake System Messages

BRAKE FLUID LOW

This message is displayed when the brake fluid level is low. See *Brake Fluid on page 10-20*.

STEP ON BRAKE TO RELEASE PARK BRAKE

This message is displayed if you attempt to release the Electric Parking Brake without the brake pedal applied. See *Parking Brake on page 9-27*.

RELEASE PARKING BRAKE

This message is displayed if the Electric Parking Brake is on while the vehicle is in motion. See *Parking Brake on page 9-27*.

SERVICE BRAKE ASSIST

This message may be displayed when there is a problem with the brake boost assist system. When this message is displayed, the brake boost assist motor might be heard operating and you might notice pulsation in the brake pedal. This is normal under these conditions. Take the vehicle to your dealer for service.

SERVICE PARKING BRAKE

This message is displayed when there is a problem with the parking brake. Take the vehicle to your dealer for service.

Compass Messages

CAL

This message is displayed when the compass needs to be calibrated. See *Compass on page 5-5*.

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Dashes will be displayed if the compass needs service. See your dealer for service.

Cruise Control Messages

ADAPTIVE CRUISE SET TO XXX

This message displays when the Adaptive Cruise Control (ACC) speed is set. See *Adaptive Cruise Control on page 9-35*.

ADAPTIVE CRUISE TEMPORARILY UNAVAILABLE

This message displays when attempting to activate Adaptive Cruise Control (ACC) when it is temporarily unavailable. The ACC system does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-85*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

CRUISE SET TO XXX

This message displays when the cruise control speed is set. See *Cruise Control on page 9-33*.

NO CRUISE BRAKING GAS PEDAL APPLIED

This message displays when Adaptive Cruise Control (ACC) is active and the driver is pressing the gas pedal. When this occurs, ACC will not brake. See *Adaptive Cruise Control on page 9-35*.

SERVICE ADAPTIVE CRUISE CONTROL

This message displays when the Adaptive Cruise Control (ACC) needs service. Take the vehicle to your dealer.

SHIFT TO PARK BEFORE EXITING

This message may display if Adaptive Cruise Control (ACC) is engaged holding the vehicle at a stop, and the driver attempts to exit the vehicle. Put the vehicle in P (Park) before exiting.

Door Ajar Messages

DOOR OPEN

A door open symbol will be displayed on the DIC showing which door is open. If the vehicle has been shifted out of P (Park), a DOOR OPEN message will also be displayed. Close the door completely.

HOOD OPEN

This message will display along with a hood open symbol when the hood is open. Close the hood completely.

REAR ACCESS OPEN

This message will display along with a symbol when the liftgate is open. Close the liftgate completely.

Engine Cooling System Messages

A/C OFF DUE TO HIGH ENGINE TEMP

This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. The vehicle can continue to be driven.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

ENGINE OVERHEATED — IDLE ENGINE

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OVERHEATED — STOP ENGINE

This message displays and a continuous chime sounds if the engine cooling system reaches unsafe temperatures for operation. Stop and turn off the vehicle as soon as it is safe to do so to avoid severe damage. This message clears when the engine has cooled to a safe operating temperature.

HIGH COOLANT TEMPERATURE

This message displays if the coolant temperature is hot. See *Engine Overheating on page 10-16*.

Engine Oil Messages

CHANGE ENGINE OIL SOON

This message displays when the engine oil needs to be changed. When you change the engine oil, be sure to reset the oil life system. See *Engine Oil Life System on page 10-9*, *Driver Information Center (DIC) on page 11-3*, *Engine Oil on page 10-7*, and *Maintenance Schedule on page 11-3*.

ENGINE OIL HOT, IDLE ENGINE

This message displays when the engine oil temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OIL LOW — ADD OIL

On some vehicles, this message displays when the engine oil level may be too low. Check the oil level before filling to the recommended level. If the oil is not low and this message remains on, take the vehicle to your dealer for service. See *Engine Oil on page 10-7*.

OIL PRESSURE LOW — STOP ENGINE

This message displays if low oil pressure levels occur. Stop the vehicle as soon as safely possible and do not operate it until the cause of the low oil pressure has been corrected. Check the oil as soon as possible and have the vehicle serviced by your dealer.

Engine Power Messages

ENGINE POWER IS REDUCED

This message displays when the vehicle's engine power is reduced. Reduced engine power can affect the vehicle's ability to accelerate. If this message is on, but there is no reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven at a reduced speed while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer for service as soon as possible.

Fuel System Messages

FUEL LEVEL LOW

This message displays when the vehicle is low on fuel. Refuel as soon as possible.

TIGHTEN GAS CAP

This message displays when the fuel cap is not on tight. Tighten the fuel cap.

Key and Lock Messages

NO REMOTE DETECTED

This message displays when the transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

NO REMOTE KEY WAS DETECTED PLACE KEY IN TRANSMITTER POCKET THEN START YOUR VEHICLE

This message displays when trying to start the vehicle if an RKE transmitter is not detected. The transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

NO REMOTE PRESS BRAKE TO RESTART

This message is displayed if the remote is no longer detected in the vehicle. Press the brake pedal to restart the vehicle.

NUMBER OF KEYS PROGRAMMED

This message displays when programming new keys to the vehicle.

REMOTE LEFT IN VEHICLE

This message displays when leaving the vehicle with the RKE transmitter still inside.

REPLACE BATTERY IN REMOTE KEY

This message displays when the battery in the RKE transmitter needs to be replaced.

Lamp Messages

AFL (ADAPTIVE FORWARD LIGHTING) LAMPS NEED SERVICE

This message displays when the AFL system is disabled and needs service. See your dealer. See *Adaptive Forward Lighting (AFL) on page 6-4*.

AUTOMATIC LIGHT CONTROL ON

This message is displayed when the exterior lamp control is in AUTO and the lights have turned on. See *Twilight Sentinel on page 6-5.*

AUTOMATIC LIGHT CONTROL OFF

This message is displayed when the exterior lamp control is in AUTO and the lights have turned off. See *Twilight Sentinel on page 6-5.*

XXX TURN INDICATOR FAILURE

When one of the turn signals is out, this message displays to show which bulb needs to be replaced. See *Bulb Replacement on page 10-25* and *Replacement Bulbs on page 10-32.*

TURN SIGNAL ON

This message is displayed if the turn signal has been left on. Turn off the turn signal.

Object Detection System Messages

24 GHz RADARS OFF

This message displays when driving in certain areas where there may be radar interference. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and the Active Emergency Braking System may not work or may not work as well. The vehicle does not need service.

AUTOMATIC COLLISION PREP OFF

This message displays when the Active Emergency Braking System has been turned off. See *Active Emergency Braking System on page 9-51.*

AUTOMATIC COLLISION PREP REDUCED

This message displays when the Active Emergency Braking System has been set to the Alert setting. This setting disables most automatic braking functions of the Auto Collision Preparation feature. Some last-second automatic braking capability is still provided with the Alert setting, but braking is less likely to occur. See *Active Emergency Braking System on page 9-51.*

AUTOMATIC COLLISION PREP UNAVAILABLE

This message displays when the Active Emergency Braking System has been unavailable for some time. The Active Emergency Braking System does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-85.*

- Heavy rain or snow is interfering with the radar object detection or camera performance.

This message may also be displayed if there is a problem with the StabiliTrak system.

FORWARD COLLISION ALERT OFF

This message displays when the Forward Collision Alert has been turned off.

FRONT CAMERA BLOCKED CLEAN WINDSHIELD

This message displays when the camera is blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue. The Lane Departure Warning (LDW) system will not operate. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and the Active Emergency Braking System may not work or may not work as well.

LANE DEPARTURE WARNING UNAVAILABLE

This message displays when attempting to activate the Lane Departure Warning (LDW) system when it is temporarily unavailable. The LDW system does not need service.

This message could be due to the camera being blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue.

REAR AUTO BRAKE/PARK ASSIST OFF

This message displays when the Parking Assist system has been turned off or when there is a temporary condition causing the system to be disabled.

REAR AUTO BRAKE AND PARK ASSIST UNAVAILABLE

This message displays when attempting to activate the parking and backing features of the Driver Assistance System when they are temporarily unavailable. The system does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care on page 10-85*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

See *Driver Assistance Systems on page 9-43*.

SERVICE AUTOMATIC COLLISION PREP

If this message displays, take the vehicle to your dealer to repair the system.

SERVICE DRIVER ASSIST SYSTEM

If this message displays, take the vehicle to your dealer to repair the system.

Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), Active Emergency Braking System, Assistance Systems for Parking or Backing, and/or Lane Departure Warning (LDW) system may not work. Do not use these systems until the vehicle has been repaired.

SERVICE FRONT CAMERA

If this message remains on after continued driving, the vehicle needs service. Do not use the Lane Departure Warning (LDW) and Forward Collision Alert (FCA) features. Take the vehicle to your dealer.

SERVICE PARK ASSIST

This message displays if there is a problem with the Parking Assist system. Do not use this system to help you park. See your dealer for service.

SERVICE REAR AUTO BRAKE AND PARK ASSIST

This message displays if there is a problem with the parking and backing features of the Driver Assistance System. Do not use this system to help park or back the vehicle. See your dealer for service.

SIDE BLIND ZONE ALERT OFF

This message indicates that the driver has turned the Side Blind Zone Alert (SBZA) system off.

SERVICE SIDE DETECTION SYSTEM

If this message remains on after continued driving, the vehicle needs service. Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) features will not work. Take the vehicle to your dealer.

SIDE DETECTION SYSTEM UNAVAILABLE

This message indicates that Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) are disabled either because the sensor is blocked and cannot detect vehicles in the blind zone, or the vehicle is passing through an open area, such as the desert, where there is insufficient data for operation. This message may also activate during heavy rain or due to road spray. The vehicle does not need service. For cleaning, see "Washing the Vehicle" under *Exterior Care on page 10-85.*

Ride Control System Messages

SERVICE ALL WHEEL DRIVE

This message displays when there is a problem with the All Wheel Drive (AWD) system. This message could be set by a number of issues. Some may require service of the AWD system some will not. The vehicle will run in normal two-wheel drive mode when this message has been set. This could be caused by:

- A vehicle or an AWD system electronics problem.
- Various vehicle electrical issues.
- Worn out or overheated clutch plates.
- Loss of fluids.

If this message appears, stop when convenient and turn off the ignition for 30 seconds. Restart the vehicle and check for the message on the DIC display. If the message has gone off and stays off, it is not necessary to take your vehicle to the dealer. If the message still displays or appears again when you begin driving, the system needs service. See your dealer.

SERVICE STABILITRAK

This message displays if there is a problem with the StabiliTrak system. See *Traction Control/Electronic Stability Control on page 9-30*.

SERVICE SUSPENSION SYSTEM

This message displays if there is a problem with the Selective Ride Control. See *Selective Ride Control on page 9-32*.

SERVICE TRACTION CONTROL

This message displays when there is a problem with the Traction Control System (TCS). See *Traction Control/Electronic Stability Control on page 9-30*.

SPORT MODE ON

This message displays when Sport Mode has been activated. See *Selective Ride Control on page 9-32* and *Manual Mode on page 9-24*.

TRACTION CONTROL OFF

This message displays when the Traction Control System (TCS) has been turned off. See *Traction Control/Electronic Stability Control on page 9-30*.

TRACTION CONTROL ON

This message displays when the Traction Control System (TCS) has been turned on. See *Traction Control/Electronic Stability Control on page 9-30*.

Airbag System Messages

SERVICE AIRBAG

This message displays if there is a problem with the airbag system. Take the vehicle to your dealer for service.

Security Messages

THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

Service Vehicle Messages

SERVICE POWER STEERING

This message is displayed if there is a problem with the power steering system and a chime may sound. Take the vehicle to your dealer for service.

SERVICE VEHICLE SOON

This message is displayed if there is a problem with the vehicle. Take the vehicle to your dealer for service.

Starting the Vehicle Messages

PRESS BRAKE TO START VEHICLE

This message is displayed when attempting to start the vehicle without first pressing the brake pedal.

SERVICE KEYLESS START SYSTEM

This message is displayed if there is a problem with the pushbutton start system. Take the vehicle to your dealer for service.

Tire Messages

SERVICE TIRE MONITOR SYSTEM

This message displays if there is a problem with the Tire Pressure Monitor System (TPMS). See *Tire Pressure Monitor Operation on page 10-51*.

TIRE LEARNING ACTIVE

This message displays when the system is learning new tires. See *Tire Pressure Monitor Operation on page 10-51*.

TIRE LOW ADD AIR TO TIRE

This message displays when the pressure in one or more of the tires is low.

This message also displays LEFT FRONT, RIGHT FRONT, LEFT REAR, or RIGHT REAR to indicate the location of the low tire.

The low tire pressure warning light will also come on. See *Tire Pressure Light on page 5-22*.

If a tire pressure message appears on the DIC, stop as soon as you can. Inflate the tires by adding air until the tire pressure is equal to the values shown on the Tire and Loading Information label. See *Tires on page 10-41*, *Vehicle Load Limits on page 9-9*, and *Tire Pressure on page 10-48*.

You can receive more than one tire pressure message at a time. The DIC also shows the tire pressure values. See *Driver Information Center (DIC) on page 5-25*.

Transmission Messages

SERVICE TRANSMISSION

This message displays if there is a problem with the transmission. See your dealer.

SHIFT DENIED

This message displays when using the Driver Shift Control (DSC) and attempting to shift to a gear not appropriate for the vehicle speed and engine revolutions per minute (rpm). See *Manual Mode on page 9-24*.

SHIFT TO PARK

This message displays when the transmission needs to be shifted to P (Park). This may appear when turning the ignition off if the vehicle is not in P (Park).

TRANSMISSION HOT — IDLE ENGINE

This message displays and a chime sounds if the transmission fluid in the vehicle gets hot. Driving with the transmission fluid temperature high can cause damage to the vehicle. Stop the vehicle and let it idle to allow the transmission to cool. This message clears when the fluid temperature reaches a safe level.

Vehicle Reminder Messages

ICE POSSIBLE DRIVE WITH CARE

This message is displayed when ice conditions are possible.

TURN WIPER CONTROL TO INTERMITTENT FIRST

This message is displayed when attempting to adjust the intermittent wiper speed without intermittent selected on the wiper control. See *Windshield Wiper/Washer on page 5-3*.

Vehicle Speed Messages

SELECTED SPEED LIMIT EXCEEDED

This message is displayed when the vehicle speed is greater than the set speed. See "Speed Warning" under *Driver Information Center (DIC) on page 5-25*.

Washer Fluid Messages

WASHER FLUID LOW ADD FLUID

This message may display when the washer fluid level is low. Fill the windshield washer reservoir as soon as possible. See *Engine Compartment Overview on page 10-5* for the location of the windshield washer reservoir. Also, see *Washer Fluid on page 10-18*.

Vehicle Personalization

Use the audio system controls to access the personalization menus for customizing vehicle features.

The following are all possible personalization features. Depending on the vehicle, some may not be available.

Infotainment System Audio System Controls

To access the personalization menu:

1. Press SETTINGS on the Home page on the infotainment system display.
2. Press the desired feature to display a list of available options.
3. Press to select the desired feature setting.
4. Press the ❮ Back screen button to return to the previous menu.

Personalization Menus

The following list of menu items may be available:

- Time and Date
- Language (Language)
- Valet Mode
- Radio
- Vehicle
- Bluetooth
- Voice
- Display
- Rear Camera
- Return to Factory Settings
- Software Information

Each menu is detailed in the following information.

Time and Date

Manually set the time and date. See *Clock on page 5-6*.

Language (Language)

Select Language, then select from the available language(s).

Select the language. The selected language will display on the system, and voice recognition will reflect the selected language.

Valet Mode (If Equipped)

This will lock the infotainment system and steering wheel controls. It may also limit top speed, power, and access to vehicle storage locations (if equipped).

To enable valet mode:

1. Enter a four-digit code on the keypad.
2. Press Enter to go to the confirmation screen.
3. Re-enter the four-digit code.

Press LOCK or UNLOCK to lock or unlock the system. Press Back to go back to the previous menu.

Radio

Press to display the Radio Menu and the following may be displayed:

- Manage Favorites
- Number of Favorites Shown
- Audible Touch Feedback
- Bose Audio Pilot
- Maximum Startup Volume

Manage Favorites

This allows favorites to be edited. See "Manage Favorites" in "Settings" under "Radio" in the infotainment manual.

Number of Favorites Shown

Press to set the number of favorites to display.

Select the desired number or select Auto and the infotainment system will automatically adjust the number of favorites shown.

Audible Touch Feedback

This allows Audible Touch Feedback to be turned on or off.

Select Off or On.

Bose Audio Pilot

This feature adjusts the volume based on the noise in the vehicle. See "Bose AudioPilot Noise Compensation Technology" under "Infotainment System Settings" in the infotainment manual.

Maximum Startup Volume

This feature sets the maximum startup volume. If the vehicle is started and the volume is greater than this level, the volume is adjusted to this level. To set the maximum startup volume, press + or − to increase or decrease.

Vehicle

Select and the following may be displayed:

- Climate and Air Quality
- Collision/Detection Systems
- Comfort and Convenience
- Lighting
- Power Door Locks
- Remote Lock, Unlock, Start

Climate and Air Quality

Select and the following may be displayed:

- Auto Fan Max Speed
- Air Quality Sensor
- Auto Defog
- Auto Rear Defog

Auto Fan Max Speed

This feature will set the maximum auto fan speed.

Select Low, Medium, or High.

Air Quality Sensor

This allows for selection of air quality sensor operation at high or low sensitivity.

Select Off, Low Sensitivity, or High Sensitivity.

Auto Defog

When set to On, the front defog will automatically react to temperature and humidity conditions that may cause fogging.

Select Off or On.

Auto Rear Defog

If equipped, this allows auto rear defog to be turned on or off.

Select Off or On.

Collision/Detection Systems

Select the Collision/Detection Systems menu and the following may display:

- Alert Type
- Auto Collision Preparation
- Go Notifier
- Side Blind Zone Alert
- Rear Cross Traffic Alert

Alert Type

This feature will set crash alerts to beeps or seat vibrations. This setting affects all crash alerts including:

- Forward Collision
- Lane Departure Warning
- Adaptive Cruise Control
- Parking Assist
- Backing Warning

Select Beeps or Safety Alert Seat.

Auto Collision Preparation

This feature will turn on or off the Forward Collision Alert feature as well as the Automatic Braking capability of the Auto Collision Preparation feature. With the Alert and Brake setting, both Forward Collision Alert as well as the Automatic Braking capability of the Auto Collision Preparation feature are available. The Alert setting disables most automatic braking functions of the Auto Collision Preparation feature. Some last-second automatic braking capability is still provided with the Alert setting, but it is much less likely to be triggered by most driving conditions. Off disables all Forward Collision Alert and Automatic Braking capabilities of the Auto Collision Preparation feature. See *Active Emergency Braking System on page 9-51*.

Select Off, Alert and Brake, or Alert.

Go Notifier

This feature will give a reminder that Adaptive Cruise Control provides when it has brought the vehicle to a complete stop behind another stopping vehicle, and then that vehicle drives on. See *Adaptive Cruise Control on page 9-35*.

Select Off or On.

Side Blind Zone Alert

This allows the feature to be turned on or off. See *Side Blind Zone Alert (SBZA) on page 9-52*.

Select Off or On.

Rear Cross Traffic Alert

Select Off or On. See *Assistance Systems for Parking or Backing on page 9-44*.

Comfort and Convenience

Select and the following may be displayed:

- Auto Memory Recall
- Easy Exit Options
- Chime Volume
- Reverse Tilt Mirror

Auto Memory Recall

This feature moves the seat rearward automatically allowing the driver more room to exit the vehicle. See *Memory Seats on page 3-6*.

Select Off, On - Driver Door Open, or On - At ignition On.

Easy Exit Options

This feature moves the seat rearward automatically allowing the driver more room to exit the vehicle. See *Memory Seats on page 3-6*.

Select Off or On.

Chime Volume

This allows the selection of the chime volume level.

Press + or − to adjust the volume.

Reverse Tilt Mirror

This allows the feature to be turned on or off.

Select Off, On - Driver and Passenger, On - Driver, or On - Passenger.

Lighting

Select and the following may be displayed:

- Vehicle Locator Lights
- Exit Lighting
- Auto High Beam

Vehicle Locator Lights

This feature will flash the exterior lamps when on the Remote Keyless Entry (RKE) transmitter is pressed to locate the vehicle.

Select Off or On.

Exit Lighting

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Select Off, 30 Seconds, 60 Seconds, or 120 Seconds.

Auto High Beam

This allows the feature to be turned on or off. See "IntelliBeam System" in *Exterior Lamp Controls on page 6-1*.

Select On or Off. On some vehicles select Off, Normal Sensitivity, or Low Sensitivity.

Power Door Locks

Select and the following may be displayed:

- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock

Unlocked Door Anti Lock Out

When on, this feature will keep the driver door from locking when the door is open. If Off is selected, the Delayed Door Lock menu will be available.

Select Off or On.

Auto Door Unlock

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park).

Select Off, All Doors, or Driver Door.

Delayed Door Lock

When on, this feature will delay the locking of the doors. To override the delay, press the power door lock switch on the door.

Select Off or On.

Remote Lock, Unlock, Start

Select and the following may be displayed:

- Remote Unlock Light Feedback
- Remote Lock Feedback
- Remote Door Unlock
- Remote Start Auto Cool Seats
- Remote Start Auto Heat Seats
- Passive Door Unlock
- Passive Door Lock
- Remote Left in Vehicle Alert

Remote Unlock Light Feedback

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Select Off or On.

Remote Lock Feedback

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Select Off, Lights and Horn, Lights Only, or Horn Only.

Remote Door Unlock

This allows selection of which doors will unlock when pressing on the RKE transmitter.

Select All Doors or Driver Door.

Remote Start Auto Cool Seats

If equipped and turned on, this feature will turn the ventilated seats on when using remote start on warm days.

Select Off or On.

Remote Start Auto Heat Seats

If equipped and turned on, this feature will turn the heated seats on when using remote start on cold days.

Select Off or On.

Passive Door Unlock

This allows the selection of what doors will unlock when using the button on the driver door to unlock the vehicle.

Select All Doors or Driver Door.

Passive Door Lock

This feature can be turned on or off, or can be used to select feedback when using the button on the driver

door to lock the vehicle. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Select Off, On with Horn Chirp, or On.

Remote Left in Vehicle Alert

This feature sounds an alert when the RKE transmitter is left in the vehicle.

Select Off or On.

Bluetooth

Select and the following may be displayed:

- Pair New Device
- Device Management
- Ringtones
- Voice Mail Numbers

Pair New Device

Select to pair a new device. See "Pairing" in "Infotainment Controls" under "Bluetooth" in the infotainment manual.

Device Management

Select to connect to a different phone source, disconnect a phone, or delete a phone.

Ringtones

Press to change the ring tone for the specific phone. The phone does not need to be connected to change the ring.

Voice Mail Numbers

This feature displays the voice mail number for all connected phones. To change the voice mail number, select EDIT or press the EDIT button. Type a new number, then select SAVE or press the SAVE button.

Voice

Select and the following may be displayed:

- Confidence Threshold
- Prompt Length
- Audio Feedback Speed

Confidence Threshold

This feature allows the adjustment of the sensitivity of the speech recognition system.

Select Confirm More or Confirm Less.

Prompt Length

This feature adjusts the voice prompt length.

Select Short or Long.

Audio Feedback Speed

This feature adjusts the audio feedback speed.

Select Slow, Medium, or Fast.

Display

Select and the following may be displayed:

- Mode
- Calibrate Touchscreen
- Turn Display Off

Mode

Select to change the display screen for day or night driving.

Select Auto, Day, or Night.

Calibrate Touchscreen

Select to calibrate the touchscreen, then follow the prompts.

Turn Display Off

Select to turn the display off. Press anywhere on the display area or any faceplate button to turn the display on.

Rear Camera

Select and the following may be displayed:

- Guidance Lines
- Rear Park Assist Symbols

Guidance Lines

Select to turn Off or On. See *Assistance Systems for Parking or Backing on page 9-44*.

Rear Park Assist Symbols

Select to turn Off or On. See *Assistance Systems for Parking or Backing on page 9-44*.

Return to Factory Settings

Select and the following may be displayed:

- Restore Vehicle Settings
- Clear All Private Data
- Restore Radio Settings

Restore Vehicle Settings

This allows selection of restoring vehicle settings.

Select Cancel or Restore.

Clear All Private Data

This allows selection to clear all private information from the vehicle.

Select Cancel or Delete.

Restore Radio Settings

This allows selection to restore radio settings.

Select Cancel or Restore.

Software Information

Select to view the infotainment system current software information.

Universal Remote System

See *Radio Frequency Statement on page 13-12.*

Universal Remote System Programming

If equipped, these buttons are in the overhead console.

This system can replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices. These instructions refer to a garage door opener, but can be used for other devices.

Do not use the Universal Remote system with any garage door opener that does not have the stop and reverse feature. This includes any garage door opener model manufactured before April 1, 1982.

Read these instructions completely before programming the Universal Remote system. It may help to have another person assist with the programming process.

Keep the original hand-held transmitter for use in other vehicles as well as for future programming. Erase the programming when vehicle ownership is terminated. See "Erasing Universal Remote System Buttons" later in this section.

To program a garage door opener, park outside directly in line with and facing the garage door opener receiver. Clear all people and objects near the garage door.

Make sure the hand-held transmitter has a new battery for quick and accurate transmission of the radio-frequency signal.

Programming the Universal Remote System

For questions or help programming the Universal Remote system, call 1-800-355-3515 or see www.homelink.com.

Programming involves time-sensitive actions, and may time out causing the procedure to be repeated.

To program up to three devices:

1. Hold the end of the hand-held transmitter about 3 to 8 cm (1 to 3 in) away from the Universal Remote system buttons with the indicator light in view. The hand-held transmitter was supplied by the manufacturer of the garage door opener receiver.

2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Remote system buttons to be used to operate the garage door. Do not release either button until the indicator light changes from a slow to a rapid flash. Then release both buttons.

   Some garage door openers may require substitution of Step 2 with the procedure under "Radio Signals for Canada and Some Gate Operators" later in this section.

3. Press and hold the newly programmed Universal Remote system button for five seconds while watching the indicator light and garage door activation.
   - If the indicator light stays on continuously or the garage door moves when the button is pressed, then programming is complete. There is no need to complete Steps 4–6.
   - If the indicator light does not come on or the garage door does not move, a second button press may be required. For a second time, press and hold the newly programmed button for five seconds. If the light stays on or the garage door moves, programming is complete.
   - If the indicator light blinks rapidly for two seconds, then changes to a solid light and the garage door does not move, continue with programming Steps 4–6.

Learn or Smart Button

4. After completing Steps 1–3, locate the Learn or Smart button inside garage on the garage door opener receiver. The name and color of the button may vary by manufacturer.
5. Press and release the Learn or Smart button. Step 6 must be completed within 30 seconds of pressing this button.
6. Inside the vehicle, press and hold the newly programmed Universal Remote system button for two seconds and then release it. If the garage door does not move or the lamp on the garage door opener receiver

does not flash, press and hold the same button a second time for two seconds, then release it. Again, if the door does not move or the garage door lamp does not flash, press and hold the same button a third time for two seconds, then release it.

The Universal Remote system should now activate the garage door.

Repeat the process for programming the two remaining buttons.

Radio Signals for Canada and Some Gate Operators

For questions or programming help call 1-800-355-3515 or see www.homelink.com.

Canadian radio-frequency laws and some U.S. gate operators require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for the Universal Remote system to pick up the signal during programming.

If the programming did not work, replace Step 2 under "Programming the Universal Remote System" with the following:

Press and hold the Universal Remote system button while pressing and releasing the hand-held transmitter button every two seconds until the signal has been successfully accepted by the Universal Remote system. The Universal Remote system indicator light will flash slowly at first and then rapidly. Proceed with Step 3 under "Programming the Universal Remote System" to complete.

Universal Remote System Operation

Using the Universal Remote System

Press and hold the appropriate Universal Remote system button for at least one-half second. The indicator light will come on while the signal is being transmitted.

Erasing Universal Remote System Buttons

Erase all programmed buttons when vehicle ownership is terminated.

To erase:

1. Press and hold the two outside buttons until the indicator light begins to flash. This should take about 10 seconds.
2. Release both buttons.

Reprogramming a Single Universal Remote System Button

To reprogram any of the system buttons:

1. Press and hold any one of the buttons. Do not release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, proceed with Step 1 under "Programming the Universal Remote System."

✍ NOTES

Lighting

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Exterior Lighting

Exterior Lamp Controls

This control is on the instrument panel to the left of the steering column.

Turn the control to the following positions:

⏻ **(Off):** Briefly turn to this position to turn the automatic light control off or on again.

AUTO (Automatic): Automatically turns the exterior lamps on and off, depending on outside lighting.

(Parking Lamps): Turns on the parking lamps including all lamps, except the headlamps.

(Headlamps): Turns on the headlamps together with the parking lamps and instrument panel lights. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

(Front Fog Lamps, If Equipped): Press to turn the lamps on or off.

See *Front Fog Lamps on page 6-6*.

IntelliBeam® System

If equipped, this system turns the vehicle's high-beam headlamps on and off according to surrounding traffic conditions.

The system turns the high-beam headlamps on when it is dark enough and there is no other traffic present.

This light comes on in the instrument cluster when the IntelliBeam system is enabled.

Turning On and Enabling IntelliBeam

To enable the IntelliBeam system, with the turn signal lever in the neutral position, turn the exterior lamp control to AUTO. The blue high-beam on light appears on the instrument cluster when the high beams are on.

Driving with IntelliBeam

The system only activates the high beams when driving over 40 km/h (25 mph).

There is a sensor near the top center of the windshield that automatically controls the system. Keep this area of the windshield clear of debris to allow for best system performance.

The high-beam headlamps remain on, under the automatic control, until one of the following situations occurs:

- The system detects an approaching vehicle's headlamps.
- The system detects a preceding vehicle's taillamps.
- The outside light is bright enough that high-beam headlamps are not required.
- The vehicle's speed drops below 20 km/h (12 mph).
- The IntelliBeam system can be disabled by the High/Low-Beam Changer or the Flash-to-Pass feature. If this happens, the High/Low-Beam Changer must be activated two times within five seconds to reactivate the IntelliBeam system. The instrument cluster light will come

on to indicate the IntelliBeam is reactivated. See *Headlamp High/Low-Beam Changer on page 6-3* or *Flash-to-Pass on page 6-3*.

The high beams may not turn off automatically if the system cannot detect another vehicle's lamps because of any of the following:

- The other vehicle's lamps are missing, damaged, obstructed from view, or otherwise undetected.
- The other vehicle's lamps are covered with dirt, snow, and/or road spray.
- The other vehicle's lamps cannot be detected due to dense exhaust, smoke, fog, snow, road spray, mist, or other airborne obstructions.
- The vehicle's windshield is dirty, cracked, or obstructed by something that blocks the view of the light sensor.
- The vehicle is loaded such that the front end points upward, causing the light sensor to aim high and not detect headlamps and taillamps.
- Driving on winding or hilly roads.

The high-beam headlamps may need to be disabled if any of the above conditions exist.

This feature can be turned on or off in vehicle personalization. See *Vehicle Personalization on page 5-39*.

Headlamp High/ Low-Beam Changer

Push the turn signal lever away from you and release to turn the high beams on. To return to low beams, push the lever again or pull it toward you and release.

This indicator light turns on in the instrument cluster when the high-beam headlamps are on.

Flash-to-Pass

The flash-to-pass feature works with the low beams or Daytime Running Lamps (DRL) on or off.

To flash the high beams, pull the turn signal lever all the way toward you, then release it.

Daytime Running Lamps (DRL)

DRL can make it easier for others to see the front of your vehicle during the day. Fully functional DRL are required on all vehicles first sold in Canada.

A light sensor on top of the instrument panel makes the DRL work, so be sure it is not covered.

The DRL system makes the low-beam headlamps come on at a reduced brightness or for vehicles with High Intensity Discharge (HID) headlamps, the DRL lights will come on when the following conditions are met:

- The ignition is in the ON/ RUN mode.
- The exterior lamp control is in AUTO.
- The engine is running.
- The vehicle is not in P (Park).

When the DRL are on, only the low-beam headlamps, at a reduced level of brightness, will be on. The high-beam headlamps, taillamps, sidemarker, instrument panel lamps, and other lamps will not be on.

The headlamps automatically change from DRL to the regular headlamps depending on the darkness of the surroundings. The other lamps that come on with the headlamps will also come on.

When it is bright enough outside, the headlamps go off and the DRL come on.

To turn the DRL lamps off or on again, turn the exterior lamp control to the off position and then release. For vehicles first sold in Canada, the DRL cannot be turned off.

This vehicle may have a DRL disabling function. When the DRL are on and a turn signal is activated, the DRL on that side will be off until the turn signal goes off.

Adaptive Forward Lighting (AFL)

For vehicles with uplevel headlamps, the Adaptive Forward Lighting System (AFL) adjusts the headlamps to provide greater road illumination in various driving conditions.

To enable AFL, set the exterior lamp control to the AUTO position. Moving the control out of the AUTO position will deactivate the system. AFL will operate when the vehicle speed is greater than 3 km/h (2 mph). AFL will not operate when the transmission is in R (Reverse). AFL is not immediately operable after starting the vehicle. Driving a short distance is required to calibrate the AFL. See *Exterior Lamp Controls on page 6-1*.

Curve Lighting

The light beam pivots based on the steering wheel position and vehicle speed of at least 10 km/h (6 mph). The headlamps shine at an angle of up to 15 degrees to the right or left of the direction of travel.

Twilight Sentinel

This feature automatically turns the lamps on and off. A light sensor on top of the instrument panel makes the Twilight Sentinel® work, so be sure it is not covered.

With Twilight Sentinel the following will happen:

- When it is dark enough outside, and the exterior lamp control is in the AUTO position, the Daytime Running Lamps (DRL) go off, and the headlamps and parking lamps come on. The other lamps that come on with the headlamps also come on.
- When it is bright enough outside, the headlamps go off, and the DRL come on, as long as the exterior lamp control is in the AUTO position. See *Exterior Lamp Controls on page 6-1*.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlamp system changes to the DRL. During that delay, the instrument cluster may not be as bright as usual. Make sure the instrument panel brightness control is in full bright position. See *Instrument Panel Illumination Control on page 6-7*.

The vehicle can be idled with the lamps off, even when it is dark outside. After starting the vehicle, turn the exterior lamps control to ⏻, then release it. The lamps will remain off until the control is turned to ⏻ again.

Twilight Sentinel also provides exterior illumination when exiting the vehicle until one of the following occurs:

- The exterior lamp control is moved to ⏻ from the AUTO position or to ≡00≡.
- The delay time selected has elapsed.

See *Vehicle Personalization on page 5-39* to select the delay time. You can also select no delay time.

If the ignition is turned off with the exterior lamp control in the parking lamp or headlamp position, the Twilight Sentinel delay will not occur. The lamps will turn off as soon as the control is turned off.

The regular headlamp system should be turned on when needed.

Lights On with Wipers

If the windshield wipers are activated in daylight with the engine on, and the exterior lamp control is in AUTO, the headlamps, parking

lamps, and other exterior lamps come on. The transition time for the lamps coming on varies based on wiper speed. When the wipers are not operating, these lamps turn off. Move the exterior lamp control to ⏻ or AUTO to disable this feature.

Hazard Warning Flashers

⚠ **(Hazard Warning Flashers):** Press this button on the instrument panel to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble. Press again to turn the flashers off.

Turn and Lane-Change Signals

Move the lever all the way up or down to signal a turn.

An arrow on the instrument cluster will flash in the direction of the turn or lane change.

Raise or lower the lever until the arrow starts to flash to signal a lane change. The turn signal flashes three times.

The lever returns to its starting position when it is released.

If after signaling a turn or lane change the arrow flashes rapidly or does not come on, a signal bulb may be burned out.

Replace any burned out bulbs. If a bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers on page 10-33.*

Front Fog Lamps

The front fog lamp button is on the exterior lamp control on the outboard side of the steering wheel.

The ignition must be on to turn on the fog lamps.

(Front Fog Lamps): Press to turn the fog lamps on or off. An indicator light on the instrument cluster comes on when the fog lamps are on.

The fog lamps come on together with the parking lamps.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Interior Lighting

Instrument Panel Illumination Control

The brightness of the instrument panel lights and steering wheel controls can be adjusted.

(Instrument Panel Brightness): Move and hold the thumbwheel up or down to brighten or dim the lights.

The brightness of the displays automatically adjusts based on outdoor lighting. The instrument panel illumination control will set the lowest level to which the displays will automatically be adjusted.

Cargo Lamp

The cargo lamp is located in the rear compartment and is controlled by the dome lamp. See *Dome Lamps on page 6-8*.

Courtesy Lamps

The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.

Dome Lamps

To change the dome lamp settings, press the following:

(Dome Lamp Override): Turns the lamp off, even when a door is open.

(Door): The lamp comes on when a door is opened.

(On): Turns the dome lamp on.

Reading Lamps

There are reading lamps in the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

- Press or next to each overhead console reading lamp.
- Press the lamp lens on the rear passenger reading lamps.

Lighting Features

Entry Lighting

The headlamps, taillamps, license plate lamps, dome lamps, and most of the interior lights turn on briefly at night, or in areas with limited lighting, when is pressed on the Remote Keyless Entry (RKE) transmitter. After about 30 seconds the exterior lamps turn off, and then the dome and remaining interior lights dim to off. The entry lighting can be manually turned off by changing the ignition out of the off position, or by pressing on the RKE transmitter.

This feature can be changed. See *Vehicle Personalization on page 5-39*.

Exit Lighting

The headlamps, taillamps, parking lamps, and license plate lamps come on at night, or in areas with limited lighting, when a door is

opened after the ignition is turned off. The dome lamps also come on when the driver door is opened after the ignition is changed to the off position.

The exterior lamps and dome lamp remain on after the door is closed for a set amount of time, then automatically turn off.

The exterior lamps turn off immediately by turning the exterior lamps control to off.

This feature can be changed. See *Vehicle Personalization on page 5-39*.

Battery Load Management

The vehicle has Electric Power Management (EPM) that estimates the battery's temperature and state of charge. It then adjusts the voltage for best performance and extended life of the battery.

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltmeter gauge or a voltage display on the Driver Information Center (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all of the power needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, fog lamps, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action, this action may be noticeable to the driver. If so, a DIC message might be displayed and it is recommended that the driver reduce the electrical loads as much as possible. See *Battery Voltage and Charging Messages on page 5-28*.

Battery Power Protection

The battery saver feature is designed to protect the vehicle's battery.

If some interior lamps are left on and the ignition is turned off, the battery rundown protection system automatically turns the lamp off after some time.

Exterior Lighting Battery Saver

The exterior lamps turn off about 10 minutes after the ignition is turned off, if the parking lamps or headlamps have been manually left on. This protects against draining the battery. To restart the 10-minute timer, turn the exterior lamp control to the off position and then back to the parking lamp or headlamp position.

To keep the lamps on for more than 10 minutes, the ignition must be in the ACC/ACCESSORY or ON/RUN position.

Infotainment System

Introduction
Infotainment 7-1

Introduction

Infotainment

See the infotainment manual for information on the radio, audio players, phone, navigation system, and voice or speech recognition. It also includes information on settings and downloadable applications (if equipped).

✍ NOTES

Climate Controls

Climate Control Systems
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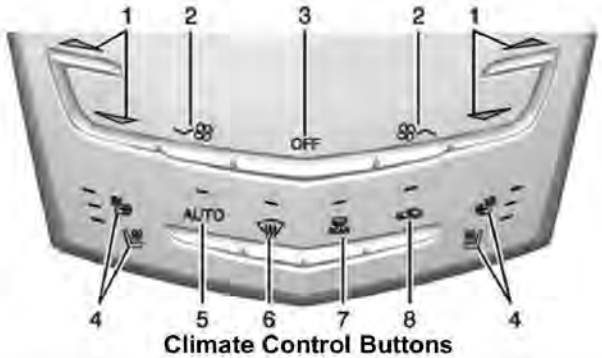
Maintenance
Passenger Compartment Air Filter 8-8

Climate Control Systems

Dual Automatic Climate Control System

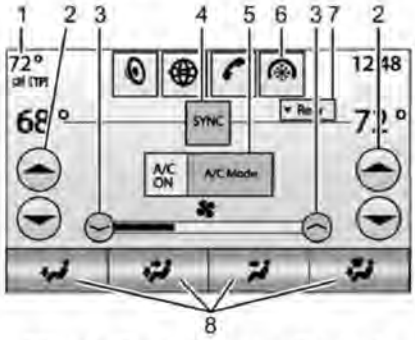
The climate control buttons and the touch screen are used to adjust the heating, cooling, and ventilation.



Climate Control Buttons

1. Driver and Passenger Temperature Controls
2. Fan Control
3. OFF (Fan)
4. Driver and Passenger Heated and Ventilated Seats (If Equipped)
5. AUTO (Automatic Operation)
6. Defrost

7. Rear Window Defogger
8. Recirculation



Climate Touch Screen Controls

1. Outside Temperature Display
2. Driver and Passenger Temperature Controls
3. Fan Control
4. SYNC (Synchronized Temperature)
5. A/C Mode (Air Conditioning)
6. Climate Control Selection (Application Tray Button)
7. Rear (Rear Climate Control Touch Screen)
8. Air Delivery Mode Control

Climate Control Touch Screen

The fan, air delivery mode, air conditioning, driver and passenger temperatures and SYNC settings can be controlled by pressing CLIMATE on the infotainment home screen or the climate button in the touch screen application tray. A selection can then be made on the front climate control page displayed. See the infotainment manual.

Climate Control Status Screen

The climate control status screen appears briefly when the climate control buttons on the faceplate are adjusted. The air delivery mode can be adjusted on the climate control status screen.

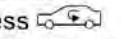
Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation in order to heat or cool the vehicle to the desired temperature.

When the indicator light is on or AUTO is displayed on the touch screen, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and the display will show the selected settings. Auto operation can be turned off individually for climate settings.

For automatic operation:

1. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Then adjust the temperature as needed for best comfort.

To improve fuel efficiency and to cool the vehicle faster, recirculation may be automatically selected in warm weather. The recirculation light will not come on. Press  to select recirculation; press it again to select outside air.

OFF (Fan): Press to turn the fan on or off. The temperature control and air delivery mode can still be adjusted.

△ / ▽ (Driver and Passenger Temperature Controls): The temperature can be adjusted separately for the driver and the passenger. Press to increase or decrease the temperature. Press and hold to rapidly increase or decrease the temperature.

The driver and passenger temperatures can also be adjusted by pressing the controls on the touch screen.

SYNC (Synchronized Temperature): Press SYNC on the touch screen to link all climate zone settings to the driver settings. Adjust the driver side temperature control to change the linked temperature. When the passenger settings are adjusted, the SYNC button is displayed when the temperatures are unlinked.

Manual Operation

∨ ❀ or ❀ ∧ (Fan Control): Press the fan control buttons or the touch screen fan control, to increase or decrease the fan speed. Press and hold the buttons or the touch screen control to adjust speed more quickly. The fan speed setting displays. Pressing either button cancels automatic fan control and the fan can be controlled manually. Press AUTO to return to automatic operation. To turn off the fan and climate control system, press and hold the fan down button or touch screen fan control until it is off.

Air Delivery Mode Control: When the climate information is displayed, press the desired air delivery mode on the touch screen to change the direction of the airflow. The selected air delivery mode button is lit. Pressing any of the air delivery buttons cancels automatic air delivery control and the direction of the airflow can be controlled manually. Press AUTO to return to automatic operation.

To change the current mode, select one of the following:

(Vent): Air is directed to the instrument panel outlets.

(Bi-Level): Air is divided between the instrument panel outlets and the floor outlets.

(Floor): Air is directed to the floor outlets.

(Defog): Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.

(Defrost): Clears the windshield of fog or frost more quickly. Air is directed to the windshield. Press the button to turn on or off. Changing the air delivery mode also turns the defrost off.

AC Mode (Air Conditioning): Press the AC Mode touch screen control to turn the automatic air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed.

Automatic Air Recirculation: When the AUTO indicator light is on, the air inside the vehicle may automatically recirculate as needed to help quickly cool the inside of the vehicle.

If equipped, an air quality sensor may also activate recirculation when it detects increasing levels of poor quality air outside the vehicle. The air quality sensor will not maintain recirculation for an extended period and may not activate during cold weather. To adjust the sensitivity of the air quality sensor, see "Climate and Air Quality" under *Vehicle Personalization on page 5-39.*

The air quality sensor system does not protect against carbon monoxide (CO), which cannot be seen or smelled. See *Engine Exhaust on page 9-21.*

(Recirculation): Press to alternate between recirculating air inside the vehicle or pulling in outside air. The indicator light on the button is lit when recirculation mode is active. This helps to quickly cool the air inside the vehicle or reduce the outside air and odors that may enter.

Pressing this button cancels automatic recirculation. Press AUTO to return to automatic operation; recirculation runs automatically as needed.

Manual recirculation mode is not available when in Defrost or Defog modes.

Auto Defog: The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. If the climate control system does not detect possible window fogging, it returns to normal

operation. To turn Auto Defog off or on, see "Climate and Air Quality" under *Vehicle Personalization on page 5-39*.

Rear Window Defogger

(Rear Window Defogger): Press to turn the rear window defogger on or off. An indicator light on the button comes on to show that the rear window defogger is on.

The rear window defogger can be set to automatic operation. See "Climate and Air Quality" under *Vehicle Personalization on page 5-39*. When Auto Rear Defog is selected, the rear window defogger turns on automatically when the interior temperature is cold and the outside temperature is about 4°C (40°F) and below.

The heated outside mirrors turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirrors.

⚠ Caution

Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect the radio's ability to pick up stations clearly. The repairs would not be covered by the vehicle warranty.

Driver and Passenger Heated and Ventilated Seats (If Equipped): Press or to heat the driver or passenger seat cushion and seatback.

Press or to ventilate the driver or passenger seat. See *Heated and Ventilated Seats on page 1-8*.

Remote Start Climate Control Operation: If equipped, the climate control system may run when the vehicle is started remotely. The system uses the driver's previous settings to heat or cool the inside of the vehicle. The rear defog may come on during remote start based on cold ambient conditions. The rear defog indicator light does not come on during a remote start. If the vehicle has heated or ventilated seats, they may come on during a remote start. See *Remote Vehicle Start on page 2-9* and *Heated and Ventilated Seats on page 1-8*.

The rear window defogger turns on if it is cold outside.

Sensor

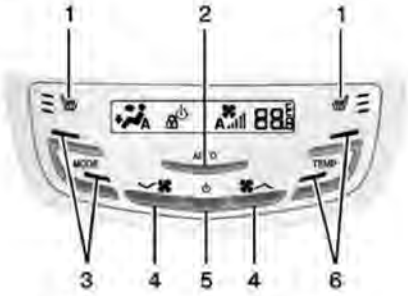
The solar sensor, located on top of the instrument panel near the windshield, monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

Rear Climate Control System

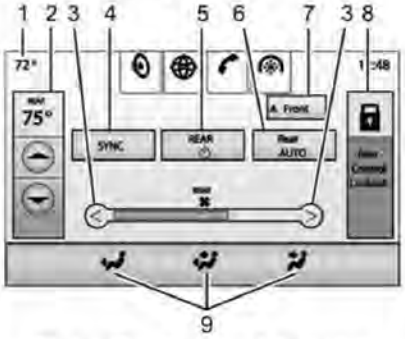
If equipped with a rear climate control system, the settings can be adjusted with the rear climate control buttons and the touch screen.



Rear Climate Control Buttons

1. Heated Rear Seats (If Equipped)
2. AUTO (Automatic Operation)
3. Air Delivery Mode Control
4. Fan Control

5. ⏻ (On/Off)
6. TEMP (Temperature Control)



Rear Climate Touch Screen Controls

1. Outside Temperature Display
2. Rear Climate Temperature Control
3. Fan Control
4. SYNC (Synchronized Temperatures)
5. REAR ⏻ (On/Off)
6. Rear AUTO (Automatic Operation)
7. Front (Front Climate Control Touch Screen)
8. Rear Control Lockout
9. Air Delivery Mode Control

Rear: Press this button on the front climate control touch screen to open the rear climate control screen. The rear climate control settings can now be adjusted from the front passenger area.

⏻ **(On/Off):** Press ⏻ or REAR ⏻ to turn the rear climate control on or off. The rear climate control system can also be turned off by pressing the fan down button until the system turns off. If the rear climate control is turned off using REAR ⏻ on the touch screen, the ⏻ button on the rear climate control faceplate must be pressed twice to turn the system back on.

SYNC: Press the SYNC button on the touch screen to match the rear climate control temperature to the front climate control driver temperature. The SYNC button will be lit. Press the TEMP, MODE, or AUTO button twice to unlink the set driver and rear temperatures. The SYNC button turns off.

Rear Control Lockout: Press to lock or unlock control of the rear climate control system from the rear seat passengers. When locked the rear climate control can only be adjusted from the front seat.

Automatic Operation

Rear AUTO: Press to turn on or off. The air delivery and fan speed are controlled automatically. The AUTO indicator appears on the display. If any of the climate control settings are manually adjusted, this cancels full automatic operation.

Manual Operation

< > (Fan Control): Press briefly or press and hold the rear climate control buttons or touch screen to increase or decrease the airflow. Pressing > when the system is off will turn the system on. The air delivery mode remains in its previous setting.

+/− (Temperature Control): Press briefly or press and hold the rear temperature control buttons or touch screen to adjust the rear passenger temperature. Press + for warmer air and press − for cooler air.

/ / (Air Delivery Mode Control): Press the desired mode button on the touch screen or the MODE button on the rear faceplate to change the direction of the airflow in the rear seating area.

or (Heated Rear Seats, If Equipped): Press or to heat the left or right outboard seat cushion and seatback. See *Heated Rear Seats on page 3-11*.

Air Vents

Move the sliding knob on the air outlets up and down or left and right to direct the airflow. Use the thumbwheels near the air outlets to open or close off the airflow.

Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windshield that could block the flow of air into the vehicle.
- Keep the path under the front seats clear of objects to help circulate the air inside the vehicle more effectively.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.
- Do not insert any objects in the outlets, as failure of the mechanism may occur.

Maintenance

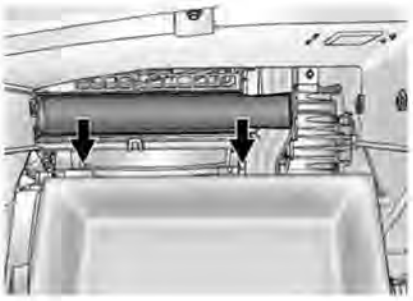
Passenger Compartment Air Filter

The filter reduces the dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle.

The filter should be replaced as part of routine scheduled maintenance, see *Maintenance Schedule on page 11-3*. To find out what type of filter to use, see *Maintenance Replacement Parts on page 11-13*.

1. Open the glove box completely and remove the four screws along the upper portion of the glove box.
2. When released, lower the upper portion of the glove box.
3. Locate the service door for the passenger compartment air filter.

4. Release the latch holding the service door. Lower the service door.



5. Remove the old air filter.
6. Install the new air filter.
7. Close the service door and latches.
8. Reinstall the upper portion of the glove box.

See your dealer if additional assistance is needed.

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Driving Information

Distracted Driving

Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgment and do not let other activities divert your attention away from the road. Many local governments have enacted laws regarding driver distraction. Become familiar with the local laws in your area.

To avoid distracted driving, always keep your eyes on the road, hands on the wheel, and mind on the drive.

- Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.
- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.
- Become familiar with vehicle features before driving, such as programming favorite radio stations and adjusting climate control and seat settings. Program all trip information into any navigation device prior to driving.
- Wait until the vehicle is parked to retrieve items that have fallen to the floor.
- Stop or park the vehicle to tend to children.
- Keep pets in an appropriate carrier or restraint.
- Avoid stressful conversations while driving, whether with a passenger or on a cell phone.

⚠ Warning

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Refer to the infotainment manual for more information on using that system, including pairing and using a cell phone

Defensive Driving

Defensive driving means "always expect the unexpected." The first step in driving defensively is to wear the safety belt. See *Safety Belts on page 3-12.*

- Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready.
- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

Drunk Driving

Death and injury associated with drinking and driving is a global tragedy.

⚠ Warning

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking.

Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power brake assist but it will be used when the brake is applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

Steering

Hydraulic Power Steering

This vehicle has hydraulic power steering. It may require maintenance. See *Power Steering Fluid on page 10-18*.

If power steering assist is lost because the engine stops or because of a system malfunction, the vehicle can be steered but may require increased effort. See your dealer if there is a problem.

⚠ Caution

If the steering wheel is turned until it reaches the end of its travel, and is held in that position for more than 15 seconds, damage may occur to the power steering system and there may be loss of power steering assist.

Curve Tips

- Take curves at a reasonable speed.
- Reduce speed before entering a curve.
- Maintain a reasonable steady speed through the curve.
- Wait until the vehicle is out of the curve before accelerating gently into the straightaway.

Steering in Emergencies

- There are some situations when steering around a problem may be more effective than braking.
- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- Antilock Brake System (ABS) allows steering while braking.

Off-Road Recovery

The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

1. Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.
2. Turn the steering wheel about one-eighth of a turn, until the right front tire contacts the pavement edge.
3. Turn the steering wheel to go straight down the roadway.

Loss of Control

Skidding

There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid — wheels are not rolling.
- Steering or Cornering Skid — too much speed or steering in a curve causes tires to slip and lose cornering force.
- Acceleration Skid — too much throttle causes the driving wheels to spin.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

If the vehicle starts to slide, follow these suggestions:

- Ease your foot off the accelerator pedal and steer the way you want the vehicle to go. The vehicle may straighten out. Be ready for a second skid if it occurs.
- Slow down and adjust your driving according to weather conditions. Stopping distance can be longer and vehicle control can be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognize warning clues — such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.
- Try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide.

Remember: Antilock brakes help avoid only the braking skid.

Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

⚠ Warning

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

Hydroplaning

Hydroplaning is dangerous. Water can build up under the vehicle's tires so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When the vehicle is hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. The best advice is to slow down when the road is wet.

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires on page 10-41*.
- Turn off cruise control.

Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips for driving in these conditions include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

⚠ Warning

Using the brakes to slow the vehicle on a long downhill slope can cause brake overheating, can reduce brake performance, and could result in a loss of braking. Shift the transmission to a lower gear to let the engine assist the brakes on a steep downhill slope.

⚠ Warning

Coasting downhill in N (Neutral) or with the ignition off is dangerous. This can cause overheating of the brakes and loss of steering. Always have the engine running and the vehicle in gear.

- Stay in your own lane. Do not swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- Be alert on top of hills; something could be in your lane (stalled car, accident).
- Pay attention to special road signs (falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Drive carefully when there is snow or ice between the tires and the road, creating less traction or grip. Wet ice can occur at about 0°C (32°F) when freezing rain begins to fall, resulting in even less traction. Avoid driving on wet ice or in freezing rain until roads can be treated with salt or sand.

Drive with caution, whatever the condition. Accelerate gently so traction is not lost. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick, so there is even less traction.

If equipped, Traction Control should be turned on. See *Traction Control/ Electronic Stability Control on page 9-30.*

The Antilock Brake System (ABS) improves vehicle stability during hard stops on slippery roads, but apply the brakes sooner than when on dry pavement.

Allow greater following distance on any slippery road and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.

See *Antilock Brake System (ABS) on page 9-26.*

Turn off cruise control on slippery surfaces.

Blizzard Conditions

Being stuck in snow can be a serious situation. Stay with the vehicle unless there is help nearby. If possible, use Roadside Service. See *Roadside Service on page 13-5*. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to an outside mirror.

⚠ Warning

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

(Continued)

Warning (Continued)

If the vehicle is stuck in the snow:

- Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust pipe.
- Check again from time to time to be sure snow does not collect there.
- Open a window about 5 cm (2 in) on the side of the vehicle that is away from the wind to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that circulates the air inside the vehicle and set the fan speed to the highest setting. See "Climate Control Systems."

(Continued)

Warning (Continued)

For more information about carbon monoxide, see *Engine Exhaust on page 9-21*.

To save fuel, run the engine for only short periods as needed to warm the vehicle and then shut the engine off and close the window most of the way to save heat. Repeat this until help arrives but only when you feel really uncomfortable from the cold. Moving about to keep warm also helps.

If it takes some time for help to arrive, now and then when you run the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible to save fuel.

If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method. See *Traction Control/Electronic Stability Control on page 9-30*.

⚠ Warning

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 56 km/h (35 mph).

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a low forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see *Towing the Vehicle on page 10-82*.

Vehicle Load Limits

It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo and all nonfactory-installed options. Two labels on the vehicle show how much weight it may properly carry, the Tire and Loading Information label and the Certification label.

⚠ Warning

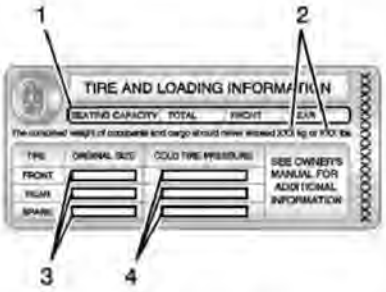
Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the

(Continued)

Warning (Continued)

vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Tire and Loading Information Label



Label Example

A vehicle-specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar). With the driver door open, the label is attached near the door lock post. The Tire and Loading Information label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilograms and pounds.

The Tire and Loading Information label also shows the tire size of the original equipment tires (3) and the recommended cold tire inflation pressures (4). For more information on tires and inflation see *Tires on page 10-41* and *Tire Pressure on page 10-48*.

There is also important loading information on the Certification label. It tells you the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification Label" later in this section.

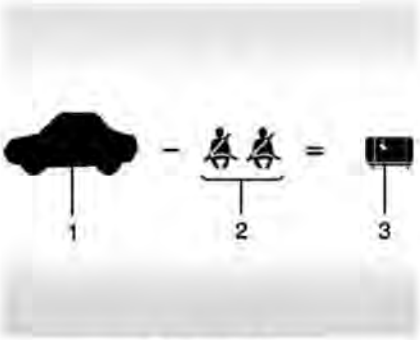
"Steps for Determining Correct Load Limit–

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and

there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.)

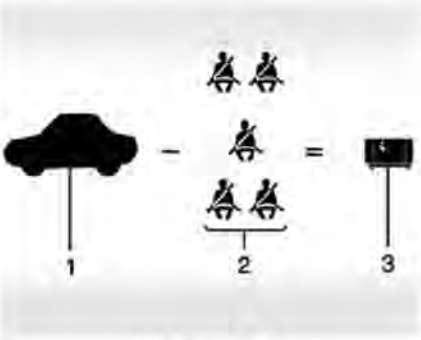
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle."

See *Trailer Towing on page 9-63* for important information on towing a trailer, towing safety rules and trailering tips.



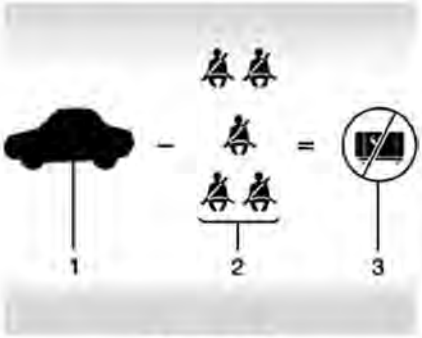
Example 1

1. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).
3. Available Occupant and Cargo Weight = 317 kg (700 lbs).



Example 2

1. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).
3. Available Cargo Weight = 113 kg (250 lbs).

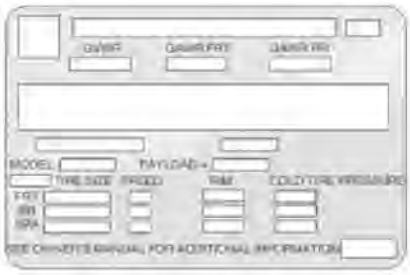


Example 3

1. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).
3. Available Cargo Weight = 0 kg (0 lbs).

Refer to the vehicle's Tire and Loading Information label for specific information about the vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's capacity weight.

Certification Label



Label Example

A vehicle-specific Certification/ Tire label is attached to the driver side center pillar (B-pillar). The label shows the size of the vehicle's original tires and the inflation pressures needed to obtain the gross weight capacity of the vehicle. This is called Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tire label also tells you the maximum weights for the front and rear axles, called Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, you need to go to a weigh station and weigh the vehicle. Your dealer can help you with this. Be sure to spread out the load equally on both sides of the center line.

Never exceed the GVWR for the vehicle, or the GAWR for either the front or rear axle.

If the vehicle is carrying a heavy load, it should be spread out. See "Steps for Determining Correct Load Limit" earlier in this section.

⚠ Warning

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Your warranty does not cover parts or components that fail because of overloading.

The label will help you decide how much cargo and installed equipment your vehicle can carry.

Using heavier suspension components to get added durability might not change your weight ratings. Ask your dealer to help you load your vehicle the right way.

If you put things inside your vehicle – like suitcases, tools, packages, or anything else – they will go as fast as the vehicle goes. If you have to stop or turn quickly, or if there is a crash, they will keep going.

⚠ Warning

Things inside the vehicle can strike and injure people in a sudden stop or turn, or in a crash.

- Put things in the cargo area of the vehicle. In the cargo area, put them as

(Continued)

Warning (Continued)

far forward as possible. Try to spread the weight evenly.

- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.
- Do not leave an unsecured child restraint in the vehicle.
- Secure loose items in the vehicle.
- Do not leave a seat folded down unless needed.

Starting and Operating

New Vehicle Break-In

⚠ Caution

The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:

- Do not drive at any one constant speed, fast or slow, for the first 805 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.
- Avoid making hard stops for the first 322 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this

(Continued)

Caution (Continued)

breaking-in guideline every time you get new brake linings.

Following break-in, engine speed and load can be gradually increased.

Adjustable Throttle and Brake Pedal

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.

The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

Adjust the throttle and brake pedals while the vehicle is in P (Park) without pressing on the pedals. The pedals cannot be adjusted while the vehicle is in R (Reverse) or when cruise control is engaged. The throttle and brake pedals can also be adjusted while driving.

Ignition Positions

The vehicle has an electronic keyless ignition with pushbutton start.

Pressing the button cycles it through three modes: ACC/ACCESSORY, ON/RUN/START, and STOPPING THE ENGINE/OFF.

If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the keyless entry system. See *Key and Lock Messages on page 5-32.*

To shift out of P (Park), the vehicle must be in ON/RUN mode and the brake pedal must be applied.

STOPPING THE ENGINE/OFF (No Indicator Light): When the vehicle is stopped, press the ENGINE START/STOP button once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 9-19.*

If the vehicle is not in P (Park), the ignition will return to ACC/ ACCESSORY and display the message SHIFT TO PARK in the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 5-25.* When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop, shift to P (Park), and turn the ignition to OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the OFF position.
4. Set the parking brake. See *Parking Brake on page 9-27.*

> **⚠ Warning**
>
> Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over and must be shut off while driving, press and hold the ENGINE START/STOP button for longer than two seconds, or press twice in five seconds.

ACC/ACCESSORY (Amber Indicator Light): This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied will place the ignition system in ACC/ACCESSORY. The ignition will switch from ACC/ACCESSORY to OFF after 10 minutes to prevent battery rundown.

ON/RUN/START (Green Indicator Light): This mode is for driving and starting. With the ignition off and the brake pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Gasoline Engine on page 9-16.* The ignition will then remain in ON/RUN.

Service Only Mode

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off, and the brake pedal not applied, pressing and holding the button for more than five seconds will place the vehicle in Service Only Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Only Mode. Press the button again to turn the vehicle off.

Starting the Gasoline Engine

Place the transmission in the proper gear by moving the shift lever to P (Park) or N (Neutral). To restart the engine when the vehicle is already moving, use N (Neutral).

> **⚠ Caution**
>
> Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.

⚠ Caution

If the steering wheel is turned until it reaches the end of its travel, and is held in that position while starting the vehicle, damage may occur to the hydraulic power steering system and there may be loss of power steering assist.

⚠ Caution

If you add electrical parts or accessories, you could change the way the engine operates. Any resulting damage would not be covered by the vehicle warranty. See *Add-On Electrical Equipment on page 9-68*.

To start the vehicle:

Starting Procedure

1. With the Keyless Access System, the RKE transmitter must be in the vehicle. Press the ENGINE START/STOP button with the brake pedal applied. When the engine begins cranking, let go of the button. The idle speed will go down as the engine warms up. Do not race the engine immediately after starting it.

   If the RKE transmitter is not in the vehicle, if there is interference, or the RKE battery is low, a Driver Information Center (DIC) message will display. See *Driver Information Center (DIC) on page 5-25* and *Remote Keyless Entry (RKE) System Operation on page 2-3*.

⚠ Caution

Cranking the engine for long periods of time, by pressing the ENGINE START/STOP button immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.

2. If the engine does not start after five to 10 seconds, especially in very cold weather (below −18°C or 0°F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor and holding it there as you press the ENGINE START/STOP button, for up to a maximum of 15 seconds. Wait at least 15 seconds between each try, to allow the cranking motor to cool down. When the engine starts, let go of the button and the

accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

Engine Heater

The engine coolant heater, if available, can help in cold weather conditions at or below −18°C (0°F) for easier starting and better fuel economy during engine warm-up. Plug in the coolant heater at least four hours before starting the vehicle. An internal thermostat in the plug end of the cord will prevent engine coolant heater operation at temperatures above −18°C (0°F).

To Use the Engine Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. The cord is located near the air cleaner.

   Check the heater cord for damage. If it is damaged, do not use it. See your dealer for a replacement. Inspect the cord for damage yearly.
3. Plug it into a normal, grounded 110-volt AC outlet.

⚠ Warning

Improper use of the heater cord or an extension cord can damage the cord and may result in overheating and fire.

- Plug the cord into a three-prong electrical utility receptacle that is protected by a ground fault detection

(Continued)

Warning (Continued)

function. An ungrounded outlet could cause an electric shock.

- Use a weatherproof, heavy-duty, 15 amp-rated extension cord if needed. Failure to use the recommended extension cord in good operating condition, or using a damaged heater or extension cord, could make it overheat and cause a fire, property damage, electric shock, and injury.
- Do not operate the vehicle with the heater cord permanently attached to the

(Continued)

Warning (Continued)

vehicle. Possible heater cord and thermostat damage could occur.

- While in use, do not let the heater cord touch vehicle parts or sharp edges. Never close the hood on the heater cord.
- Before starting the vehicle, unplug the cord, reattach the cover to the plug, and securely fasten the cord. Keep the cord away from any moving parts.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts. If you do not it could be damaged.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

Retained Accessory Power (RAP)

These accessories can be used after the engine is turned off:

- Infotainment system (up to 10 minutes or until the driver door is opened).
- Power windows, sunroof (if equipped), and power outlets (up to 10 minutes or until any door is opened).

Shifting Into Park

1. Hold the brake pedal down and set the parking brake. See *Parking Brake on page 9-27*.
2. Move the shift lever into P (Park) by pushing the lever all the way toward the front of the vehicle.
3. Turn the ignition off.

Leaving the Vehicle with the Engine Running

⚠ Warning

It can be dangerous to leave the vehicle with the engine running. It could overheat and catch fire.

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on*

(Continued)

Warning (Continued)

page 9-19. If you are towing a trailer, see *Driving Characteristics and Towing Tips on page 9-60*.

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is firmly set before you leave it. After you have moved the shift lever into P (Park), hold down the regular brake pedal. See if you can move the shift lever away from P (Park) without first pulling it toward you. If you can, it means that the shift lever was not fully locked into P (Park).

Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see "Shifting Into P (Park)" listed previously.

If torque lock does occur, your vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 9-60*.

Shifting out of Park

This vehicle is equipped with an automatic transmission shift lock control system. The shift lock control is designed to prevent movement of the shift lever out of P (Park), unless the ignition is in ON/RUN and the brake pedal is applied.

The shift lock control is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting on page 10-78*.

To shift out of P (Park):

1. Apply the brake pedal.
2. Press the ENGINE START/ STOP button.
3. Press the shift lever button.
4. Move the shift lever to the desired position.

If you still are unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.

3. Move the shift lever to the desired position.

If you still cannot move the shift lever from P (Park), consult your dealer or a professional towing service.

Parking over Things That Burn

⚠ Warning

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Engine Exhaust

⚠ Warning

Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or tail pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.
- The vehicle exhaust system has been modified, damaged, or improperly repaired.

(Continued)

Warning (Continued)

- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

Running the Vehicle While Parked

It is better not to park with the engine running.

If the vehicle is left with the engine running, follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park on page 9-19* and *Engine Exhaust on page 9-21*.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-60*.

Automatic Transmission

There are several different positions for the shift lever.

P (Park): This position locks the front wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

⚠ Warning

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 9-19* and *Driving Characteristics and Towing Tips on page 9-60*.

Make sure the shift lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. You must fully apply the regular brakes first and then press

the shift lever button before you can shift from P (Park) when the ignition is in ON/RUN. If you cannot shift out of P (Park), ease pressure on the shift lever and push the shift lever all the way into P (Park) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See *Shifting out of Park on page 9-20*.

⚠ Caution

Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.

R (Reverse): Use this gear to back up.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging your transmission. See *If the Vehicle Is Stuck on page 9-9*.

N (Neutral): In this position, the engine does not connect with the wheels. To restart when the vehicle is already moving, use N (Neutral) only. You can also use N (Neutral) when the vehicle is being towed.

⚠ Warning

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

⚠ Caution

Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

D (Drive): This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Going less than 35 mph (55 km/h), push the accelerator pedal about halfway down.
- Going about 35 mph (55 km/h) or more, push the accelerator all the way down.

  The transmission will shift down to a lower gear and have more power.

Downshifting the transmission in slippery road conditions could result in skidding. See "Skidding" under *Loss of Control on page 9-5*.

⚠ Caution

Spinning the tires or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. The repair will not be covered by the vehicle warranty. If you are stuck, do not spin the tires. When stopping on a hill, use the brakes to hold the vehicle in place.

Manual Mode

Driver Shift Control (DSC)

⚠ Caution

Driving with the engine at a high rpm without upshifting while using Driver Shift Control (DSC), could damage the vehicle. Always upshift when necessary while using DSC.

DSC allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).

If you do not move the shift lever forward or rearward, the vehicle will be in Sport Mode. When you are in Sport Mode the vehicle will still shift automatically. The transmission may remain in a gear longer than it would in the normal driving mode based on braking, throttle input, and vehicle lateral acceleration.

SPORT MODE ON will be displayed in the DIC. See *Ride Control System Messages on page 5-36*. The word "sport" will display below the odometer. The gear position will also be indicated in the tachometer.

Within Sport Mode there is a further performance feature called Performance Mode Lift Foot (PMLF) Mode. The feature is activated automatically when sports oriented driving is detected, based on cornering and on/off throttle application. PMLF allows the transmission to

hold the current gear instead of upshifting when the throttle is lifted.

2. To enter M (Manual Mode), press the shift lever forward to upshift or rearward to downshift.

   An M will be displayed in the DIC.

3. To return to Sport Mode from M (Manual Mode), press and briefly hold the shift lever forward.

Gear position is indicated in the bottom right corner of the display area in the instrument cluster. The number indicates the requested gear range when moving the shift lever forward or rearward.

While using the DSC feature, the vehicle will have firmer, quicker shifting. You can use this for sport driving or when climbing or descending hills, to stay in gear longer, or to downshift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine revolutions per minute (rpm). The transmission will not automatically shift to the next lower gear if the engine rpm is too high, nor to the next higher gear when the maximum engine rpm is reached.

If shifting is prevented for any reason, the currently selected gear will flash multiple times, indicating that the transmission has not shifted gears.

While in the DSC mode, the transmission will automatically downshift when the vehicle comes to a stop. This will allow for more power during take-off.

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into second gear. A higher gear ratio allows you to gain more traction on slippery surfaces.

Fuel Economy Mode

Driving habits can affect fuel mileage. For driving tips to get the best fuel economy possible, see *Driving for Better Fuel Economy on page 1-20.*

The vehicle may have a fuel economy mode. When engaged, fuel economy mode can improve the vehicle's fuel economy.

Pressing the eco button by the shift lever will engage fuel economy mode. When activated, the eco light in the instrument cluster will come

on. See *Fuel Economy Light on page 5-23*. Pressing the button a second time will turn fuel economy mode off.

When fuel economy mode is on:

- The transmission will upshift sooner, and downshift later.
- The torque converter will lock up sooner, and stay on longer.
- The gas pedal will be less sensitive.
- The vehicle's computers will more aggressively shut off fuel to the engine under deceleration.
- The engine operates at lower rpm's in fuel economy mode, which can increase noise and vibration. This is normal.

Drive Systems

All-Wheel Drive

Vehicles with this feature transfer torque as required to the rear wheels. It is fully automatic, and adjusts itself as needed for road conditions.

AWD system performance will be automatically reduced when you use the compact spare. To restore full AWD operation and prevent excessive wear on the system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire on page 10-77*.

Brakes

Antilock Brake System (ABS)

This vehicle has ABS, an advanced electronic braking system that helps prevent a braking skid.

When the vehicle begins to drive away, ABS checks itself.
A momentary motor or clicking noise might be heard while this test is going on, and it might even be noticed that the brake pedal moves a little. This is normal.

If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light on page 5-19*.

If driving safely on a wet road and it becomes necessary to slam on the brakes and continue braking to avoid a sudden obstacle, a computer senses the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help you steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You may hear the ABS pump or motor operating and feel the brake pedal pulsate. This is normal.

Braking in Emergencies

ABS allows you to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

Parking Brake

The Electric Parking Brake (EPB) switch is on the center console. The EPB can always be activated, even if the ignition is off. To prevent draining the battery, avoid repeated cycles of the EPB when the engine is not running.

The system has a red parking brake status light and an amber parking brake warning light. See *Electric Parking Brake Light on page 5-18* and *Service Electric Parking Brake Light on page 5-19*. There are also

parking brake-related Driver Information Center (DIC) messages. See *Brake System Messages on page 5-28*. In case of insufficient electrical power, the EPB cannot be applied or released.

Before leaving the vehicle, check the red parking brake status light to ensure that the parking brake is applied.

EPB Apply

To apply the EPB:

1. Be sure the vehicle is at a complete stop.
2. Lift up the EPB switch momentarily.

The red parking brake status light will flash and then stay on once the EPB is fully applied. If the red parking brake status light flashes continuously, then the EPB is only partially applied or there is a problem with the EPB. A DIC message will display. Release the EPB and try to apply it again. If the light does not come on, or keeps flashing, have the vehicle serviced. Do not drive the vehicle if the red parking brake status light is flashing. See your dealer. See *Electric Parking Brake Light on page 5-18*.

If the amber parking brake warning light is on, lift up on the EPB switch and hold it up. Continue to hold the switch until the red parking brake status light remains on. If the amber parking brake warning light remains on, see your dealer.

If the EPB is applied while the vehicle is moving, the vehicle will decelerate as long as the switch is held up. If the switch is held up until the vehicle comes to a stop, the EPB will remain applied.

The vehicle may automatically apply the EPB in some situations when the vehicle is not moving. This is normal, and is done to periodically check the correct operation of the EPB system.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

EPB Release

To release the EPB:

1. Place the ignition in the ACC/ ACCESSORY or ON/RUN position.
2. Apply and hold the brake pedal.
3. Push down momentarily on the EPB switch.

The EPB is released when the red parking brake status light is off.

If the amber parking brake warning light is on, release the EPB by pushing down on the EPB switch and holding it down. Continue to hold the switch until the red parking brake status light is off. If either light stays on after release is attempted, see your dealer.

> **⚠ Caution**
>
> Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.

Automatic EPB Release

The EPB automatically releases differently on vehicles with Adaptive Cruise Control. Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

- With Adaptive Cruise Control, the parking brake will automatically release with the engine running, the brake pedal applied, and the transmission is shifted out of P (Park).
- Without Adaptive Cruise Control, the parking brake will automatically release when the engine is running, the transmission is placed into gear, and an attempt is made to drive away by pressing the accelerator pedal.

If parking on a hill, or if the vehicle is pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-60*.

Brake Assist

The Brake Assist feature is designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature uses the stability system hydraulic brake control module to supplement the power brake system under conditions where the driver has quickly and forcefully applied the brake pedal in an attempt to quickly stop or slow down the vehicle. The stability system hydraulic brake control module increases brake pressure at each corner of the vehicle until the ABS activates. Minor brake pedal pulsation or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates. The Brake Assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

Hill Start Assist (HSA)

This vehicle has an HSA feature, which may be useful when the vehicle is stopped on a grade sufficient enough to activate HSA. This feature is designed to prevent the vehicle from rolling, either forward or rearward, during vehicle

drive off. After the driver completely stops and holds the vehicle in a complete standstill on a grade, HSA will be automatically activated. During the transition period between when the driver releases the brake pedal and starts to accelerate to drive off on a grade, HSA holds the braking pressure for a maximum of two seconds to ensure that there is no rolling. The brakes will automatically release when the accelerator pedal is applied within the two-second window. It will not activate if the vehicle is in a drive gear and facing downhill, or if the vehicle is facing uphill and in R (Reverse).

Ride Control Systems

Traction Control/ Electronic Stability Control

System Operation

The vehicle has a Traction Control System (TCS) and StabiliTrak®, an electronic stability control system. These systems help limit wheel slip and assist the driver in maintaining control, especially on slippery road conditions.

TCS activates if it senses that any of the drive wheels are spinning or beginning to lose traction. When this happens, TCS applies the brakes to the spinning wheels and reduces engine power to limit wheel spin.

StabiliTrak activates when the vehicle senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak selectively applies braking pressure to any one of the vehicle wheel brakes to assist the driver in keeping the vehicle on the intended path. Trailer Sway Control (TSC) is also on automatically when the vehicle is started. See *Trailer Sway Control (TSC) on page 9-67*.

If cruise control is being used and traction control or StabiliTrak begins to limit wheel spin, cruise control will disengage. Cruise control may be turned back on when road conditions allow.

Both systems come on automatically when the vehicle is started and begins to move. The systems may be heard or felt while they are operating or while performing diagnostic checks. This is normal and does not mean there is a problem with the vehicle.

It is recommended to leave both systems on for normal driving conditions, but it may be necessary to turn TCS off if the vehicle gets stuck in sand, mud, ice, or snow.

See *If the Vehicle Is Stuck on page 9-9* and "Turning the Systems Off and On" later in this section.

The indicator light for both systems is in the instrument cluster. This light will:

- Flash when TCS is limiting wheel spin.
- Flash when StabiliTrak is activated.
- Turn on and stay on when either system is not working.

If either system fails to turn on or to activate, a message displays in the Driver Information Center (DIC), and comes on and stays on to indicate that the system is inactive and is not assisting the driver in maintaining control. The vehicle is safe to drive, but driving should be adjusted accordingly.

If comes on and stays on:

1. Stop the vehicle.
2. Turn the engine off and wait 15 seconds.
3. Start the engine.

Drive the vehicle. If comes on and stays on, the vehicle may need more time to diagnose the problem. If the condition persists, see your dealer.

Turning the Systems Off and On

The button for TCS and StabiliTrak is on the center stack.

⚠ Caution

Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle driveline could be damaged.

To turn off only TCS, press and release the button. The traction off light displays in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-36*.

To turn TCS on again, press and release the button. The traction off light displayed in the instrument cluster will turn off. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-36*.

If TCS is limiting wheel spin when the button is pressed, the system will not turn off until the wheels stop spinning.

To turn off both TCS and StabiliTrak, press and hold the OFF button until the traction off light and the StabiliTrak OFF light come on and stay on in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-36*.

To turn TCS and StabiliTrak on again, press and release the OFF button. The traction off light and the StabiliTrak OFF light in the instrument cluster turn off. The appropriate message is displayed in the DIC. See *Ride Control System Messages on page 5-36*.

Adding accessories can affect the vehicle performance. See *Accessories and Modifications on page 10-3*.

Limited-Slip Rear Axle

Vehicles with a limited-slip rear axle can give more traction on snow, mud, ice, sand, or gravel. When traction is low, this feature allows the drive wheel with the most traction to move the vehicle. The limited-slip rear axle also gives the driver enhanced control when cornering hard or completing a maneuver, such as a lane change.

Selective Ride Control

The vehicle may have a ride control system called Selective Ride Control. The setting can be changed at any time. Based on road conditions, steering wheel angle, and the vehicle speed, the system automatically adjusts to provide the best handling while providing a smooth ride. The Tour and Sport modes will feel similar on a smooth road.

Tour: Use for normal city and highway driving. This setting provides a smooth, soft ride.

Sport: Use where road conditions or personal preference demand more control. This setting provides more "feel," or response to road conditions through increased steering effort and suspension control. Transmission shift points and shift firmness are also enhanced.

The vehicle is normally in the Tour Mode. To switch from Tour Mode to Sport Mode, move the shift lever to the left while the transmission is in D (Drive). Sport Mode is automatically engaged when the shift lever is moved to the left. Moving the shift lever forward or rearward will put the transmission in the M (Manual) Mode.

The Driver Information Center (DIC) will display SPORT MODE ON when the Sport Mode has been activated. When the shift lever is moved to the right in D (Drive), the system will revert back to Tour Mode. See *Manual Mode on page 9-24* under Automatic Transmission.

If there is a problem detected with Selective Ride Control, SERVICE SUSPENSION SYSTEM displays on the DIC. See *Ride Control System Messages on page 5-36*. Driving should be adjusted accordingly.

Cruise Control

With cruise control, a speed of about 40 km/h (25 mph) or more can be maintained without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

⚠ Warning

Cruise control can be dangerous where you cannot drive safely at a steady speed. Do not use cruise control on winding roads or in heavy traffic.

Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

If the StabiliTrak® system begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *Traction Control/Electronic Stability Control on page 9-30*. If a collision alert occurs when cruise control is activated, cruise control is disengaged. See *Forward Collision Alert (FCA) System on page 9-48*. When road conditions allow the cruise control to be safely used, you can apply the cruise control again.

If the brakes are applied, cruise control disengages.

(On/Off): Press to turn the system on and off. A white indicator appears in the instrument cluster when cruise is turned on.

+RES (Resume/Accelerate): If there is a set speed in memory, press the control up briefly to resume to that speed or press and hold to accelerate. If cruise control is already active, use to increase vehicle speed.

SET− (Set/Coast): Press the control down briefly to set the speed and activate cruise control. If cruise control is already active, use to decrease vehicle speed.

(Cancel): Press to disengage cruise control without erasing the set speed from memory.

Setting Cruise Control

If the button is on when not in use, SET− or +RES could get pressed and the vehicle could go into cruise when not desired. Keep the button off when cruise is not being used.

1. Press to turn the cruise system on.
2. Get up to the desired speed.
3. Move the control down to SET− and release it.
4. Remove foot from the accelerator pedal.

The cruise control indicator on the instrument cluster turns green after the cruise control has been set to the desired speed. See *Instrument Cluster on page 5-9*.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied or is pressed, the cruise control is disengaged without erasing the set speed from memory. Once the vehicle reaches about 40 km/h (25 mph) or more, press +RES up briefly. The vehicle returns to the previous set speed.

Increasing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

- Press and hold +RES up until the vehicle accelerates to the desired speed, then release it.
- To increase vehicle speed in small increments, press +RES up briefly. For each press, the vehicle goes about 1.6 km/h (1 mph) faster.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster on page 5-9*. The increment value used depends on the units displayed.

Reducing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

- Press and hold SET− down until the desired lower speed is reached, then release it.
- To slow down in small increments, press SET− down briefly. For each press, the vehicle goes about 1.6 km/h (1 mph) slower.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster on page 5-9*. The increment value used depends on the units displayed.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previously set cruise speed. While pressing the accelerator pedal or shortly following the release to override cruise control, briefly pressing SET− will result in cruise set to the current vehicle speed.

Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain your speed. When going downhill, you might have to brake or shift to a lower gear to keep your speed down. If the brake pedal is applied, the cruise control will disengage.

Ending Cruise Control

There are four ways to end cruise control:

- Step lightly on the brake pedal.
- Press ⊗.
- Shift the transmission to N (Neutral).
- To turn off the cruise control, press .

Erasing Speed Memory

The cruise control set speed is erased from memory if is pressed or if the ignition is turned off.

Adaptive Cruise Control

If equipped with Adaptive Cruise Control (ACC), it allows the driver to select the cruise control set speed and following gap. Read this entire section before using this system. The following gap is the following time between your vehicle and a vehicle detected directly ahead in your path moving in the same direction. If no vehicle is detected in your path, ACC works like regular cruise control. ACC uses camera and radar sensors. See *Radio Frequency Statement on page 13-12*.

If a vehicle is detected in your path, ACC can apply acceleration or limited, moderate braking to maintain the selected following gap. To disengage ACC, apply the brake.

If ACC is controlling your vehicle speed when the traction control system (TCS) or electronic stabilty control system activates, the ACC may automatically disengage. See *Traction Control/Electronic Stability Control on page 9-30*. When road conditions allow ACC to be safely used, the ACC can be turned back on.

ACC will not engage if the TCS or StabiliTrak electronic stability control system is disabled.

⚠ Warning

ACC has limited braking ability and may not have time to slow the vehicle down enough to avoid a collision with another vehicle you are following. This can occur when vehicles suddenly slow or stop ahead, or enter your lane. Also see "Alerting the Driver" in this section. Complete attention is always required while driving and

(Continued)

Warning (Continued)

you should be ready to take action and apply the brakes. See *Defensive Driving on page 9-3*.

⚠ Warning

Adaptive Cruise Control will not detect or brake for children, pedestrians, animals, or other objects.

Do not use Adaptive Cruise Control when:

- On winding and hilly roads or when the sensors are blocked by snow, ice, or dirt. The system may not detect a vehicle ahead. Keep the entire front of the vehicle clean.

(Continued)

Warning (Continued)

- Visibility is low, such as in fog, rain, or snow conditions. Adaptive Cruise Control performance is limited under these conditions.
- On slippery roads where fast changes in tire traction can cause excessive wheel slip.

(On/Off): Press to turn the system on or off. A white cruise control indicator comes on.

+RES (Resume/Accelerate): Press the control up briefly to resume to the previous set speed or hold upwards to accelerate. If cruise control is already active, use to increase vehicle speed.

SET– (Set/Coast): Press the control down briefly to set the speed and activate ACC. If cruise control is already active, use to decrease vehicle speed.

(Cancel): Press to disengage ACC without erasing the set speed from memory.

(Follow Distance Gap): Press to select a following gap time (or distance) setting for ACC of Far, Medium, or Near.

Setting Adaptive Cruise Control

If cruise control is on when not in use, the cruise control on/off control could get pressed and cruise control could become active when not desired. Keep the cruise control off when cruise is not being used.

Select the set speed desired for cruise. This is the vehicle speed when no vehicle is detected in its path slower than the set speed.

ACC will not set at a speed less than 25 km/h (16 mph), although it can be resumed when driving at lower speeds.

To set ACC:

1. Press .
2. Get up to the desired speed.
3. Press and release the SET– control.
4. Remove foot from the accelerator.

After ACC is set, it may immediately apply the brakes if a vehicle ahead is detected closer than the selected following gap.

The ACC indicator displays on the instrument cluster. When the ACC is active, the indicator turns green.

Be mindful of speed limits, surrounding traffic speeds, and weather conditions when selecting the set speed.

Resuming a Set Speed

If the ACC is set at a desired speed and then the brakes are applied, the ACC is disengaged without erasing the set speed from memory.

To begin using ACC again, press +RES up briefly. The vehicle returns to the previous set speed.

Increasing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the accelerator to get to the higher speed. Press SET– down. Release the control and the accelerator pedal. The vehicle will now cruise at the higher speed.

  When the accelerator pedal is pressed, ACC will not brake because it is overridden. A warning message will appear on the Driver Information Center (DIC). See *Cruise Control Messages on page 5-29*.
- Press and hold +RES up until the desired set speed appears on the display, then release it.
- To increase vehicle speed in small increments, press +RES up briefly. For each press, the vehicle goes to the next 1 km/h (1 mph) faster mark on the speedometer.

When it is determined that there is no vehicle ahead or the vehicle ahead is beyond the selected following gap, then the vehicle speed will increase to the set speed.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster on page 5-9*. The increment value used depends on the units displayed.

Reducing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the brake to get to the desired lower speed. Press SET– down and release the accelerator pedal. The vehicle will now cruise at the lower speed.
- Press and hold SET– down until the desired lower speed is reached, then release it.
- To decrease the vehicle speed in smaller increments, press SET– down briefly. For each press, the vehicle goes to the next 1 km/h (1 mph) slower mark on the speedometer.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster on page 5-9*. The increment value used depends on the units displayed.

Selecting the Follow Distance

When a slower moving vehicle is detected ahead within the selected following gap, ACC will adjust the vehicle's speed and attempt to maintain the follow distance gap selected.

Press on the steering wheel to adjust the following gap. When pressed, the current gap setting displays briefly on the instrument cluster. Subsequent presses cycle the gap button through three settings: Far, Medium, or Near.

When pressed, the current gap setting displays briefly on the instrument cluster. The gap setting will be maintained until it is changed.

Since each gap setting corresponds to a following time (Far, Medium, or Near), the following distance will vary based on vehicle speed. The faster the vehicle speed, the further back your vehicle will follow a vehicle detected ahead. Consider traffic and weather conditions when selecting the following gap. The range of selectable gaps may not be appropriate for all drivers and driving conditions.

Changing the gap setting automatically changes the alert timing sensitivity (Far, Medium, or Near) for the Forward Collision Alert (FCA) feature. See *Forward Collision Alert (FCA) System on page 9-48*.

Alerting the Driver

If ACC is engaged, driver action may be required when ACC cannot apply sufficient braking because of approaching a vehicle too rapidly.

When this condition occurs, six red lights will flash on the windshield and either eight beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. See "Collision/Detection Systems" under *Vehicle Personalization on page 5-39*.

See *Defensive Driving on page 9-3*.

Approaching and Following a Vehicle

The vehicle ahead symbol is in the instrument cluster.

The vehicle ahead symbol only displays when a vehicle is detected in your vehicle's path moving in the same direction.

If this symbol is not displaying, ACC will not respond to or brake to vehicles ahead.

ACC automatically slows the vehicle down and adjusts vehicle speed to follow the vehicle in front at the selected follow gap. The vehicle speed increases or decreases to follow the vehicle in front of you, but will not exceed the set speed. It may apply limited braking, if necessary. When braking is active, the brake

lights will come on. The automatic braking may feel or sound different than if the brakes were applied manually. This is normal.

Stationary or Very Slow-Moving Objects

⚠ Warning

Adaptive Cruise Control (ACC) may not detect and react to stopped or slow-moving vehicles ahead of you. For example, the system may not brake for a vehicle it has never detected moving. This can occur in stop-and-go traffic or when a vehicle suddenly appears due to a vehicle ahead changing lanes. Your vehicle may not stop and could cause a crash. Use caution when using ACC. Your complete attention is always required while driving and you should be ready to take action and apply the brakes.

ACC Automatically Disengages

ACC may automatically disengage and the driver will need to manually apply the brakes to slow the vehicle when:

- The sensors are blocked.
- The Traction Control System (TCS) or electronic stability control system has activated or been disabled.
- There is no traffic and nothing to detect on the side of the road.
- There is a fault in the system.
- The brakes get heated.

The ACC active symbol will not be displayed when ACC is no longer active.

Notification to Resume ACC

ACC will maintain a follow time/distance gap behind a detected vehicle and slow your vehicle to a stop behind that vehicle.

If the vehicle ahead has driven away and ACC has not resumed, the vehicle ahead symbol will flash as a reminder. In addition, the left and right sides of the Safety Alert Seat will pulse three times, or three beeps will sound. See "Alert Type" and "Go Notifier" in "Collision/Detection Systems" under *Vehicle Personalization on page 5-39*.

When the vehicle ahead drives away, press +RES or the accelerator pedal to resume ACC. If stopped for more than two minutes or if the driver door is opened and the driver safety belt is unbuckled, the ACC automatically applies the electric parking brake to hold the vehicle. The electric parking brake status light will turn on. See *Parking Brake on page 9-27*. To release the electric parking brake, press the accelerator pedal.

A DIC warning message may display indicating to shift to P (Park) before exiting the vehicle. See *Vehicle Messages on page 5-28*.

⚠ Warning

If ACC has stopped the vehicle, and if ACC is disengaged, turned off, or canceled, the vehicle will no longer be held at a stop. The vehicle can move. When ACC is holding the vehicle at a stop, always be prepared to manually apply the brakes.

⚠ Warning

Leaving the vehicle without placing it in P (Park) can be dangerous. Do not leave the vehicle while it is being held at a stop by ACC. Always place the vehicle in P (Park) and turn off the ignition before leaving the vehicle.

ACC Override

If using the accelerator pedal while ACC is active, a warning message on the DIC will indicate that automatic braking will not occur. See *Vehicle Messages on page 5-28*. ACC will resume operation when the accelerator pedal is not being pressed.

⚠ Warning

The ACC will not automatically apply the brakes if your foot is resting on the accelerator pedal. You could crash into a vehicle ahead of you.

Curves in the Road

⚠ Warning

On curves, ACC may not detect a vehicle ahead in your lane. You could be startled if the vehicle

(Continued)

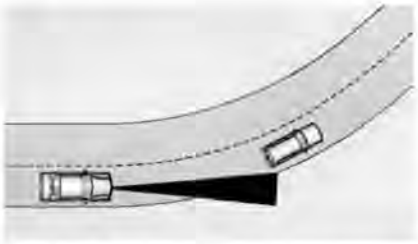
Warning (Continued)

accelerates up to the set speed, especially when following a vehicle exiting or entering exit ramps. You could lose control of the vehicle or crash. Do not use ACC while driving on an entrance or exit ramp. Always be ready to use the brakes if necessary.

⚠ Warning

On curves, ACC may respond to a vehicle in another lane, or may not have time to react to a vehicle in your lane. You could crash into a vehicle ahead of you, or lose control of your vehicle. Give extra attention in curves and be ready to use the brakes if necessary. Select an appropriate speed while driving in curves.

ACC may operate differently in a sharp curve. It may reduce the vehicle speed if the curve is too sharp.



When following a vehicle and entering a curve, ACC may not detect the vehicle ahead and accelerate to the set speed. When this happens the vehicle ahead symbol will not appear.

ACC may detect a vehicle that is not in your lane and apply the brakes.

ACC may occasionally provide an alert and/or braking that is considered unnecessary. It could respond to vehicles in different lanes, signs, guardrails, and other stationary objects when entering or exiting a curve. This is normal operation. The vehicle does not need service.

Other Vehicle Lane Changes

ACC will not detect a vehicle ahead until it is completely in the lane. The brake may need to be manually applied.

Do Not Use ACC on Hills and When Towing a Trailer

Do not use ACC when driving on steep hills or when towing a trailer. ACC will not detect a vehicle in the lane while driving on steep hills. The driver will often need to take over acceleration and braking on steep hills, especially when towing a trailer. If the brakes are applied, the ACC disengages.

Ending ACC

There are three ways to end ACC:

- Step lightly on the brake pedal.
- Press .
- Press .

Erasing Speed Memory

The cruise control set speed is erased from memory if is pressed or if the ignition is turned off.

Cleaning the Sensing System

The camera sensor on the back of the rearview mirror and the radar sensors on the front of the vehicle can become blocked by snow, ice, dirt, or mud. These areas need to be cleaned for ACC to operate properly.

For cleaning instructions, see "Washing the Vehicle" under *Exterior Care on page 10-85*.

System operation may also be limited under snow, heavy rain or road spray conditions.

Driver Assistance Systems

This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, backing, and parking. Read this entire section before using these systems.

⚠ Warning

Do not rely on the Driver Assistance Systems. These systems do not replace the need for paying attention and driving safely. You may not hear or feel alerts or warnings provided by these systems. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving on page 9-3*.

Under many conditions, these systems will not:

(Continued)

Warning (Continued)

- Detect children, pedestrians, bicyclists, or animals.
- Detect vehicles or objects outside the area monitored by the system.
- Work at all driving speeds.
- Warn you or provide you with enough time to avoid a crash.
- Work under poor visibility or bad weather conditions.
- Work if the detection sensor is not cleaned or is covered by ice, snow, mud, or dirt.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

Audible or Safety Alert Seat

Some driver assistance features alert the driver of obstacles by beeping. To change the volume of the warning chime, see "Comfort and Convenience" under *Vehicle Personalization on page 5-39*.

If equipped with the Safety Alert Seat, the driver seat cushion may provide a vibrating pulse alert instead of beeping. To change this, see "Collision/Detection Systems" under *Vehicle Personalization on page 5-39*.

Assistance Systems for Parking or Backing

If equipped, the Rear Vision Camera (RVC), Rear Parking Assist (RPA), Front Park Assist (FPA), Rear Automatic Braking (RAB) and Backing Warning System, and Rear Cross Traffic Alert (RCTA) may help the driver park or avoid objects. Always check around the vehicle when parking or backing.

When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the center stack display. The previous screen displays when the vehicle is shifted out of R (Reverse) after a short delay. To return to the previous screen sooner, press a button on the infotainment system, shift into P (Park), or reach a vehicle speed of 8 km/h (5 mph).

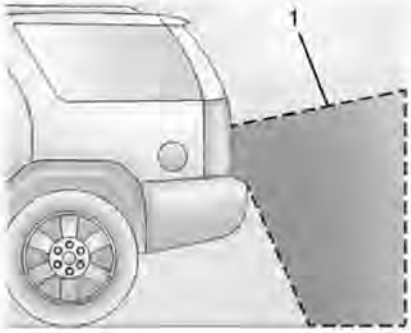
⚠ Warning

The RVC system does not display children, pedestrians, bicyclists, crossing traffic, animals, or any other object located outside the camera's field of view, below the bumper, or under the vehicle. Perceived distances may be different from actual distances. Do not back the vehicle using only the RVC screen. Failure to use proper care before backing may result in injury, death,

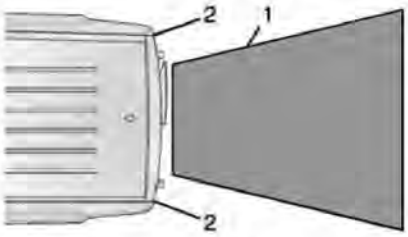
(Continued)

Warning (Continued)

or vehicle damage. Always check behind and around the vehicle before backing.



1. View Displayed by the Camera



1. View Displayed by the Camera
2. Corners of the Rear Bumper

Displayed images may be farther or closer than they appear. The area displayed is limited and objects that are close to either corner of the bumper or under the bumper do not display.

A warning triangle may display on the RVC screen to show where the RPA has detected an object. This triangle changes from amber to red and increases in size the closer the object.

If equipped, Rear Cross Traffic Alert (RCTA), displays a red warning triangle with a left or right pointing arrow on the RVC screen to warn of traffic coming from the left or right. This system detects objects coming from up to 20 m (65 ft) from the left or right side of the vehicle. When an object is detected, either three beeps sound from the left or right or three Safety Alert Seat pulses occur on the left or right side, depending on the direction of the detected vehicle.

Use caution while backing up when towing a trailer, as the RCTA detection zones that extend out from the back of the vehicle do not move further back when a trailer is towed.

With RPA, and if equipped with FPA, as the vehicle moves at speeds of less than 8 km/h (5 mph) the sensors on the bumpers may detect objects up to 2.5 m (8 ft) behind and 1.2 m (4 ft) in front of the vehicle within a zone 25 cm (10 in) high off the ground and below bumper level. These detection distances may be shorter during warmer or humid weather. Blocked sensors will not

detect objects and can also cause false detections. Keep the sensors clean of mud, dirt, snow, ice, and slush; and clean sensors after a car wash in freezing temperatures.

⚠ Warning

The parking assist system does not detect children, pedestrians, bicyclists, animals, or objects located below the bumper or that are too close or too far from the vehicle. It is not available at speeds greater than 8 km/h (5 mph). To prevent injury, death, or vehicle damage, even with parking assist, always check the area around the vehicle and check all mirrors before moving forward or backing.

The instrument cluster may have a parking assist display with bars that show "distance to object" and object location information for RPA, and on some vehicles, FPA. As the object gets closer, more bars light up and the bars change color from yellow to amber to red.

When an object is first detected in the rear, one beep will be heard from the rear, or both sides of the Safety Alert Seat will pulse two times. When an object is very close (<0.6 m (2 ft) in the vehicle rear, or <0.3 m (1 ft) in the vehicle front), five beeps will sound from the front or rear depending on object location, or both sides of the Safety Alert Seat will pulse five times.

Beeps for Front Parking Assist are higher pitched than for Rear Parking Assist.

Vehicles with Adaptive Cruise Control (ACC) have the Backing Warning and Rear Automatic Braking (RAB) system. The Backing Warning part of this system can warn of rear objects when backing up at speeds greater than 8 km/h (5 mph).

The Backing Warning System will beep once from the rear when an object is first detected, or pulse twice on both sides of the Safety Alert Seat. When the system detects a potential crash, beeps will be heard from the rear, or five pulses will be felt on both sides of the Safety Alert Seat. There may also be a brief, sharp application of the brakes.

⚠ Warning

The Backing Warning System only operates at speeds greater than 8 km/h (5 mph). It does not detect children, pedestrians, bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. In some situations, such as at higher backing speeds, there may not be enough time for the short, sharp application of the vehicle brake system to occur. To prevent injury, death, or vehicle damage, even with the Backing Warning System, always check the area around the vehicle and check all mirrors before backing.

When the vehicle is in R (Reverse) and if it is backing too fast to avoid a crash with a detected object directly behind the vehicle, the Rear Automatic Braking (RAB) system may automatically brake hard to a stop to help avoid or reduce the harm caused by a backing crash.

⚠ Warning

Rear Automatic Braking may not avoid many types of backing crashes. Do not wait for the automatic braking to apply. This system is not designed to replace driver braking and only works in R (Reverse) when an object is detected directly behind the vehicle. It may not brake or stop in time to avoid a crash. It will not brake for objects when the vehicle is moving at very low speeds. It does not detect children, pedestrians, bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. To prevent injury, death, or vehicle damage, even with Rear

(Continued)

Warning (Continued)

Automatic Braking, always check the area around the vehicle before and while backing.

Pressing the brake pedal after the vehicle comes to a stop will release the Rear Automatic Braking. If the brake pedal is not pressed soon after the stop, the Electric Parking Brake (EPB) may be set. When it is safe, press the accelerator pedal firmly at any time to override the Rear Automatic Braking.

⚠ Warning

There may be instances where unexpected or undesired automatic braking occurs. If this happens, either press the brake pedal or firmly press the accelerator pedal to release the brakes from the Rear Automatic

(Continued)

Warning (Continued)
Braking system. Before releasing the brakes, check the RVC screen and check the area around the vehicle to make sure it is safe to proceed.

Turning the Features On or Off

The P button near the shift lever is used to turn on or off the Front and Rear Parking Assist, Rear Automatic Braking, and Backing Warning System at the same time. The indicator light next to the button comes on when the features are on and turns off when the features have been disabled.

Turn off parking assist and Rear Automatic Braking when towing a trailer.

To turn the parking assist symbols or guidance lines on or off:

1. On the infotainment system, press the Settings screen button, or turn the MENU knob to highlight Settings and press MENU.
2. Select Rear Camera.
3. Press Rear Park Assist Symbols or Guidance Lines and then select Off or On.

RCTA can be turned on or off through vehicle personalization. See "Collision/Detection Systems" under *Vehicle Personalization on page 5-39*.

Assistance Systems for Driving

If equipped, when driving the vehicle forward, Forward Collision Alert (FCA), Lane Departure Warning (LDW), Side Blind Zone Alert (SBZA), and/or the Active Emergency Braking System can help to avoid a crash or reduce crash damage.

Forward Collision Alert (FCA) System

If equipped, the FCA system may help to avoid or reduce the harm caused by front-end crashes. When approaching a vehicle ahead too quickly, FCA provides a red flashing alert on the windshield and rapidly beeps or pulses the driver seat. FCA also lights an amber visual alert if following another vehicle much too closely.

FCA detects vehicles within a distance of approximately 60 m (197 ft) and operates at speeds above 40 km/h (25 mph). If the vehicle has Adaptive Cruise Control (ACC), it can detect vehicles to distances of approximately 110 m (360 ft) and operates at all speeds. See *Adaptive Cruise Control on page 9-35*.

⚠ Warning

FCA is a warning system and does not apply the brakes. When approaching a slower-moving or stopped vehicle ahead too rapidly, or when following a vehicle too closely, FCA may not provide a warning with enough time to help avoid a crash. FCA does not warn of pedestrians, animals, signs, guardrails, bridges, construction barrels, or other objects. Be ready to take action and apply the brakes. For more information, see *Defensive Driving on page 9-3*.

FCA can be disabled with the FCA steering wheel control, or if your vehicle is equipped with Adaptive Cruise Control (ACC), through vehicle personalization. See the "Auto Collision Preparation" portion of "Collision/Detection Systems" under *Vehicle Personalization on page 5-39*.

Detecting the Vehicle Ahead

FCA warnings will not occur unless the FCA system detects a vehicle ahead. When a vehicle is detected, the vehicle-ahead indicator will display green. Vehicles may not be detected on curves, highway exit ramps, or hills; or due to poor visibility. FCA will not detect another vehicle ahead until it is completely in the driving lane.

⚠ Warning

FCA does not provide a warning to help avoid a crash, unless it detects a vehicle. FCA may not detect a vehicle ahead if the FCA sensor is blocked by dirt, snow, or ice, or if the windshield is damaged. It may also not detect a vehicle on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and FCA sensors clean and in good repair.

Collision Alert

When your vehicle approaches another detected vehicle too rapidly, the red FCA display will flash on the windshield. Also, eight rapid high-pitched beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. When this Collision Alert occurs, the brake system may prepare for driver braking to occur more rapidly which can cause a brief, mild deceleration. Continue to apply the brake pedal as needed. Cruise control may be disengaged when the Collision Alert occurs.

Tailgating Alert

The vehicle-ahead indicator will display amber when you are following a detected vehicle ahead much too closely.

Selecting the Alert Timing

The Collision Alert control is on the steering wheel. Press on the steering wheel to set the FCA timing to far, medium, near, or on some vehicles, off. The first button press shows the current setting on the DIC. Additional button presses will change this setting. The chosen setting will remain until it is changed and will affect the timing of both the Collision Alert and the Tailgating Alert features. The timing of both alerts will vary based on vehicle speed. The faster the vehicle speed, the farther away the alert will occur. Consider traffic and weather conditions when selecting the alert timing. The range of selectable alert timing may not be appropriate for all drivers and driving conditions.

If your vehicle is equipped with Adaptive Cruise Control (ACC), changing the FCA timing setting automatically changes the following gap setting (Far, Medium, or Near).

Unnecessary Alerts

FCA may provide unnecessary alerts for turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.

Cleaning the System

If the FCA system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor on the back of the rearview mirror, and cleaning the

front of the vehicle where radar sensors are located (if equipped with ACC), may correct the issue.

Active Emergency Braking System

If the vehicle has Adaptive Cruise Control (ACC) it also has the Active Emergency Braking System, which includes Intelligent Brake Assist (IBA) and the Automatic Collision Preparation (ACP) System. These systems can provide a boost to braking or automatically brake the vehicle to help avoid or lessen the severity of crashes when driving in a forward gear.

Intelligent Brake Assist (IBA)

IBA may activate when the brake pedal is applied quickly by providing a boost to braking based on the speed of approach and distance to a vehicle ahead.

Minor brake pedal pulsations or pedal movement during this time is normal and the brake pedal should continue to be applied as needed. IBA will automatically disengage only when the brake pedal is released.

⚠ Warning

IBA may increase vehicle braking in situations when it may not be necessary. You could block the flow of traffic. If this occurs, take your foot off the brake pedal and then apply the brakes as needed.

Automatic Collision Preparation (ACP) System

When driving in a forward gear above 4 km/h (2.5 mph), ACP may help reduce crash damage by applying the brakes. It has a detection range of approximately 60 m (197 ft). This front automatic braking can only occur if a vehicle is detected. This is shown by the FCA vehicle ahead indicator being lit. See *Forward Collision Alert (FCA) System on page 9-48*.

⚠ Warning

ACP is an emergency crash preparation feature and is not designed to avoid crashes. Do not rely on ACP to brake the vehicle.

ACP may not:

- Respond to stopped vehicles, pedestrians, or animals.
- Detect a vehicle ahead on winding or hilly roads.
- Detect a stopped or slow-moving vehicle or other object ahead.
- Detect a vehicle when weather limits visibility, such as in fog, rain, or snow. In these situations, ACP sensor performance is limited.

(Continued)

Warning (Continued)

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

Brake Preparation

When quickly approaching a vehicle ahead, Brake Preparation reduces brake response time by having the brake system prepared for driver braking to occur more rapidly.

Automatic Braking

If ACP detects it is about to crash with the vehicle you are following that is moving or has come to a stop, and the brakes have not been applied, it may automatically brake hard. This can help to reduce crash damage and it may even help to avoid some very low speed crashes. Automatic Braking may slow the vehicle to a complete stop to try to avoid a potential crash. If this happens, Automatic Braking may engage the Electric Parking Brake (EPB) to hold the vehicle at a stop. To release the EPB, press the EPB button. A firm press of the accelerator pedal will also release Automatic Braking and the EPB.

⚠ Warning

Automatic Braking may automatically brake the vehicle suddenly in situations where it is unexpected and undesired. It could respond to a turning vehicle ahead, guardrails, signs, and other non-moving objects. To override Automatic Braking, firmly press the accelerator pedal, if it is safe to do so.

Automatic Braking can be disabled or reduced through vehicle personalization. See the "Auto Collision Preparation" portion of "Collision/Detection Systems" under *Vehicle Personalization on page 5-39*.

⚠ Warning

Using the Automatic Collision Preparation System while towing a trailer could cause you to lose control of the vehicle and crash. Turn the system off when towing a trailer.

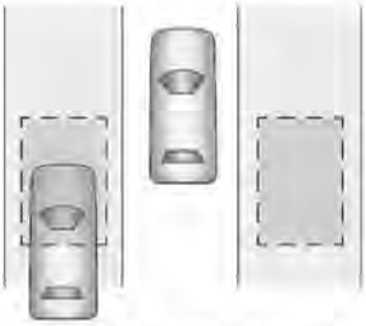
Side Blind Zone Alert (SBZA)

If equipped, the SBZA system is a lane-changing aid that assists drivers with avoiding crashes that occur with vehicles in the side blind zone (or spot) areas. The SBZA warning display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

⚠ Warning

SBZA does not alert the driver to vehicles rapidly approaching outside of the side blind zones, pedestrians, bicyclists, or animals. It may not provide alerts when changing lanes under all driving conditions. Failure to use proper care when changing lanes may result in injury, death, or vehicle damage. Before making a lane change, always check mirrors, glance over your shoulder, and use the turn signals.

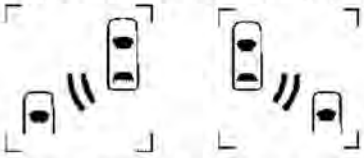
SBZA Detection Zones



The SBZA sensor covers a zone of approximately one lane over from both sides of the vehicle, or 3.5 m (11 ft). The height of the zone is approximately between 0.5 m (1.5 ft) and 2 m (6 ft) off the ground. This zone starts at approximately the middle of the vehicle and goes back 5 m (16 ft).

How the System Works

The SBZA symbol lights up in the side mirrors when the system detects a vehicle in the next lane over that is in the side blind zone. This indicates it may be unsafe to change lanes. Before making a lane change, check the SBZA display, check mirrors, glance over your shoulder, and use the turn signals.



Left Side Mirror Display **Right Side Mirror Display**

When the vehicle is started, both outside mirror SBZA displays will briefly come on to indicate the system is operating. When the vehicle is moving forward, the left or right side mirror display will light up if a vehicle is detected in that blind zone. If the turn signal is activated in the same direction of a detected vehicle, this display will flash as an extra warning not to change lanes.

SBZA can be disabled through vehicle personalization. See "Collision Detection Systems" under *Vehicle Personalization on page 5-39*. If SBZA is disabled by the driver, the SBZA mirror displays will not light up.

When the System Does Not Seem to Work Properly

SBZA displays may not come on when passing a vehicle quickly or when towing a trailer. The SBZA detection zones that extend back from the side of the vehicle do not move further back when a trailer is towed. Use caution while changing lanes when towing a trailer. SBZA may alert to objects attached to the vehicle, such as a trailer, bicycle, or object extending out to either side of the vehicle. This is normal system operation; the vehicle does not need service.

SBZA may not always alert the driver to vehicles in the side blind zone, especially in wet conditions. The system does not need to be serviced. The system may light up due to guardrails, signs, trees, shrubs, and other non-moving objects. This is normal system operation; the vehicle does not need service.

SBZA may not operate when the SBZA sensors in the left or right corners of the rear bumper are covered with mud, dirt, snow, ice, or slush, or in heavy rainstorms. For cleaning instructions, see "Washing the Vehicle" under *Exterior Care on page 10-85*. If the DIC still displays the system unavailable message after cleaning both sides of the vehicle toward the rear corners of the vehicle, see your dealer.

If the SBZA displays do not light up when vehicles are in the blind zone and the system is clean, the system may need service. Take the vehicle to your dealer.

When SBZA is disabled for any reason other than the driver turning it off, the Side Blind Zone Alert On option will not be available on the personalization menu.

Radio Frequency Information

See *Radio Frequency Statement on page 13-12*.

Lane Departure Warning (LDW)

If equipped, LDW may help avoid crashes due to unintentional lane departures. It may provide an alert if the vehicle is crossing a lane without using a turn signal in that direction. LDW uses a camera sensor to detect the lane markings at speeds of 56 km/h (35 mph) or greater.

⚠ Warning

The LDW system does not steer the vehicle. The LDW system may not:

- Provide enough time to avoid a crash.
- Detect lane markings under poor weather or visibility conditions. This can occur if the windshield or headlamps are blocked by dirt, snow, or ice; if they are not in proper condition; or if the sun shines directly into the camera.
- Detect road edges.
- Detect lanes on winding or hilly roads.

If LDW only detects lane markings on one side of the road, it will only warn you when departing the lane on the side where it has detected a lane

(Continued)

Warning (Continued)

marking. Always keep your attention on the road and maintain proper vehicle position within the lane, or vehicle damage, injury, or death could occur. Always keep the windshield, headlamps, and camera sensors clean and in good repair. Do not use LDW in bad weather conditions.

How the System Works

The LDW camera sensor is on the windshield ahead of the rearview mirror.

To turn LDW on and off, press near the shift lever. The control indicator will light when LDW is on.

When LDW is on, is green if LDW is available to warn of a lane departure. If the vehicle crosses a detected lane marking without using the turn signal in that direction, changes to amber and flashes. Additionally, there will be three beeps, or the driver seat will pulse three times, on the right or left, depending on the lane departure direction.

When the System Does Not Seem to Work Properly

The system may not detect lanes as well when there are:

- Close vehicles ahead.
- Sudden lighting changes, such as when driving through tunnels.
- Banked roads.

If the LDW system is not functioning properly when lane markings are clearly visible, cleaning the windshield may help.

LDW alerts may occur due to tar marks, shadows, cracks in the road, temporary or construction lane markings, or other road imperfections. This is normal system operation; the vehicle does not need service. Turn LDW off if these conditions continue.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of this vehicle. When driving in the U.S. and Canada, to help keep the engine clean and maintain optimum vehicle performance, we recommend using TOP TIER Detergent Gasolines. See www.toptiergas.com for a list of TOP TIER Detergent Gasolines.

TOP TIER Detergent Gasoline

CATEGORIE SUPERIEURE Essences Detergentes

Use regular unleaded gasoline meeting ASTM specification D4814 with a posted octane rating of 87 or higher. Do not use gasoline with an octane rating below 87, as it may cause engine damage and will lower fuel economy.

Use of Seasonal Fuels

Use summer and winter fuels in the appropriate season. The fuels industry automatically modifies the fuel for the appropriate season. If fuel is left in the vehicle tank for long periods of time, driving or starting could be affected. Drive the vehicle until the fuel is at one-half tank or less, then refuel with the current seasonal fuel.

Prohibited Fuels

Gasolines containing oxygenates such as ethers and ethanol, as well as reformulated gasolines, are available in some cities. If these gasolines comply with the previously described specification, then they are acceptable to use. However, E85 (85% ethanol) and other fuels containing more than 15% ethanol must be used only in FlexFuel vehicles.

⚠ Caution

Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.

Some gasolines, mainly high octane racing gasolines, can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). Do not use gasolines and/or fuel additives with MMT as they can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp may turn on. If this occurs, see your dealer for service.

California Fuel Requirements

If the vehicle is certified to meet California Emissions Standards, it is designed to operate on fuels that meet California specifications. See the underhood emission control label. If this fuel is not available in states adopting California Emissions Standards, the vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system performance might be affected. The malfunction indicator lamp could turn on and the vehicle may not pass a smog-check test. See *Malfunction Indicator Lamp on page 5-15*. If this occurs, return to your authorized dealer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs may not be covered by the vehicle warranty.

Fuels in Foreign Countries

If planning to drive in countries outside the U.S. or Canada, the proper fuel might be hard to find. Check regional auto club or fuel retail brand websites for availability in the country where driving. Never use leaded gasoline, fuel containing methanol, manganese, or any other fuel not recommended. Costly repairs caused by use of improper fuel would not be covered by the vehicle warranty.

Fuel Additives

To keep fuel systems clean, TOP TIER Detergent Gasoline is recommended. See *Fuel on page 9-56*.

If TOP TIER Detergent Gasoline is not available, one bottle of Fuel System Treatment PLUS added to the fuel tank at every engine oil change, can help. Fuel System Treatment PLUS is the only

gasoline additive recommended by General Motors. It is available at your dealer.

Filling the Tank

⚠ Warning

Fuel vapors and fuel fires burn violently and can cause injury or death.

- To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island.
- Turn off the engine when refueling.
- Keep sparks, flames, and smoking materials away from fuel.
- Do not leave the fuel pump unattended.
- Do not reenter the vehicle while pumping fuel.

(Continued)

Warning (Continued)

- Keep children away from the fuel pump and never let children pump fuel.
- Fuel can spray out if the fuel cap is opened too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop then unscrew the cap all the way.

The fuel cap is located behind a hinged fuel door on the passenger side of the vehicle. If equipped, the fuel door is locked when the vehicle doors are locked. Press on the RKE transmitter to unlock. To open the fuel door, push and release the rearward center edge of the door.

To remove the fuel cap, turn it slowly counterclockwise.

While refueling, hang the tethered fuel cap from the hook on the fuel door.

When reinstalling the cap, turn it clockwise until it clicks once, otherwise the malfunction indicator lamp could turn on. See *Malfunction Indicator Lamp on page 5-15*.

Be careful not to spill fuel. Do not top off or overfill the tank and wait a few seconds after you have finished pumping before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care on page 10-85*.

When replacing the fuel cap, turn it clockwise until it clicks once. Make sure the cap is fully installed. The diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See *Malfunction Indicator Lamp on page 5-15*.

⚠ Warning

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

⚠ Caution

If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap may not fit properly, may cause the malfunction indicator lamp to light, and could damage the fuel tank and emissions system. See *Malfunction Indicator Lamp on page 5-15*.

Filling a Portable Fuel Container

⚠ Warning

Filling a portable fuel container while it is in the vehicle can cause fuel vapors that can ignite either by static electricity or other means. You or others could be badly burned and the vehicle could be damaged. Always:

- Use approved fuel containers.
- Remove the container from the vehicle, trunk, or pickup bed before filling.
- Place the container on the ground.

(Continued)

Warning (Continued)

- Place the nozzle inside the fill opening of the container before dispensing fuel, and keep it in contact with the fill opening until filling is complete.
- Fill the container no more than 95% full to allow for expansion.
- Do not smoke, light matches, or use lighters while pumping fuel.
- Avoid using cell phones or other electronic devices.

Trailer Towing

General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer. Read the entire section before towing a trailer.

For towing a disabled vehicle, see *Towing the Vehicle on page 10-82*. For towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing on page 10-82*.

Driving Characteristics and Towing Tips

Driving with a Trailer

When towing a trailer:

- Become familiar with the state and local laws that apply specifically to trailer towing.
- Do not tow a trailer during the first 800 km (500 mi), to prevent damage to the engine, axle or other parts.
- Then, during the first 800 km (500 mi) trailer towing, do not drive over 80 km/h (50 mph) and do not make starts at full throttle.
- The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.
- Do not use Adaptive Cruise Control when towing.
- The Automatic Collision Preparation System should be set to "Off" when towing. See *Active Emergency Braking System on page 9-51*.
- Turn off Park Assist when towing.

⚠ Warning

When towing a trailer, exhaust gases may collect at the rear of the vehicle and enter if the liftgate, trunk/hatch, or rear-most window is open.

When towing a trailer:

- Do not drive with the liftgate, trunk/hatch, or rear-most window open.
- Fully open the air outlets on or under the instrument panel.
- Also adjust the Climate Control system to a setting that brings in only outside air. See "Climate Control Systems" in the Index.

For more information about Carbon Monoxide, see *Engine Exhaust on page 9-21*.

Towing a trailer requires a certain amount of experience. The combination you are driving is longer and not as responsive as the vehicle itself. Get acquainted with the handling and braking of the rig before setting out for the open road.

Before starting, check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tires, and mirrors. If the trailer has electric brakes, start the combination moving and then apply the trailer brake controller by hand to be sure the brakes work.

During the trip, check occasionally to be sure that the load is secure and the lamps and any trailer brakes still work.

Towing with a Stability Control System

When towing, the sound of the stability control system might be heard. The system is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid situations that require heavy braking and sudden turns.

Passing

More passing distance is needed when towing a trailer. Because the rig is longer, it is necessary to go farther beyond the passed vehicle before returning to the lane.

Backing Up

Hold the bottom of the steering wheel with one hand. To move the trailer to the left, move your hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

Making Turns

⚠ Caution

Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.

When turning with a trailer, make wider turns than normal so the trailer will not strike soft shoulders, curbs, road signs, trees or other objects. Use the turn signal well in advance and avoid jerky or sudden maneuvers.

Turn Signals When Towing a Trailer

The turn signal indicators on the instrument cluster flash whenever signaling a turn or lane change. Properly hooked up, the trailer lamps also flash, telling other drivers the vehicle is turning, changing lanes, or stopping.

When towing a trailer, the arrows on the instrument cluster flash for turns even if the bulbs on the trailer are burned out. Check occasionally to be sure the trailer bulbs are still working.

Driving on Grades

Reduce speed and shift to a lower gear before starting down a long or steep downgrade. If the transmission is not shifted down, the brakes might have to be used so much that they would get hot and no longer work well.

The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.

When towing at high altitude on steep uphill grades, engine coolant boils at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle could show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating on page 10-16*.

Parking on Hills

⚠ Warning

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the brake pedal until the chocks absorb the load.
4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
5. Release the brake pedal.

Leaving After Parking on a Hill

1. Apply and hold the brake pedal while you:
   - Start the engine.
   - Shift into a gear.
   - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance When Trailer Towing

The vehicle needs service more often when pulling a trailer. See the *Maintenance Schedule on page 11-3*. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system, and brake system. Inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Engine Cooling When Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating on page 10-16*.

Trailer Towing

Before pulling a trailer, there are three important considerations that have to do with weight:

- The weight of the trailer.
- The weight of the trailer tongue.
- The total weight on the vehicle's tires.

Weight of the Trailer

How heavy can a trailer safely be?

It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature and how much the vehicle is used to pull a trailer are all important. It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry. See "Weight of the Trailer Tongue" later in this section.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Use the following chart to determine how much the vehicle can weigh, based upon the vehicle model and options.

Vehicle	Maximum Trailer Weight	GCWR*	Maximum Tongue Weight
3.6L Engine, FWD without Trailering Package	1 134 kg (2,500 lb)	3 185 kg (7,022 lb)	113 kg (250 lb)
3.6L Engine, FWD with Trailering Package	1 588 kg (3,500 lb)	3 640 kg (8,025 lb)	159 kg (350 lb)
3.6L Engine, AWD without Trailering Package	1 134 kg (2,500 lb)	3 270 kg (7,209 lb)	113 kg (250 lb)
3.6L Engine, AWD with Trailering Package	1 588 kg (3,500 lb)	3 725 kg (8,212 lb)	159 kg (350 lb)
*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversions. The GCWR for the vehicle should not be exceeded.			

Ask your dealer for trailering information or advice.

Weight of the Trailer Tongue

The tongue load (1) of any trailer is an important weight to measure because it affects the total gross weight of the vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo carried in it, and the people who will be riding in the vehicle.

If there are a lot of options, equipment, passengers or cargo in the vehicle, it will reduce the tongue weight the vehicle can carry, which will also reduce the trailer weight the vehicle can tow. If towing a trailer, the tongue load must be added to the GVW because the vehicle will be carrying that weight, too. See *Vehicle Load Limits on page 9-9* for more information about the vehicle's maximum load capacity.

1 2

If a weight-carrying hitch or a weight-distributing hitch is being used, the trailer tongue (1) should weigh 10-15 percent of the total loaded trailer weight (2).

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

Trailering may be limited by the vehicle's ability to carry tongue weight. Tongue weight cannot cause the vehicle to exceed the GVWR (Gross Vehicle Weight Rating) or the RGAWR (Rear Gross Axle Weight Rating). The effect of additional weight may reduce the trailering capacity more than the total of the additional weight.

It is important that the vehicle does not exceed any of its ratings — GCWR, GVWR, RGAWR, Maximum Trailer Rating or Tongue Weight.

The only way to be sure it is not exceeding any of these ratings is to weigh the vehicle and trailer.

Total Weight on the Vehicle's Tires

Be sure the vehicle's tires are inflated to the upper limit for cold tires. These numbers can be found on the Certification label or see *Vehicle Load Limits on page 9-9*. Make sure not to go over the GVW limit for the vehicle, or the GAWR, including the weight of the trailer tongue. If using a weight distributing hitch, make sure not to go over the rear axle limit before applying the weight distribution spring bars.

Towing Equipment

Hitches

It is important to have the correct hitch equipment. Crosswinds, large trucks going by, and rough roads are a few reasons why the right hitch is needed.

- The rear bumper on the vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will any holes be made in the body of the vehicle when the trailer hitch is installed? If there are, then be sure to seal the holes later when the hitch is removed. If the holes are not sealed, dirt, water, and deadly carbon monoxide (CO) from the exhaust can get into the vehicle. See *Engine Exhaust on page 9-21*.

Hitch Cover

To remove the hitch cover, if equipped:

1. Turn the fasteners on the lower tabs 90 degrees counterclockwise.
2. Lift the lower edge of the cover about 45 degrees.
3. Pull the cover downward to disengage the upper attachments.

To reinstall the hitch cover:

1. Hold the cover at a 45 degree angle to the vehicle and push the upper tabs in the hitch cover into the slots in the fascia.
2. Move the bottom of the cover forward until the lower tabs line up with the lower fascia slots.
3. Snap the hitch cover into place by pushing the upper corners forward.
4. Turn the fasteners on the lower tabs 90 degrees clockwise to lock the cover in place.

Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Always leave just enough slack so the rig can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

A loaded trailer that weighs more than 450 kg (1,000 lb) needs to have its own brake system that is adequate for the weight of the trailer. Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted, and maintained properly.

Because the vehicle has antilock brakes, do not tap into the vehicle's brake system. If you do, both brake systems will not work well, or at all.

Trailer Sway Control (TSC)

The vehicle has a TSC feature as part of the StabiliTrak system. If TSC detects that the trailer is swaying, the vehicle's brakes are automatically applied.

When TSC is applying the brakes, the TCS/StabiliTrak indicator light flashes to notify the driver to reduce speed. If the trailer continues to sway, StabiliTrak will reduce engine torque to help slow the vehicle.

TSC will not function if StabiliTrak is turned off. See *Traction Control/ Electronic Stability Control on page 9-30*.

Conversions and Add-Ons

Add-On Electrical Equipment

⚠ Caution

Some electrical equipment can damage the vehicle or cause components to not work and would not be covered by the warranty. Always check with your dealer before adding electrical equipment.

Add-on equipment can drain the vehicle's 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see *Servicing the Airbag-Equipped Vehicle on page 3-31* and *Adding Equipment to the Airbag-Equipped Vehicle on page 3-31*.

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General Information

For service and parts needs, visit your dealer. You will receive genuine GM parts and GM-trained and supported service people.

Genuine GM parts have one of these marks:

ACDelco

Genuine GM Parts

GM Accessories

California Proposition 65 Warning

Most motor vehicles, including this one, contain and/or emit chemicals known to the State of California to

cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems, many fluids, and some component wear by-products contain and/or emit these chemicals.

California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, safety belt pretensioners, and lithium batteries contained in Remote Keyless Entry transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.

Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorize the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle on page 3-31.*

Vehicle Checks

Doing Your Own Service Work

⚠ Warning

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner manual procedures and consult the service manual for your vehicle before doing any service work.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can. To order the proper service manual, see *Service Publications Ordering Information on page 13-10.*

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle on page 3-31*.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records on page 11-14*.

⚠ Caution

Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.

Hood

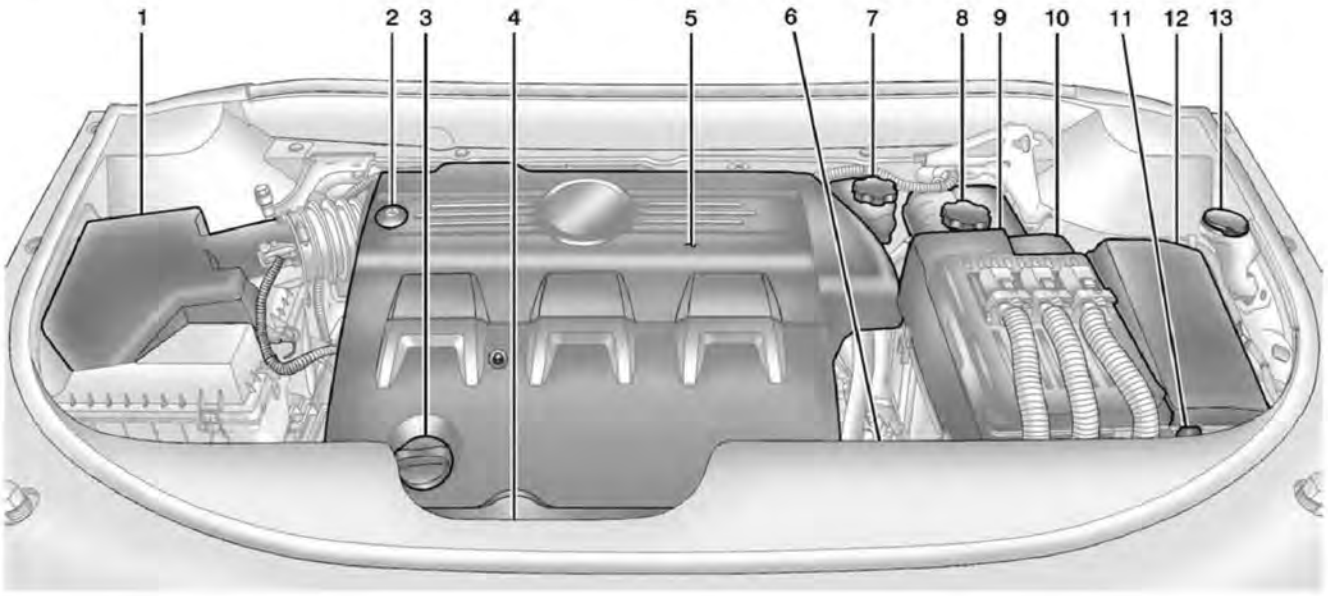
To open the hood:

1. Pull the release handle with the above symbol on it. It is located below the instrument panel to the left of the steering wheel.

2. Move the secondary hood release lever up to release the striker. The lever is located near the middle of the hood.
3. Lift the hood.

Before closing the hood, be sure all the filler caps are on properly.

Engine Compartment Overview



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1. *Engine Air Cleaner/Filter on page 10-10.*
2. Power Steering Reservoir and Cap (Under Engine Cover). See *Power Steering Fluid on page 10-18.*
3. Engine Oil Fill Cap. See *Engine Oil on page 10-7.*
4. Engine Oil Dipstick (Out of View). See *Engine Oil on page 10-7.*
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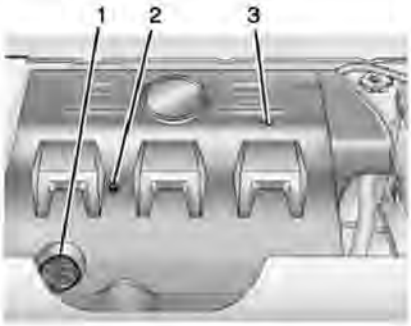
6. Transmission Fluid Cap and Dipstick (Out of View). See *Automatic Transmission Fluid on page 10-10.*
7. Brake Fluid Reservoir. See *Brakes on page 10-19.*
8. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 10-13.*
9. Battery (Out of View). See *Battery on page 10-21.*
10. Remote Positive (+) Terminal. See *Jump Starting on page 10-78.*
11. Remote Negative (−) Terminal (Out of View). See *Jump Starting on page 10-78.*
12. *Engine Compartment Fuse Block on page 10-33.*
13. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 10-18.*

Engine Cover



1. Oil Fill Cap
2. Engine Cover Bolt
3. Engine Cover

To remove:

1. Remove the oil fill cap (1).
2. Remove the engine cover bolt (2).
3. Raise the engine cover (3) to release from the retainers.
4. Lift and remove the engine cover.
5. Reverse Steps 1–4 to reinstall engine cover.

Engine Oil

To ensure proper engine performance and long life, careful attention must be paid to engine oil. Following these simple, but important steps will help protect your investment:

- Always use engine oil approved to the proper specification and of the proper viscosity grade. See "Selecting the Right Engine Oil" in this section.
- Check the engine oil level regularly and maintain the proper oil level. See "Checking Engine Oil" and "When to Add Engine Oil" in this section.
- Change the engine oil at the appropriate time. See *Engine Oil Life System on page 10-9*.
- Always dispose of engine oil properly. See "What to Do with Used Oil" in this section.

Checking Engine Oil

It is a good idea to check the engine oil level at each fuel fill. In order to get an accurate reading, the vehicle must be on level ground. The engine oil dipstick handle is a loop. See *Engine Compartment Overview on page 10-5* for the location of the engine oil dipstick.

1. If the engine has been running recently, turn off the engine and allow several minutes for the oil to drain back into the oil pan. Checking the oil level too soon after engine shutoff will not provide an accurate oil level reading.

⚠ Warning

The engine oil dipstick handle may be hot; it could burn you. Use a towel or glove to touch the dipstick handle.

2. Pull out the dipstick and wipe it with a clean paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

When to Add Engine Oil

If the oil is below the cross-hatched area at the tip of the dipstick, add 1 L (1 qt) of the recommended oil and then recheck the level. See "Selecting the Right Engine Oil" in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications on page 12-2*.

⚠ Caution

Do not add too much oil. Oil levels above or below the acceptable operating range shown on the dipstick are harmful to the engine. If you find that you have an oil level above the operating range, i.e., the engine has so much oil that the oil level gets above the cross-hatched area that shows the proper operating range, the engine could be damaged. You should drain out the excess oil or limit driving of the vehicle and seek a service professional to remove the excess amount of oil.

See *Engine Compartment Overview on page 10-5* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when finished.

Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade. See *Recommended Fluids and Lubricants on page 11-12*.

Specification

Ask for and use engine oils that meet the dexos1™ specification. Engine oils that have been approved by GM as meeting the dexos1 specification are marked with the dexos1 approved logo. See www.gmdexos.com.

⚠ Caution

Failure to use the recommended engine oil can result in engine damage not covered by the vehicle warranty. Check with your dealer or service provider on whether the oil is approved to the dexos1 specification.

Viscosity Grade

Use SAE 5W-30 viscosity grade engine oil.

Cold Temperature Operation: In an area of extreme cold, where the temperature falls below −29°C (−20°F), an SAE 0W-30 oil may be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, always select an oil of the correct specification. See "Specification" earlier in this section for more information.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils meeting the dexos1 specification are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Engine Oil Life System

When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. See *Engine Oil Messages on page 5-31*.

Change the oil as soon as possible within the next 1 000 km (600 mi). It is possible that, if driving under the best conditions, the oil life system might indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. To reset the system:

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-25*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-31*.
2. Press SEL on the DIC controls and hold SEL down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

The system is reset when the CHANGE ENGINE OIL SOON message is off.

If the CHANGE ENGINE OIL SOON message comes back on when the vehicle is started, the engine oil life system has not been reset. Repeat the procedure.

Automatic Transmission Fluid

A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer and have it repaired as soon as possible.

Change the fluid and filter at the intervals listed in *Maintenance Schedule on page 11-3*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants on page 11-12*.

Engine Air Cleaner/Filter

See *Engine Compartment Overview on page 10-5* for the location of the engine air cleaner/filter.

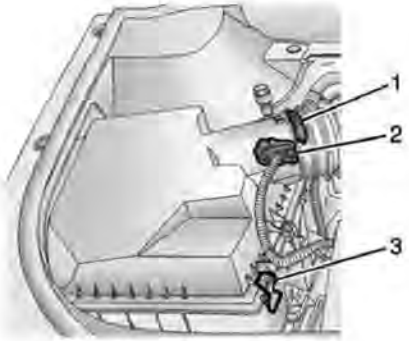
When to Inspect the Engine Air Cleaner/Filter

Inspect the air cleaner/filter at the scheduled maintenance intervals and replace it at the first oil change after each 80 000 km (50,000 mi) interval. See *Maintenance Schedule*

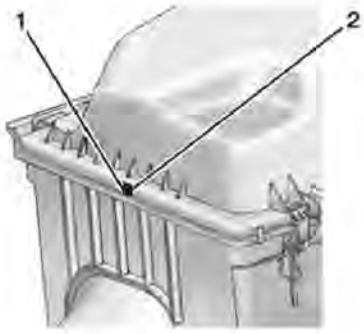
on page 11-3. If driving in dusty/dirty conditions, inspect the filter at each engine oil change.

How to Inspect the Engine Air Cleaner/Filter

To inspect the air cleaner/filter, remove the filter from the vehicle and lightly shake the filter to release loose dust and dirt. If the filter remains covered with dirt, a new filter is required. Never use compressed air to clean the filter.



1. Air Duct Clamp
2. Electrical Connector
3. Retaining Clips



1. Cover Cut Outs
2. Air Filter Tabs

To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood on page 10-4*.
2. Locate the air filter housing on the front passenger side of the engine compartment. See *Engine Compartment Overview on page 10-5*.
3. Disconnect the outlet duct by loosening the air duct clamp (1).
4. Disconnect the electrical connector (2). First, remove the connector lock clip at the bottom of the connector, then press on the top and bottom of the connector to remove.
5. Lift the retaining clips (3) on the air filter housing.
6. Tilt and lift the cover slightly upward and slide the cover away from outside edge of the vehicle. Remove the air filter.
7. To install the air filter, place filter inside box where the pleats fit in between the tabs inside the lower box. Ensure that the cover cut outs (1) on both sides match the air filter tabs (2) on both sides.
8. Replace air cleaner cover by inserting the four tabs into the slots. Lower cover to meet bottom of the box. Attach the retaining clips (3).

9. Reconnect outlet duct to the cover and tighten the air duct clamp (1).
10. Reconnect the electrical connector (2). Install connector lock clip to the bottom of connector.

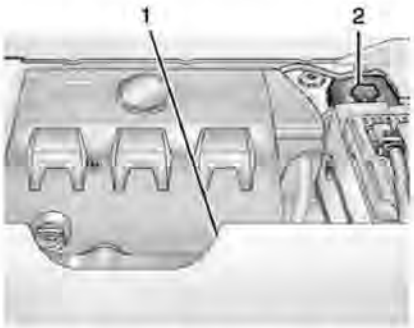
⚠ Warning

Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

⚠ Caution

If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when you are driving.

Cooling System



1. Engine Cooling Fan (Out of View)
2. Engine Coolant Surge Tank and Pressure Cap

⚠ Warning

An electric engine cooling fan under the hood can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood electric fan.

If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. The vehicle should be parked on a level surface.

The coolant level should be between the MIN and MAX lines. If it is not, the vehicle may have a leak at the radiator hoses, heater hoses, radiator, water pump, or somewhere else in the cooling system.

⚠ Warning

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.

If there seems to be no leak, with the engine on, check to see if the engine cooling fan is running. If the engine is overheating, the fan should be running. If it is not, the vehicle needs service. Turn off the engine.

⚠ Caution

Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner. Any repairs would not be covered by the vehicle warranty. Always use DEX-COOL (silicate-free) coolant in the vehicle.

Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL® engine coolant. This coolant needs to be checked and replaced at appropriate intervals. See *Maintenance Schedule on page 11-3*.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating on page 10-16*.

What to Use

⚠ Warning

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. If using this mixture, nothing else needs to be added. This mixture:

- Gives freezing protection down to −37°C (−34°F), outside temperature.
- Gives boiling protection up to 129°C (265°F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminum parts.
- Helps keep the proper engine temperature.

⚠ Caution

If improper coolant mixture, inhibitors, or additives are used in the vehicle cooling system, the engine could overheat and be damaged. Too much water in the

(Continued)

Caution (Continued)

mixture can freeze and crack engine cooling parts. The repairs would not be covered by the vehicle warranty. Use only the proper mixture of engine coolant for the cooling system. See *Recommended Fluids and Lubricants on page 11-12*.

Never dispose of engine coolant by putting it in the trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

Checking Coolant

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. If coolant is visible but the coolant level is not at the indicated mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system is cool before this is done. See *Engine Overheating on page 10-16*.

The coolant surge tank is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview on page 10-5*.

How to Add Coolant to the Coolant Surge Tank

⚠ Caution

This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.

⚠ Warning

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. Never turn the cap when the cooling system, including the surge tank pressure cap, is hot. Wait for the cooling system and surge tank pressure cap to cool.

⚠ Warning

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine

(Continued)

Warning (Continued)

could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

⚠ Caution

In cold weather, water can freeze and crack the engine, radiator, heater core, and other parts. Use the recommended coolant and the proper coolant mixture.

⚠ Warning

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.

1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This will allow any pressure still left to be vented out the discharge hose.
2. Keep turning the pressure cap slowly and remove it.
3. Fill the coolant surge tank with the proper mixture to the indicated level mark.
4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper mixture to the coolant surge tank until the level reaches the indicated level mark.
5. Replace the pressure cap tightly.
6. Verify coolant level after the engine is shut off and the coolant is cold. If necessary, repeat coolant fill procedure Steps 1–6.

   If the coolant still is not at the proper level when the system cools down again, see your dealer.

⚠ Caution

If the pressure cap is not tightly installed, coolant loss and possible engine damage may occur. Be sure the cap is properly and tightly secured.

Engine Overheating

The vehicle has an indicator to warn of engine overheating.

There is an engine coolant temperature warning light on the vehicle's instrument cluster. See *Engine Coolant Temperature Gauge on page 5-12*.

If the decision is made not to lift the hood when this warning appears, but instead get service help right away. See *Roadside Service on page 13-5*.

If the decision is made to lift the hood, make sure the vehicle is parked on a level surface.

Then check to see if the engine cooling fans are running. If the engine is overheating, both fans should be running. If they are not, do not continue to run the engine and have the vehicle serviced.

⚠ Caution

Running the engine without coolant may cause damage or a fire. Vehicle damage would not be covered by the vehicle warranty.

If Steam Is Coming from the Engine Compartment

⚠ Warning

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down.

(Continued)

Warning (Continued)

Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when the engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop the engine if it overheats, and get out of the vehicle until the engine is cool.

If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day.
- Stops after high-speed driving.
- Idles for long periods in traffic.
- Tows a trailer.

If the overheat warning displays with no sign of steam:

1. Turn the air conditioning off.
2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
3. When it is safe to do so, pull off the road, shift to P (Park) or N (Neutral), and let the engine idle.

If the temperature overheat gauge is no longer in the overheat zone or an overheat warning no longer displays, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe vehicle distance from the vehicle in front. If the warning does not come back on, continue to drive normally and have the cooling system checked for proper fill and function.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

Power Steering Fluid

See *Engine Compartment Overview on page 10-5* for reservoir location.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless a leak is suspected in the system or unusual noise is heard. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

To check the power steering fluid:

1. Turn the engine off and let the engine compartment cool down.
2. Remove the engine cover, if required. See *Engine Cover on page 10-6*.
3. Wipe the cap and the top of the reservoir clean.
4. Unscrew the cap and wipe the dipstick with a clean rag.
5. Replace the cap and completely tighten it.
6. Remove the cap again and look at the fluid level on the dipstick.

The level should be within the HOT mark. If necessary, add only enough fluid to bring the level within the mark.

What to Use

⚠ Caution

Use of the incorrect fluid may damage the vehicle and the damages may not be covered by the vehicle warranty. Always use the correct fluid listed in *Recommended Fluids and Lubricants on page 11-12*.

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants on page 11-12*. Always use the proper fluid.

Washer Fluid

What to Use

When windshield washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall

below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid

The WASHER FLUID LOW ADD FLUID message appears on the Driver Information Center (DIC) when the fluid level is low. See *Washer Fluid Messages on page 5-38*.

Open the cap with the washer symbol on it. Add washer fluid up to the fill mark. See *Engine Compartment Overview on page 10-5* for reservoir location.

⚠ Caution

- Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.
- Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.
- When using concentrated washer fluid, follow the manufacturer instructions for adding water.
- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.

Brakes

Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or be heard all the time when the vehicle is moving, except when applying the brake pedal firmly.

⚠ Warning

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

⚠ Caution

Continuing to drive with worn-out brake pads could result in costly brake repair.

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications. See *Capacities and Specifications on page 12-2*.

Brake pads should be replaced as complete sets.

Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service may be required.

Replacing Brake System Parts

Always replace brake system parts with new, approved replacement parts. If this is not done, the brakes may not work properly. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed or parts are improperly installed.

Brake Fluid

The brake master cylinder reservoir is filled with DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview on page 10-5* for the location of the reservoir.

There are only two reasons why the brake fluid level in the reservoir might go down:

- The brake fluid level goes down because of normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake hydraulic system can also cause a low fluid level. Have the brake hydraulic system fixed, since a leak means that sooner or later the brakes will not work well.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove brake fluid, as necessary, only when work is done on the brake hydraulic system.

⚠ Warning

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light on page 5-18.*

What to Add

Use only new DOT 3 brake fluid from a sealed container. See *Recommended Fluids and Lubricants on page 11-12.*

Always clean the brake fluid reservoir cap and the area around the cap before removing it. This helps keep dirt from entering the reservoir.

⚠ Warning

With the wrong kind of fluid in the brake hydraulic system, the brakes might not work well. This could cause a crash. Always use the proper brake fluid.

⚠ Caution

- Using the wrong fluid can badly damage brake hydraulic system parts. For example, just a few drops of mineral-based oil, such as engine oil, in the brake hydraulic system can damage brake hydraulic system parts so badly that they will have to be replaced. Do not let someone put in the wrong kind of fluid.

(Continued)

Caution (Continued)

- If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on the vehicle. If you do, wash it off immediately.

Battery

The original equipment battery is maintenance free. Do not remove the cap and do not add fluid.

Refer to the replacement number shown on the original battery label when a new battery is needed. See *Engine Compartment Overview on page 10-5* for battery location.

⚠ Warning

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Vehicle Storage

⚠ Warning

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. See *Jump Starting on page 10-78* for tips on working around a battery without getting hurt.

Infrequent Usage: Remove the black, negative (−) cable from the battery to keep the battery from running down.

Extended Storage: Remove the black, negative (−) cable from the battery or use a battery trickle charger.

All-Wheel Drive

Transfer Case

Under normal driving conditions, transfer case fluid does not require changing or checking unless there is a fluid leak or unusual noise. If required, have the transfer case serviced by your dealer.

Starter Switch Check

⚠ Warning

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.
2. Apply both the parking brake and the regular brake.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

Automatic Transmission Shift Lock Control Function Check

⚠ Warning

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.
2. Apply the parking brake. Be ready to apply the regular brake immediately if the vehicle begins to move.
3. With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the shift lever out of P (Park) with normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

Park Brake and P (Park) Mechanism Check

⚠ Warning

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

Wiper Blade Replacement

Windshield wiper blades should be inspected for wear or cracking.

It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn. For proper windshield wiper blade length and type, see *Maintenance Replacement Parts on page 11-13*

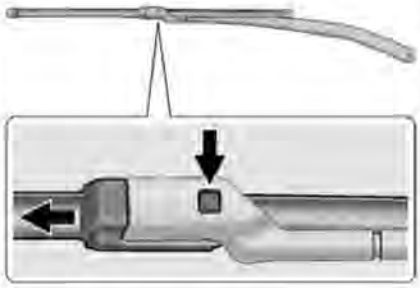
⚠ Caution

Allowing the wiper arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that occurs would not be covered by the vehicle warranty. Do not allow the wiper arm to touch the windshield.

Front Wiper Blade Replacement

To replace the wiper blade assembly:

1. Pull the windshield wiper assembly away from the windshield.



2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
3. Remove the wiper blade.
4. Reverse steps 1–3 for wiper blade replacement.

Rear Wiper Blade Replacement

The rear wiper blade and wiper arm have a cover for protection. The cover must be removed before the wiper blade can be replaced.

To remove the cover:

1. Slide a plastic tool under the cover and push upward to unsnap.
2. Slide the cover toward the wiper blade tip to unhook it from the blade assembly.
3. Remove the cover.
4. After wiper blade replacement, ensure that the cover hook slides into the slot in the blade assembly.
5. Snap the cover down to secure.

To remove the wiper blade:

1. Lift the wiper arm away from the window.
2. Push the release lever (2) to disengage the hook and push the wiper arm (1) out of the blade assembly (3).
3. Push the new blade assembly securely on the wiper arm until the release lever clicks into place.
4. Replace the wiper cover.

Headlamp Aiming

Headlamp aim has been preset and should need no further adjustment.

If the vehicle is damaged in a crash, the headlamp aim may be affected. If adjustment to the headlamps is necessary, see your dealer.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs on page 10-32*.

For any bulb changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

⚠ Warning

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

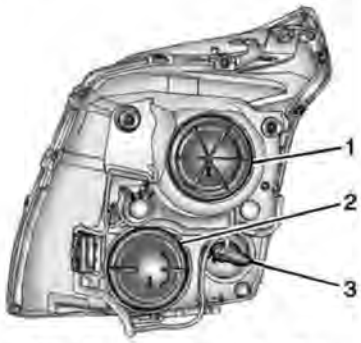
High Intensity Discharge (HID) Lighting

⚠ Warning

The high intensity discharge lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.

After an HID headlamp bulb has been replaced, the beam might be a slightly different shade than it was originally. This is normal.

Headlamps



Base Headlamp Assembly (Rear View Passenger Side)

1. Low-Beam Headlamp/ Daytime Running Lamp (DRL)
2. High-Beam Headlamp
3. Turn Signal Lamp

Uplevel Headlamp Assembly (Rear View Driver Side)

1. High/Low-Beam Headlamp (To be replaced at dealer only)
2. Daytime Running Lamp (DRL)
3. Turn Signal Lamp

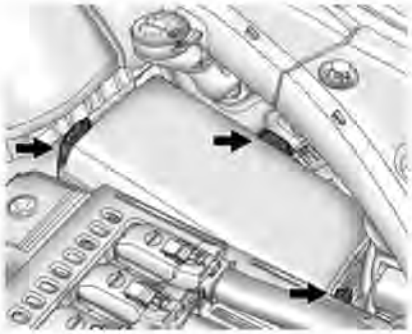
Driver Side

The removal of the underhood electrical center cover is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-4*.

⚠ Warning

Liquids from environment or spillage and/or tools placed on top of or used in the underhood electrical center while the cover is removed can pose a risk of electrical shock/burn to anyone in the vicinity. These conditions can also cause damage to electrical components on the vehicle. Keep liquids and tools away from the underhood electrical center when the cover is removed.



2. Unlatch the three clips and lift up the underhood electrical center cover to remove.

Passenger Side

The removal of the air filter/cleaner assembly and base is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-4*.
2. Remove the air cleaner/filter cover. See *Engine Air Cleaner/ Filter on page 10-10*.
3. Lift the air cleaner/filter base to disengage from the three pins.

Low-Beam Headlamps/Daytime Running Lamps (DRL), High-Beam Headlamps (Base)

1. From the back side of the headlamp assembly, remove the top cap to replace the low-beam headlamp/DRL bulb.

2. From the back side of the headlamp assembly, remove the bottom cap to replace the high-beam headlamp bulb.
3. Disconnect the electrical connector.
4. Remove the bulb socket from the headlamp assembly.
5. Replace the bulb in the bulb socket.
6. Install the bulb socket in the headlamp assembly.
7. Connect the electrical connector.
8. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
9. For the driver side, reinstall the underhood electrical center cover by latching three clips.
10. For the passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

High/Low-Beam Headlamps (Uplevel)

The high/low-beam headlamps on the uplevel are High Intensity Discharge (HID) and should be replaced at the dealer.

Daytime Running Lamp (DRL) (Uplevel)

1. From the back side of the headlamp assembly, remove the bottom cap to replace the DRL bulb.
2. Disconnect electrical connector.
3. Remove the DRL bulb socket from the headlamp assembly.
4. Replace the bulb in the bulb socket.
5. Install the bulb socket in the headlamp assembly.

6. Connect the electrical connector.
7. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
8. For the driver side, reinstall the underhood electrical center cover by latching three clips.
9. For the passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/ cleaner assembly.

Front Turn Signal Lamp (Base and Uplevel)

To replace the front turn signal lamp:

1. Remove the turn signal lamp bulb socket from the headlamp assembly.
2. Remove the turn signal lamp bulb from the socket.
3. Replace the bulb in the bulb socket.
4. Install the bulb socket in the headlamp assembly.
5. For the driver side, reinstall the underhood electrical center cover by latching the three clips.
6. For the passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/ cleaner assembly.

Turn Signal Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-14*.

2. Remove the push pin (1) on the taillamp cover (2).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten the snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.

6. Turn the turn signal lamp bulb socket counterclockwise to remove it from the taillamp assembly.
7. Pull the bulb straight out from the socket.
8. Press a new bulb into the socket, insert it into the taillamp assembly, and turn the bulb socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

Back-Up Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-14*.

2. Remove the push pin (1) on the taillamp cover (2).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from the snap tabs.

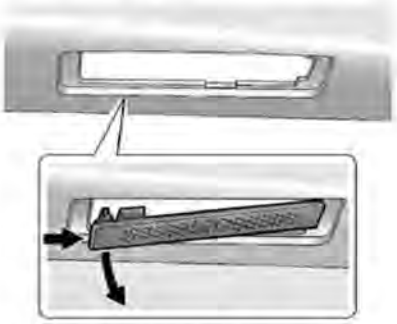
4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.

6. Disconnect the wiring harness connector from the back-up bulb/socket assembly.
7. Turn the back-up bulb socket counterclockwise to remove it from the taillamp assembly.
8. Install a new bulb/socket assembly into the taillamp assembly, and turn the bulb/socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

License Plate Lamp

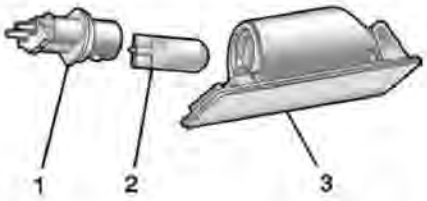
To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-14*.



Passenger Side Shown, Driver Side Similar

2. Push the left end of the lamp assembly toward the right.
3. Turn the lamp assembly down to remove it from the liftgate.



4. Turn the bulb socket (1) counterclockwise to remove it from the lamp assembly (3).
5. Pull the bulb (2) straight out of the bulb socket.
6. Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install into the lamp assembly.
7. Turn the lamp assembly into the liftgate, engaging the clip side first.
8. Push on the lamp side opposite the clip until the lamp assembly snaps into place.

Replacement Bulbs

Exterior Lamp	Bulb Number
Back-up Lamp	Hyperclick PH16W
Daytime Running Lamp	7443 ULL
Headlamp High-Beam	9005LL
Headlamp Low-Beam	H11LL
License Plate Lamp	W5WLL
Turn Signal Front	7444NA
Tail/Turn Signal Rear	7440

For replacement bulbs not listed here, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect power devices in the vehicle.

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

Windshield Wipers

If the wiper motor overheats due to heavy snow or ice, the windshield wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windshield before using the windshield wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

Fuses and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit breakers. This greatly reduces the chance of damage caused by electrical problems.

To check a fuse, look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating.

Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as possible.

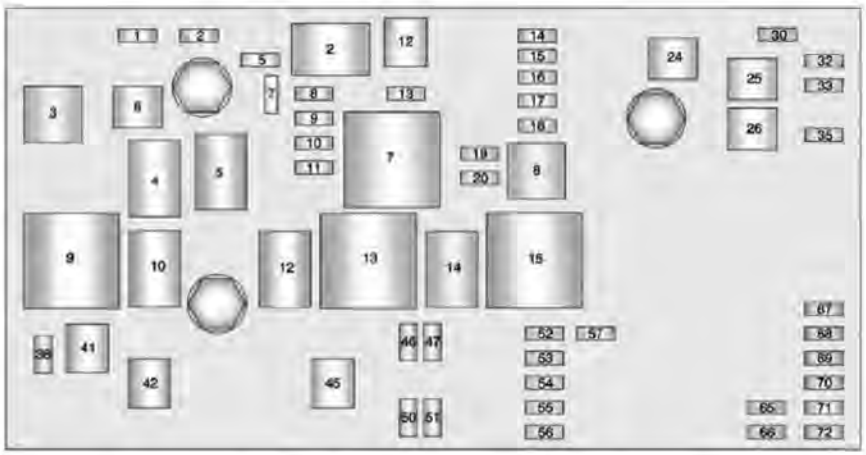
To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse Block on page 10-33*, *Instrument Panel Fuse Block on page 10-36*, and *Rear Compartment Fuse Block on page 10-38*.

Engine Compartment Fuse Block

To remove the fuse block cover, press the clips on the cover and lift it straight up.

⚠ Caution

Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.



Engine Compartment Fuse Block

The vehicle may not be equipped with all of the fuses, relays, and features shown.

J-Case Fuses	Usage
6	Wiper
12	Vacuum Pump

J-Case Fuses	Usage
24	Antilock Brake System Pump
25	Rear Electrical Center 1

J-Case Fuses	Usage
26	Rear Electrical Center 2
41	Cooling Fan 2
42	Starter
45	Cooling Fan 1

Mini Fuses	Usage
1	Engine Control Module Battery
2	Transmission Control Module Battery
5	Engine Control Module Run Crank
7	Post-Catalytic Converter O2 Sensor
8	Pre-Catalytic Converter O2 Sensor

Mini Fuses	Usage
9	Engine Control Module Powertrain
10	Fuel Injectors – Even
11	Fuel Injectors – Odd
13	Washer
14	Heated Steering Wheel
15	Not Used
16	Instrument Cluster/ Malfunction Indicator Lamp/Ignition
17	Air Quality Sensor
18	Not Used
19	Transmission Control Module Run Crank
20	Rear Electrical Center Run Crank
30	Switch Back Light

Mini Fuses	Usage
32	Battery Sense (Regulated Voltage Control)
33	Adaptive Forward Lighting
35	Electronic Brake Control Module
36	Air Conditioning Compressor Clutch
46	Low-Beam Headlamp – Right
47	Low-Beam Headlamp – Left
50	Front Fog Lamps
51	Horn
52	Fuel System Control Module
53	Headlamp Level
54	Sensing Diagnostic Module Ignition

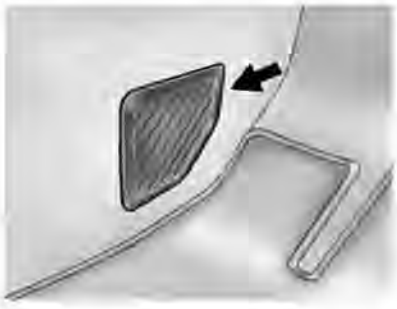
Mini Fuses	Usage
55	High-Beam Headlamp – Right
56	High-Beam Headlamp – Left
57	Ignition Steering Column Lock
65	Trailer Right Stoplamp
66	Trailer Left Stoplamp
67	Spare
68	Spare
69	Spare
70	Spare
71	Spare
72	Spare

Mini Relays	Usage
7	Powertrain
9	Cooling Fan 2
13	Cooling Fan 1
15	Run/Crank

Micro Relays	Usage
2	Vacuum Pump
4	Wiper Control
5	Wiper Speed
10	Starter
12	Cool Fan 3
14	Low Beam/HID

U Micro Relays	Usage
3	Air Conditioning Compressor Clutch
8	Not Used

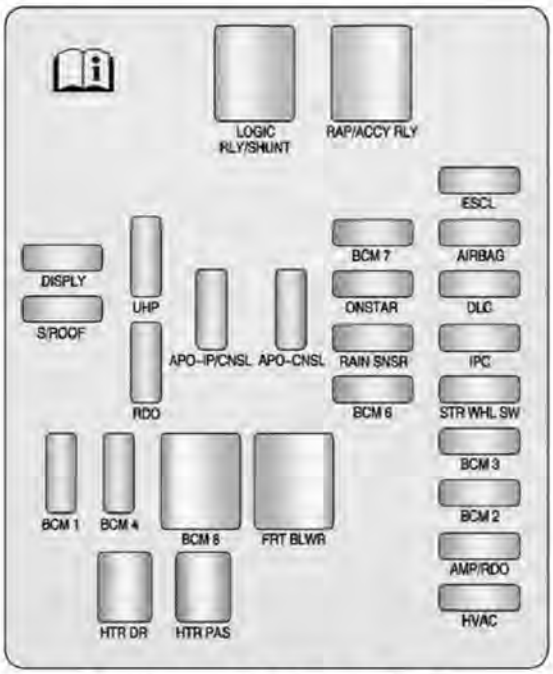
Instrument Panel Fuse Block



The instrument panel fuse block is located in the center console between the driver and passenger seats. To access the fuses, open the fuse panel door from the passenger side by pulling it out.

To reinstall the door, push the door back into its original location.

The vehicle may not be equipped with all of the fuses, relays and features shown.



Instrument Panel Fuse Block

Mini Fuses	Usage
DISPLY	Display
S/ROOF	Sunroof
UHP	Universal Handsfree Phone (If Equipped)
RDO	Radio
APO – IP/CNSL	Auxiliary Power Outlet – Instrument Panel/Console
APO – CNSL	Auxiliary Power Outlet – Floor Console
BCM 1	Body Control Module 3
BCM 4	Body Control Module 4
BCM 7	Body Control Module 7
ONSTAR	OnStar® System (If Equipped)
RAIN SNSR	Rain Sensor

Mini Fuses	Usage
BCM 6	Body Control Module 6
ESCL	Electronic Steering Column Lock
AIRBAG	Sensing and Diagnostic Module
DLC	Data Link Connector
IPC	Instrument Cluster
STR WHL SW	Steering Wheel Switch
BCM 3	Body Control Module 1
BCM 2	Body Control Module 2
AMP/RDO	Amplifier/Radio
HVAC	Heating Ventilation & Air Conditioning

J-Case Fuses	Usage
BCM 8	Body Control Module 8
FRT BLWR	Front Blower

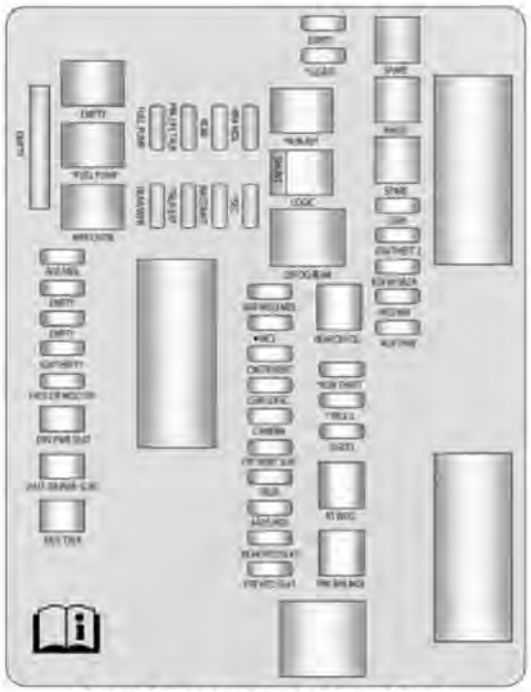
Relays	Usage
LOGIC RLY/ SHUNT	Logistics Relay/ Shunt
RAP/ ACCY RLY	Retained Accessory Power/ Accessory Relay

Breakers	Usage
HTR DR	Heated Driver Seat
HTR PAS	Heated Passenger Seat

Rear Compartment Fuse Block

The rear compartment fuse block is in the cargo area, on the driver side of the vehicle behind the lower trim panel. To open, turn the latch with a flat bladed tool and pull the trim panel from the edges to fold it down.

The vehicle may not be equipped with all of the fuses, relays, and features shown.



Rear Compartment Fuse Block

Fuses	Usage
AOS MDL	Automatic Occupant Sensing Module
AUX PWR	Auxiliary Power Outlet
* BCM THEFT	Body Control Module Theft
CAMERA	Rear Vision Camera
CNSTR VENT	Canister Vent
DRV PWR SEAT	Driver Power Seat
EOCM/ SBZA	External Object Calculating Module/ Side Blind Zone Alert
EMPTY	Not Used
FRT HTD SEAT	Front Heated Seats
FRT VENT SEAT	Front Ventilated Seats
FUEL PUMP	Fuel Pump

Fuses	Usage
HTD MIR	Heated Mirror
IGN/ THEFT 1	Ignition/Theft 1
IGN/ THEFT 2	Ignition/Theft 2
INFOTMNT	Infotainment
* L/GATE	Liftgate
LGM	Liftgate Module
LGM LOGIC	Liftgate Module Logic
MDL TRLR	Trailer Module
MIR WDO MDL	Mirror Window Module
PRK BRK MDL	Park Brake Module
PASS DR WDO SW	Passenger Door Window Switch
PASS DR PWR SEAT	Passenger/Driver Power Seats
PRK LPS TRLR	Trailer Park Lamps

Fuses	Usage
RDM	Rear Drive Module
REAR DEFOG	Rear Defog
REAR HTD SEAT	Rear Heated Seats
REAR/WPR	Rear Wiper
RT WDO	Right Window
RPA MDL	Rear Parking Assist Module
SADS MDL	Semi Active Damping System Module
* SEC	Security
SHUNT	Shunt
SPARE	Not Used
SPARE FUSES	Spare Fuses
* TRLR EXP	Trailer Export
TRLR	Trailer Module
* TRLR 2	Trailer 2

Fuses	Usage
UGDO	Universal Garage Door Opener
VICS	Vehicle Information Communications System (Export)
WNDO	Power Window

Relays	Usage
DEFOG REAR	Rear Window Defogger
* FUEL PUMP	Fuel Pump
LOGIC	Logistic Relay (Export)
* RUN RLY	Run Relay
SPARE	Not Used
WPR CONTRL	Wiper Control

*Denotes uplevel content.

Wheels and Tires

Tires

Every new GM vehicle has high-quality tires made by a leading tire manufacturer. See the warranty manual for information regarding the tire warranty and where to get service. For additional information refer to the tire manufacturer.

⚠ Warning

- Poorly maintained and improperly used tires are dangerous.
- Overloading the tires can cause overheating as a result of too much flexing. There could be a blowout

(Continued)

Warning (Continued)

and a serious crash. See *Vehicle Load Limits on page 9-9*.

- Underinflated tires pose the same danger as overloaded tires. The resulting crash could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when the tires are cold.
- Overinflated tires are more likely to be cut, punctured, or broken by a sudden impact — such as when hitting a pothole. Keep tires at the recommended pressure.

(Continued)

Warning (Continued)

- Worn or old tires can cause a crash. If the tread is badly worn, replace them.
- Replace any tires that have been damaged by impacts with potholes, curbs, etc.
- Improperly repaired tires can cause a crash. Only the dealer or an authorized tire service center should repair, replace, dismount, and mount the tires.
- Do not spin the tires in excess of 56 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tires to explode.

See *Tire Pressure for High-Speed Operation on page 10-49* for inflation pressure adjustment for high-speed driving.

All-Season Tires

This vehicle may come with all-season tires. These tires are designed to provide good overall performance on most road surfaces and weather conditions. Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. Original equipment all-season tires can be identified by the last two characters of this TPC code, which will be "MS."

Consider installing winter tires on the vehicle if frequent driving on snow or ice-covered roads is expected. All-season tires provide adequate performance for most winter driving conditions, but they may not offer the same level of traction or performance as winter tires on snow or ice-covered roads. See *Winter Tires on page 10-42*.

Winter Tires

This vehicle was not originally equipped with winter tires. Winter tires are designed for increased traction on snow and ice-covered roads. Consider installing winter tires on the vehicle if frequent driving on ice or snow covered roads is expected. See your dealer for details regarding winter tire availability and proper tire selection. Also, see *Buying New Tires on page 10-57*.

With winter tires, there may be decreased dry road traction, increased road noise, and shorter tread life. After changing to winter tires, be alert for changes in vehicle handling and braking.

If using winter tires:

- Use tires of the same brand and tread type on all four wheel positions.
- Use only radial ply tires of the same size, load range, and speed rating as the original equipment tires.

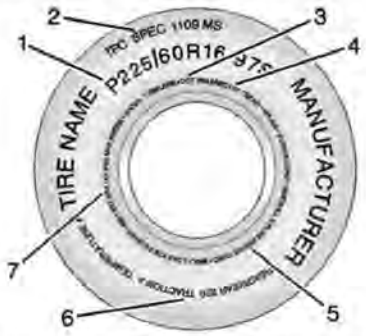
Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y, and ZR speed rated tires. If winter tires with a lower speed rating are chosen, never exceed the tire's maximum speed capability.

Summer Tires

This vehicle may come with high performance summer tires. These tires have a special tread and compound that are optimized for maximum dry and wet road performance. This special tread and compound will have decreased performance in cold climates, and on ice and snow. We recommend installing winter tires on the vehicle if frequent driving at temperatures below approximately 5°C (40°F) or on ice or snow covered roads is expected. See *Winter Tires on page 10-42*.

Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples show a typical passenger vehicle tire and a compact spare tire sidewall.



Passenger (P-Metric) Tire Example

(1) Tire Size: The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type, and service description. See the "Tire Size" illustration later in this section.

(2) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

(3) DOT (Department of Transportation): The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

DOT Tire Date of Manufacture: The last four digits of the TIN indicate the tire manufactured date. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

(4) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(5) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(6) Uniform Tire Quality Grading (UTQG): Tire manufacturers are required to grade tires based on three

performance factors: treadwear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading on page 10-59*.

(7) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.

Compact Spare Tire Example

(1) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(2) Temporary Use Only: The compact spare tire or temporary use tire should not be driven at speeds over 80 km/h (50 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If the vehicle has a compact spare tire, see *Compact Spare Tire on page 10-77* and *If a Tire Goes Flat on page 10-62*.

(3) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(4) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.

(5) Tire Inflation: The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure on page 10-48*.

(6) Tire Size: A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(7) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance

criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

Tire Designations

Tire Size

The following is an example of a typical passenger vehicle tire size.

(1) Passenger (P-Metric) Tire: The United States version of a metric tire sizing system. The letter P as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

(2) Tire Width: The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(3) Aspect Ratio: A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item 3 of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(4) Construction Code: A letter code is used to indicate the type of ply construction in the tire. The letter R means radial ply construction; the letter D means diagonal or bias ply construction; and the letter B means belted-bias ply construction.

(5) Rim Diameter: Diameter of the wheel in inches.

(6) Service Description: These characters represent the load index and speed rating of the tire. The load index represents the load carrying capacity a tire is certified to carry. The speed rating is the maximum speed a tire is certified to carry a load.

Tire Terminology and Definitions

Air Pressure: The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in kPa (kilopascal) or psi (pounds per square inch).

Accessory Weight: The combined weight of optional accessories. Some examples of optional accessories are

automatic transmission, power windows, power seats, and air conditioning.

Aspect Ratio: The relationship of a tire's height to its width.

Belt: A rubber coated layer of cords between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead: The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire: A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure: The amount of air pressure in a tire, measured in kPa (kilopascal) or psi (pounds per square inch) before a tire has built up heat from driving. See *Tire Pressure on page 10-48*.

Curb Weight: The weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil, and coolant, but without passengers and cargo.

DOT Markings: A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation (DOT) Motor Vehicle Safety Standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand, and date of production.

GVWR: Gross Vehicle Weight Rating. See *Vehicle Load Limits on page 9-9*.

GAWR FRT: Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits on page 9-9*.

GAWR RR: Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits on page 9-9*.

Intended Outboard Sidewall: The side of an asymmetrical tire that must always face outward when mounted on a vehicle.

Kilopascal (kPa): The metric unit for air pressure.

Light Truck (LT-Metric) Tire: A tire used on light duty trucks and some multipurpose passenger vehicles.

Load Index: An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

Maximum Inflation Pressure: The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.

Maximum Load Rating: The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum Loaded Vehicle Weight: The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Normal Occupant Weight: The number of occupants a vehicle is designed to seat multiplied by 68 kg (150 lb). See *Vehicle Load Limits on page 9-9*.

Occupant Distribution: Designated seating positions.

Outward Facing Sidewall: The side of an asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The side of the tire that contains a whitewall, bears white lettering, or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the other sidewall of the tire.

Passenger (P-Metric) Tire: A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

Recommended Inflation Pressure: Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Tire Pressure on page 10-48* and *Vehicle Load Limits on page 9-9*.

Radial Ply Tire: A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

Rim: A metal support for a tire and upon which the tire beads are seated.

Sidewall: The portion of a tire between the tread and the bead.

Speed Rating: An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

Traction: The friction between the tire and the road surface. The amount of grip provided.

Tread: The portion of a tire that comes into contact with the road.

Treadwear Indicators: Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1.6 mm (1/16 in) of tread remains. See *When It Is Time for New Tires on page 10-56*.

UTQGS (Uniform Tire Quality Grading Standards): A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading on page 10-59*.

Vehicle Capacity Weight: The number of designated seating positions multiplied by 68 kg (150 lb) plus the rated cargo load. See *Vehicle Load Limits on page 9-9*.

Vehicle Maximum Load on the Tire: Load on an individual tire due to curb weight, accessory weight, occupant weight, and cargo weight.

Vehicle Placard: A label permanently attached to a vehicle showing the vehicle capacity weight and the original equipment tire size and recommended inflation pressure. See "Tire and Loading Information Label" under *Vehicle Load Limits on page 9-9*.

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

⚠ Caution

Neither tire underinflation nor overinflation is good. Underinflated tires, or tires that do not have enough air, can result in:

- Tire overloading and overheating which could lead to a blowout.
- Premature or irregular wear.
- Poor handling.
- Reduced fuel economy.

Overinflated tires, or tires that have too much air, can result in:

- Unusual wear.
- Poor handling.
- Rough ride.
- Needless damage from road hazards.

The Tire and Loading Information label on the vehicle indicates the original equipment tires and the correct cold tire inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity. See *Vehicle Load Limits on page 9-9*.

How the vehicle is loaded affects vehicle handling and ride comfort. Never load the vehicle with more weight than it was designed to carry.

When to Check

Check the tires once a month or more. Do not forget the compact spare, if the vehicle has one. The cold compact spare tire pressure should be at 420 kPa (60 psi). See *Compact Spare Tire on page 10-77*.

How to Check

Use a good quality pocket-type gauge to check tire pressure. Proper tire inflation cannot be determined by looking at the tire. Check the tire inflation pressure when the tires are cold, meaning the vehicle has not been driven for at least three hours or no more than 1.6 km (1 mi).

Remove the valve cap from the tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement. If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until the recommended pressure is reached. If the inflation pressure is high, press on the metal stem in the center of the tire valve to release air.

Recheck the tire pressure with the tire gauge.

Return the valve caps on the valve stems to prevent leaks and keep out dirt and moisture.

Tire Pressure for High-Speed Operation

⚠ Warning

Driving at high speeds, 160 km/h (100 mph) or higher, puts an additional strain on tires. Sustained high-speed driving causes excessive heat buildup and can cause sudden tire failure. You could have a crash and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for high-speed operation. When speed limits and road conditions are such that a vehicle can be driven at high speeds, make sure

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Warning (Continued)

the tires are rated for high-speed operation, in excellent condition, and set to the correct cold tire inflation pressure for the vehicle load.

Vehicles with P235/65R18, P235/55R20, or 235/55R20 size tires require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold inflation pressure to the maximum inflation pressure shown on the tire sidewall, or 260 kPa (38 psi), whichever is lower. Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See *Vehicle Load Limits on page 9-9* and *Tire Pressure on page 10-48.*

The maximum load and inflation pressure is molded on the tire sidewall, in small letters, near the rim flange. It will read something like this: Maximum load 690 kg (1521 lbs) 300 kPa (44 psi) Max. Press.

Tire Pressure Monitor System

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS sensors monitor the air pressure in your tires and transmit tire pressure readings to a receiver located in the vehicle.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated.

Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

See *Tire Pressure Monitor Operation on page 10-51*.

See *Radio Frequency Statement on page 13-12*.

Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the tires and transmits the tire pressure readings to a receiver located in the vehicle.

When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-9*.

A message to check the pressure in a specific tire displays in the Driver Information Center (DIC). The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure. Using the DIC, tire pressure levels can be viewed. For additional information and details

about the DIC operation and displays see *Driver Information Center (DIC) on page 5-25*.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tire and Loading Information label, attached to your vehicle, shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See *Vehicle Load Limits on page 9-9*, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure on page 10-48*.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection on page 10-54*, *Tire Rotation on page 10-55* and *Tires on page 10-41*.

⚠ Caution

Tire sealant materials are not all the same. A non-approved tire sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tire sealant is not covered by the vehicle warranty. Always use only the GM approved tire sealant available through your dealer or included in the vehicle.

Factory-installed Tire Inflator Kits use a GM approved liquid tire sealant. Using non-approved tire sealants could damage the TPMS sensors. See *Tire Sealant and Compressor Kit on page 10-63* for information regarding the inflator kit materials and instructions.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tire warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and DIC message should go off after the road tire is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.

- The TPMS sensor matching process was not done or not completed successfully after rotating the tires. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tires or wheels do not match the original equipment tires or wheels. Tires and wheels other than those recommended could prevent the TPMS from functioning properly. See *Buying New Tires on page 10-57*.
- Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning properly it cannot detect or signal a low tire condition. See your dealer for service if the TPMS malfunction light and DIC message comes on and stays on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the vehicle's tires or replacing one or more of the TPMS sensors. The TPMS sensor matching process should also be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message should go off at the next ignition cycle. The sensors are matched to the tire/wheel positions, using a TPMS relearn tool, in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear. See your dealer for service or to purchase a relearn tool. A TPMS relearn tool can also be purchased. See Tire Pressure Monitor Sensor Activation Tool at www.gmtoolsandequipment.com or call 1-800-GM TOOLS (1-800-468-6657).

There are two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is:

1. Set the parking brake.
2. Place the vehicle power mode in ON/RUN/START. See *Ignition Positions on page 9-15*.

3. Make sure the Tire Pressure info display option is turned on. The info displays on the DIC can be turned on and off through the Settings menu. See *Driver Information Center (DIC) on page 5-25*.
4. Use the five-way DIC control on the right side of the steering wheel to scroll to the Tire Pressure screen under the DIC info page. See *Driver Information Center (DIC) on page 5-25*.
5. Press and hold the SEL button in the center of the five-way DIC control.

   The horn sounds twice to signal the receiver is in relearn mode and the TIRE LEARNING ACTIVE message displays on the DIC screen.
6. Start with the driver side front tire.
7. Place the relearn tool against the tire sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tire and wheel position.
8. Proceed to the passenger side front tire, and repeat Step 7.
9. Proceed to the passenger side rear tire, and repeat Step 7.
10. Proceed to the driver side rear tire, and repeat Step 7. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
11. Shut the ignition off.
12. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

Tire Inspection

We recommend that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.

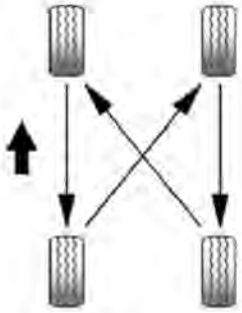
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Tire Rotation

Tires should be rotated every 12 000 km (7,500 mi). See *Maintenance Schedule on page 11-3*.

Tires are rotated to achieve a uniform wear for all tires. The first rotation is the most important.

Anytime unusual wear is noticed, rotate the tires as soon as possible, check for proper tire inflation pressure, and check for damaged tires or wheels. If the unusual wear continues after the rotation, check the wheel alignment. See *When It Is Time for New Tires on page 10-56* and *Wheel Replacement on page 10-60*.



Use this rotation pattern when rotating the tires.

Do not include the compact spare tire in the tire rotation.

Adjust the front and rear tires to the recommended inflation pressure on the Tire and Loading Information label after the tires have been rotated. See *Tire Pressure on page 10-48* and *Vehicle Load Limits on page 9-9*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 10-51*.

Check that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications on page 12-2*.

⚠ Warning

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In

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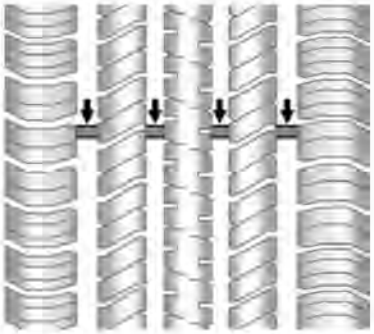
Warning (Continued)

an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

Lightly coat the center of the wheel hub with wheel bearing grease after a wheel change or tire rotation to prevent corrosion or rust build-up. Do not get grease on the flat wheel mounting surface or on the wheel nuts or bolts.

When It Is Time for New Tires

Factors such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tires.



Treadwear indicators are one way to tell when it is time for new tires. Treadwear indicators appear when the tires have only 1.6 mm (1/16 in) or less of tread remaining. See *Tire Inspection on page 10-54* and *Tire Rotation on page 10-55*.

The rubber in tires ages over time. This also applies to the spare tire, if the vehicle has one, even if it is never used. Multiple factors including temperatures, loading conditions, and inflation pressure maintenance affect how fast aging takes place. GM recommends that tires, including the spare if equipped, be replaced after six years, regardless of tread wear. The tire manufacture date is the last four digits of the DOT Tire Identification Number (TIN) which is molded into one side of the tire sidewall. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

Vehicle Storage

Tires age when stored normally mounted on a parked vehicle. Park a vehicle that will be stored for at least a month in a cool, dry, clean area away from direct sunlight to slow aging. This area should be free of grease, gasoline, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tires that may result in vibrations while driving. When storing a vehicle for

at least a month, remove the tires or raise the vehicle to reduce the weight from the tires.

Buying New Tires

GM has developed and matched specific tires for the vehicle. The original equipment tires installed were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. When replacement tires are needed, GM strongly recommends buying tires with the same TPC Spec rating.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of the vehicle, including brake system performance, ride and handling, traction control, and tire pressure monitoring performance. GM's TPC Spec number is molded onto the tire's sidewall near the tire size. If the tires have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow. See *Tire Sidewall Labeling on page 10-43.*

GM recommends replacing worn tires in complete sets of four. Uniform tread depth on all tires will help to maintain the performance of the vehicle. Braking and handling performance may be adversely affected if all the tires are not replaced at the same time. If proper rotation and maintenance have been done, all four tires should wear out at about the same time. See *Tire Rotation on page 10-55.* However, if it is necessary to replace only one axle set of worn tires, place the new tires on the rear axle.

Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y and ZR speed rated tires. Never exceed the winter tires' maximum speed capability when using winter tires with a lower speed rating.

⚠ Warning

Tires could explode during improper service. Attempting to mount or dismount a tire could cause injury or death. Only your dealer or authorized tire service center should mount or dismount the tires.

⚠ Warning

Mixing tires of different sizes, brands, or types may cause loss of control of the vehicle, resulting in a crash or other vehicle damage. Use the correct size, brand, and type of tires on all wheels.

⚠ Warning

Using bias-ply tires on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tire and/or wheel could fail suddenly and cause a crash. Use only radial-ply tires with the wheels on the vehicle.

If the vehicle tires must be replaced with a tire that does not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction (radial) as the original tires.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed. See *Tire Pressure Monitor System on page 10-50*.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See *Vehicle Load Limits on page 9-9*.

Different Size Tires and Wheels

If wheels or tires are installed that are a different size than the original equipment wheels and tires, vehicle performance, including its braking, ride and handling characteristics, stability, and resistance to rollover may be affected. If the vehicle has electronic systems such as antilock brakes, rollover airbags, traction control, electronic stability control, or All-Wheel Drive, the performance of these systems can also be affected.

⚠ Warning

If different sized wheels are used, there may not be an acceptable level of performance and safety if tires not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tire systems developed for the vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires on page 10-57* and *Accessories and Modifications on page 10-3*.

Uniform Tire Quality Grading

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter tires, compact spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

Traction

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction

tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

Wheel Alignment and Tire Balance

The tires and wheels were aligned and balanced at the factory to provide the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing are not necessary on a regular basis. Consider an alignment check if there is unusual tire wear or the vehicle is significantly pulling to one side or the other. Some slight pull to the left or right, depending on the crown of the road and/or other road surface variations such as troughs or ruts, is normal. If the vehicle is vibrating when driving on a smooth road, the tires and wheels may need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it. Some aluminum wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

⚠ Warning

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tires can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

⚠ Caution

The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tire or tire chain clearance to the body and chassis.

Used Replacement Wheels

⚠ Warning

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

Tire Chains

⚠ Warning

Do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes, suspension, or other vehicle

(Continued)

Warning (Continued)

parts. The area damaged by the tire chains could cause loss of control and a crash.

Use another type of traction device only if its manufacturer recommends it for the vehicle's tire size combination and road conditions. Follow that manufacturer's instructions. To avoid vehicle damage, drive slow and readjust or remove the traction device if it contacts the vehicle. Do not spin the wheels. If traction devices are used, install them on the front tires.

If a Tire Goes Flat

It is unusual for a tire to blow out while driving, especially if the tires are maintained properly. See *Tires on page 10-41*. If air goes out of a tire, it is much more likely to leak out slowly. But if there is ever a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

⚠ Warning

Driving on a flat tire will cause permanent damage to the tire. Re-inflating a tire after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tire that has been driven on while severely underinflated or flat. Have your dealer or an authorized tire service center repair or replace the flat tire as soon as possible.

⚠ Warning

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for

(Continued)

Warning (Continued)

changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-6*.

⚠ Warning

Changing a tire can be dangerous. The vehicle can slip off the jack and roll over or fall causing injury or death. Find a level place to change the tire. To help prevent the vehicle from moving:

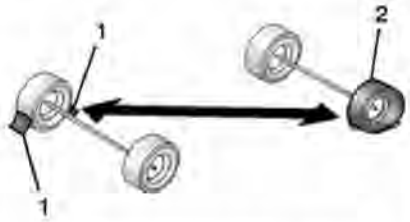
(Continued)

Warning (Continued)

1. Set the parking brake firmly.
2. Put an automatic transmission in P (Park) or a manual transmission in 1 (First) or R (Reverse).
3. Turn off the engine and do not restart while the vehicle is raised.
4. Do not allow passengers to remain in the vehicle.
5. Place wheel blocks, if equipped, on both sides of the tire at the opposite corner of the tire being changed.

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. To use the jacking equipment to change a spare tire safely, follow the instructions below. Then see *Tire Changing on page 10-71*. To use the tire sealant and compressor kit, see *Tire Sealant and Compressor Kit on page 10-63*.

When the vehicle has a flat tire (2), use the following example as a guide to assist you in the placement of wheel blocks (1), if equipped.



1. Wheel Block (If Equipped)
2. Flat Tire

The following information explains how to repair or change a tire.

Tire Sealant and Compressor Kit

⚠ Warning

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 9-21*.

⚠ Warning

Overinflating a tire could cause the tire to rupture and you or others could be injured. Be sure to read and follow the tire sealant

(Continued)

Warning (Continued)

and compressor kit instructions and inflate the tire to its recommended pressure. Do not exceed the recommended pressure.

⚠ Warning

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

If this vehicle has a tire sealant and compressor kit, there may not be a spare tire or tire changing equipment, and on some vehicles there may not be a place to store a tire.

The tire sealant and compressor can be used to temporarily seal punctures up to 6 mm (0.25 in) in the tread area of the tire. It can also be used to inflate an underinflated tire.

If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Service on page 13-5*.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

Tire Sealant

Read and follow the safe handling instructions on the label adhered to the sealant canister.

Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date. Replacement sealant canisters are available at your local dealer. See "Removal and Installation of the Sealant Canister" following.

There is only enough sealant to seal one tire. After usage, the sealant canister and sealant/air hose assembly must be replaced. See "Removal and Installation of the Sealant Canister" following.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button

3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

When using the tire sealant and compressor kit during cold temperatures, warm the kit in a heated environment for five minutes. This will help to inflate the tire faster.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-6*.

See *If a Tire Goes Flat on page 10-62* for other important safety warnings.

Do not remove any objects that have penetrated the tire.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-71*.
2. Unwrap the sealant/air hose (6) and the power plug (8).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the sealant/air hose (6) onto the tire valve stem. Turn it clockwise until it is tight.
6. Plug the power plug (8) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-6*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Press and turn the selector switch (1) counterclockwise to the Sealant + Air position.

9. Press the on/off button (2) to turn the tire sealant and compressor kit on.

   The compressor will inject sealant and air into the tire.

   The pressure gauge (3) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.

10. Inflate the tire to the recommended inflation pressure using the pressure gauge (3). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-48*.

    The pressure gauge (3) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

> **⚠ Caution**
>
> If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tire is too severely damaged and the tire sealant and compressor kit cannot inflate the tire. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Service on page 13-5*.

11. Press the on/off button (2) to turn the tire sealant and compressor kit off.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire, therefore, Steps 12–18 must be done immediately after Step 11.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (8) from the accessory power outlet in the vehicle.

13. Turn the sealant/air hose (6) counterclockwise to remove it from the tire valve stem.

14. Replace the tire valve stem cap.

15. Replace the sealant/air hose (6), and the power plug (8) back in their original location.

16. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (5) and place it in a highly visible location. Do not exceed the speed on this label until the damaged tire is repaired or replaced.
17. Return the equipment to its original storage location in the vehicle.
18. Immediately drive the vehicle 8 km (5 mi) to distribute the sealant in the tire.
19. Stop at a safe location and check the tire pressure. Refer to Steps 1–11 under "Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)."

    If the tire pressure has fallen more than 68 kPa (10 psi) below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant cannot seal the tire. See *Roadside Service on page 13-5*.

    If the tire pressure has not dropped more than 68 kPa (10 psi) from the recommended inflation pressure, inflate the tire to the recommended inflation pressure.
20. Wipe off any sealant from the wheel, tire, and vehicle.
21. Dispose of the used sealant canister (5) and sealant/air hose (6) assembly at a local dealer or in accordance with local state codes and practices.
22. Replace with a new canister assembly available from your dealer.
23. After temporarily sealing the tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within 161 km (100 mi) of driving to have the tire repaired or replaced.

Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-6*.

See *If a Tire Goes Flat on page 10-62* for other important safety warnings.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-71*.
2. Unwrap the air only hose (7) and the power plug (8).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the tire valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the air only hose (7) onto the tire valve stem by turning it clockwise until it is tight.
6. Plug the power plug (8) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-6*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.

8. Press and turn the selector switch (1) clockwise to the Air Only position.
9. Press the on/off button (2) to turn the compressor on.

   The compressor will inflate the tire with air only.
10. Inflate the tire to the recommended inflation pressure using the pressure gauge (3). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-48*.

    The pressure gauge (3) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on/off until the correct pressure is reached.

    If you inflate the tire higher than the recommended pressure you can adjust the excess pressure by pressing the pressure deflation button (4) until the proper pressure reading is reached. This option is only functional when using the air only hose (7).
11. Press the on/off button (2) to turn the tire sealant and compressor kit off.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.
12. Unplug the power plug (8) from the accessory power outlet in the vehicle.
13. Disconnect the air only hose (7) from the tire valve stem, by turning it counterclockwise, and replace the tire valve stem cap.
14. Replace the air only hose (7) and the power plug (8) and cord back in its original location.
15. Place the equipment in the original storage location in the vehicle.

The tire sealant and compressor kit has an accessory adapter located in a compartment on the bottom of its housing that may be used to inflate air mattresses, balls, etc.

Removal and Installation of the Sealant Canister

To remove the sealant canister:

1. Unwrap the sealant hose.

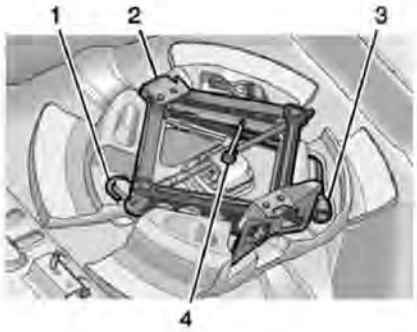
2. Press the canister release button (9).
3. Pull up and remove the canister.
4. Replace with a new canister which is available from your dealer.
5. Push the new canister into place.

Storing the Tire Sealant and Compressor Kit

This vehicle may have a tire sealant and compressor kit in place of a jack or spare tire. It is located in a foam container in the rear compartment storage area. If the vehicle has a cargo cover, see *Cargo Management System on page 4-5* for instructions on how to access the tire sealant and compressor kit.

Tire Changing

Removing the Spare Tire and Tools



1. Extension
2. Jack
3. Wheel Wrench
4. Wing Nut

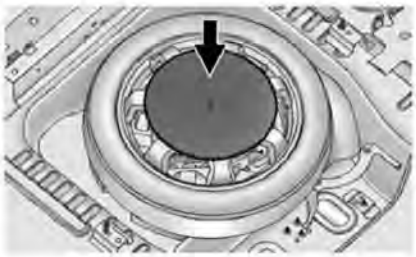
To access the spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-14*.

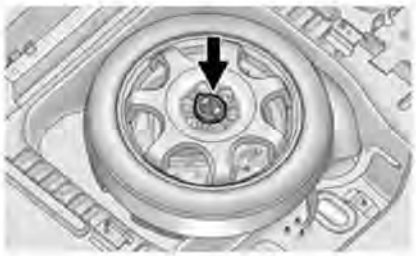
2. Press on the bottom of the handle assembly to unlatch it and lift up on the handle.

   The prop rod locks into place when open.

3. Remove the spare tire cover.



4. Remove the rubber cover.



5. Remove the nut retaining the spare tire.
6. Remove the spare tire and place it next to the tire being changed.
7. Remove the wing nut.
8. Remove the extension, jack, and wheel wrench and place them near the tire being changed.

Removing the Flat Tire and Installing the Spare Tire

Take off the wheel cover or center cap, if the vehicle has one, to reach the wheel bolts.

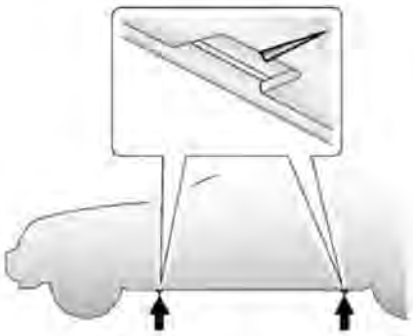
1. Do a safety check before proceeding. See *If a Tire Goes Flat on page 10-62* for more information.
2. Turn the wheel wrench counterclockwise to loosen and remove the wheel nut caps.

   Do not try to remove plastic caps from the cover or center cap.
3. Pull the cover or center cap away from the wheel. Store the wheel cover in the cargo area until you have the flat tire repaired or replaced.

4. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
5. Place the jack near the flat tire.

⚠ Caution

Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.



6. Position the jack lift head at the jack location nearest the flat tire.

   The jacking location is indicated by a V-shaped notch in the plastic molding. The jack must not be used in any other position.

7. Insert the hooked end of the extension handle through the jack and the flat end through the wheel wrench.

⚠ Warning

Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

⚠ Warning

Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

⚠ Warning

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

8. Turn the extension with the wheel wrench clockwise to raise the jack lift head until the jack just fits under the vehicle.

9. Raise the vehicle by turning the wheel wrench clockwise until the slots in the jack head fit into the metal flange located behind the triangle on the plastic moulding.

⚠ Caution

Using a jack to raise the vehicle without positioning it correctly could damage your vehicle. When raising your vehicle on a jack, be sure to position it correctly under the frame and avoid contact with the plastic molding.

10. Put the compact spare tire near you.

Remove all of the wheel nuts.

11. Remove the flat tire.

⚠ Warning

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When

(Continued)

Warning (Continued)

changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

12. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
13. Place the compact spare tire on the wheel-mounting surface.

⚠ Warning

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

14. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
15. Lower the vehicle by turning the jack handle counterclockwise.

⚠ Warning

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench

(Continued)

Warning (Continued)

to the proper torque specification after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications on page 12-2* for original equipment wheel nut torque specifications.

⚠ Caution

Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications on page 12-2* for the wheel nut torque specification.

16. Tighten the wheel nuts firmly in a crisscross sequence, as shown.
17. Lower the jack all the way and remove the jack from under the vehicle.
18. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or center cap on the full-size tire, tighten all six plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

⚠ Caution

Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.

Storing a Flat or Spare Tire and Tools

⚠ Warning

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

To store the flat or spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-14* for more information.
2. Put back all tools as they were stored in the rear storage compartment and put the compartment cover back on. For more information, see "Storing the Compact Spare Tire and Tools" next in this section.
3. Install the cargo cover. For more information, see *Cargo Management System on page 4-5*.
4. Place the tire, lying flat, in the rear storage compartment.

5. Attach the strap to the cargo tie-down in the rear of the vehicle.

6. Route the strap through the wheel, as shown.
7. Attach the strap to the other cargo tie-down in the rear of the vehicle.
8. Tighten the strap.
9. Replace the rubber cover.

The compact spare is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can.

Compact Spare Tire

⚠ Warning

Driving with more than one compact spare tire at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tire at a time.

If this vehicle has a compact spare tire, it was fully inflated when new; however, it can lose air over time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

Stop as soon as possible and check that the spare tire is correctly inflated after being installed on the vehicle. The compact spare tire is designed for temporary use only. The vehicle will perform differently with the spare tire installed and it is recommended that the vehicle speed be limited to 80 km/h (50 mph). To conserve the tread of the spare tire, have the standard tire repaired or replaced as soon as convenient and return the spare tire to the storage area.

When using a compact spare tire, the ABS and Traction Control systems may engage until the spare tire is recognized by the vehicle, especially on slippery roads. Adjust driving to reduce possible wheel slip.

⚠ Caution

When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tire, wheel, and other parts of the vehicle.

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

⚠ Caution

Tire chains will not fit the compact spare. Using them can damage the vehicle and the chains. Do not use tire chains on the compact spare.

Jump Starting

For more information about the vehicle battery, see *Battery on page 10-21.*

If the vehicle battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠ Warning

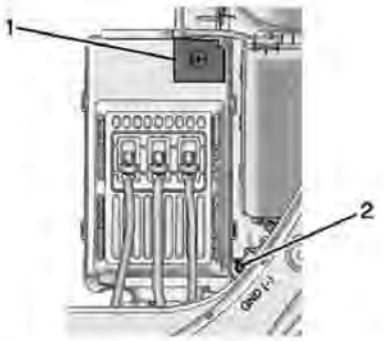
Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

⚠ Caution

Ignoring these steps could result in costly damage to the vehicle that would not be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.



1. Remote Positive (+) Terminal
2. Remote Negative (−) Terminal

Your vehicle is equipped with a remote positive (+) terminal (1) and a remote negative (−) terminal (2). The remote positive (+) terminal is located in the engine compartment on the driver side of the vehicle, above the rear of the battery. The remote negative (−) terminal is a stud located in the engine compartment on the driver side of the vehicle, on the front tie bar. See *Engine Compartment Overview on page 10-5*.

To uncover the remote positive (+) terminal, lift open the access panel on the battery cover indicated by the (+) sign.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

⚠ Caution

If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be

(Continued)

Caution (Continued)

damaged. Only use a vehicle that has a 12-volt system with a negative ground for jump starting.

2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start your vehicle, and the bad grounding could damage the electrical systems.

   To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the transmission in P (Park) before setting the parking brake.

⚠ Caution

If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs would not be covered by the vehicle warranty. Whenever possible, turn off or unplug all accessories on either vehicle when jump starting.

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or the accessory power outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks, helping save both batteries and the radio.

4. Open the hood on the other vehicle and locate the positive (+) and negative (−) terminal locations on that vehicle.

   Open the hood on your vehicle and find the remote positive (+) and remote negative (−) jump starting terminals.

⚠ Warning

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.

⚠ Warning

Using a match near a battery can cause battery gas to explode. People have been hurt doing this.

(Continued)

Warning (Continued)

and some have been blinded. Use a flashlight if you need more light.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

⚠ Warning

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could also be damaged.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the vehicle has one. Negative (−) will go to a heavy, unpainted metal engine part or to a remote negative (−) terminal if the vehicle has one.

   Do not connect positive (+) to negative (−) or you will get a short that would damage the battery and maybe other parts. Do not connect the negative (−) cable to the negative (−) terminal on the dead battery because this can cause sparks.

6. Connect the red positive (+) cable to the positive (+) terminal on the vehicle with the dead battery. Use a remote positive (+) terminal if the vehicle has one.
7. Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.
8. Now connect the black negative (−) cable to the negative (−) terminal of the good battery. Use a remote negative (−) terminal if the vehicle has one.

   Do not let the other end touch anything until the next step. The other end of the negative (−) cable does not go to the dead battery. It goes to a heavy, unpainted metal engine part or to a remote negative (−) terminal on the vehicle with the dead battery.
9. Connect the other end of the negative (−) cable away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, and the chance of sparks getting back to the battery is much less.

   Your vehicle has a remote (−) terminal for this purpose.
10. Now start the vehicle with the good battery and run the engine for a while.
11. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

⚠ Caution

If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.

Jumper Cable Removal

Reverse the sequence exactly when removing the jumper cables.

Towing the Vehicle

⚠ Caution

Incorrectly towing a disabled vehicle may cause damage. The damage would not be covered by the vehicle warranty.

Have the vehicle towed on a flatbed car carrier. A wheel lift tow truck could damage the vehicle.

Consult your dealer or a professional towing service if the disabled vehicle must be towed.

Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle, such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

- The towing capacity of the towing vehicle. Be sure to read the tow vehicle manufacturer's recommendations.
- How far the vehicle will be towed. Some vehicles have restrictions on how far and how long they can tow.
- The proper towing equipment. See your dealer or trailering professional for additional advice and equipment recommendations.
- If the vehicle is ready to be towed. Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

Dinghy Towing

Front-wheel-drive and all-wheel-drive vehicles may be dinghy towed from the front. These vehicles can also be towed by placing them on a platform trailer with all four wheels off of the ground. For other towing options, see the information on dolly towing that follows.

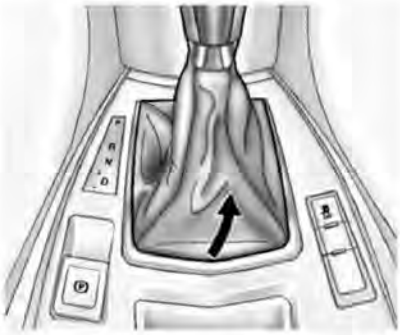
⚠ Caution

If 105 km/h (65 mph) is exceeded while towing the vehicle, it could be damaged. Never exceed 105 km/h (65 mph) while towing the vehicle.

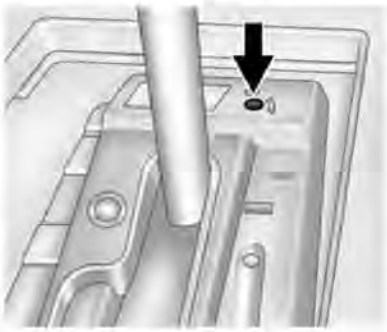
For vehicles being dinghy towed, the vehicle should be run at the beginning of each day and at each RV fuel stop for about five minutes. This will ensure proper lubrication of transmission components.

To tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle that will be towed and secure it to the towing vehicle.



2. Remove the shift lever boot by pulling up on the rear of the trim plate.



3. Use a small screwdriver or tool to press and hold the manual release button on the front right.
4. Put the vehicle in N (Neutral).

⚠ Caution

If the vehicle is towed without performing each of the steps listed under "Dinghy Towing," the automatic transmission could be damaged. Be sure to follow all steps of the dinghy towing procedure prior to and after towing the vehicle.

Once the destination has been reached:

1. Shift the vehicle to P (Park).
2. Reinstall the shift lever boot by inserting the front edge and pressing the rear of the trim plate until it snaps into place.
3. Start the engine and let it idle for more than three minutes before driving the vehicle.

⚠ Caution

Too much or too little fluid can damage the transmission. Be sure that the transmission fluid is at the proper level before towing with all four wheels on the ground.

⚠ Caution

Do not tow a vehicle with the front drive wheels on the ground if one of the front tires is a compact spare tire. Towing with two different tire sizes on the front of the vehicle can cause severe damage to the transmission.

Dolly Towing (All-Wheel-Drive Vehicles)

All-wheel-drive vehicles should not be towed with two wheels on the ground. To properly tow these vehicles, they should be placed on a platform trailer with all four wheels off of the ground or dinghy towed from the front. See "Dinghy Towing" earlier in this section.

Dolly Towing (Front-Wheel-Drive Vehicles)

To tow the vehicle from the front with the rear wheels on the ground:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park). See *Shifting Into Park on page 9-19*.
3. Set the parking brake.
4. Secure the vehicle to the dolly.
5. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.

6. Release the parking brake.

Towing the Vehicle from the Rear

⚠ Caution

Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.

Appearance Care

Exterior Care

Locks

Locks are lubricated at the factory. Use a de-icing agent only when absolutely necessary, and have the locks greased after using. See *Recommended Fluids and Lubricants on page 11-12*.

Washing the Vehicle

To preserve the vehicle's finish, wash it often and out of direct sunlight.

⚠ Caution

Do not use petroleum-based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle warranty. Approved cleaning

(Continued)

Caution (Continued)

products can be obtained from your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

⚠ Caution

Avoid using high-pressure washes closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.

The symbol is on any underhood compartment electrical center that should not be power washed. This could cause damage that would not be covered by the vehicle warranty.

If using an automatic car wash, follow the car wash instructions. The windshield wiper and rear window wiper, if equipped, must be off. Remove any accessories that may be damaged or interfere with the car wash equipment.

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

Finish Care

Application of aftermarket clearcoat sealant/wax materials is not recommended. If painted surfaces are damaged, see your dealer to have the damage assessed and repaired. Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Occasional hand waxing or mild polishing should be done to remove residue from the paint finish. See your dealer for approved cleaning products.

Do not apply waxes or polishes to uncoated plastic, vinyl, rubber, decals, simulated wood, or flat paint as damage can occur.

⚠ Caution

Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish

(Continued)

Caution (Continued)

may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/ clearcoat paint finish on the vehicle.

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Moldings

⚠ Caution

Failure to clean and protect the bright metal moldings can result in a hazy white finish or pitting. This damage would not be covered by the vehicle warranty.

The bright metal moldings on the vehicle are aluminum or stainless steel. To prevent damage always follow these cleaning instructions:

- Be sure the molding is cool to the touch before applying any cleaning solution.
- Use a cleaning solution approved for aluminum or stainless steel. Some cleaners are highly acidic or contain alkaline substances and can damage the moldings.
- Always dilute a concentrated cleaner according to the manufacturer's instructions.
- Do not use chrome cleaners.
- Do not use cleaners that are not intended for automotive use.
- Use a nonabrasive wax on the vehicle after washing to protect and extend the molding finish.

Cleaning Exterior Lamps/ Lenses, Emblems, Decals and Stripes

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps, lenses, emblems, decals and stripes. Follow instructions under "Washing the Vehicle" previously in this section.

Lamp covers are made of plastic, and some have a UV protective coating. Do not clean or wipe them when dry.

Do not use any of the following on lamp covers:

- Abrasive or caustic agents.
- Washer fluids and other cleaning agents in higher concentrations than suggested by the manufacturer.
- Solvents, alcohols, fuels, or other harsh cleaners.
- Ice scrapers or other hard items.

- Aftermarket appearance caps or covers while the lamps are illuminated, due to excessive heat generated.

⚠ Caution

Failure to clean lamps properly can cause damage to the lamp cover that would not be covered by the vehicle warranty.

⚠ Caution

Using wax on low gloss black finish stripes can increase the gloss level and create a non-uniform finish. Clean low gloss stripes with soap and water only.

Air Intakes

Clear debris from the air intakes, between the hood and windshield when washing the vehicle.

Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean rubber blades using a lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking.

Replace the wiper blades if they are worn or damaged. Damage can be caused by extreme dusty conditions, sand, salt, heat, sun, snow, and ice.

Weatherstrips

Apply Dielectric silicone grease on weatherstrips to make them last longer, seal better, and not stick or squeak. Lubricate weatherstrips at least once a year. Hot, dry climates may require more frequent application. Black marks from rubber material on painted surfaces can be removed by rubbing with a clean cloth. See *Recommended Fluids and Lubricants on page 11-12*.

Tires

Use a stiff brush with tire cleaner to clean the tires.

⚠ Caution

Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on the vehicle.

Wheels and Trim — Aluminum or Chrome

Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

⚠ Caution

Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium, or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.

⚠ Caution

To avoid surface damage, do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels. Use only approved cleaners. Also, never drive a vehicle with aluminum or chrome-plated wheels through an

(Continued)

Caution (Continued)

automatic car wash that uses silicone carbide tire cleaning brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.

Steering, Suspension, and Chassis Components

Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear at least once a year.

Inspect power steering for proper hook-up, binding, leaks, cracks, chafing, etc.

Visually check constant velocity joint boots and axle seals for leaks.

Body Component Lubrication

Lubricate all key lock cylinders, hood hinges, liftgate hinges, steel fuel door hinge, unless the components are plastic. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

Underbody Maintenance

At least twice a year, spring and fall use plain water to flush any corrosive materials from the underbody. Take care to thoroughly clean any areas where mud and other debris can collect.

Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

Finish Damage

Quickly repair minor chips and scratches with touch-up materials available from your dealer to avoid corrosion. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

Chemical Paint Spotting

Airborne pollutants can fall upon and attack painted vehicle surfaces causing blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface. See "Finish Care" previously in this section.

Interior Care

To prevent dirt particle abrasions, regularly clean the vehicle's interior. Immediately remove any soils. Note that newspapers or dark garments that can transfer color to home furnishings can also permanently transfer color to the vehicle's interior.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. Using a mild soap solution, immediately remove hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

Your dealer may have products for cleaning the interior. Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage. Apply all cleaners directly to the cleaning cloth. Do not spray cleaners directly on any switches or controls. Cleaners should be removed quickly. Never allow cleaners to remain on the surface being cleaned for extended periods of time.

Cleaners may contain solvents that can become concentrated in the interior. Before using cleaners, read and adhere to all safety instructions on the label. While cleaning the interior, maintain adequate ventilation by opening the doors and windows.

To prevent damage, do not clean the interior using the following cleaners or techniques:

- Never use a razor or any other sharp object to remove a soil from any interior surface.
- Never use a brush with stiff bristles.
- Never rub any surface aggressively or with excessive pressure.
- Do not use laundry detergents or dishwashing soaps with degreasers. For liquid cleaners, use approximately 20 drops per 3.8 L (1 gal) of water. A concentrated soap solution will leave a residue that creates streaks and attracts dirt. Do not use solutions that contain strong or caustic soap.
- Do not heavily saturate the upholstery when cleaning.
- Do not use solvents or cleaners containing solvents.

Interior Glass

To clean, use a terry cloth fabric dampened with water. Wipe droplets left behind with a clean dry cloth. Commercial glass cleaners may be used, if necessary, after cleaning the interior glass with plain water.

⚠ Caution

To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window defogger.

Cleaning the windshield with water during the first three to six months of ownership will reduce tendency to fog.

Speaker Covers

Vacuum around a speaker cover gently, so that the speaker will not be damaged. Clean spots with just water and mild soap.

Coated Moldings

Coated moldings should be cleaned.

- When lightly soiled, wipe with a sponge or soft lint-free cloth dampened with water.
- When heavily soiled, use warm soapy water.

Fabric/Carpet/Suede

Start by vacuuming the surface using a soft brush attachment. If a rotating brush attachment is being used during vacuuming, only use it on the floor carpet. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- Gently blot liquids with a paper towel. Continue blotting until no more soil can be removed.
- For solid soils, remove as much as possible prior to vacuuming.

To clean:

1. Saturate a clean lint-free colorfast cloth with water. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.
3. Start on the outside edge of the soil and gently rub toward the center. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
4. Continue gently rubbing the soiled area until there is no longer any color transfer from the soil to the cleaning cloth.
5. If the soil is not completely removed, use a mild soap solution followed only by plain water.

If the soil is not completely removed, it may be necessary to use a commercial upholstery

cleaner or spot lifter. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If ring formation occurs, clean the entire fabric or carpet.

Following the cleaning process, a paper towel can be used to blot excess moisture.

Cleaning High Gloss Surfaces and Vehicle Information and Radio Displays

For vehicles with high gloss surfaces or vehicle displays, use a microfiber cloth to wipe surfaces. Before wiping the surface with the microfiber cloth, use a soft bristle brush to remove dirt that could scratch the surface. Then use the microfiber cloth by gently rubbing to clean. Never use window cleaners or solvents. Periodically hand wash the microfiber cloth separately, using mild soap. Do not use bleach or fabric softener. Rinse thoroughly and air dry before next use.

⚠ Caution

Do not attach a device with a suction cup to the display. This may cause damage and would not be covered by the vehicle warranty.

Instrument Panel, Leather, Vinyl, Other Plastic Surfaces, Low Gloss Paint Surfaces and Natural Open Pore Wood Surfaces

Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfiber cloth dampened with a mild soap solution.

⚠ Caution

Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to dry naturally. Never use heat, steam, or spot removers. Do not use cleaners that contain silicone or wax-based products. Cleaners containing these solvents can permanently change the appearance and feel of leather or soft trim, and are not recommended.

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windshield under certain conditions.

⚠ Caution

Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.

Cargo Cover and Convenience Net

Wash with warm water and mild detergent. Do not use chlorine bleach. Rinse with cold water, and then dry completely.

Care of Safety Belts

Keep belts clean and dry.

⚠ Warning

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Floor Mats

⚠ Warning

If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

Use the following guidelines for proper floor mat usage.

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that certified floor mats be purchased. Non-certified floor mats may not fit properly and may interfere with the pedals. Always check that the floor mats do not interfere with the pedals.
- Do not use a floor mat if the vehicle is not equipped with a floor mat retainer on the driver side floor.
- Use the floor mat with the correct side up. Do not turn it over.
- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

Removing and Replacing the Floor Mats

The driver side floor mat is held in place by two button-type retainers. The passenger side floor mat is held in place by one button-type retainer.

1. Pull up on the rear of the floor mat to unlock each retainer and remove.
2. Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.
3. Make sure the floor mat is properly secured and verify that it does not interfere with the pedals.

Service and Maintenance

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Recommended Fluids, Lubricants, and Parts
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General Information

Your vehicle is an important investment. This section describes the required maintenance for the vehicle. Follow this schedule to help protect against major repair expenses resulting from neglect or inadequate maintenance. It may also help to maintain the value of the vehicle if it is sold. It is the responsibility of the owner to have all required maintenance performed.

Your dealer has trained technicians who can perform required maintenance using genuine replacement parts. They have up-to-date tools and equipment for fast and accurate diagnostics. Many dealers have extended evening and Saturday hours, courtesy transportation, and online scheduling to assist with service needs.

Your dealer recognizes the importance of providing competitively priced maintenance and repair services. With trained

technicians, the dealer is the place for routine maintenance such as oil changes and tire rotations and additional maintenance items like tires, brakes, batteries, and wiper blades.

⚠ Caution

Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.

The Tire Rotation and Required Services are the responsibility of the vehicle owner. It is recommended to have your dealer perform these services every 12 000 km/7,500 mi. Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions.

Because of the way people use vehicles, maintenance needs vary. There may need to be more frequent checks and services. The Additional Required Services - Normal are for vehicles that:

- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-9*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Fuel on page 9-56*.

Refer to the information in the Maintenance Schedule Additional Required Services - Normal chart.

The Additional Required Services - Severe are for vehicles that are:

- Mainly driven in heavy city traffic in hot weather.
- Mainly driven in hilly or mountainous terrain.
- Frequently towing a trailer.
- Used for high speed or competitive driving.
- Used for taxi, police, or delivery service.

Refer to the information in the Maintenance Schedule Additional Required Services - Severe chart.

⚠ Warning

Performing maintenance work can be dangerous and can cause serious injury. Perform maintenance work only if the required information, proper tools, and equipment are available. If they are not, see your dealer to have a trained technician do the work. See *Doing Your Own Service Work on page 10-3*.

Cadillac Premium Care Maintenance

Your vehicle comes with the Cadillac Premium Care Maintenance. It is a maintenance program that covers select maintenance services during the first 4 years or 80 000 km (50,000 mi), whichever comes first.

Cadillac Premium Care Maintenance covers routine maintenance services, when scheduled in accordance with the owner manual, including:

- Oil changes based on the vehicle's oil life monitor system.
- Tire rotation every 12 000 km (7,500 mi).
- Engine air cleaner filter replacement.
- Passenger compartment air filter replacement.
- Multi-point vehicle inspection (MPVI) performed by a qualified technician.

Cadillac requires that all Cadillac Premium Care Maintenance services be performed by a Cadillac authorized service dealer.

Maintenance Schedule

Owner Checks and Services

At Each Fuel Stop

- Check the engine oil level. See *Engine Oil on page 10-7*.

Once a Month

- Check the tire inflation pressures. See *Tire Pressure on page 10-48*.
- Inspect the tires for wear. See *Tire Inspection on page 10-54*.
- Check the windshield washer fluid level. See *Washer Fluid on page 10-18*.

Engine Oil Change

When the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km/600 mi. If driven under the best conditions, the engine oil life system may not indicate the need for vehicle service

for up to a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your trained dealer technician can perform this work. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 mi since the last service. Reset the oil life system when the oil is changed. See *Engine Oil Life System on page 10-9*.

Tire Rotation and Required Services Every 12 000 km/ 7,500 mi

Rotate the tires, if recommended for the vehicle, and perform the following services. See *Tire Rotation on page 10-55*.

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. See *Engine Oil on page 10-7* and *Engine Oil Life System on page 10-9*.
- Check engine coolant level. See *Engine Coolant on page 10-13*.
- Check windshield washer fluid level. See *Washer Fluid on page 10-18*.
- Visually inspect windshield wiper blades for wear, cracking, or contamination. See *Exterior Care on page 10-85*. Replace worn or damaged wiper blades. See *Wiper Blade Replacement on page 10-23*.
- Check tire inflation pressures. See *Tire Pressure on page 10-48*.
- Inspect tire wear. See *Tire Inspection on page 10-54*.
- Visually check for fluid leaks.
- Inspect engine air cleaner filter. See *Engine Air Cleaner/Filter on page 10-10*.
- Inspect brake system.
- Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear. See *Exterior Care on page 10-85*.
- Check restraint system components. See *Safety System Check on page 3-19*.
- Visually inspect fuel system for damage or leaks.
- Visually inspect exhaust system and nearby heat shields for loose or damaged parts.
- Lubricate body components. See *Exterior Care on page 10-85*.
- Check starter switch. See *Starter Switch Check on page 10-22*.
- Check automatic transmission shift lock control function. See *Automatic Transmission Shift Lock Control Function Check on page 10-23*.
- Check parking brake and automatic transmission park mechanism. See *Park Brake and P (Park) Mechanism Check on page 10-23*.

- Check accelerator pedal for damage, high effort, or binding. Replace if needed.
- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. See your dealer if service is required.
- Check tire sealant expiration date, if equipped. See *Tire Sealant and Compressor Kit on page 10-63*.
- Inspect sunroof track and seal, if equipped. See *Sunroof on page 2-26*.

Maintenance Schedule Additional Required Services - Normal	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter. (1)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (2)						✓						✓						✓		
Replace engine air cleaner filter. (3)						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Drain and fill engine cooling system. (4)																				✓
Visually inspect accessory drive belts. (5)																				✓
Replace brake fluid. (6)						✓						✓						✓		

Footnotes — Maintenance Schedule Additional Required Services - Normal

(1) Or every two years, whichever comes first. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

(2) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition.

(3) Or every four years, whichever comes first.

(4) Or every five years, whichever comes first. See *Cooling System on page 10-12*.

(5) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

(6) Or every three years, whichever comes first.

Maintenance Schedule Additional Required Services - Severe	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter. (1)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (2)						✓						✓						✓		
Replace engine air cleaner filter. (3)						✓						✓						✓		
Change automatic transmission fluid.						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Drain and fill engine cooling system. (4)																				✓
Visually inspect accessory drive belts. (5)																				✓
Replace brake fluid. (6)						✓						✓						✓		

Footnotes — Maintenance Schedule Additional Required Services - Severe

(1) Or every two years, whichever comes first. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

(2) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition.

(3) Or every four years, whichever comes first.

(4) Or every five years, whichever comes first. See *Cooling System on page 10-12*.

(5) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

(6) Or every three years, whichever comes first.

Special Application Services

- Severe Commercial Use Vehicles Only: Lubricate chassis components every 5 000 km/ 3,000 mi.
- Have underbody flushing service performed. See "Underbody Maintenance" in *Exterior Care on page 10-85*.

Additional Maintenance and Care

Your vehicle is an important investment and caring for it properly may help to avoid future costly repairs. To maintain vehicle performance, additional maintenance services may be required.

It is recommended that your dealer perform these services — their trained dealer technicians know your vehicle best. Your dealer can also perform a thorough assessment with a multi-point inspection to recommend when your vehicle may need attention.

The following list is intended to explain the services and conditions to look for that may indicate services are required.

Battery

The battery supplies power to start the engine and operate any additional electrical accessories.

- To avoid break-down or failure to start the vehicle, maintain a battery with full cranking power.
- Trained dealer technicians have the diagnostic equipment to test the battery and ensure that the connections and cables are corrosion-free.

Belts

- Belts may need replacing if they squeak or show signs of cracking or splitting.
- Trained dealer technicians have access to tools and equipment to inspect the belts and recommend adjustment or replacement when necessary.

Brakes

Brakes stop the vehicle and are crucial to safe driving.

- Signs of brake wear may include chirping, grinding, or squealing noises, or difficulty stopping.
- Trained dealer technicians have access to tools and equipment to inspect the brakes and recommend quality parts engineered for the vehicle.

Fluids

Proper fluid levels and approved fluids protect the vehicle's systems and components. See *Recommended Fluids and Lubricants on page 11-12* for GM approved fluids.

- Engine oil and windshield washer fluid levels should be checked at every fuel fill.
- Instrument cluster lights may come on to indicate that fluids may be low and need to be filled.

Hoses

Hoses transport fluids and should be regularly inspected to ensure that there are no cracks or leaks. With a multi-point inspection, your dealer can inspect the hoses and advise if replacement is needed.

Lamps

Properly working headlamps, taillamps, and brake lamps are important to see and be seen on the road.

- Signs that the headlamps need attention include dimming, failure to light, cracking, or damage. The brake lamps need to be checked periodically to ensure that they light when braking.
- With a multi-point inspection, your dealer can check the lamps and note any concerns.

Shocks and Struts

Shocks and struts help aid in control for a smoother ride.

- Signs of wear may include steering wheel vibration, bounce/sway while braking, longer stopping distance, or uneven tire wear.
- As part of the multi-point inspection, trained dealer technicians can visually inspect

the shocks and struts for signs of leaking, blown seals, or damage, and can advise when service is needed.

Tires

Tires need to be properly inflated, rotated, and balanced. Maintaining the tires can save money and fuel, and can reduce the risk of tire failure.

- Signs that the tires need to be replaced include three or more visible treadwear indicators; cord or fabric showing through the rubber; cracks or cuts in the tread or sidewall; or a bulge or split in the tire.
- Trained dealer technicians can inspect and recommend the right tires. Your dealer can also provide tire/wheel balancing services to ensure smooth vehicle operation at all speeds. Your dealer sells and services name brand tires.

Vehicle Care

To help keep the vehicle looking like new, vehicle care products are available from your dealer. For information on how to clean and protect the vehicle's interior and exterior, see *Interior Care on page 10-90* and *Exterior Care on page 10-85*.

Wheel Alignment

Wheel alignment is critical for ensuring that the tires deliver optimal wear and performance.

- Signs that the alignment may need to be adjusted include pulling, improper vehicle handling, or unusual tire wear.
- Your dealer has the required equipment to ensure proper wheel alignment.

Windshield

For safety, appearance, and the best viewing, keep the windshield clean and clear.

- Signs of damage include scratches, cracks, and chips.
- Trained dealer technicians can inspect the windshield and recommend proper replacement if needed.

Wiper Blades

Wiper blades need to be cleaned and kept in good condition to provide a clear view.

- Signs of wear include streaking, skipping across the windshield, and worn or split rubber.
- Trained dealer technicians can check the wiper blades and replace them when needed.

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Usage	Fluid/Lubricant
Engine Oil	Use only engine oil meeting the dexos1™ specification of the proper SAE viscosity grade. Look for the dexos1 approved logo for GM approved engine oil. See *Engine Oil on page 10-7*.
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL® Coolant. See *Engine Coolant on page 10-13*.
Fuel Additive	Fuel System Treatment PLUS (Part No. 88861013).
Hydraulic Brake System	DOT 3 Hydraulic Brake Fluid (GM Part No. 19299818, in Canada 19299819).
Windshield Washer	Automotive windshield washer fluid that meets regional freeze protection requirements.
Hydraulic Power Steering System	DEXRON®-VI Automatic Transmission Fluid.
Automatic Transmission	DEXRON®-VI Automatic Transmission Fluid.
Transfer Case (All-Wheel Drive)	Transfer Case Fluid (GM Part No. 19256084, in Canada 19256085).
Chassis Lubrication	Chassis Lubricant (GM Part No. 12377985, in Canada 88901242) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Key Lock Cylinders, Hood, and Door Hinges	Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).

Usage	Fluid/Lubricant
Power Liftgate Actuator Ball Joint, Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl	Lubriplate Lubricant Aerosol (GM Part No. 89021668, in Canada 89021674) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Weatherstrip Conditioning	Weatherstrip Lubricant (GM Part No. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. 12345579, in Canada 10953481).

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

Part	GM Part Number	ACDelco Part Number
Engine Air Cleaner/Filter	20897358	A3147C
Engine Oil Filter	89017525	PF63
Passenger Compartment Air Filter Element	13271191	CF176
Spark Plugs	12622561	41–109
Wiper Blades		
Driver Side – 65.0 cm (25.6 in)	22870539	—
Passenger Side – 42.5 cm (16.7 in)	22870540	—
Rear – 30.0 cm (11.8 in)	20825882	—

Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Technical Data

Vehicle Identification
Vehicle Identification Number (VIN) 12-1
Service Parts Identification Label 12-1

Vehicle Data
Capacities and Specifications 12-2
Engine Drive Belt Routing ... 12-4

Vehicle Identification

Vehicle Identification Number (VIN)

This legal identifier is in the front corner of the instrument panel, on the left side of the vehicle. It can be seen through the windshield from outside. The VIN also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under *Capacities and Specifications on page 12-2* for the vehicle's engine code.

Service Parts Identification Label

This label, on the inside of the rear side cargo management cover, has the following information:

- Vehicle Identification Number (VIN).
- Model designation.
- Paint information.
- Production options and special equipment.

Do not remove this label from the vehicle.

Vehicle Data

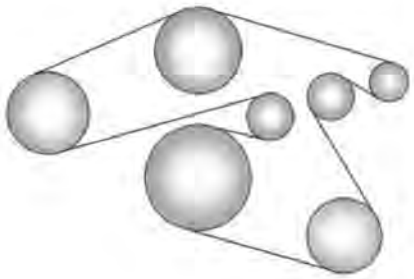
Capacities and Specifications

Application	Capacities	
	Metric	English
Air Conditioning Refrigerant	For the air conditioning system refrigerant type, and charge amount, see the refrigerant label located under the hood. See your dealer for more information.	
Engine Cooling System		
3.6L V6 Engine	12.8 L	13.5 qt
Engine Oil with Filter	5.7 L	6.0 qt
Fuel Tank	79.5 L	21.0 gal
Transfer Case Fluid	0.65 L	0.69 qt
Wheel Nut Torque	190 N•m	140 lb ft
All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.		

Engine Specifications

Engine	VIN Code	Transmission	Spark Plug Gap
3.6L V6 (LFX)	3	Automatic	0.95–1.10 mm (0.037–0.043 in)

Engine Drive Belt Routing



Customer Information

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Customer Information

Customer Satisfaction Procedure

Your satisfaction and goodwill are important to your dealer and to Cadillac. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by your dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

STEP ONE: Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service or parts manager, contact the owner of your dealership or the general manager.

STEP TWO: If after contacting a member of dealership management, it appears your concern cannot be resolved by your dealership without further help, in the U.S., call the Cadillac Customer Assistance Center at 1-800–458–8006. In Canada, call the Canadian Cadillac Customer Care Centre at 1-888-446-2000.

We encourage you to call the toll-free number in order to give your inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Cadillac, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

STEP THREE — U.S. Owners: Both General Motors and your dealer are committed to making sure you are completely satisfied with the new vehicle. However, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you can file with the Better Business Bureau (BBB) Auto Line® Program to enforce your rights.

The BBB Auto Line Program is an out-of-court program administered by the Council of Better Business Bureaus to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you.

You may contact the BBB Auto Line Program using the toll-free telephone number or write them at the following address:

BBB Auto Line Program
Council of Better Business Bureaus, Inc.
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203-1838

Telephone: 1-800-955-5100
www.dr.bbb.org/goauto

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage, and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

STEP THREE — Canadian Owners: In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps One and Two, General Motors of Canada Limited wants you to be aware of its participation in a no-charge mediation/arbitration program. General Motors of Canada Limited has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in approximately 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call the General Motors Customer Care Centre, 1-888-446-2000 (English), 1-800-263-7854 (French), or write to:

Mediation/Arbitration Program
c/o Customer Care Centre
General Motors of Canada Limited
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

The inquiry should be accompanied by the Vehicle Identification Number (VIN).

Customer Assistance Offices

Cadillac encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Cadillac, the letter should be addressed to:

United States and Puerto Rico

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169
www.Cadillac.com

1-800-458-8006
1-800-833-2622 (For Text Telephone devices (TTYs))
Roadside Service: 1-800-224-1400

From U.S. Virgin Islands:

1-800-496-9994

Canada

General Motors of Canada Limited
Canadian Cadillac Customer Care Centre, Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
www.gm.ca

1-888-446-2000 (English)
1-800-263-7854 (French)
Roadside Service: 1-800-882-1112

Overseas

Contact the local General Motors Business Unit.

Customer Assistance for Text Telephone (TTY) Users

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Cadillac has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Cadillac by dialing: 1-800-833-2622. TTY users in Canada can dial 1-800-263-3830.

Online Owner Center

Online Owner Experience (U.S.) my.cadillac.com

The Cadillac online owner experience allows interaction with Cadillac and keeps important vehicle-specific information in one place.

Membership Benefits

(Vehicle Information): Download owner manuals and view vehicle-specific how-to videos.

(Maintenance Information): View maintenance schedules, required alerts, and OnStar onboard vehicle diagnostic information. Schedule service appointments.

(Service History): View printable dealer-recorded service records and self-recorded service records.

(Preferred Dealer Information): Select a dealer and view locations, maps, phone numbers, and hours.

(Warranty Tracking Information): Track the vehicle's warranty information.

(Recall Information): View active recalls or search by Vehicle Identification Number (VIN). See *Vehicle Identification Number (VIN) on page 12-1*.

(Other Account Information): View GM Card, SiriusXM Satellite radio, and OnStar account information.

(Live Chat Support): Chat with online help representatives.

See my.cadillac.com to register your vehicle.

Cadillac Owner Centre (Canada) cadillacowner.ca

Visit the Cadillac Owner Centre:

- Chat live with online help representatives.
- Locate owner resources such as lease-end, financing, and warranty information.
- Retrieve favorite articles, quizzes, tips, and multimedia galleries organized into the Featured Articles and Auto Care Sections.
- Download owner manuals.
- Find Cadillac-recommended maintenance services.

Roadside Service

U.S.: 1-800-224-1400.

Canada: 1-800-882-1112.

Text Telephone (TTY) Users (U.S. Only): 1-888-889-2438.

Service is available 24 hours a day, 365 days a year.

Calling for Service

When calling Roadside Service, have the following information ready:

- Your name, home address, and home telephone number.
- Telephone number of your location.
- Location of the vehicle.
- Model, year, color, and license plate number of the vehicle.
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle.
- Description of the problem.

Coverage

Services are provided up to 6 years/ 110 000 km (70,000 mi), whichever comes first.

In the U.S., anyone driving the vehicle is covered. In Canada, a person driving the vehicle without permission from the owner is not covered.

Roadside Service is not a part of the New Vehicle Limited Warranty. General Motors North America and Cadillac reserve the right to make any changes or discontinue the Roadside Service program at any time without notification.

General Motors North America and Cadillac reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

Cadillac Owner Privileges™

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.
- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.

- **Emergency Tow from a Public Road or Highway:** Tow to the nearest Cadillac dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is not given when the vehicle is stuck in the sand, mud, or snow.
- **Flat Tire Change:** Service to change a flat tire with a spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is your responsibility for the repair or replacement of the tire if it is not covered by the warranty.
- **Battery Jump Start:** Service to jump start a dead battery.
- **Trip Interruption Benefits and Service:** If your trip is interrupted due to a warranty failure, incidental expenses may be reimbursed during the 6 years/110 000 km (70,000 mi) Powertrain warranty period. Items considered are hotel, meals, and rental car.

Cadillac Technician Roadside Service (U.S. Only)

Cadillac's exceptional Roadside Service is more than an auto club or towing service. It provides every Cadillac owner in the United States with the advantage of contacting a Cadillac advisor and, where available, a Cadillac trained dealer technician who can provide on-site service.

A dealer technician will travel to your location within a 30-mile radius of a participating Cadillac dealership. If beyond this radius, we will arrange to have your car towed to the nearest Cadillac dealership. Each technician travels with a specially equipped service vehicle complete with the necessary Cadillac parts and tools required to handle most roadside repairs.

Services Not Included in Roadside Service

- Impound towing caused by violation of any laws.
- Legal fines.
- Mounting, dismounting, or changing of snow tires, chains, or other traction devices.

Service is not provided if a vehicle is in an area that is not accessible to the service vehicle or is not a regularly traveled or maintained public road, which includes ice and winter roads. Off-road use is not covered.

Services Specific to Canadian-Purchased Vehicles

- **Fuel delivery:** Reimbursement is up to 7 liters. Diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.
- **Lock-Out Service:** Vehicle registration is required.
- **Trip Interruption Benefits and Service:** Pre-authorization, original detailed receipts, and a copy of the repair orders are required. Once authorization has been received, the Roadside

Service advisor will help you make arrangements and explain how to receive payment.

- **Alternative Service:** If assistance cannot be provided right away, the Roadside Service advisor may give you permission to get local emergency road service. You will receive payment, up to $100, after sending the original receipt to Roadside Service. Mechanical failures may be covered, however any cost for parts and labor for repairs not covered by the warranty are the owner responsibility.

Scheduling Service Appointments

When the vehicle requires warranty service, contact your dealer and request an appointment. By scheduling a service appointment and advising the service consultant of your transportation needs, your dealer can help minimize your inconvenience.

If the vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety related. If it is, please call your dealership, let them know this, and ask for instructions.

If your dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for same-day repair.

Courtesy Transportation Program

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper-to-Bumper (Base Warranty Coverage period in Canada), extended powertrain, and/or hybrid-specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled "Limited Warranty and Owner Assistance Information" furnished with each new vehicle provides detailed warranty coverage information.

Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to do so, your dealer may offer the following transportation options:

Shuttle Service

This includes one-way or round-trip shuttle service within reasonable time and distance parameters of your dealer's area.

Public Transportation or Fuel Reimbursement

If overnight warranty repairs are needed, and public transportation is used, the expense must be supported by original receipts and within the maximum amount allowed by GM for shuttle service. If U.S. customers arrange their own transportation, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information.

Courtesy Rental Vehicle

For an overnight warranty repair, the dealer may provide an available courtesy rental vehicle or provide for reimbursement of a rental vehicle. Reimbursement is limited and must be supported by original receipts as well as a signed and completed rental agreement and meet state/ provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. Additional fees such as fuel usage charges, taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair are also your responsibility.

It may not be possible to provide a like vehicle as a courtesy rental.

Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Contact your dealer for specific availability.

General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

Collision Damage Repair

If the vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish the vehicle resale value, and safety performance can be compromised in subsequent collisions.

Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine GM Collision parts are the best choice to ensure that the vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain the GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from

vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain the vehicle's originally designed appearance and safety performance; however, the history of these parts is not known. Such parts are not covered by the GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for the vehicle. As a result, these parts may fit poorly, exhibit premature durability/ corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by the GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

Repair Facility

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

Insuring the Vehicle

Protect your investment in the GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to the GM vehicle by limiting compensation for damage repairs by using aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you ensure that the vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If the vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read the lease carefully, as you may be charged at the end of the lease for poor quality repairs.

If a Crash Occurs

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see *Roadside Service on page 13-5*.

Gather the following information:

- Driver name, address, and telephone number.
- Driver license number.
- Owner name, address, and telephone number.
- Vehicle license plate number.
- Vehicle make, model, and model year.
- Vehicle Identification Number (VIN).
- Insurance company and policy number.
- General description of the damage to the other vehicle.

Choose a reputable repair facility that uses quality replacement parts. See "Collision Parts" earlier in this section.

If the airbag has inflated, see *What Will You See after an Airbag Inflates? on page 3-25*.

Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take the vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by the GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with the repair professional, and insist on Genuine GM parts. Remember, if the vehicle is leased, you may be obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

Service Publications Ordering Information

Service Manals

Service Manuals have the diagnosis and repair information on the engines, transmission, axle, suspension, brakes, electrical, steering, body, etc.

Service Bulletins

Service Bulletins give additional technical service information needed to knowledgeably service General Motors cars and trucks. Each bulletin contains instructions to assist in the diagnosis and service of the vehicle.

Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The Owner Manual includes the Maintenance Schedule for all models.

In-Portfolio: Includes a Portfolio, Owner Manual, and Warranty Manual.

RETAIL SELL PRICE: $35.00 – $40.00 (U.S.) plus handling and shipping fees.

Without Pouch: Owner Manual only.

RETAIL SELL PRICE: $25.00 (U.S.) plus handling and shipping fees.

Current and Past Models

Technical Service Bulletins and Manuals are available for current and past model GM vehicles.

ORDER TOLL FREE:
1-800-551-4123 Monday – Friday 8:00 AM – 6:00 PM Eastern Time

For Credit Card Orders Only (VISA-MasterCard-Discover), see Helm, Inc. at: www.helminc.com.

Or write to:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

All listed prices are quoted in U.S. funds. Make checks payable in U.S. funds.

Radio Frequency Identification (RFID)

RFID technology is used in some vehicles for functions such as tire pressure monitoring and ignition system security, as well as in connection with conveniences such as Remote Keyless Entry (RKE) transmitters for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in GM vehicles does not use or record personal information or link with any other GM system containing personal information.

Radio Frequency Statement

This vehicle has systems that operate on a radio frequency that complies with Part 15/Part 18 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-GEN/210/220/310, ICES-001.

Operation is subject to the following two conditions:

1. The device may not cause harmful interference.
2. The device must accept any interference received, including interference that may cause undesired operation of the device.

Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

Reporting Safety Defects

Reporting Safety Defects to the United States Government

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign.

However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to *http://www.safercar.gov;* or write to:

Administrator, NHTSA
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from *http://www.safercar.gov.*

Reporting Safety Defects to the Canadian Government

If you live in Canada, and you believe that the vehicle has a safety defect, notify Transport Canada immediately, and notify General Motors of Canada Limited. Call Transport Canada at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
80 rue Noel
Gatineau, QC J8Z 0A1

Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify General Motors.

Call 1-800-458-8006, or write:

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit , MI 48232-5169

In Canada, call 1-888-446-2000, or write:

Canadian Cadillac Customer Care Centre, Mail Code: CA1-163-005
General Motors of Canada Limited
1908 Colonel Sam Drive
Oshawa , Ontario L1H 8P7

Vehicle Data Recording and Privacy

The vehicle has a number of computers that record information about the vehicle's performance and how it is driven. For example, the vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy them in a crash, and, if equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help the dealer technician service the vehicle. Some modules may also store data about how the vehicle is operated, such as rate of fuel consumption or average speed. These modules may retain personal preferences, such as radio presets, seat positions, and temperature settings.

Event Data Recorders

This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur. NOTE: EDR data are recorded by your vehicle only if a non-trivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access this data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request by police or similar government office; as part of GM's defense of litigation through the discovery process; or, as required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

OnStar®

If the vehicle is equipped with OnStar® and has an active subscription, additional data may be collected through the OnStar system. This includes information about the vehicle's operation; collisions involving the vehicle; the use of the vehicle and its features; and, in certain situations, the location and approximate GPS speed of the vehicle. Refer to the OnStar Terms and Conditions and Privacy Statement on the OnStar website.

Infotainment System

If the vehicle is equipped with a navigation system as part of the infotainment system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. See the infotainment manual for information on stored data and for deletion instructions.

✍ NOTES

OnStar

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OnStar Overview

- Voice Command Button
- Blue OnStar Button
- Emergency Button

This vehicle may be equipped with a comprehensive, in-vehicle system that can connect to a live OnStar Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services. OnStar services may require a paid subscription. OnStar requires the vehicle battery and electrical system, cellular service, and GPS satellite signals to be available and operating. OnStar acts as a link to existing public emergency service providers. OnStar may collect information about you and your vehicle, including location information. See OnStar's Terms and Conditions and Privacy Statement for more details including system limitations at www.onstar.com (U.S.) or www.onstar.ca (Canada).

The OnStar system status light is next to the OnStar buttons. If the status light is:

- Solid Green: System is on.
- Flashing Green: On a call.
- Red: Indicates a problem.
- Off: System is off. Press the blue OnStar button twice to speak with an OnStar Advisor.

Press On or call 1-888-4-ONSTAR (1-888-466-7827) to speak to an Advisor.

Press to:

- Make a call, end a call, or answer an incoming call.
- Give OnStar Hands-Free Calling voice commands.

- Give OnStar Turn-by-Turn Navigation voice commands. Requires a specific OnStar subscription plan.
- Obtain the WiFi network name, or Service Set Identifier or SSID, and passphrase (if equipped).

Press to connect to a live Advisor to:

- Verify account information or update contact information.
- Get driving directions. Requires a specific OnStar subscription plan.
- Receive On-Demand Diagnostics for a check of the vehicle's key operating systems.
- Receive Roadside Assistance.
- Manage WiFi Settings (if equipped).

Press to get a priority connection to an OnStar Emergency Advisor available 24/7 to:

- Get help for an emergency.
- Be a Good Samaritan or respond to an AMBER Alert.
- Get assistance in severe weather or other crisis and evacuation routes.

OnStar Services

Emergency

With Automatic Crash Response, the OnStar system can automatically connect to an OnStar Emergency Advisor. The built-in system can automatically connect to help in certain crashes.

Press to connect to an OnStar Emergency Advisor. GPS technology is used to identify the vehicle location and can provide important information to emergency personnel. OnStar Emergency Advisors are trained to provide assistance and link to existing public emergency service providers in emergency situations.

With OnStar Crisis Assist, specially trained Crisis Advisors are available 24 hours a day, 7 days a week, to provide a central point of contact, assistance, and information if a crisis occurs.

Security

OnStar provides services including Stolen Vehicle Assistance, Remote Ignition Block, and Roadside Assistance, if equipped. OnStar can unlock the vehicle doors remotely, if equipped with automatic door locks, and can help police locate the vehicle if it is stolen.

Navigation

OnStar navigation requires a specific OnStar subscription plan.

Press to receive directions or have them sent to the vehicle navigation screen, if equipped. Destinations can also be forwarded to the vehicle from MapQuest.com.

Turn-by-Turn Navigation

1. Press to connect to a live Advisor.
2. Request directions.
3. Directions are downloaded to the vehicle.
4. Follow the voice-guided commands.

Using Voice Commands During a Planned Route

Cancel Route

1. Press . System responds: "OnStar ready," then a tone. Say "Cancel route." System responds: "Do you want to cancel directions?"
2. Say "Yes." System responds: "OK, request completed, thank you, goodbye."

Route Preview

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Route preview." System responds with the next three maneuvers.

Repeat

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Repeat." System responds with the last direction given, then responds with "OnStar ready," then a tone.

Get My Destination

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Get my destination." System responds with the address and the distance to the destination, then responds with "OnStar ready," then a tone.

Other Navigation Services Available from OnStar

OnStar eNav: Subscribers can send destinations from MapQuest.com to the vehicle Turn-by-Turn Navigation or screen-based navigation system (if equipped). When ready, the directions will be downloaded to the vehicle.

Destination Download: Press , then request the Advisor to download directions to the

navigation system in the vehicle (if equipped). After the call ends, press the "Go" button on the navigation screen to begin driving directions.

If directions are downloaded to the navigation system, the route can only be canceled through the navigation system.

Destinations can also be downloaded on the go. For information about eNav or Destination Download, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

Connections

The required specific Onstar subscription plan includes the services that follow to help customers stay connected.

For coverage maps, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

WiFi Connectivity (If Equipped)

The vehicle has a WiFi hotspot that provides a high-speed, wireless Internet connection to connect multiple mobile devices (data plan required).

1. To retrieve WiFi hotspot information, press and select or say "WiFi settings."
2. The WiFi settings will display the WiFi network name/SSID, passphrase, and level of encryption.
3. To change the SSID or passphrase, press or call 1-888-4-ONSTAR to connect with an Advisor.

OnStar RemoteLink® Mobile App (If Equipped)

Download the OnStar RemoteLink mobile app to select Apple®, Android™, and BlackBerry® or Windows 7 or 8 mobile devices. From the mobile device, check the vehicle's fuel level, oil life, or tire pressure (if the vehicle is equipped with the tire pressure monitoring system); or activate remote horn and lights. Also remote start the vehicle (if factory equipped) or unlock the doors from anywhere with a wireless connection (if equipped with automatic locks). With a required specific OnStar subscription plan, a destination can be sent to the vehicle. For OnStar RemoteLink information and compatibility, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

OnStar RemoteLink® Key Fob Services

This feature is included for five years and allows for remote door lock/unlock (if equipped with automatic locks), remote start (if factory equipped), or activation of horn and lights from anywhere with a wireless signal. Download the app and start using it any time during the trial period to get started.

OnStar Hands-Free Calling

This service allows calls to be made and received from the vehicle.

To Make a Call

1. Press . System responds: "OnStar ready."
2. Say "Call." System responds: "Call. Please say the name or number to call."
3. Say the entire number without pausing, including a "1" and the area code. System responds: "OK calling."

Calling 911 Emergency

1. Press . System responds: "OnStar Ready," followed by a tone.
2. Say "Call." System responds: "Call. Please say the name or number to call."
3. Say "911" without pausing. System responds: "911."
4. Say "Call." System responds: "OK, dialing 911."

Retrieve My Number

1. Press . System responds: "OnStar ready."
2. Say "My number." System responds: "Your OnStar Hands-Free Calling number is," then says the number.

End a Call

Press . System responds: "Call ended."

Store a Name Tag for Speed Dialing

1. Press . System responds: "OnStar ready."
2. Say "Store." System responds: "Please say the number you would like to store."
3. Say the entire number without pausing. System responds: "Please say the name tag."
4. Pick a name tag. System responds: "About to store <name tag>. Does that sound OK?"
5. Say "Yes" or say "No" to try again. System responds: "OK, storing <name tag>."

Place a Call Using a Stored Number

1. Press . System responds: "OnStar ready."
2. Say "Call <name tag>." System responds: "OK, calling <name tag>."

Verify Minutes and Expiration

Press and say "Minutes" then "Verify" to check how many minutes remain and their expiration date.

Vehicle Diagnostics

OnStar Vehicle Diagnostics can perform a vehicle check every month. It will check the engine, transmission, antilock brakes, and other major vehicle systems. It also checks the tire pressures, if the vehicle is equipped with the Tire Pressure Monitoring System. If an On-Demand Diagnostics check is needed, press , and an Advisor can run a check.

OnStar Additional Information

Transferring Service

Press to request account transfer eligibility information. The Advisor can assist in canceling or removing account information.

Selling/Transferring the Vehicle

Call 1-888-4-ONSTAR immediately to terminate your OnStar services if the vehicle is disposed of, sold, transferred, or if the lease ends.

Reactivation for Subsequent Owners

Press and follow the prompts to speak to an Advisor as soon as possible. The Advisor will update vehicle records and explain the OnStar service options available.

How OnStar Service Works

Automatic Crash Response, Emergency Services, Crisis Assist, Stolen Vehicle Assistance, Vehicle Diagnostics, Remote Door Unlock, Roadside Assistance, Turn-by-Turn Navigation, and Hands-Free Calling are available on most vehicles. Not all OnStar services are available everywhere or on all vehicles. For more information, a full description of OnStar services, system limitations, and OnStar terms and conditions:

- Call 1-888-4-ONSTAR (1-888-466-7827).
- See www.onstar.com (U.S.).
- See www.onstar.ca (Canada).
- Call TTY 1-877-248-2080.
- Press to speak with an Advisor.

OnStar services cannot work unless the vehicle is in a place where OnStar has an agreement with a wireless service provider for service

in that area. The wireless service provider must also have coverage, network capacity, reception, and technology compatible with OnStar services. Service involving location information about the vehicle cannot work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. OnStar services may not work if the OnStar equipment is not properly installed or it has not been properly maintained. If equipment or software is added, connected, or modified, OnStar services may not work. Other problems beyond the control of OnStar may prevent service such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage to the vehicle in a crash, or wireless phone network congestion or jamming.

See *Radio Frequency Statement on page 13-12.*

Services for People with Disabilities

Advisors provide services to help subscribers with physical disabilities and medical conditions.

Press for help with:

- Locating a gas station with an attendant to pump gas.
- Finding a hotel, restaurant, etc., that meets accessibility needs.
- Providing directions to the closest hospital or pharmacy in urgent situations.

TTY Users

OnStar has the ability to communicate to deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available dealer-installed TTY system can provide in-vehicle access to all of the OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

OnStar Personal Identification Number (PIN)

A PIN is needed to access some of the OnStar services, like Remote Door Unlock and Stolen Vehicle Assistance. The PIN will need to be changed the first time when speaking with an Advisor. To change the OnStar PIN, contact an OnStar Advisor by pressing or calling 1-888-4-ONSTAR.

Warranty

OnStar equipment may be warranted as part of the vehicle warranty.

Languages

The vehicle can be programmed to respond in multiple languages. Press and ask for an Advisor. Advisors are available in English, Spanish, and French. Available languages may vary by country.

Potential Issues

OnStar cannot perform Remote Door Unlock or Stolen Vehicle Assistance after the vehicle has been off continuously for five days. After five days, OnStar can contact Roadside Assistance and a locksmith to help gain access to the vehicle.

Global Positioning System (GPS)

- Obstruction of the GPS can occur in a large city with tall buildings; in parking garages; around airports; in tunnels, underpasses; or in an area with very dense trees. If GPS signals are not available, the OnStar system should still operate to call OnStar. However, OnStar could have difficulty identifying the exact location.
- In emergency situations, OnStar can use the last stored GPS location to send to emergency responders.

A temporary loss of GPS can cause loss of the ability to send a Turn-by-Turn Navigation route. The Advisor may give a verbal route or may ask for a call back after the vehicle is driven into an open area.

Cellular and GPS Antennas

Do not place items over or near the antenna to prevent blocking cellular and GPS signal reception. Cellular reception is required for OnStar to send remote signals to the vehicle.

Unable to Connect to OnStar Message

If there is limited cellular coverage or the cellular network has reached maximum capacity, this message may come on. Press to try the call again or try again after driving a few miles into another cellular area.

Vehicle and Power Issues

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

Add-on Electrical Equipment

The OnStar system is integrated into the electrical architecture of the vehicle. Do not add any electrical equipment. See *Add-On Electrical Equipment on page 9-68*. Added electrical equipment may interfere with the operation of the OnStar system and cause it to not operate.

Privacy

The complete OnStar Privacy Statement may be found at www.onstar.com (U.S.), or www.onstar.ca (Canada). We recommend that you review it. If you have any questions, call 1-888-4-ONSTAR (1-888-466-7827) or press to speak with an Advisor. Users of wireless communications are cautioned that the privacy of any information sent via wireless cellular communications cannot be assured. Third parties

may unlawfully intercept or access transmissions and private communications without consent.

OnStar - software acknowledgements

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libcurl:

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✍ NOTES

2016

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Introduction

The names, logos, emblems, slogans, vehicle model names, and vehicle body designs appearing in this manual including, but not limited to, GM, the GM logo, CADILLAC, the CADILLAC Emblem, and SRX are trademarks and/or service marks of General Motors LLC, its subsidiaries, affiliates, or licensors.

For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Cadillac Motor Car Division wherever it appears in this manual.

This manual describes features that may or may not be on the vehicle because of optional equipment that was not purchased on the vehicle, model variants, country specifications, features/applications that may not be available in your region, or changes subsequent to the printing of this owner manual.

Refer to the purchase documentation relating to your specific vehicle to confirm the features.

Keep this manual in the vehicle for quick reference.

Canadian Vehicle Owners

A French language manual can be obtained from your dealer, at www.helminc.com, or from:

Propriétaires Canadiens

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire ou à l'adresse suivante:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170
USA

Using this Manual

To quickly locate information about the vehicle, use the Index in the back of the manual. It is an alphabetical list of what is in the manual and the page number where it can be found.

Danger, Warning, and Caution

Warning messages found on vehicle labels and in this manual describe hazards and what to do to avoid or reduce them.

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⚠ Danger

Danger indicates a hazard with a high level of risk which will result in serious injury or death.

⚠ Warning

Warning indicates a hazard that could result in injury or death.

Caution

Caution indicates a hazard that could result in property or vehicle damage.

A circle with a slash through it is a safety symbol which means "Do Not," "Do not do this," or "Do not let this happen."

Symbols

The vehicle has components and labels that use symbols instead of text. Symbols are shown along with the text describing the operation or information relating to a specific component, control, message, gauge, or indicator.

: Shown when the owner manual has additional instructions or information.

: Shown when the service manual has additional instructions or information.

: Shown when there is more information on another page — "see page."

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. For more information on the symbol, refer to the Index.

: Airbag Readiness Light

: Air Conditioning

: Antilock Brake System (ABS)

: Audio Steering Wheel Controls or OnStar®

: Brake System Warning Light

: Charging System

: Cruise Control

: Do Not Puncture

: Do Not Service

: Engine Coolant Temperature

: Exterior Lamps

: Flame/Fire Prohibited

: Fog Lamps

: Fuel Gauge

: Fuses

: Headlamp High/Low-Beam Changer

: Heated Steering Wheel

: LATCH System Child Restraints

: Malfunction Indicator Lamp

: Oil Pressure

: Outside Power Foldaway Mirrors

: Power

: Remote Vehicle Start

: Safety Belt Reminders

: Tire Pressure Monitor

: Traction Control/StabiliTrak®

: Under Pressure

: Windshield Washer Fluid

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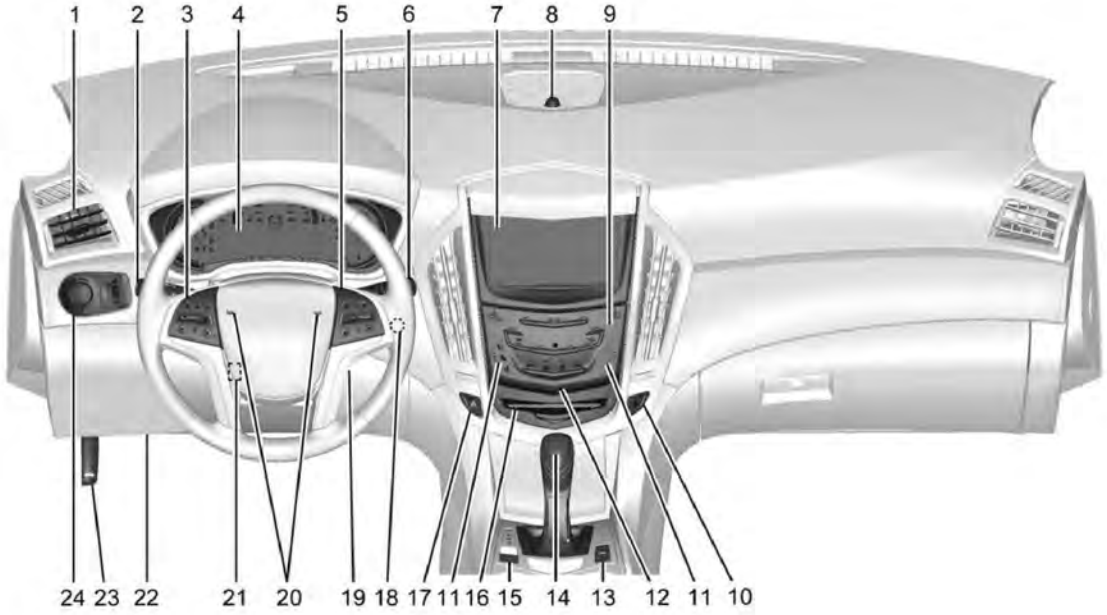

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Initial Drive Information

This section provides a brief overview about some of the important features that may or may not be on your specific vehicle.

For more detailed information, refer to each of the features which can be found later in this owner manual.

Remote Keyless Entry (RKE) System

The RKE transmitter may be used to lock and unlock the doors from up to 60 m (197 ft) away from the vehicle.

: Press to lock all doors.

: Press to unlock the driver door or all doors depending on the vehicle personalization settings.

Lock and unlock feedback can be personalized.

See *Vehicle Personalization* ⇨ *147*.

: Press and release one time to initiate vehicle locator.

Press and hold for three seconds to sound the panic alarm.

: Press twice to open or close the liftgate. Press once to stop the liftgate from moving.

Press the key release button near the bottom of the transmitter to remove the key. The key can be used for the driver door and the glove box.

See *Keys* ⇨ *26* and *Remote Keyless Entry (RKE) System Operation* ⇨ *27*.

Remote Vehicle Start

If equipped, the engine can be started from outside of the vehicle.

Starting the Vehicle

1. Press and release on the RKE transmitter.
2. Immediately press and hold for at least four seconds or until the turn signal lamps flash.
3. Start the vehicle normally after entering.

When the vehicle starts, the parking lamps will turn on.

Remote start can be extended.

Canceling a Remote Start

To cancel a remote start, do one of the following:

- Press and hold until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

See *Remote Vehicle Start* ⇨ 33.

Door Locks

Keyless Access

When the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door, pressing the lock/unlock button on that door handle will lock/unlock the doors. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock. See *Remote Keyless Entry (RKE) System Operation* ⇨ 27.

Remote Keyless Entry (RKE)

To lock or unlock the doors from the outside, press or on the RKE transmitter. See *Remote Keyless Entry (RKE) System Operation* ⇨ 27.

Key

To lock or unlock the door, use the key in the driver door. Turn the key counterclockwise once to unlock the driver door; turning the key again will unlock the passenger doors.

Inside the Vehicle

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks

There is a power door lock switch on the front door panels.

: Press to lock the doors.

: Press to unlock the doors.

See *Power Door Locks* ⇨ 36.

Liftgate

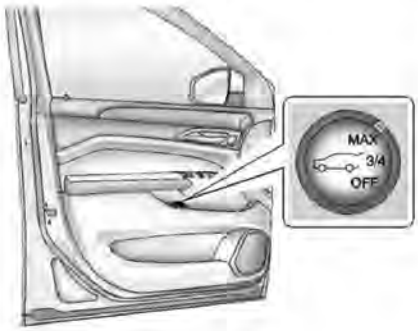
Manual Liftgate Operation

For vehicles without Keyless Access, unlock the vehicle before opening the liftgate.

Press the touch pad in the handle of the liftgate above the license plate and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Power Liftgate Operation



If equipped, the switch is on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

Choose a power liftgate mode and press the center of the switch.

The three modes are:

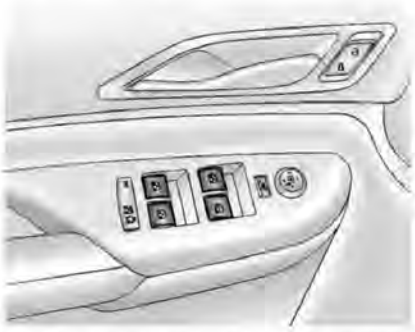
MAX : The liftgate opens to the full open height.

3/4 : The liftgate opens to a reduced height that can be set from 3/4 to fully open.

OFF : The liftgate only operates manually in this position.

See *Liftgate* ⇨ *37*.

Windows



Press or pull the switch, part of the way, to open or close the window.

Press the window switch fully and release to activate the express-down feature. If equipped, the express-up feature allows the window to be raised without holding the switch. Pull the window switch up fully and release to activate.

Press to activate the window lockout on the rear doors.

See *Power Windows* ⇨ *46*.

Remote Window Operation

If equipped, remote operating windows will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

See *Power Windows* ⇨ *46*.

Seat Adjustment

Manual Seats

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

To raise or recline the seatback, use the lever on the outboard side of the seat.

See *Seat Adjustment* ⇨ *53* and *Reclining Seatbacks* ⇨ *55*.

Power Seats

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control up or down.
- Raise or lower the entire seat by moving the rear of the control up or down.

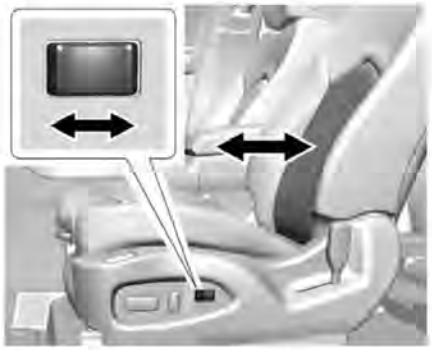
See *Power Seat Adjustment* ⇨ *54*.

Reclining Seatbacks

Raise or recline the seatback by tilting the control forward or rearward.

See *Reclining Seatbacks* ⇨ *55*.

Lumbar Adjustment



If equipped, increase or decrease the lumbar support by pressing and holding the front or rear of the control. See *Lumbar Adjustment* ⇨ *54*.

Memory Features

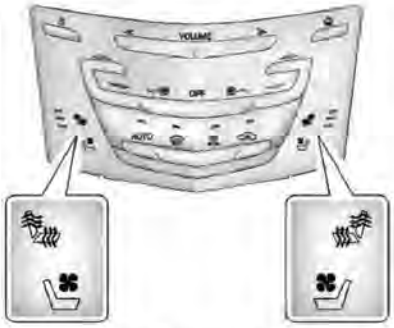
If equipped, the 1, 2, and MEM buttons on the outboard side of the driver seat are used to manually store and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions (if equipped).

When Auto Memory Recall is enabled in the personalization menu, positions previously stored to memory buttons 1 and 2 are recalled when the ignition is changed from OFF to ON/RUN or ACC/ACCESSORY.

When Easy Exit Options is enabled in the personalization menu, the seats will move rearward when the ignition is changed to OFF and the driver door is opened within a short time.

See *Memory Seats* ⇨ *56* and *Vehicle Personalization* ⇨ *147*.

Heated and Ventilated Seats



Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the center stack. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights next to the buttons indicate three for the highest setting and one for the lowest. If the front heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

See *Heated and Ventilated Front Seats* ⇨ *58*.

The heated and ventilated front seats can also be programmed to come on during a remote start. See *Vehicle Personalization* ⇨ *147*.

Head Restraint Adjustment

Do not drive until the head restraints for all occupants are installed and adjusted properly.

To achieve a comfortable seating position, change the seatback recline angle as little as necessary while keeping the seat and the head restraint height in the proper position.

See *Head Restraints* ⇨ *52* and *Seat Adjustment* ⇨ *53*.

Safety Belts

Refer to the following sections for important information on how to use safety belts properly:

- *Safety Belts* ⇨ *62*.
- *How to Wear Safety Belts Properly* ⇨ *63*.
- *Lap-Shoulder Belt* ⇨ *64*.
- *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *87*.

Passenger Sensing System

United States

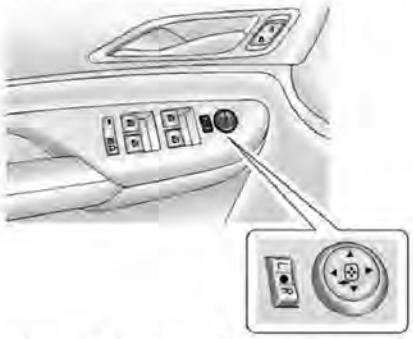
Canada and Mexico

The passenger sensing system will turn off the front outboard passenger frontal airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger airbag status indicator will be visible on the overhead console when the vehicle is started. See *Passenger Sensing System* ⇨ *75*.

Mirror Adjustment

Exterior



Manual Folding Mirrors Shown, Power Folding Similar

To adjust the mirror:

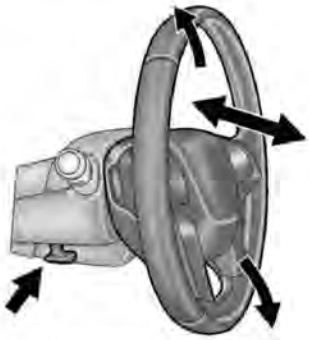
1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror to the desired position.
3. Return the selector switch to the center position.

See *Power Mirrors* ⇨ *44*.

Automatic Dimming Mirror

If equipped, the driver outside mirror and the inside rearview mirror automatically adjust for the glare of headlamps behind you. See *Automatic Dimming Mirror* ⇨ *45* or *Automatic Dimming Rearview Mirror* ⇨ *46*.

Steering Wheel Adjustment



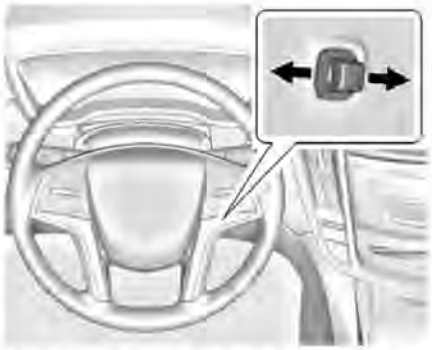
To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Throttle and Brake Pedal Adjustment

If equipped, the position of the throttle and brake pedals can be adjusted.



The switch used to adjust the pedals is below the windshield wiper lever. Pull the switch toward you to

move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

See *Adjustable Throttle and Brake Pedal* ⇨ *187*.

Interior Lighting

Dome Lamp

To change the dome lamp settings, press the following:

: Turns the lamp off, even when a door is open.

: The lamp comes on when a door is opened.

: Turns the dome lamp on.

Reading Lamps

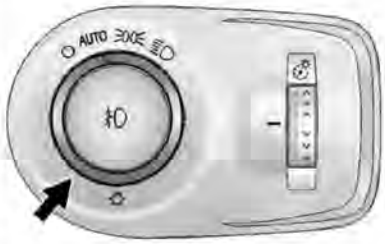
There are reading lamps on the overhead console and over the rear passenger doors. These lamps come on when any door is opened.

To manually turn the reading lamps on or off:

- For the overhead console reading lamps, press the or next to each lamp.
- For the rear passenger reading lamps, press the lamp lens.

For more information on interior lighting, see *Instrument Panel Illumination Control* ⇨ *163*.

Exterior Lighting



The exterior lamp control is on the instrument panel to the left of the steering column.

Turn the control to the following positions:

: Briefly turn to this position to turn the automatic light control off or on again.

AUTO : Automatically turns the exterior lamps on and off, depending on outside lighting.

: Turns on the parking lamps including all lamps, except the headlamps.

: Turns on the headlamps together with the parking lamps and instrument panel lights. A warning

chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

: If equipped with fog lamps, press to turn the lamps on or off.

See:

- *Exterior Lamp Controls* ⇨ *157*.
- *Daytime Running Lamps (DRL)* ⇨ *159*.

Windshield Wiper/Washer

With the ignition in ACC/ ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI : Use for fast wipes.

LO : Use for slow wipes.

INT : Use this setting for intermittent wipes or Rainsense™, if equipped. For intermittent wipes, move the windshield wiper lever to INT. Turn the INT band up for more frequent wipes or down for less frequent wipes.

If equipped with Rainsense, move the windshield wiper lever to INT and turn the INT band to adjust the sensitivity to moisture.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

OFF : Use to turn the wipers off.

1X : For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON : Press the upper portion of the button for continuous rear window wipes.

OFF : The rear wiper turns off when the button is returned to the middle position.

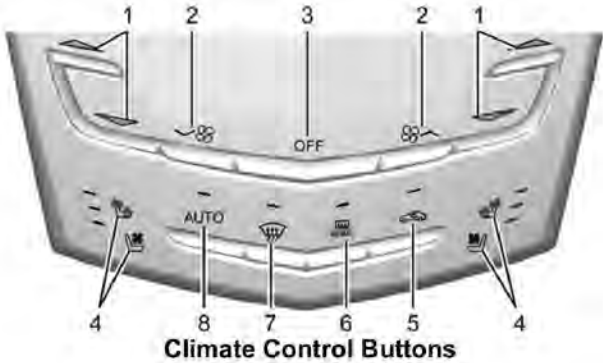
INT : Press the lower portion of the button for intermittent rear wipes.

REAR **:** Push the windshield wiper lever forward to spray washer fluid on the rear window.

See *Windshield Wiper/Washer* ⇨ *113* and *Rear Window Wiper/ Washer* ⇨ *114*.

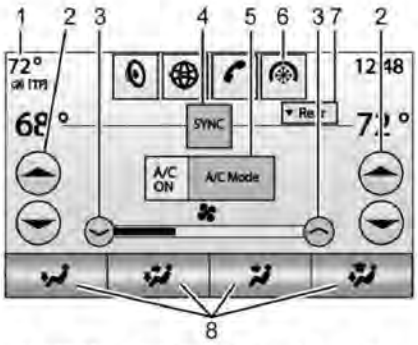
Climate Controls

The climate control buttons and the touch screen are used to adjust the heating, cooling, and ventilation.



Climate Control Buttons

1. Driver and Passenger Temperature Controls
2. Fan Control
3. OFF (Fan)
4. Driver and Passenger Heated and Ventilated Seats (If Equipped)
5. Recirculation
6. Rear Window Defogger
7. Defrost
8. AUTO (Automatic Operation)



Climate Touch Screen Controls

1. Outside Temperature Display
2. Driver and Passenger Temperature Controls
3. Fan Control
4. SYNC (Synchronized Temperature)
5. A/C Mode (Air Conditioning)
6. Climate Control Selection (Application Tray Button)
7. Rear (Rear Climate Control Touch Screen)
8. Air Delivery Mode Control

See *Dual Automatic Climate Control System* ⇨ *167* and *Rear Climate Control System* ⇨ *171* (if equipped).

Transmission

Driver Shift Control (DSC)

DSC allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to Sport Mode.
2. To enter M (Manual Mode), press the shift lever forward to upshift or rearward to downshift.

See *Manual Mode* ⇨ *196*.

Vehicle Features

Infotainment System

See the infotainment manual for information on the radio, audio players, phone, navigation system, and voice or speech recognition. It also includes information on settings and downloadable applications (if equipped).

Steering Wheel Controls

The infotainment system can be operated by using the steering wheel controls. See "Steering Wheel Controls" in the infotainment manual.

Cruise Control

: Press to turn the system on and off. A white indicator appears in the instrument cluster when cruise is turned on.

+RES : If there is a set speed in memory, press the control up briefly to resume to that speed or press and hold to accelerate. If cruise control is already active, use to increase vehicle speed.

SET− : Press the control down briefly to set the speed and activate cruise control or to decrease vehicle speed if the cruise control is already activated.

: Press to disengage cruise control without erasing the set speed from memory.

See *Cruise Control* ⇨ *205* or *Adaptive Cruise Control* ⇨ *207* (if equipped).

Driver Information Center (DIC)

The DIC display is in the instrument cluster. It shows the status of many vehicle systems.

∧ or ∨ : Move SEL up or down to go to the previous or next selection.

< or > : Press to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL : Press to open a menu or select a menu item. Press and hold to reset values on certain screens.

See *Driver Information Center (DIC)* ⇨ *134*.

Forward Collision Alert (FCA) System

If equipped, FCA may help avoid or reduce the harm caused by front-end crashes. FCA provides a green indicator, , when a vehicle is detected ahead. This indicator displays amber if you follow a vehicle much too closely. When approaching a vehicle ahead too quickly, FCA provides a flashing red alert on the windshield and rapidly beeps or pulses the driver seat.

See *Forward Collision Alert (FCA) System* ⇨ *219*.

Front Automatic Braking (FAB) System

If the vehicle has Adaptive Cruise Control (ACC), it also has FAB, which includes Intelligent Brake Assist (IBA). When the system detects a vehicle ahead in your path that is traveling in the same direction that you may be about to crash into, it can provide a boost to braking or automatically brake the vehicle. This can help avoid or lessen the severity of crashes when driving in a forward gear.

See *Front Automatic Braking (FAB) System* ⇨ *221*.

Lane Departure Warning (LDW)

If equipped, LDW may help avoid unintentional lane departures at speeds of 56 km/h (35 mph) or greater. LDW uses a camera sensor to detect the lane markings. The LDW light, , is green if a lane marking is detected. If the vehicle departs the lane, the light will change to amber and flash. In addition, beeps will sound or the driver seat will pulse.

See *Lane Departure Warning (LDW)* ⇨ *224*.

Side Blind Zone Alert (SBZA)

If equipped, SBZA will detect moving vehicles in the next lane over in the vehicle's side blind zone area. When this happens, the SBZA display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

See *Side Blind Zone Alert (SBZA)* ⇨ *222*.

Rear Vision Camera (RVC)

If equipped, RVC displays a view of the area behind the vehicle on the center stack display when the vehicle is shifted into R (Reverse) to aid with parking and low-speed backing maneuvers.

See *Assistance Systems for Parking or Backing* ⇨ *215*.

Rear Cross Traffic Alert (RCTA) System

If equipped, the RCTA system uses a triangle with an arrow displayed on the RVC screen to warn of traffic behind your vehicle that may cross your vehicle's path while in R (Reverse). In addition, beeps will sound, or the driver seat will pulse.

See *Assistance Systems for Parking or Backing* ⇨ *215*.

Parking Assist

If equipped, Rear Parking Assist (RPA) uses sensors on the rear bumper to assist with parking and avoiding objects while in R (Reverse). It operates at speeds less than 8 km/h (5 mph). RPA may display a warning triangle on the Rear Vision Camera screen and a graphic on the instrument cluster to provide the object distance. In addition, multiple beeps or seat pulses may occur if very close to an object.

The vehicle may also have the Front Parking Assist system.

See *Assistance Systems for Parking or Backing* ⇨ *215*.

Rear Automatic Braking (RAB) System

If the vehicle has Adaptive Cruise Control (ACC) it also has the RAB system, which is designed to help avoid or reduce the harm caused by backing crashes when the vehicle is shifted into R (Reverse). If the system detects the vehicle is backing too fast to avoid a crash with a detected object behind your vehicle in your path, it may automatically brake hard to a stop.

See *Assistance Systems for Parking or Backing* ⇨ *215*.

Storage Compartments

The glove box is air conditioned and can be used to store items at a lower temperature. Move the slide control to open or close the opening to adjust the air flow. See *Glove Box* ⇨ *100*.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle may have up to five accessory power outlets.

The accessory power outlets are:

- Below the climate control system inside the front storage bin.
- Inside the center floor console.
- On the rear of the center floor console. For vehicles with a rear climate control system, there will be two accessory power outlets on the rear of the center floor console.
- In the rear cargo area.

These are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

See *Power Outlets* ⇨ *116*.

Universal Remote System

If available, this system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Read the instructions completely before attempting to program the Universal Remote system. Because of the steps involved, it may be helpful to have another person available to assist you with programming the Universal Remote system.

See *Universal Remote System* ⇨ *154*.

Performance and Maintenance

Traction Control/ Electronic Stability Control

The Traction Control System (TCS) limits wheel spin. The system turns on automatically when the vehicle is started.

The StabiliTrak system assists with directional control of the vehicle in difficult driving conditions. The system turns on automatically when the vehicle is started.

- To turn off traction control, press and release OFF on the center stack. ⚠ illuminates in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages* ⇨ *144*.
- Press and release OFF again to turn traction control back on. ⚠ goes out in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages* ⇨ *144*.
- To turn off both traction control and StabiliTrak, press and hold OFF on the center stack until OFF and ⚠ illuminate in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages* ⇨ *144*.
- Press OFF again to turn on both systems. OFF and ⚠ go out in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages* ⇨ *144*.

See *Traction Control/Electronic Stability Control* ⇨ *202*.

Tire Pressure Monitor

This vehicle may have a Tire Pressure Monitor System (TPMS).

The low tire pressure warning light alerts to a significant loss in pressure of one of the vehicle's tires. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits* ⇨ *182*. The warning light will remain on until the tire pressure is corrected.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This may be an early indicator that the tire pressures are getting low and the tires need to be inflated to the proper pressure.

The TPMS does not replace normal monthly tire maintenance. Maintain the correct tire pressures.

See *Tire Pressure Monitor System* ⇨ *287*.

Engine Oil Life System

The engine oil life system calculates engine oil life based on vehicle use and displays the CHANGE ENGINE OIL SOON message when it is time to change the engine oil and filter. The oil life system should be reset to 100% only following an oil change.

Resetting the Oil Life System

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC)* ⇨ *134*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages* ⇨ *140*.
2. Press SEL on the DIC controls and hold SEL down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

See *Engine Oil Life System* ⇨ *246*.

Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tires properly inflated.
- Combine several trips into a single trip.
- Replace the vehicle's tires with the same TPC Spec number molded into the tire's sidewall near the size.
- Follow recommended scheduled maintenance.

Roadside Service

U.S.: 1-800-224-1400

Canada: 1-800-882-1112

TTY Users (U.S. Only): 1-888-889-2438

New Cadillac owners are automatically enrolled in the Roadside Service Program.

See *Roadside Service* ⇨ *349*.

Keys, Doors, and Windows

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Keys and Locks

Keys

⚠ Warning

Leaving children in a vehicle with a Remote Keyless Entry (RKE) transmitter is dangerous and children or others could be seriously injured or killed. They could operate the power windows or other controls or make the vehicle move. The windows will function with the RKE transmitter in the vehicle, and children or others could be caught in the path of a closing window. Do not leave children in a vehicle with an RKE transmitter.

The key, inside the Remote Keyless Entry (RKE) transmitter, is used for the driver door and glove box.

To remove the key, press the button near the bottom of the transmitter, and pull the key out. Never pull the key out without pressing the button.

If it becomes difficult to turn the key, inspect the key blade for debris.

See your dealer if a new key is needed.

Contact Roadside Service if locked out of the vehicle. See *Roadside Service* ⇨ *349*.

With an active OnStar subscription, an OnStar Advisor may remotely unlock the vehicle. See *OnStar Overview* ⇨ *360*.

Remote Keyless Entry (RKE) System

See *Radio Frequency Statement* ⇨ *356*.

If there is a decrease in the RKE operating range:

- Check the distance. The transmitter may be too far from the vehicle.
- Check the location. Other vehicles or objects may be blocking the signal.
- Check the transmitter's battery. See "Battery Replacement" later in this section.
- If the transmitter is still not working correctly, see your dealer or a qualified technician for service.

Remote Keyless Entry (RKE) System Operation

The Keyless Access system allows for vehicle entry when the transmitter is within range. See "Keyless Access Operation" following.

The RKE transmitter functions may work up to 60 m (197 ft) away from the vehicle.

Keep in mind that other conditions, such as those previously stated, can impact the performance of the transmitter.

With Remote Start and Power Liftgate Shown, Without Similar

(Lock) : Press to lock all doors. The turn signal indicators may flash and/or the horn may sound on the second press to indicate locking. See *Vehicle Personalization* ⇨ *147*.

If the driver door is open when is pressed, all doors lock except the driver door, if enabled through the vehicle personalization. If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the theft-deterrent system. See *Vehicle Alarm System* ⇨ *40*.

If equipped, pressing will also lock the fuel door.

(Unlock) : Press to unlock the driver door or all doors. See *Vehicle Personalization* ⇨ *147*. When remotely unlocking the vehicle at night the fog lamps and back-up lamps will come on for about 20 seconds to light your approach to the vehicle. The turn signal indicators may flash to indicate unlocking. See *Vehicle Personalization* ⇨ *147*.

Pressing will disarm the theft-deterrent system. See *Vehicle Alarm System* ⇨ *40*.

On some models, pressing and holding will open all of the windows.

If equipped, pressing will also unlock the fuel door.

(Remote Start) : For vehicles with this feature, press and release and then immediately press and hold for at least four seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start* ⇨ *33*.

(Vehicle Locator/Panic Alarm) : Press and release one time to initiate vehicle locator. The exterior lamps flash and the horn chirps three times. Press and hold for three seconds to sound the panic alarm. The horn sounds and the turn signal lamps flash for 30 seconds, or until is pressed again or the vehicle is started.

(Remote Liftgate Release) : Press twice to open or close the liftgate.

Press once to stop the liftgate from moving.

Keyless Access Operation

With the Keyless Access system, you can lock and unlock the doors and access the hatch without removing the RKE transmitter from your pocket, purse, briefcase, etc. The RKE transmitter should be within 1 m (3 ft) of the door or hatch being opened.

Keyless Access can be programmed to unlock all doors on the first lock/unlock press from the driver door. See *Vehicle Personalization* ⇨ *147*.

Keyless Unlocking/Locking from the Driver Door

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the driver door handle, pressing the lock/unlock button on the driver door handle will unlock the driver door. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock.

Driver Shown, Passenger Similar

Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

- It has been more than five seconds since the first lock/unlock button press.
- Two lock/unlock button presses were used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

Keyless Unlocking/Locking from Passenger Doors

When the doors are locked and the RKE transmitter is within 1 m (3 ft) of the door handle, pressing the lock/unlock button on that door handle will unlock all doors. Pressing the lock/unlock button will cause all doors to lock if any of the following occur:

- The lock/unlock button was used to unlock all doors.
- Any vehicle door has opened and all doors are now closed.

Passive Locking

If equipped with Keyless Access, this vehicle will lock several seconds after all doors are closed if the vehicle is off and at least one RKE transmitter has been removed or none remain in the interior.

If equipped with a locking fuel door, the fuel door will also lock at this time.

If other electronic devices interfere with the RKE transmitter signal, the vehicle may not detect the RKE transmitter inside the vehicle. If passive locking is enabled, the doors may lock with the RKE transmitter inside the vehicle. Do not leave the RKE transmitter in an unattended vehicle.

Temporary Disable Passive Locking Feature

Temporarily disable the passive locking by pressing and holding on the interior door switch with a door open for at least four seconds, or until three chimes are heard. Passive locking will then remain disabled until on the interior door is pressed, or until the vehicle is turned on.

To customize the doors to automatically lock when exiting the vehicle, see "Remote Lock, Unlock, Start" under *Vehicle Personalization* ⇨ *147*.

Keyless Liftgate Opening

Press the touch pad on the liftgate handle to open the liftgate if the RKE transmitter is within 1 m (3 ft).

Programming Transmitters to the Vehicle

Only RKE transmitters programmed to the vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen transmitters no longer work. Each vehicle can have up to eight transmitters matched to it.

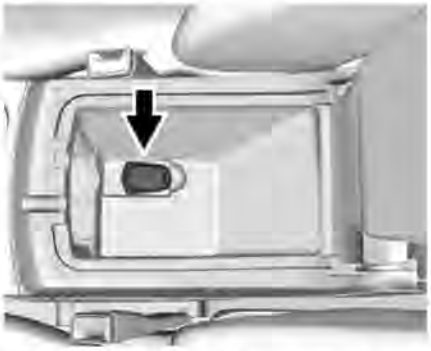
Programming with a Recognized Transmitter

A new transmitter can be programmed to the vehicle when there is one recognized transmitter.

To program, the vehicle must be off and all of the transmitters, both currently recognized and new, must be with you.

1. Place the recognized transmitter(s) in the cupholder.
2. Insert the vehicle key of the transmitter into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

   The Driver Information Center (DIC) displays READY FOR REMOTE #2, 3, 4, ETC.



3. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area between the driver and front passenger seats. The storage

area will need to be opened and the storage tray lifted up to access the transmitter pocket.

4. Press the ENGINE START/ STOP button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
5. Remove the transmitter from the transmitter pocket and press the transmitter or button.

   To program additional transmitters, repeat Steps 3–5.

   When all additional transmitters are programmed, press and hold the ENGINE START/ STOP button for 12 seconds to exit programming mode.

Programming without a Recognized Transmitter

If there are no currently recognized transmitters available, follow this procedure to program up to eight transmitters. This feature is not available in Canada. This procedure will take approximately 30 minutes to complete. The vehicle must be off and all of the transmitters you wish to program must be with you.

1. Insert the vehicle key of the transmitter into the key lock cylinder on the driver door handle and turn the key, counterclockwise, to the unlock position five times within 10 seconds.

   The Driver Information Center (DIC) displays REMOTE LEARN PENDING, PLEASE WAIT.
2. Wait for 10 minutes until the DIC displays PRESS ENGINE START BUTTON TO LEARN and then press the ENGINE START/STOP button.

   The DIC displays will again show REMOTE LEARN PENDING, PLEASE WAIT.
3. Repeat Step 2 two additional times. After the third time all previously known transmitters will no longer work with the vehicle. Remaining transmitters can be relearned during the next steps.

   The DIC display should now show READY FOR REMOTE # 1.

4. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.

5. Press the ENGINE START/ STOP button. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
6. Remove the transmitter from the transmitter pocket and press the transmitter or button.

   To program additional transmitters, repeat Steps 4–6.

   When all additional transmitters are programmed, press and hold the ENGINE START/ STOP button for 12 seconds to exit programming mode.

Starting the Vehicle with a Low Transmitter Battery

When the vehicle is started, if the transmitter battery is weak, the DIC may display NO REMOTE DETECTED or NO REMOTE KEY WAS DETECTED PLACE KEY IN TRANSMITTER POCKET THEN START YOUR VEHICLE. The REPLACE BATTERY IN REMOTE KEY message may also be displayed at this time.

To start the vehicle:

1. Open the center console storage area and the storage tray.

2. Place the transmitter in the transmitter pocket.
3. With the vehicle in P (Park) or N (Neutral), press the brake pedal and the ENGINE START/ STOP button.

   Replace the transmitter battery as soon as possible.

Battery Replacement

Caution
When replacing the battery, do not touch any of the circuitry on the transmitter. Static from your body could damage the transmitter.

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC.

1. Press the button on the side of the transmitter near the bottom and pull the key out.

2. Separate the two halves of the transmitter using a flat tool inserted into the bottom center of the transmitter. Do not use the key slot.

3. Remove the old battery. Do not use a metal object.
4. Insert the new battery on the back housing, positive side facing down. Replace with a CR2032 or equivalent battery.
5. Align the front and back housing then snap the transmitter together.

Remote Vehicle Start

If available, this feature allows the engine to be started from outside of the vehicle.

(Remote Vehicle Start) : This button will be on the RKE transmitter if the vehicle has remote start.

The climate control system will use the previous settings during a remote start. The rear defog may come on during remote start based on cold ambient conditions. The rear fog indicator light does not come on during remote start.

If the vehicle has auto heated or ventilated seats they may come on during a remote start. See *Heated and Ventilated Front Seats* ⇨ *58*.

Laws in some local communities may restrict the use of remote starters. For example, some laws may require a person using remote start to have the vehicle in view. Check local regulations for any requirements.

Other conditions can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System* ⇨ *27*.

Starting the Engine Using Remote Start

1. Press and release on the RKE transmitter.
2. Immediately press and hold for at least four seconds or until the turn signal lamps flash. The turn signal lamps flashing confirms the request to remote start the vehicle has been received.

   During the remote start the doors will be locked and the parking lamps will remain on as long as the engine is running.

   The engine will shut off after 10 minutes unless a time extension is done or the ignition is put in ON/RUN/START.
3. With the remote in the vehicle, press the brake pedal and select the ON/RUN/START ignition mode to drive.

Extending Engine Run Time

The engine run time can also be extended by another 10 minutes, if during the first 10 minutes Steps 1 and 2 are repeated while the engine is still running. An extension can be requested 30 seconds after starting. This provides a total of 20 minutes.

The remote start can only be extended once.

When the remote start is extended, the second 10-minute period is added on to the first 10 minutes for a total of 20 minutes.

A maximum of two remote starts, or a remote start with an extension, are allowed between ignition cycles.

The vehicle's ignition must be changed to ON/RUN/START and then back to OFF before the remote start procedure can be used again.

Canceling a Remote Start

To cancel a remote start, do any of the following:

- Press and hold until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

Conditions in Which Remote Start Will Not Work

The remote start will not operate if any of the following occur:

- The transmitter is in the vehicle.
- The hood is not closed.
- The hazard warning flashers are on.
- There is an emission control system malfunction.
- The engine coolant temperature is too high.
- The oil pressure is low.
- Two remote vehicle starts or a start with an extension have already been used.
- The vehicle is not in P (Park).

Door Locks

⚠ Warning

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked. So, all passengers should wear safety belts properly and the doors should be locked whenever the vehicle is driven.
- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.

(Continued)

Warning (Continued)

- Outsiders can easily enter through an unlocked door when slowing or stopping the vehicle. Lock the doors to help prevent this from happening.

Keyless Access

When the Remote Keyless Entry (RKE) transmitter is within 1 m (3 ft) of the driver door, pressing the lock/unlock button on that door handle will lock/unlock the doors. If the lock/unlock button is pressed again within five seconds, all passenger doors will unlock. See *Remote Keyless Entry (RKE) System Operation* ⇨ 27.

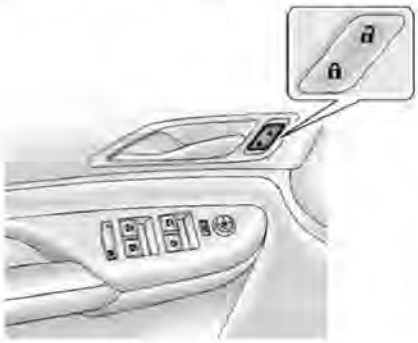
Key

To lock or unlock the door, use the key in the driver door. Turn the key counterclockwise once to unlock the driver door; turning the key again will unlock the passenger doors.

Inside the Vehicle

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks



(Lock) : Press to lock the doors.

(Unlock) : Press to unlock the doors.

Delayed Locking

This feature delays the locking of the doors until five seconds after all doors are closed.

When is pressed on the power door lock switch while the door is open, a chime will sound three times indicating delayed locking is active.

The doors will lock automatically five seconds after all doors are closed. If a door is reopened before that time, the five-second timer will reset when all doors are closed again.

Press on the door lock switch again or press on the RKE transmitter to lock the doors immediately.

This feature can also be programmed. See *Vehicle Personalization* ⇨ *147*.

Automatic Door Locks

The doors will lock automatically when all doors are closed, the ignition is on, and the shift lever is moved out of P (Park). The doors will automatically unlock when the vehicle is stopped and the shift lever is moved into P (Park).

Use the manual or power door locks to unlock the doors if someone needs to exit, and to lock the doors again.

The power door locks can be programmed through the Driver Information Center (DIC). See *Vehicle Personalization* ⇨ *147*.

Lockout Protection

Lockout protection decreases the chances that the keys may be accidentally locked in the vehicle.

When door locking is requested by pressing on the front door panels or the RKE transmitter and the driver door is open, all doors will lock and the driver door will immediately unlock. The driver door must be closed when is pressed for all doors to remain locked.

This feature can be programmed to provide the lockout protection feature only when the ignition mode is ACC/ACCESSORY, or ON/RUN/START. See "Power Door Locks" in *Vehicle Personalization* ⇨ *147*.

Safety Locks

The rear door safety locks prevent passengers from opening the rear doors from inside the vehicle.

Press to activate the safety locks. The indicator light comes on when activated.

The rear door power windows are also disabled. See *Power Windows* ⇨ *46*.

Press again to deactivate the safety locks and enable the power windows.

If a rear door handle is being pulled when the safety lock is deactivated, that door will remain locked and the indicator light may flash. Release the handle, then press the safety lock twice to deactivate the safety locks.

Doors

Liftgate

⚠ Warning

Exhaust gases can enter the vehicle if it is driven with the liftgate or trunk/hatch open, or with any objects that pass through the seal between the body and the trunk/hatch or liftgate. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle must be driven with the liftgate or trunk/hatch open:

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.

(Continued)

Warning (Continued)

- Adjust the climate control system to a setting that brings in only outside air and set the fan speed to the highest setting. See "Climate Control Systems" in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

See *Engine Exhaust* ⇨ *193*.

Caution

To avoid damage to the liftgate or liftgate glass, make sure the area above and behind the liftgate is clear before opening it.

Manual Liftgate

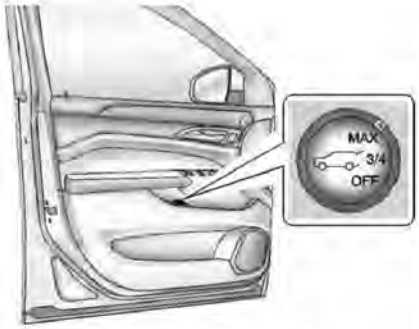
For vehicles without Keyless Access, unlock the vehicle before opening the liftgate.

Press the touch pad in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Always close the liftgate before driving.

Power Liftgate



If equipped, the power liftgate switch is on the driver door. The vehicle must be in P (Park). The taillamps flash when the power liftgate moves.

⚠ Warning

You or others could be injured if caught in the path of the power liftgate. Make sure there is no one in the way of the liftgate as it is opening and closing.

Choose the power liftgate mode and press the center of the switch.

The modes are:

MAX : Opens to maximum height.

3/4 : Opens to a reduced height that can be set from 3/4 to fully open. Use to prevent the liftgate from opening into overhead objects such as a garage door or roof-mounted cargo. The liftgate can be opened all the way manually.

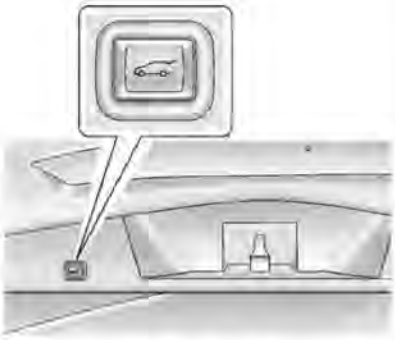
OFF : Opens manually only.

Manual operation of a liftgate that also has power operation requires more effort than with a standard manual liftgate.

To open or close the liftgate, select MAX or the 3/4 mode and then:

- Press twice on the RKE transmitter.
- Press on the center of the liftgate mode switch on the driver door, with the driver door unlocked.

- Press the touch pad on the liftgate outside handle after unlocking all doors.



Press and release on the liftgate next to the latch to close the liftgate.

Pressing any liftgate button, or the touch pad while the liftgate is moving, stops it. Pressing again reverses the direction. There is a minimum distance that the power liftgate must already be open for the system to hold it open. If movement is stopped below that minimum, the liftgate closes.

Do not force the liftgate open or closed during a power cycle. This may activate the system's obstacle detection feature and stop the power operation.

The power liftgate may be temporarily disabled under extreme temperatures or low battery conditions. If this occurs, the liftgate can still be operated manually.

If you shift the transmission out of P (Park) while the power function is in progress, the liftgate power function will continue to completion. If you shift the transmission out of P (Park) and accelerate before the power liftgate latch is closed, the liftgate may reverse to the open position. Cargo could fall out of the vehicle. Always make sure the power liftgate is closed and latched before you drive away.

If after a power opening, the liftgate stays open momentarily, then slowly closes with continuous chiming sounds and turn signal flashes, the support strut may have lost pressure. See your dealer for service before using the liftgate.

Obstacle Detection Features

If the liftgate encounters an obstacle during a power open or close cycle, a warning chime will sound and the liftgate will automatically reverse direction to the full closed or open position. After removing the obstruction, the power liftgate operation can be used again. If the liftgate encounters multiple obstacles on the same power cycle, the power function will deactivate. After removing the obstructions, the liftgate will resume normal power operation.

The vehicle has pinch sensors on the side edges of the liftgate. If an object is caught between the liftgate and the body and presses against one of these sensors, the liftgate will reverse direction and open fully. The liftgate will remain open until it is activated again or closed manually.

Setting the 3/4 Mode

To change the liftgate stop position:

1. Select MAX or 3/4 mode and open the liftgate.

2. Stop the liftgate movement at the desired height by pressing any liftgate switch. Manually adjust the liftgate position if needed.
3. Press and hold on the liftgate next to the latch until the turn signals flash and a beep sounds. This indicates the setting has been recorded.

The liftgate cannot be set below a minimum programmable height. If there is no light flash or sound, then the height adjustment may be too low.

Manual Operation of Power Liftgate

To change the liftgate to manual operation, turn the mode switch to the OFF position.

With the power liftgate disabled and all of the doors unlocked, the liftgate can be manually opened and closed. The effort required to operate a power liftgate is greater than the effort required to operate a non-power liftgate.

To open the liftgate, press the touch pad on the handle on the outside of the liftgate, and lift the gate open.

Caution
Do not use too much force when closing the liftgate to avoid damage.

To close the liftgate, use the pull cup to lower the liftgate and close. With the power liftgate disabled, the liftgate electric latch will still power latch once contact is made with the striker. Always close the liftgate before driving.

If the RKE button is pressed while power operation is disabled, the turn signals flash and the liftgate will not move.

The liftgate has an electric latch. If the battery is disconnected or has low voltage, the liftgate will not open. The liftgate will resume operation when the battery is reconnected and charged.

Vehicle Security

This vehicle has theft-deterrent features; however, they do not make the vehicle impossible to steal.

Vehicle Alarm System

This vehicle has an anti-theft alarm system.

The indicator light, on the instrument panel near the windshield, indicates the status of the system.

Off : Alarm system is disarmed.

On Solid : Vehicle is secured during the delay to arm the system.

Fast Flash : Vehicle is unsecured. A door, the hood, or the liftgate is open.

Slow Flash : Alarm system is armed.

Arming the Alarm System

1. Close the liftgate and the hood. Turn off the vehicle.
2. Lock the vehicle in one of three ways:
   - Use the RKE transmitter.
   - Use the Keyless Access system.
   - With a door open, press the inside .
3. After 30 seconds the alarm system will arm, and the indicator light will begin to slowly flash indicating the alarm system is operating.
   Pressing on the RKE transmitter a second time will bypass the 30-second delay and immediately arm the alarm system.

The vehicle alarm system will not arm if the doors are locked with the key.

If the driver door is opened without first unlocking with the RKE transmitter, the horn will chirp and the lights will flash to indicate pre-alarm. If the vehicle is not started, or the door is not unlocked by pressing on the RKE transmitter during the 10-second pre-alarm, the alarm will be activated.

The alarm will also be activated if a passenger door, the liftgate, or the hood is opened without first disarming the system. When the alarm is activated, the turn signals flash and the horn sounds for about 30 seconds. The alarm system will then re-arm to monitor for the next unauthorized event.

Disarming the Alarm System

To disarm the alarm system or turn off the alarm if it has been activated:

- Press on the RKE transmitter.
- Unlock the vehicle using the Keyless Access system.
- Start the vehicle.

To avoid setting off the alarm by accident:

- Lock the vehicle after all occupants have left the vehicle and all doors are closed.
- Always unlock a door with the RKE transmitter or use the Keyless Access system.

Unlocking the driver door with the key will not disarm the system or turn off the alarm.

How to Detect a Tamper Condition

If is pressed and the horn chirps and the lights flash three times, the alarm was activated while the alarm system was armed.

If the alarm system has been activated, a message will appear on the DIC. See *Security Messages* ⇨ *145*.

Power Sounder, Inclination Sensor, and Intrusion Sensor

In addition to the standard theft-deterrent system features, this system may also have an inclination sensor, intrusion sensor, and power sounder.

The power sounder provides an audible alarm which is different from the vehicle's horn. It has its own power source, and can sound an alarm when the vehicle's battery is compromised.

The inclination sensor can set off the alarm if it senses movement of the vehicle, such as a change in vehicle orientation.

The intrusion sensor monitors the vehicle interior, and can set off the alarm it if senses an unauthorized entry into the vehicle's interior. Do not allow passengers or pets to remain in the vehicle when the intrusion sensor is activated.

Before arming the theft-deterrent system and activating the intrusion sensor:

- Make sure all doors and windows are completely closed.
- Secure any loose items such as a sunshades.
- Make sure there are no obstructions blocking the sensors in the front overhead console.

Inclination, and Intrusion Sensors Disable Switch

It is recommended that the inclination and intrusion sensors be deactivated if pets are left in the vehicle or the vehicle is being transported.

With the vehicle turned off, press in the overhead console. The indicator light will come on momentarily, indicating that the sensor has been disabled until the next time the alarm system is armed.

Immobilizer

See *Radio Frequency Statement* ⇨ *356*.

Immobilizer Operation

This vehicle has a passive theft-deterrent system.

The system does not have to be manually armed or disarmed.

The vehicle is automatically immobilized when the vehicle is turned off.

The immobilization system is disarmed when the pushbutton start is activated to enter the ACC/ACCESSORY mode or the ON/RUN/START mode and a valid transmitter is present in the vehicle.

The security light, in the instrument cluster, comes on if there is a problem with arming or disarming the theft-deterrent system.

The system has one or more RKE transmitters matched to an immobilizer control unit in your vehicle. Only a correctly matched RKE transmitter will start the vehicle. If the transmitter is ever damaged, you may not be able to start your vehicle.

When trying to start the vehicle, the security light comes on briefly when the ignition is turned on.

If the engine does not start and the security light stays on, there is a problem with the system. Turn the ignition off and try again.

If the vehicle will not change ignition modes (ACC/ACCESSORY, ON/RUN/START, OFF), and the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket located in the center console. See "NO REMOTE DETECTED" under *Key and Lock Messages* ⇨ *140*.

If the ignition mode will not change with the other transmitter, your vehicle needs service. If the ignition does change modes, the first transmitter may be faulty. See your dealer who can service the theft-deterrent system and have a new RKE transmitter programmed to the vehicle.

It is possible for the immobilizer system to learn new or replacement RKE transmitters. Up to eight transmitters can be programmed for the vehicle. To program additional transmitters, see "Programming Transmitters to the Vehicle" under *Remote Keyless Entry (RKE) System Operation* ⇨ *27*.

Do not leave the key or device that disarms or deactivates the theft-deterrent system in the vehicle.

Exterior Mirrors

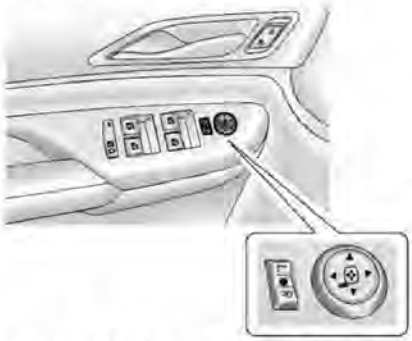
Convex Mirrors

⚠ Warning

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on the right. Check the inside mirror or glance over your shoulder before changing lanes.

The passenger side mirror is convex shaped. A convex mirror's surface is curved so more can be seen from the driver seat.

Power Mirrors



Manual Folding Mirrors Shown, Power Folding Similar

To adjust the mirror:

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror in the desired direction.
3. Return the selector switch to the center position.

Side Blind Zone Alert (SBZA)

The vehicle may have SBZA. See *Side Blind Zone Alert (SBZA)* ⇨ *222*.

Memory Mirrors

The vehicle may have memory mirrors. See *Memory Seats* ⇨ *56*.

Folding Mirrors

Manual Folding Mirrors

If equipped, manually fold the mirrors inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

Power Folding Mirrors

To fold the mirrors, if equipped:

1. With the selector switch in the ● position, press the down arrow on the control pad. Both mirrors will automatically fold.
2. Press the down arrow again to return the mirrors to their original position.

Resetting the Power Folding Mirrors

Reset the power folding mirrors if:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.
- The mirrors do not stay in the unfolded position.
- The mirrors vibrate at normal driving speeds.

Fold and unfold the mirrors one time using the mirror controls to reset them to their normal position.
A noise may be heard during the resetting of the power folding mirrors. This sound is normal after a manual folding operation.

Heated Mirrors

(Rear Window Defogger) :
Press to heat the mirrors.

See "Rear Window Defogger" under *Dual Automatic Climate Control System* ⇨ *167*.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror automatically adjusts for the glare of headlamps behind you.

Reverse Tilt Mirrors

If equipped with memory seats, the passenger and/or driver mirror tilts to a preselected position when the vehicle is in R (Reverse). This allows the curb to be seen when parallel parking.

The mirror(s) return to the original position when:

- The vehicle is shifted out of R (Reverse), or remains in R (Reverse) for about 30 seconds.
- The ignition is turned off.
- The vehicle is driven in R (Reverse) above a set speed.

To turn this feature on or off, see *Vehicle Personalization* ⇨ *147*.

Interior Mirrors

Interior Rearview Mirrors

Adjust the rearview mirror for a clear view of the area behind your vehicle.

If equipped with OnStar, there are three buttons at the bottom of the mirror. See your dealer for more information on the system and how to subscribe to OnStar. See *OnStar Overview* ⇨ *360*.

To avoid accidental OnStar calls, clean the mirror with the ignition off. Do not spray glass cleaner directly on the mirror. Use a soft towel dampened with water.

Manual Rearview Mirror

Push the tab forward for daytime use and pull it rearward for nighttime use to avoid glare of the headlamps from behind.

Automatic Dimming Rearview Mirror

If equipped, automatic dimming reduces the glare of headlamps from behind. The dimming feature comes on when the vehicle is started.

Windows

⚠ Warning

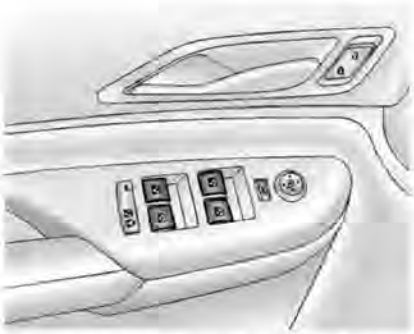
Never leave a child, a helpless adult, or a pet alone in a vehicle, especially with the windows closed in warm or hot weather. They can be overcome by the extreme heat and suffer permanent injuries or even death from heat stroke.

The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a pulsing sound when either rear window is down and the front windows are up. To reduce the sound, open either a front window or the sunroof, if equipped.

Power Windows

⚠ Warning

Children could be seriously injured or killed if caught in the path of a closing window. Never leave the Remote Keyless Entry (RKE) transmitter in a vehicle with children. When there are children in the rear seat, use the window lockout switch to prevent operation of the windows. See *Keys ⇨ 26*.



The driver power window switches control all windows. Each passenger switch only controls that window. The power windows work when the ignition is in ON/RUN or ACC/ACCESSORY, or in Retained Accessory Power (RAP). See *Retained Accessory Power (RAP)* ⇨ *191*.

Press the switch down to lower the window. Pull the switch up to raise it.

Express-Down/Up Windows

The express feature allows the windows to be raised and lowered all the way without holding the switch.

Press or pull the switch fully and release it to activate the express feature. Cancel the express mode by briefly pressing or pulling the switch.

Express Window Anti-Pinch Feature

If any object is in the path of the window when express-up is active, the window will stop at the obstruction and auto-reverse to a preset factory position. Weather conditions such as severe icing may also cause the window to auto-reverse. The window will return to normal operation after the obstruction or condition is removed.

Express Window Anti-Pinch Override

⚠ Warning

If express override is activated, the window will not reverse automatically. You or others could be injured and the window could be damaged. Before you use

(Continued)

Warning (Continued)

express override, make sure that all people and obstructions are clear of the window path.

To override the anti-pinch feature, hold the window switch all the way up to the second position. The window will raise for as long as the switch is held. Once the switch is released, the express mode is reactivated.

In this mode, the window can close on an object in its path. Use care when using the override mode.

Programming the Power Windows

If the vehicle battery has been recharged or disconnected, or is not working, the front power windows will need to be reprogrammed for the express-up feature to work. Before reprogramming, replace or recharge the vehicle's battery.

To program:

1. With the ignition in ON/RUN or ACC/ACCESSORY, or when Retained Accessory Power (RAP) is active, close all doors.
2. Press and hold the power window switch until the window is fully open.
3. Pull the power window switch up until the window is fully closed.
4. Continue holding the switch up for approximately two seconds after the window is completely closed.

The window is now reprogrammed. Repeat the process for the other windows.

Overload

If the windows are repeatedly operated within a short time, the window operation is disabled for a short time.

Remote Window Operation

If equipped, the remote operating windows will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

Window Lockout

This feature disables the rear passenger window switches from operating the rear passenger windows.

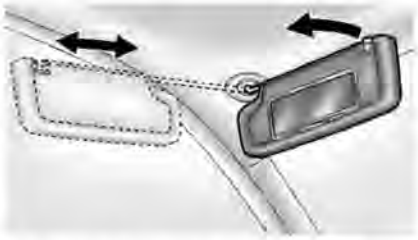
Press to activate the rear window lockout. The indicator light in the switch illuminates.

The rear door safety locks are also enabled. See *Safety Locks* ⇨ *36*.

Press again to deactivate the rear window lockout.

If an inside rear door handle is being pulled at the same time a safety lock is deactivated, only that door will remain locked and the indicator light may flash. Release the handle, then press the safety lock twice to deactivate the safety locks.

Sun Visors



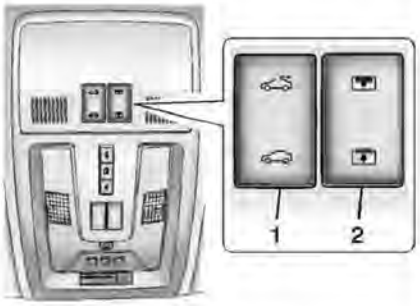
Pull the sun visor down to block glare. Detach the sun visor from the center mount to pivot to the side window or, if equipped, extend along the rod.

Roof

Sunroof

On vehicles with a sunroof, the switches are on the overhead console.

The sunroof only operates when the ignition is in ON/RUN or ACC/ ACCESSORY, or in Retained Accessory Power (RAP). See *Ignition Positions* ⇨ *187* and *Retained Accessory Power (RAP)* ⇨ *191*.



1. Sunroof Switch
2. Sunshade Switch

Sunroof Switch

Vent : To vent the sunroof, press the rear of the sunroof switch (1) to the first detent and release. The sunroof will open to the vent position.

Open/Close : To open or close the sunroof, press the front or rear of the sunroof switch (1) to the first detent and hold to open or close the sunroof to a desired position.

Comfort Stop : The sunroof has a comfort stop feature that stops the sunroof from opening to the full-open position. Press the rear of the sunroof switch (1) to the second detent and release to express-open the sunroof to the comfort open position. Press and release the rear of the sunroof switch (1) again to express-open the sunroof fully. Press the front of the sunroof switch (1) to the second detent and release to express-close the sunroof.

Sunshade Switch

Open/Close : To open or close the sunshade, press the front or back of the sunshade switch (2) to the first detent and hold to open or close the sunshade to a desired position.

Express-Open/Express-Close : To express-open or close the sunshade, press the sunshade switch (2) to the second detent and release.

The sunshade automatically opens more than the sunroof's opening. Fully close the sunroof before fully closing the sunshade.

Anti-Pinch Feature

If an object is in the path of the sunroof or sunshade when it is closing, the anti-pinch feature detects the object and stops the sunroof or sunshade from closing at the point of the obstruction. The sunroof or sunshade then returns to the full-open position.

Weather conditions such as extreme cold and/or ice may cause the window to auto-reverse.

Dirt and debris may collect on the sunroof seal or in the track. This could cause an issue with sunroof operation or noise. It could also plug the water drainage system. Periodically open the sunroof and remove any obstacles or loose debris. Wipe the sunroof seal and roof sealing area using a clean cloth, mild soap, and water. Do not remove grease from the sunroof.

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Head Restraints

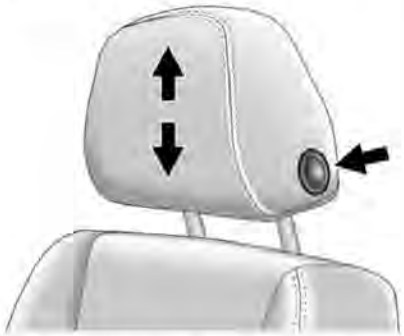
⚠ Warning

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.

Front Seats

The vehicle's front seats have adjustable head restraints in the outboard seating positions.



The height of the head restraint can be adjusted. To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down, and release the button. Pull and push on the head restraint after the button is released to make sure that it is locked in place.

The front seat outboard head restraints are not removable.

Rear Seats

The vehicle's rear seats have adjustable head restraints in the outboard seating positions.

The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure that it is locked in place.

To lower the head restraint, press the button, located on the top of the seatback, and push the head restraint down. Try to move the head restraint after the button is released to make sure that it is locked in place.

The vehicle's rear seat has an adjustable headrest in the center seating position that can be adjusted the same way as the outboard head restraints.

If you are installing a child restraint in the rear seat, see "Securing a Child Restraint Designed for the LATCH System" under *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *87*.

Front Seats

Seat Adjustment

⚠ Warning

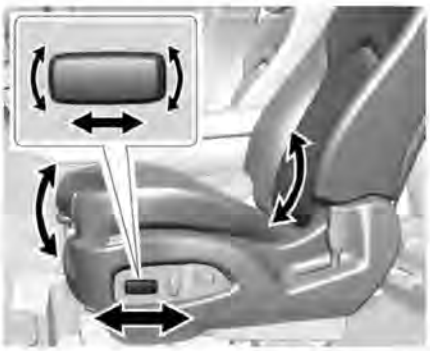
You can lose control of the vehicle if you try to adjust a driver seat while the vehicle is moving. Adjust the driver seat only when the vehicle is not moving.

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.

2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

Power Seat Adjustment



To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front part of the seat cushion by moving the front of the control up or down.
- Raise or lower the entire seat by moving the rear of the control up or down.

To adjust the seatback, see *Reclining Seatbacks* ⇨ *55*.

To adjust the lumbar support, see *Lumbar Adjustment* ⇨ *54*.

Some vehicles are equipped with a feature that activates a vibration in the driver seat to help the driver avoid crashes. See *Driver Assistance Systems* ⇨ *214*.

Lumbar Adjustment

Power Lumbar

If available, press and hold the front or rear of the control to increase or decrease lumbar support. Release the control when the seatback reaches the desired level of lumbar support.

Thigh Support Adjustment

If available, adjust the manual leg extension by pulling up on the lever, and then pulling or pushing on the support to lengthen or shorten it. Release the lever to lock it in place.

Reclining Seatbacks

⚠ Warning

Sitting in a reclined position when the vehicle is in motion can be dangerous. Even when buckled up, the safety belts cannot do their job.

The shoulder belt will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

The lap belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.

For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the safety belt properly.

Do not have a seatback reclined if the vehicle is moving.

Manual Reclining Seatbacks

⚠ Warning

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

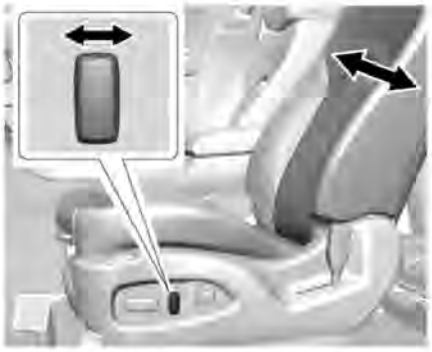
To recline a manual seatback:

1. Lift the lever.
2. Move the seatback to the desired position, and then release the lever to lock the seatback in place.
3. Push and pull on the seatback to make sure it is locked.

To return the seatback to the upright position:

1. Lift the lever fully without applying pressure to the seatback, and the seatback will return to the upright position.
2. Push and pull on the seatback to make sure it is locked.

Power Reclining Seatbacks



To adjust a power seatback, if available:

- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

Memory Seats

If equipped, the 1, 2, and MEM buttons on the outboard side of the driver seat are used to manually store and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions (if equipped).

Storing Memory Positions

To store positions to the 1 and 2 buttons:

1. The ignition must be in ON/RUN/START or ACC/ACCESSORY.

2. Adjust the driver seat, outside mirrors, and adjustable throttle and brake pedal positions (if equipped).
3. Press and hold MEM (Memory) and 1 until three beeps sound.
4. Repeat Steps 1–3 for a second driver using 2.

Manually Recalling Memory Positions

Press and hold 1 or 2 to manually recall the previously stored memory positions. Releasing 1 or 2 before the stored positions are reached stops the recall.

Automatically Recalling Memory Positions (Auto Memory Recall)

When enabled in the vehicle personalization menu, the Auto Memory Recall feature recalls the previously stored memory 1 or 2 positions when the ignition is changed from OFF to ON/RUN or ACC/ACCESSORY.

To activate, place the ignition in ON/RUN or ACC/ACCESSORY.

RKE transmitters are not labeled with a number. If your memory seat position is stored to 1 or 2, but this position is not automatically recalling, then store your positions to the other button or switch RKE transmitters with the other driver.

See "Auto Memory Recall" under "Comfort and Convenience" in *Vehicle Personalization* ⇨ *147*.

To stop recall movement, press one of the memory, power mirror, power seat controls, or the adjustable pedal switch (if equipped).

Easy Exit Recall

If programmed on in the vehicle personalization menu, this feature automatically moves the seat approximately 7 cm (3 in) rearward allowing the driver more room to exit the vehicle.

Easy Exit recall activates when one of the following occurs:

- The vehicle is turned off and the driver door is opened within a short time.
- The vehicle is turned off with the driver door open.

See *Vehicle Personalization* ⇨ *147*.

To stop recall movement, press one of the memory, power mirror, or power seat controls.

Obstructions

If something has blocked the driver seat while recalling a memory position, the recall may stop. Remove the obstruction. Then do one of the following:

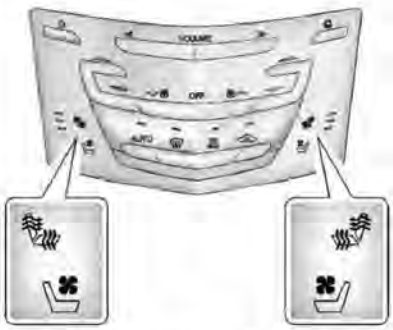
- If automatically or manually recalling the stored memory position, press and hold the appropriate manual control for two seconds. Try recalling again by pressing the appropriate memory button, then try recalling again by opening the driver door and pressing on the RKE transmitter.
- If recalling the exit position, press and hold the power seat control rearward for two seconds. Then try recalling the exit position again.

If the memory position is still not recalling, see your dealer for service.

Heated and Ventilated Front Seats

⚠ Warning

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns. To reduce the risk of burns, people with such a condition should use care when using the seat heater, especially for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket, cushion, cover, or similar item. This may cause the seat heater to overheat. An overheated seat heater may cause a burn or may damage the seat.



Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the center stack. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat. A ventilated seat has a fan that pulls or pushes air through the seat. The air is not cooled.

When this feature is off, the symbols on the buttons are white. When a heated seat is turned on, the symbol turns red. When a ventilated seat (if available) is turned on, the symbol turns blue.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The indicator lights next to the buttons indicate three for the highest setting and one for the lowest. If the front heated seats are on high, the level may automatically be lowered after approximately 30 minutes.

The passenger seat may take longer to heat up.

Remote Start Heated and Ventilated Seats

During a remote start, the heated or ventilated seats can be turned on automatically. When it is cold outside, the heated seats turn on, and when it is hot outside the ventilated seats turn on. This feature is canceled when the ignition is turned on. Press the

button to use the heated or ventilated seats after the vehicle is started.

The heated or ventilated seat indicator lights on the button do not turn on during a remote start.

The temperature performance of an unoccupied seat may be reduced. This is normal.

The heated or ventilated seats will not turn on during a remote start unless they are enabled in the vehicle personalization menu. See *Remote Vehicle Start* ⇨ *33* and *Vehicle Personalization* ⇨ *147*.

Auto Heated Seats

If equipped, when the vehicle is on, this feature will automatically activate the heated seats at the level required by the vehicle's interior temperature. The active high, medium, low, or off heated seat level will be indicated by the manual heated seat buttons on the center stack.

Use the manual heated seat buttons on the center stack to turn auto heated seats off.

If the passenger seat is unoccupied, the auto heated seats feature will not activate that seat.

The auto heated seats feature can be programmed to always be enabled when the vehicle is on. See *Vehicle Personalization* ⇨ *147*.

Rear Seats

Split Folding Seatbacks

With this feature, either side of the rear seatback can be folded down for more cargo space.

Folding the Seatbacks

Caution
Folding a rear seat with the safety belts still fastened may cause damage to the seat or the safety belts. Always unbuckle the safety belts and return them to their normal stowed position before folding a rear seat.

To fold the seatback:

1. Unbuckle the rear safety belts and move the front seatbacks to the upright position. See *Reclining Seatbacks* ⇨ *55*.
2. Make sure that there is nothing under, in front of, or on the seat.

3. Lift the lever on the top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.
4. Fold the seatback forward. A tab near the seatback lever retracts when the seatback is locked in place.

Keep the seatback in the upright, locked position when not in use.

Raising the Seatbacks

⚠ Warning

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

⚠ Warning

A safety belt that is improperly routed, not properly attached, or twisted will not provide the protection needed in a crash. The person wearing the belt could be seriously injured. After raising the rear seatback, always check to be sure that the safety belts are properly routed and attached, and are not twisted.

To raise the seatback:

1. Lift the lever on top of the seatback. Raise the seatback and release the lever. A tab near the seatback lever raises when the seatback is unlocked.
2. Push the seatback rearward until it locks in the upright position. A tab near the seatback lever retracts when the seatback is locked in place.
3. Make sure the rear safety belts are not twisted or caught between the seat cushion and the seatback.

Reclining the Seatbacks

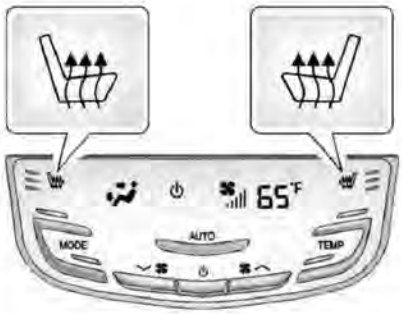
To recline the seatback:

1. Lift and hold the lever on top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.
2. Tilt the seatback rearward, and then release the lever when the seatback is in the desired position. A tab near the seatback lever retracts when the seatback is locked in place.

Heated Rear Seats

⚠ Warning

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns. See the Warning under *Heated and Ventilated Front Seats* ⇨ *58*.

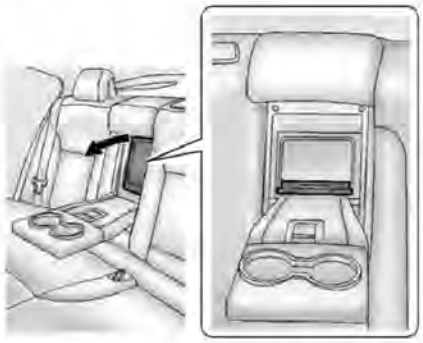


If available, the buttons are on the rear climate control panel on the rear of the center console.

With the ignition in ON/RUN/START, press or to heat the left or right outboard seat cushion and seatback. An indicator on the climate control display appears when this feature is on.

Press the button once for the highest setting. With each press of the button, the heated seat changes to the next lower setting, and then the off setting. Three lights indicate the highest setting, and one light indicates the lowest.

Rear Seat Pass-Through Door



There is a rear seat pass-through door in the center of the rear seatback. Fold down the center armrest and push down on the latch to open the door.

Safety Belts

This section of the manual describes how to use safety belts properly. It also describes some things not to do with safety belts.

⚠ Warning

Do not let anyone ride where a safety belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing safety belts, injuries can be much worse than if you are wearing safety belts. You can be seriously injured or killed by hitting things inside the vehicle harder or by being ejected from the vehicle. In addition, anyone who is not buckled up can strike other passengers in the vehicle.

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, passengers riding in these areas are more likely to be seriously injured or killed. Do not allow

(Continued)

Warning (Continued)

passengers to ride in any area of the vehicle that is not equipped with seats and safety belts.

Always wear a safety belt, and check that all passenger(s) are restrained properly too.

This vehicle has indicators as a reminder to buckle the safety belts. See *Safety Belt Reminders* ⇨ *122*.

Why Safety Belts Work

When riding in a vehicle, you travel as fast as the vehicle does. If the vehicle stops suddenly, you keep going until something stops you. It could be the windshield, the instrument panel, or the safety belts!

When you wear a safety belt, you and the vehicle slow down together. There is more time to stop because you stop over a longer distance and, when worn properly, your strongest bones take the forces from the safety belts. That is why wearing safety belts makes such good sense.

Questions and Answers About Safety Belts

Q: Will I be trapped in the vehicle after a crash if I am wearing a safety belt?

A: You *could* be — whether you are wearing a safety belt or not. Your chance of being conscious during and after a crash, so you *can* unbuckle and get out, is *much* greater if you are belted.

Q: If my vehicle has airbags, why should I have to wear safety belts?

A: Airbags are supplemental systems only; so they work *with* safety belts — not instead of them. Whether or not an airbag is provided, all occupants still have to buckle up to get the most protection.

Also, in nearly all states and in all Canadian provinces, the law requires wearing safety belts.

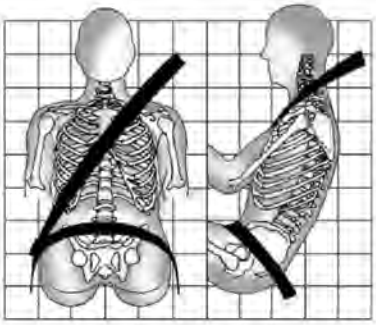
How to Wear Safety Belts Properly

This section is only for people of adult size.

There are special things to know about safety belts and children. And there are different rules for smaller children and infants. If a child will be riding in the vehicle, see *Older Children* ⇨ *81* or *Infants and Young Children* ⇨ *82*. Follow those rules for everyone's protection.

It is very important for all occupants to buckle up. Statistics show that unbelted people are hurt more often in crashes than those who are wearing safety belts.

There are important things to know about wearing a safety belt properly.



- Sit up straight and always keep your feet on the floor in front of you.
- Always use the correct buckle for your seating position.
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries.
- Wear the shoulder belt over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces. The shoulder belt locks if there is a sudden stop or crash.

⚠ Warning

You can be seriously injured, or even killed, by not wearing your safety belt properly.

- Never allow the lap or shoulder belt to become loose or twisted.
- Never wear the shoulder belt under both arms or behind your back.
- Never route the lap or shoulder belt over an armrest.

Lap-Shoulder Belt

All seating positions in the vehicle have a lap-shoulder belt.

The following instructions explain how to wear a lap-shoulder belt properly.

1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see "Seats" in the Index.
2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

   The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

   If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. If this happens, let the belt go back all the way and start again.

If the webbing locks in the latch plate before it reaches the buckle, tilt the latch plate flat to unlock.

3. Push the latch plate into the buckle until it clicks.

   Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Safety Belt Extender* ⇨ *68*.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.
4. If equipped with a shoulder belt height adjuster, move it to the height that is right for you. See "Shoulder Belt Height Adjuster" later in this section for instructions on use and important safety information.

5. To make the lap part tight, pull up on the shoulder belt.

To unlatch the belt, push the button on the buckle. The belt should return to its stowed position.

Always stow the safety belt slowly. If the safety belt webbing returns quickly to the stowed position, the retractor may lock and cannot be pulled out. If this happens, pull the safety belt straight out firmly to unlock the webbing, and then release it. If the webbing is still locked in the retractor, see your dealer.

Before a door is closed, be sure the safety belt is out of the way. If a door is slammed against a safety belt, damage can occur to both the safety belt and the vehicle.

Shoulder Belt Height Adjuster

The vehicle has a shoulder belt height adjuster for the driver and front outboard passenger seating positions.

Adjust the height so that the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash. See *How to Wear Safety Belts Properly* ➪ *63*.

Move the height adjuster up to the desired position by pushing up on the height adjuster.

After the height adjuster is set to the desired position, try to move it down without pressing the release button to make sure it has locked into position. Press the release button to lower the height adjuster.

Safety Belt Pretensioners

This vehicle has safety belt pretensioners for front outboard occupants. Although the safety belt pretensioners cannot be seen, they are part of the safety belt assembly. They can help tighten the safety belts during the early stages of a moderate to severe frontal, near frontal, or rear crash if the threshold conditions for pretensioner activation are met. Safety belt pretensioners can also help tighten the safety belts in a side crash or a rollover event.

Pretensioners work only once. If the pretensioners activate in a crash, they will need to be replaced, and the vehicle's safety belt system will probably need other new parts. See *Replacing Safety Belt System Parts after a Crash* ⇨ 68.

Rear Safety Belt Comfort Guides

⚠ Warning

A safety belt that is not properly worn may not provide the protection needed in a crash. The person wearing the belt could be seriously injured. The shoulder belt should go over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces.

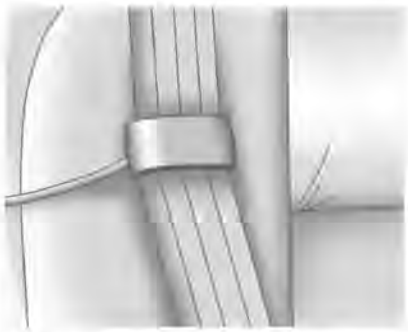
Rear safety belt comfort guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, the comfort guide positions the shoulder belt away from the neck and head.

This vehicle has rear safety belt comfort guides in the rear outboard seating positions.

To install:

1. Remove the guide from its storage pocket on the side of the seat.

2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.



3. Be sure that the belt is not twisted and it lies flat. The elastic cord must be behind the belt with the plastic guide on the front.

4. Buckle, position, and release the safety belt as described previously in this section. Make sure the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck.

To remove and store the comfort guide, squeeze the belt edges together so that the safety belt can be removed from the guide. Slide the guide back into its storage pocket on the side of the seatback.

Safety Belt Use During Pregnancy

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear safety belts.

A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

The best way to protect the fetus is to protect the mother. When a safety belt is worn properly, it is more likely that the fetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child seats. To wear it, attach it to the regular safety belt. For more information, see the instruction sheet that comes with the extender.

Safety System Check

Now and then, check that the safety belt reminder light, safety belts, buckles, latch plates, retractors, and anchorages are all working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from doing its job. See your dealer to have it repaired. Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Make sure the safety belt reminder light is working. See *Safety Belt Reminders* ⇨ *122*.

Keep safety belts clean and dry. See *Safety Belt Care* ⇨ *68*.

Safety Belt Care

Keep belts clean and dry.

⚠ Warning

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Replacing Safety Belt System Parts after a Crash

⚠ Warning

A crash can damage the safety belt system in the vehicle. A damaged safety belt system may not properly protect the person using it, resulting in serious injury or even death in a crash. To help make sure the safety belt systems are working

(Continued)

Warning (Continued)

properly after a crash, have them inspected and any necessary replacements made as soon as possible.

After a minor crash, replacement of safety belts may not be necessary. But the safety belt assemblies that were used during any crash may have been stressed or damaged. See your dealer to have the safety belt assemblies inspected or replaced.

New parts and repairs may be necessary even if the safety belt system was not being used at the time of the crash.

Have the safety belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light* ⇨ *123*.

Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver.
- A frontal airbag for the front outboard passenger.
- A seat-mounted side impact airbag for the driver.
- A seat-mounted side impact airbag for the front outboard passenger.
- A roof-rail airbag for the driver and for the second row passenger seated directly behind the driver.
- A roof-rail airbag for the front outboard passenger and the second row passenger seated directly behind the front outboard passenger.

All vehicle airbags have the word AIRBAG on the trim or on an attached label near the deployment opening.

For frontal airbags, the word AIRBAG is on the center of the steering wheel for the driver and on the instrument panel for the front outboard passenger.

For seat-mounted side impact airbags, the word AIRBAG is on the side of the seatback closest to the door.

For roof-rail airbags, the word AIRBAG is on the ceiling or trim.

Airbags are designed to supplement the protection provided by safety belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating bag, all airbags must inflate very quickly to do their job.

Here are the most important things to know about the airbag system:

⚠ Warning

You can be severely injured or killed in a crash if you are not wearing your safety belt, even with airbags. Airbags are

(Continued)

Warning (Continued)

designed to work with safety belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes safety belts are the only restraint. See *When Should an Airbag Inflate?* ⇨ *72*.

Wearing your safety belt during a crash helps reduce the chance of hitting things inside the vehicle or being ejected from it. Airbags are "supplemental restraints" to the safety belts. Everyone in the vehicle should wear a safety belt properly, whether or not there is an airbag for that person.

⚠ Warning

Because airbags inflate with great force and faster than the blink of an eye, anyone who is up against, or very close to any airbag when it inflates can be

(Continued)

Warning (Continued)

seriously injured or killed. Do not sit unnecessarily close to any airbag, as you would be if sitting on the edge of the seat or leaning forward. Safety belts help keep you in position before and during a crash. Always wear a safety belt, even with airbags. The driver should sit as far back as possible while still maintaining control of the vehicle. The safety belts and the front outboard passenger airbags are most effective when you are sitting well back and upright in the seat with both feet on the floor.

Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

⚠ Warning

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Always secure children properly in the vehicle. To read how, see *Older Children* ⇨ *81* or *Infants and Young Children* ⇨ *82*.

There is an airbag readiness light on the instrument cluster, which shows the airbag symbol.

The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light* ⇨ *123* for more information.

Where Are the Airbags?

The driver frontal airbag is in the center of the steering wheel.

The front outboard passenger frontal airbag is in the passenger side instrument panel.

Driver Side Shown, Passenger Side Similar

The driver and front outboard passenger seat-mounted side impact airbags are in the side of the seatbacks closest to the door.

Driver Side Shown, Passenger Side Similar

The roof-rail airbags for the driver, right front passenger, and second row outboard passengers are in the ceiling above the side windows.

⚠ Warning

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury or even death. The path of an inflating airbag must be kept

(Continued)

Warning (Continued)

clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

Do not use seat accessories that block the inflation path of a seat-mounted side impact airbag.

Never secure anything to the roof of a vehicle with roof-rail airbags by routing a rope or tie-down through any door or window opening. If you do, the path of an inflating roof-rail airbag will be blocked.

When Should an Airbag Inflate?

This vehicle is equipped with airbags. See *Airbag System* ⇨ *69*. Airbags are designed to inflate if the impact exceeds the specific airbag system's deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants. The vehicle has electronic sensors that help the airbag system determine the severity of the impact. Deployment thresholds can vary with specific vehicle design.

Frontal airbags are designed to inflate in moderate to severe frontal or near frontal crashes to help reduce the potential for severe injuries, mainly to the driver's or front outboard passenger's head and chest.

Whether the frontal airbags will or should inflate is not based primarily on how fast the vehicle is traveling. It depends on what is hit, the direction of the impact, and how quickly the vehicle slows down.

Frontal airbags may inflate at different crash speeds depending on whether the vehicle hits an object straight on or at an angle, and whether the object is fixed or moving, rigid or deformable, narrow or wide.

Frontal airbags are not intended to inflate during vehicle rollovers, in rear impacts, or in many side impacts.

In addition, the vehicle has advanced technology frontal airbags. Advanced technology frontal airbags adjust the restraint according to crash severity.

Seat-mounted side impact airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. Seat-mounted side impact airbags are not designed to inflate in frontal impacts, near frontal impacts, rollovers, or rear impacts. A seat-mounted side impact airbag is designed to inflate on the side of the vehicle that is struck.

Roof-rail airbags are designed to inflate in moderate to severe side crashes depending on the location of the impact. In addition, these roof-rail airbags are designed to inflate during a rollover or in a severe frontal impact. Roof-rail airbags are not designed to inflate in rear impacts. Both roof-rail airbags

will inflate when either side of the vehicle is struck, if the sensing system predicts that the vehicle is about to roll over on its side, or in a severe frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the vehicle damage or repair costs.

What Makes an Airbag Inflate?

In a deployment event, the sensing system sends an electrical signal triggering a release of gas from the inflator. Gas from the inflator fills the airbag causing the bag to break out of the cover. The inflator, the airbag, and related hardware are all part of the airbag module.

For airbag locations, see *Where Are the Airbags?* ⇨ *71*.

How Does an Airbag Restrain?

In moderate to severe frontal or near frontal collisions, even belted occupants can contact the steering wheel or the instrument panel. In moderate to severe side collisions, even belted occupants can contact the inside of the vehicle.

Airbags supplement the protection provided by safety belts by distributing the force of the impact more evenly over the occupant's body.

Rollover capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the first and second rows. The rollover capable roof-rail airbags are designed to help reduce the risk of full or partial ejection in rollover events, although no system can prevent all such ejections.

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate?* ⇨ *72*.

Airbags should never be regarded as anything more than a supplement to safety belts.

What Will You See after an Airbag Inflates?

After the frontal airbags and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realize an airbag inflated. Roof-rail airbags may still be at least partially inflated for some time after they inflate. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags?* ⇨ *71*.

The parts of the airbag that come into contact with you may be warm, but not too hot to touch. There may be some smoke and dust coming from the vents in the deflated airbags. Airbag inflation does not prevent the driver from seeing out of the windshield or being able to steer the vehicle, nor does it prevent people from leaving the vehicle.

⚠ Warning

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone in the vehicle should get out as soon as it is safe to do so. If you have breathing problems but cannot get out of the vehicle after an airbag inflates, then get fresh air by opening a window or a door. If you experience breathing problems following an airbag deployment, you should seek medical attention.

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps and hazard warning flashers, and shut off the fuel system after the airbags inflate. The feature may also activate, without airbag inflation, after an event that exceeds a predetermined threshold. You can lock the doors, and turn off the interior lamps, and turn off the hazard warning flashers by using the controls for those features.

⚠ Warning

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel system, brake and steering systems, etc. Even if the vehicle appears to be drivable after a moderate crash, there may be concealed damage that could make it difficult to safely operate the vehicle.

Use caution if you should attempt to restart the engine after a crash has occurred.

In many crashes severe enough to inflate the airbag, windshields are broken by vehicle deformation. Additional windshield breakage may also occur from the front outboard passenger airbag.

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for the vehicle covers the need to replace other parts.
- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy* ⇨ *357* and *Event Data Recorders* ⇨ *358*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

Passenger Sensing System

The vehicle has a passenger sensing system for the front outboard passenger position. The passenger airbag status indicator will light on the overhead console when the vehicle is started.

United States

Canada and Mexico

The words ON and OFF, or the symbol for on and off, are visible during the system check. When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator* ⇨ *124*.

The passenger sensing system turns off the front outboard passenger frontal airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger sensing system works with sensors that are part of the front outboard passenger seat. The sensors are designed to detect the presence of a properly-seated occupant and determine if the front outboard passenger frontal airbag should be allowed to inflate or not.

According to accident statistics, children are safer when properly secured in a rear seat in the correct child restraint for their weight and size.

Whenever possible, children aged 12 and under should be secured in a rear seating position.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though the airbag is turned off.

(Continued)

Warning (Continued)

Never put a rear-facing child restraint in the front seat, even if the airbag is off. If securing a forward-facing child restraint in the front outboard passenger seat, always move the seat as far back as it will go. It is better to secure child restraints in the rear seat. Consider using another vehicle to transport the child when a rear seat is not available.

The passenger sensing system is designed to turn off the front outboard passenger airbag if:

- The front outboard passenger seat is unoccupied.
- The system determines that an infant is present in a child restraint.
- A front outboard passenger takes his/her weight off of the seat for a period of time.
- There is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the front outboard passenger frontal airbag, the off indicator will light and stay lit as a reminder that the airbag is off. See *Passenger Airbag Status Indicator* ⇨ *124*.

The passenger sensing system is designed to turn on the front outboard passenger frontal airbag anytime the system senses that a person of adult size is sitting properly in the front outboard passenger seat.

When the passenger sensing system has allowed the airbag to be enabled, the on indicator will light and stay lit as a reminder that the airbag is active.

For some children, including children in child restraints, and for very small adults, the passenger sensing system may or may not turn off the front outboard passenger frontal airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a safety belt properly — whether or not there is an airbag for that person.

⚠ Warning

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light* ⇨ *123* for more information, including important safety information.

If the On Indicator Is Lit for a Child Restraint

The passenger sensing system is designed to turn off the front outboard passenger frontal airbag if the system determines that an infant is present in a child restraint. If a child restraint has been installed and the on indicator is lit:

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to *Securing Child Restraints (Rear Seat)* ⇨ *95* or *Securing Child Restraints (Front Passenger Seat)* ⇨ *97*.
5. If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion.

   Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints* ⇨ *52*.
6. Restart the vehicle.

The passenger sensing system may or may not turn off the airbags for a child in a child restraint depending upon the child's size. It is better to secure the child restraint in a rear seat. Never put a rear-facing child restraint in the front seat, even if the on indicator is not lit.

If the Off Indicator Is Lit for an Adult-Sized Occupant

If a person of adult size is sitting in the front outboard passenger seat, but the off indicator is lit, it could be because that person is not sitting properly in the seat. Use the following steps to allow the system to detect that person and enable the front outboard passenger frontal airbag:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat

massagers. Also remove laptops or other electronic devices.

3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. Restart the vehicle and have the person remain in this position for two to three minutes after the on indicator is lit.

⚠ Warning

If the front outboard passenger airbag is turned off for an adult-sized occupant, the airbag will not be able to inflate and help protect that person in a crash, resulting in an increased risk of serious injury or even death. An adult-sized occupant should not ride in the front outboard passenger seat, if the passenger airbag off indicator is lit.

Additional Factors Affecting System Operation

Safety belts help keep the passenger in position on the seat during vehicle maneuvers and braking, which helps the passenger sensing system maintain the passenger airbag status. See "Safety Belts" and "Child Restraints" in the Index for additional information about the importance of proper restraint use.

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment except when approved by GM for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle* ⇨ *79* for more information about modifications that can affect how the system operates.

A wet seat can affect the performance of the passenger sensing system. Here's how:

- The passenger sensing system may turn off the passenger airbag when liquid is soaked into the seat. If this happens, the off indicator will be lit, and the airbag readiness light will also be lit.
- Liquid pooled on the seat that has not soaked in may make it more likely that the passenger sensing system will turn on the passenger airbag while a child restraint or child occupant is on the seat. If the passenger airbag is turned on, the on indicator will be lit.

If the front passenger seat gets wet, dry it immediately. If the airbag readiness light is lit, do not install a child restraint or allow anyone to occupy the seat. See *Airbag Readiness Light* ⇨ *123* for important safety information.

The on indicator may be lit if an object, such as a briefcase, handbag, grocery bag, laptop,

or other electronic device, is put on an unoccupied seat. If this is not desired, remove the object from the seat.

⚠ Warning

Stowing of articles under the passenger seat or between the passenger seat cushion and seatback may interfere with the proper operation of the passenger sensing system.

Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the service manual have information about servicing the vehicle and the airbag system. To purchase a service manual, see *Service Publications Ordering Information* ⇨ *355*.

⚠ Warning

For up to 10 seconds after the vehicle is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.

Adding Equipment to the Airbag-Equipped Vehicle

Adding accessories that change the vehicle's frame, bumper system, height, front end, or side sheet metal may keep the airbag system from working properly.

The operation of the airbag system can also be affected by changing or moving any parts of the front seats, safety belts, airbag sensing and diagnostic module, steering wheel, instrument panel, any of the airbag modules, ceiling or pillar garnish trim, overhead console, front sensors, side impact sensors, rollover sensor module, airbag wiring, or cargo restraint system and convenience net.

Your dealer and the service manual have information about the location of the airbag sensors, sensing and diagnostic module, and airbag wiring.

In addition, the vehicle has a passenger sensing system that includes sensors as part of the front outboard passenger seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery, or trim; or with GM covers, upholstery, or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort-enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger

airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See *Passenger Sensing System* ⇨ *75*.

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels* ⇨ *295* for additional important information.

If you have to modify your vehicle because you have a disability and you have questions about whether the modifications will affect the vehicle's airbag system, or if you have questions about whether the airbag system will be affected if the vehicle is modified for any other reason, call Customer Assistance. See *Customer Assistance Offices* ⇨ *348*.

Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See *Airbag Readiness Light* ⇨ *123*.

Caution

If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag coverings, have the airbag covering and/or airbag module replaced. For the location of the airbags, see *Where Are the Airbags?* ⇨ *71*. See your dealer for service.

Replacing Airbag System Parts after a Crash

⚠ Warning

A crash can damage the airbag systems in the vehicle.
A damaged airbag system may not work properly and may not protect you and your passenger(s) in a crash, resulting

(Continued)

Warning (Continued)

in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See *Airbag Readiness Light* ⇨ *123*.

Child Restraints

Older Children

Older children who have outgrown booster seats should wear the vehicle safety belts.

The manufacturer instructions that come with the booster seat state the weight and height limitations for that booster. Use a booster seat with a lap-shoulder belt until the child passes the fit test below:

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide, if equipped. See "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt* ⇨ *64*. If a comfort guide is not available, or if the shoulder belt still does not rest on the shoulder, then return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.
- Can proper safety belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.

Q: What is the proper way to wear safety belts?

A: An older child should wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide. The shoulder belt should not cross the face or neck. The lap belt should fit snugly below the hips, just touching the top of the thighs. This applies belt force to the child's pelvic bones in a crash. It should never be worn over the abdomen, which could cause severe or even fatal internal injuries in a crash.

Also see "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt* ⇨ *64*.

According to accident statistics, children are safer when properly restrained in a rear seating position.

In a crash, children who are not buckled up can strike other people who are buckled up, or can be thrown out of the vehicle. Older children need to use safety belts properly.

⚠ Warning

Never allow more than one child to wear the same safety belt. The safety belt cannot properly spread the impact forces. In a crash, they can be crushed together and seriously injured. A safety belt must be used by only one person at a time.

⚠ Warning

Never allow a child to wear the safety belt with the shoulder belt behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt. The child could move too far forward increasing the chance of head and neck injury. The child might also slide under the lap belt. The belt force would then be applied right on the abdomen.

(Continued)

Warning (Continued)

That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance traveled nor the age and size of the traveler changes the need, for everyone, to use safety

restraints. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

⚠ Warning

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck. The shoulder belt can tighten but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all the way back into the retractor, but it cannot do this if it is wrapped around a child's neck. If the shoulder belt is locked and tightened around a child's neck, the only way to loosen the belt is to cut it.

Never leave children unattended in a vehicle and never allow children to play with the safety belts.

Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints. Neither the vehicle's safety belt system nor its airbag system is designed for them.

Children who are not restrained properly can strike other people, or can be thrown out of the vehicle.

⚠ Warning

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash. For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's arms. An infant should be secured in an appropriate restraint.

⚠ Warning

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Never put a rear-facing child restraint in the front outboard seat. Secure a rear-facing child restraint in a rear seat. It is also better to secure a forward-facing child restraint in a rear seat. If you must secure a forward-facing child restraint in the front outboard seat, always move the front passenger seat as far back as it will go.

Q: What are the different types of add-on child restraints?

A: Add-on child restraints, which are purchased by the vehicle owner, are available in four basic types. Selection of a particular restraint should take into consideration not only the child's weight, height, and age but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.

For most basic types of child restraints, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle. If it is, the restraint will have a label saying that it meets federal motor vehicle safety standards.

The restraint manufacturer instructions that come with the restraint state the weight and height limitations for a particular child restraint. In addition, there are many kinds of restraints available for children with special needs.

⚠ Warning

To reduce the risk of neck and head injury in a crash, infants and toddlers should be secured in a rear-facing child restraint until age two, or until they reach the maximum height and weight limits of their child restraint.

⚠ Warning

A young child's hip bones are still so small that the vehicle's regular safety belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's abdomen. In a crash, the belt would apply force on a body area that is unprotected by any bony structure. This alone could cause serious or fatal injuries. To reduce the risk of serious or fatal injuries during a crash, young children should always be secured in appropriate child restraints.

Child Restraint Systems

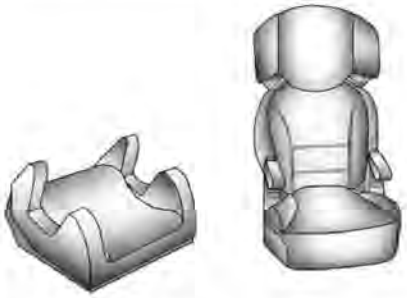
Rear-Facing Infant Seat

A rear-facing infant seat provides restraint with the seating surface against the back of the infant.

The harness system holds the infant in place and, in a crash, acts to keep the infant positioned in the restraint.

Forward-Facing Child Seat

A forward-facing child seat provides restraint for the child's body with the harness.



Booster Seats

A booster seat is a child restraint designed to improve the fit of the vehicle's safety belt system.
A booster seat can also help a child to see out the window.

Securing an Add-On Child Restraint in the Vehicle

⚠ Warning

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Secure the child

(Continued)

Warning (Continued)

restraint properly in the vehicle using the vehicle safety belt or LATCH system, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the LATCH system. See *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *87*. Children can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, refer to the instructions that come with the restraint which may be on the restraint itself or in a booklet, or both, and to this manual. The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

In some areas of the United States and Canada, Certified Child Passenger Safety Technicians (CPSTs) are available to inspect and demonstrate how to correctly use and install child restraints. In the U.S., refer to the National Highway Traffic Safety Administration (NHTSA) website to locate the nearest child safety seat inspection station. For CPST availability in Canada, check with Transport Canada or the Provincial Ministry of Transportation office.

Securing the Child Within the Child Restraint

⚠ Warning

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Secure the child properly following the instructions that came with that child restraint.

Where to Put the Restraint

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

Whenever possible, children aged 12 and under should be secured in a rear seating position.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great if the airbag deploys.

⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in

(Continued)

Warning (Continued)

the front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System* ⇨ *75* for additional information.

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others.

Depending on where you place the child restraint and the size of the child restraint, you may not be able to access adjacent safety belt assemblies or LATCH anchors for additional passengers or child restraints. Adjacent seating positions should not be used if the child restraint prevents access to or interferes with the routing of the safety belt.

Wherever a child restraint is installed, be sure to secure the child restraint properly.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

Lower Anchors and Tethers for Children (LATCH System)

The LATCH system secures a child restraint during driving or in a crash. LATCH attachments on the child restraint are used to attach the child restraint to the anchors in the vehicle. The LATCH system is designed to make installation of a child restraint easier.

In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH

attachments. LATCH-compatible rear-facing and forward-facing child seats can be properly installed using either the LATCH anchors or the vehicle's safety belts. Do not use both the safety belts and the LATCH anchorage system to secure a rear-facing or forward-facing child seat.

Booster seats use the vehicle's safety belts to secure the child in the booster seat. If the manufacturer recommends that the booster seat be secured with the LATCH system, this can be done as long as the booster seat can be positioned properly and there is no interference with the proper positioning of the lap-shoulder belt on the child.

Make sure to follow the instructions that came with the child restraint, and also the instructions in this manual.

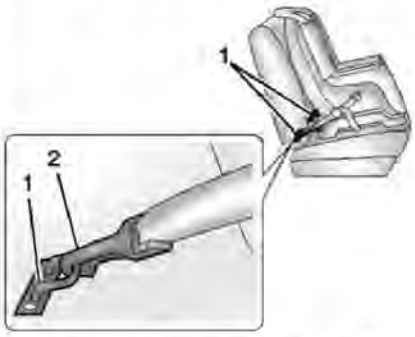
When installing a child restraint with a top tether, you must also use either the lower anchors or the safety belts to properly secure the child restraint. A child restraint must never be attached using only the top tether.

The LATCH anchorage system can be used until the combined weight of the child plus the child restraint is 29.5 kg (65 lbs). Use the safety belt alone instead of the LATCH anchorage system once the combined weight is more than 29.5 kg (65 lbs).

The following explains how to attach a child restraint with these attachments in the vehicle.

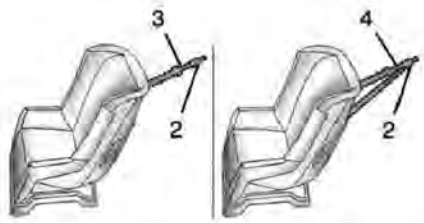
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments. In this case, the safety belt must be used (with top tether where available) to secure the child restraint. See *Securing Child Restraints (Rear Seat)* ⇨ *95* or *Securing Child Restraints (Front Passenger Seat)* ⇨ *97*.

Lower Anchors



Lower anchors (1) are metal bars built into the vehicle. There are two lower anchors for each LATCH seating position that will accommodate a child restraint with lower attachments (2).

Top Tether Anchor



A top tether (3, 4) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (2) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during driving or in a crash.

The child restraint may have a single tether (3) or a dual tether (4). Either will have a single attachment (2) to secure the top tether to the anchor.

Some child restraints that have a top tether are designed for use with or without the top tether being attached. Others require the top tether always to be attached. In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached. Be sure to read and follow the instructions for your child restraint.

Lower Anchor and Top Tether Anchor Locations

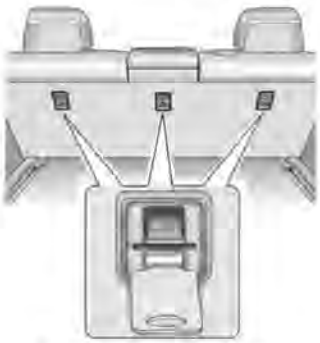
Rear Seat

: Seating positions with top tether anchors.

: Seating positions with two lower anchors.

To assist in locating the lower anchors, each seating position with lower anchors has two labels, near the crease between the seatback and the seat cushion.

To assist in locating the top tether anchors, the top tether anchor symbol is located on the cover.



Top Tether Anchors

The top tether anchors for each rear seating position are located under the covers, on the back of the rear seatback. Be sure to use an anchor located on the same side of the vehicle as the seating position where the child restraint will be placed.

Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether be attached, or if the instructions that come with the child restraint say that the top tether must be attached.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. See *Where to Put the Restraint* ⇨ *86* for additional information.

Securing a Child Restraint Designed for the LATCH System

⚠ Warning

If a LATCH-type child restraint is not attached to anchors or with the safety belt, the child restraint will not be able to protect the child correctly. In a crash, the child could be seriously injured or killed. Install a LATCH-type child restraint properly using the anchors, or use the vehicle safety belts to secure the restraint, following the instructions that came with the child restraint and the instructions in this manual.

⚠ Warning

To reduce the risk of serious or fatal injuries during a crash, do not attach more than one child restraint to a single anchor. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured.

⚠ Warning

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck. The shoulder belt can tighten but cannot be loosened if it is locked. The shoulder belt locks when it is pulled all the way out of the retractor. It unlocks when the shoulder belt is allowed to go all the way back into the retractor, but it cannot do this if it is

(Continued)

Warning (Continued)

wrapped around a child's neck. If the shoulder belt is locked and tightened around a child's neck, the only way to loosen the belt is to cut it.

Buckle any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, and tighten the belt behind the child restraint after the child restraint has been installed.

Caution

Do not let the LATCH attachments rub against the vehicle's safety belts. This may damage these parts. If necessary, move buckled safety belts to avoid rubbing the LATCH attachments.

(Continued)

Caution (Continued)

Do not fold the empty rear seat with a safety belt buckled. This could damage the safety belt or the seat. Unbuckle and return the safety belt to its stowed position, before folding the seat.

Do not attach more than one child restraint to a single anchor. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured. To reduce the risk of serious or fatal injuries during a crash, attach only one child restraint per anchor.

If you need to secure more than one child restraint in the rear seat, see *Where to Put the Restraint* ⇨ *86*.

This system is designed to make installation of child restraints easier. When using lower anchors, do not use the vehicle's safety belts. Instead use the vehicle's anchors and child restraint attachments to secure the restraints. Some restraints also use another vehicle anchor to secure a top tether.

1. Attach and tighten the lower attachments to the lower anchors. If the child restraint does not have lower attachments or the desired seating position does not have lower anchors, secure the child restraint with the top tether and the safety belts. Refer to your child restraint manufacturer instructions and the instructions in this manual.
   1.1. Find the lower anchors for the desired seating position.
   1.2. Put the child restraint on the seat.

   For the outboard rear seating positions, if the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head

Restraint Removal and Reinstallation" at the end of this section.

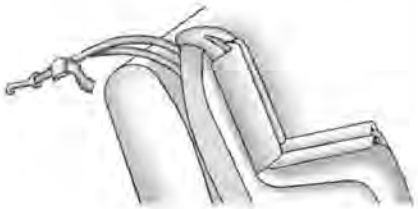
1.3. Attach and tighten the lower attachments on the child restraint to the lower anchors.

2. If the child restraint manufacturer recommends that the top tether be attached, attach and tighten the top tether to the top tether anchor, if equipped. Refer to the child restraint instructions and the following steps:

2.1. Find the top tether anchor and open its cover to expose the anchor.

2.2. Route, attach, and tighten the top tether according to your child restraint instructions and the following instructions:

If you are using a dual tether in the rear outboard seating position with an adjustable head restraint, route the dual tether around the head restraint.



If you are using a dual tether in the rear outboard seating position and the head restraint has been removed, route the dual tether over the seatback.

If you are using a single tether in the rear outboard seating position with an adjustable head restraint, route the single tether under the head restraint and in between the head restraint posts.

If you are using a single tether in the rear outboard seating position and the head restraint has been removed, route the single tether over the seatback.

If you are using a dual tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the dual tether over the headrest.

If you are using a single tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the single tether over the headrest.

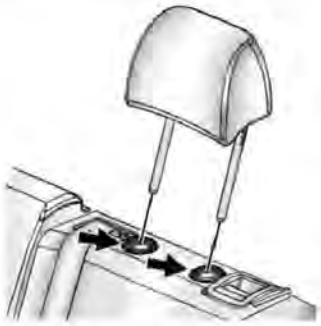
3. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the LATCH path and attempt to move it side to side and back and forth. There should be no more than 2.5 cm (1 in) of movement for proper installation.

Head Restraint Removal and Reinstallation

The rear outboard head restraints can be removed if they interfere with the proper installation of the child restraint. The headrest in the rear center seating position is not removable and should be lowered to the stowed position for child restraint installation.

To remove the head restraint:

1. Partially fold the seatback forward. See *Rear Seats* ⇨ *59* for additional information.



2. Press both buttons on the head restraint posts at the same time, and pull up on the head restraint.
3. Store the head restraint in the cargo area of the vehicle.
4. When the child restraint is removed, reinstall the head restraint before the seating position is used.

⚠ Warning

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

To reinstall the head restraint:

1. Insert the head restraint posts into the holes in the top of the seatback. The notches on the posts must face the driver side of the vehicle.
2. Push the head restraint down.

   If necessary, press the height adjustment release button to further lower the head restraint. See *Head Restraints* ⇨ *52*.
3. Try to move the head restraint to make sure that it is locked in place.

Replacing LATCH System Parts After a Crash

⚠ Warning

A crash can damage the LATCH system in the vehicle. A damaged LATCH system may not properly secure the child restraint, resulting in serious injury or even death in a crash. To help make sure the LATCH system is working properly after a crash, see your dealer to have the system inspected and any necessary replacements made as soon as possible.

If the vehicle has the LATCH system and it was being used during a crash, new LATCH system parts may be needed.

New parts and repairs may be necessary even if the LATCH system was not being used at the time of the crash.

Securing Child Restraints (Rear Seat)

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *87* for how and where to install the child restraint using LATCH. If a child restraint is secured in the vehicle using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *87* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

If the child restraint or vehicle seat position does not have the LATCH system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint* ⇨ *86*.

1. Put the child restraint on the seat.

   If the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *87*.

2. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

3. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 4 and 5.

6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *87*.

7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it. If the head restraint was removed, reinstall it before the seating position is used. See “Head Restraint Removal and

Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *87* for additional information on installing the head restraint properly.

Securing Child Restraints (Front Passenger Seat)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint* ⇨ *86*.

In addition, the vehicle has a passenger sensing system which is designed to turn off the front outboard passenger frontal airbag under certain conditions. See *Passenger Sensing System* ⇨ *75* and *Passenger Airbag Status Indicator* ⇨ *124* for more information, including important safety information.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ Warning

A child in a rear-facing child restraint can be seriously injured or killed if the front outboard passenger frontal airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the front outboard passenger frontal airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the front outboard passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a

(Continued)

Warning (Continued)

forward-facing child restraint in the front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System* ⇨ *75* for additional information.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

If the child restraint uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System)* ⇨ *87* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

When using the lap-shoulder belt to secure the child restraint in this position, follow the instructions that came with the child restraint and the following instructions:

1. Move the seat as far back as it will go before securing the forward-facing child restraint.

   When the passenger sensing system has turned off the front outboard passenger frontal airbag, the off indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator* ⇨ *124*.

2. Put the child restraint on the seat.

3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

   Tilt the latch plate to adjust the belt if needed.

4. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle, so that the safety belt could be quickly unbuckled if necessary.

5. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 5 and 6.

7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

If the airbag is off, the off indicator in the passenger airbag status indicator will come on and stay on when the vehicle is started.

If a child restraint has been installed and the on indicator is lit, see "If the On Indicator is Lit for a Child Restraint" under *Passenger Sensing System* ⇨ *75*.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position.

Storage

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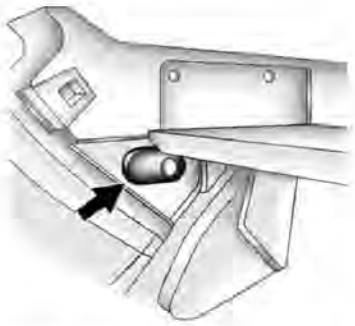
Storage Compartments

⚠ Warning

Do not store heavy or sharp objects in storage compartments. In a crash, these objects may cause the cover to open and could result in injury.

Glove Box

Lift the glove box handle up to open it. Use the key to lock and unlock the glove box.



The glove box is air conditioned and can be used to store items at a lower temperature. The vehicle air conditioning must be turned on for the maximum cool air to enter the glove box. Move the slide control to allow cool air into the glove box. After opening the air flow, close the glove box door to keep the cold air from entering the vehicle.

Cupholders

The front cupholder has a divider that can be adjusted to accommodate large or small containers.

For large containers, press the button to move aside the divider and make the cupholder deeper. For small containers, push down on the top edge of the divider to lock it back in place and make the cupholder shorter.

Front Storage

There is storage behind the climate control system. Touch the chrome bar at the bottom of the climate control system panel to open. There is a USB port inside. See "USB Port" in the infotainment manual.

Keep the storage area door closed while driving.

Touch the chrome bar at the bottom of the climate control system panel again to close.

A storage area is located in front of the shift lever. Push upward on the top of the door and release; the door automatically opens.

There is an accessory power outlet inside. See *Power Outlets* ⇨ *116*.

Armrest Storage

For vehicles with a rear seat armrest, pull the rear seat armrest forward to access cupholders with removable liners. For vehicles with a rear storage area, pull the lever to access.

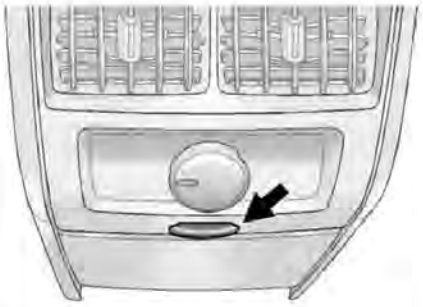
Center Console Storage

The center console has an armrest, upper storage tray, and lower storage area.

The armrest can be adjusted. Slide the top of the armrest to adjust to the desired position.

Press the driver side button to access the upper storage tray. Press the passenger side button to access the lower storage area.

There are two USB ports and an accessory power outlet inside the center console. There may be an auxiliary jack. See *Power Outlets* ⇨ *116* and the infotainment manual.

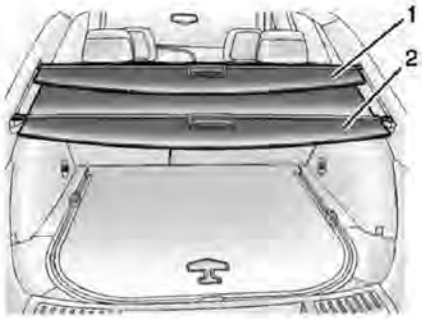


Press the button to open the storage area on the rear of the center console. If equipped with Rear Seat Entertainment (RSE), the audio/video jacks and USB port may be inside. See the infotainment manual.

Additional Storage Features

Cargo Cover

For vehicles with the dual position cargo cover, it can be used to cover items in the cargo area of the vehicle.

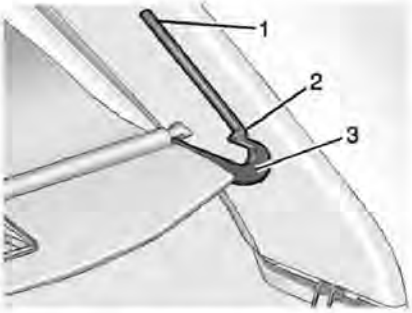


The shade can be set in two positions. It can be set in a halfway open (1) position for loading objects into the rear compartment, or the lower (2) position to conceal objects in the rear compartment.

Install the Cargo Cover

1. Hold the cartridge so that the pull-out shade faces the rear of the vehicle.

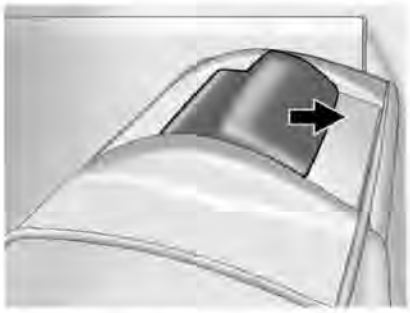
2. Align the cartridge over the pins on the trim panels of the vehicle.
3. Push down on the cartridge to snap it into place.
4. Unroll the shade toward the rear of the vehicle.



5. Insert the shade pins in the channels (3) on both sides.
6. Slide the shade to the lower (2) position, or the halfway open (1) position.

Remove the Cargo Cover

1. Remove the cover from the channels and carefully roll it back up.



2. Slide the button on the top to release the cartridge.
3. Pull up to remove the cartridge from the pins.

⚠ Warning

An unsecured cargo cover could strike people in a sudden stop or turn, or in a crash. Store the cargo cover securely or remove it from the vehicle.

Cargo Tie-Downs

For vehicles equipped with cargo tie-downs, the four tie-downs are located in the rear compartment of the vehicle. Use the tie-downs to secure small loads.

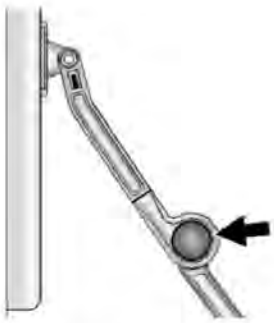
Cargo Management System

To open the cargo management system, press the rear of the handle to unlatch it and then lift the handle up.

A prop rod locks to hold the cover up when opened.

Four hooks are located on the inside cover and can be used for storing items.

There may be additional storage compartments on each side of the cargo management system. Lift the panel up to open.



Press the red button on the prop rod to close the cover.

Rear Storage Area

⚠ Warning

An improperly latched and closed cargo cover, or cargo cover left in the open position, could be thrown about the vehicle during a crash or sudden maneuver. Someone could be injured. Be sure to return the cover to the closed position and latch before driving. If the cover is removed,

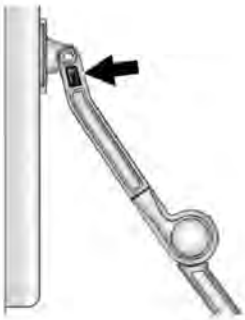
(Continued)

Warning (Continued)

always store it outside of the vehicle. When it is replaced, always be sure that it is securely reattached.

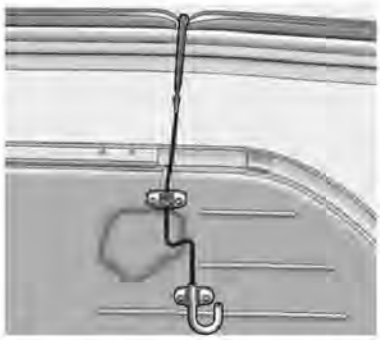
To access the rear storage areas of the cargo management system, and the tire sealant and compressor kit:

1. Remove the cargo cover, if equipped.
2. Open the cargo management system cover.



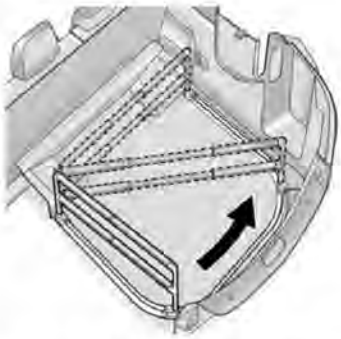
3. Release the prop rod from the inside cover by sliding the red clip down.

   Unhook the prop rod from the pin on the inside cover. Store the unhooked prop rod by folding it into the cargo management compartment.

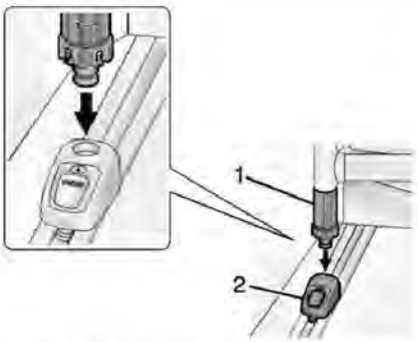


4. Store the cargo management system cover by hooking it onto the weatherstrip.

U-Rail



If equipped with a u-rail system, the fence can be moved to different positions on the u-rail track to secure cargo.



Press both adapter buttons to move the adapters (2) on the straight part of the u-rail.

To move the fence around the u-rail, disconnect one side:

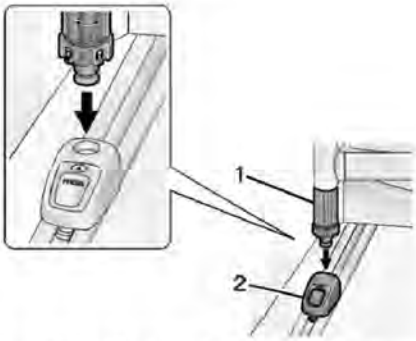
1. Unlock by turning the latch (1) to align 🔓 with the arrow on the adapter (2).
2. Press the adapter button to move the adapters (2) to the desired position.
3. Reinstall the fence and lock both latches (1) by turning to align 🔒 with the arrow on the adapter (2).

Use the fence to secure items in place.

Removing the Fence

Unlock by turning both latches (1) to align 🔓 with the arrow on the adapter (2). Lift and remove the fence.

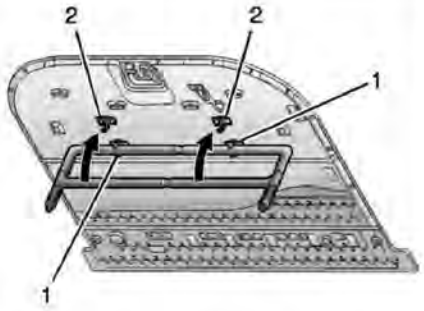
Installing the Fence



Insert the fence into the adapters and lock both latches (1) by turning to align 🔒 with the arrow on the adapter (2).

Storing the Fence

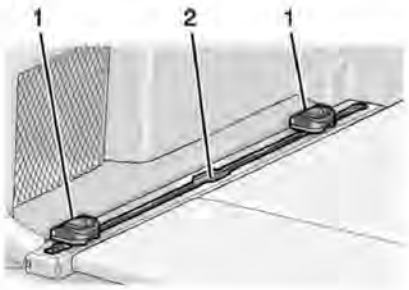
1. Lift the cargo management system cover.
2. Release the cover from the prop rod as described in the previous steps.



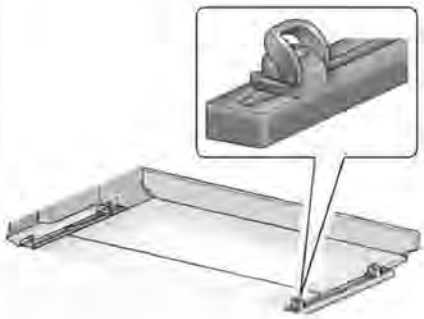
3. Insert the top of the fence into the lower two clips (1).
4. Turn the bottom of the fence up and insert it into the upper two clips (2).

D-Ring Sliders

If equipped with a D-ring system, there are four D-ring sliders that move along rails. These can be used as tie-downs when storing cargo.



Insert the D-ring sliders (1) into the channel (2) located in the middle of the rail. Press the button to move the D-ring slider along the rail.



The loop of the D-ring slider must be facing inward toward the storage area and the ring must be in the up position for proper usage.

Cargo Net

⚠ Warning

Do not stack items higher than the upper end of the cargo net or hang anything from the net. Avoid items that have sharp edges or that apply excessive force to the net. If items are not properly stored, damage to the net could occur and items can be thrown about the vehicle. You or others could be injured. Always store items behind the net.

If equipped, the cargo net can be used to store light loads, keeping them from falling over or being thrown into the cabin during heavy braking.

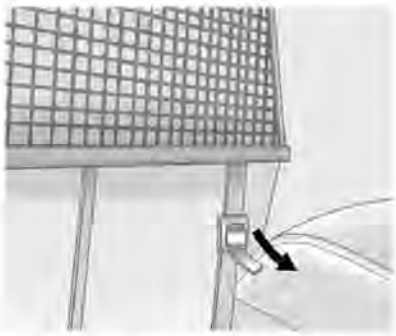
The net should not be overloaded or used to store heavy loads.

There are four openings in the headliner: two behind the front seats and two behind the rear seats.

1. Insert the top corners of the cargo net into the large openings in the headliner and secure by sliding them into the small openings.
2. The rear seatbacks should be folded down when the net is installed in the headliner opening behind the front seats.

3. Mount the cargo net to the rear seat tethers on the back of the folded down rear seats and pull on the straps to tighten the net.
4. When the net is installed in the headliner opening behind the rear seats, the rear seatbacks should be upright.

5. Mount the cargo net to the cargo tie-downs on the lower side panels.



6. Pull on the straps to tighten the net.

Cargo Net Storage

The cargo net can be removed from the vehicle and stored in the cargo management system.

1. Disconnect the net from the roof openings and the tethers.
2. Press the red button on the center of the net to fold it in half.
3. Roll up the cargo net and store it in the attached vinyl bag.
4. Open the cargo management system cover.
5. If equipped with a tire sealant and compressor kit, store the cargo net in the available space next to the kit.

Convenience Net

This vehicle may have a convenience net in the rear of the vehicle. Attach it to the cargo tie-downs for storing small loads.

Do not use the net to store heavy loads.

Roof Rack System

⚠ Warning

If something is carried on top of the vehicle that is longer or wider than the roof rack — like paneling, plywood, or a mattress — the wind can catch it while the vehicle is being driven. The item being carried could be violently torn off, and this could cause a collision and damage the vehicle. Never carry something longer or wider than the roof rack on top of the vehicle unless using a GM certified accessory carrier.

If equipped, the roof rack can be used to load items. For roof racks that do not have crossrails included, GM certified crossrails can be purchased as an accessory. See your dealer.

Caution

Loading cargo on the roof rack that weighs more than 100 kg (220 lb) or hangs over the rear or sides of the vehicle may damage the vehicle. Load cargo so that it rests evenly between the crossrails, making sure to fasten cargo securely.

To prevent damage or loss of cargo when driving, check to make sure crossrails and cargo are securely fastened. Loading cargo on the roof rack will make the vehicle's center of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt maneuvers; otherwise it may result in loss of control. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place. Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits* ⇨ *182*.

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Controls

Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Steering Wheel Controls

The infotainment system can be operated by using the steering wheel controls. See "Steering Wheel Controls" in the infotainment manual.

Heated Steering Wheel

(Heated Steering Wheel) :
If equipped with a heated steering wheel, press to turn on or off. An indicator next to the button is lit when the feature is turned on.

The steering wheel takes about three minutes to start heating.

Horn

Press on the steering wheel pad to sound the horn.

Windshield Wiper/Washer

With the ignition in ACC/ ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI : Use for fast wipes.

LO : Use for slow wipes.

INT (Intermittent Wipes/Rainsense Wipe Sensitivity Control) : Move the lever up to INT for intermittent wipes, then turn the INT band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see Rainsense™ later in this section.

OFF : Use to turn the wipers off.

1X (Mist) : For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Clear snow and ice from the wiper blades before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement* ⇨ *261*.

Heavy snow or ice can overload the wiper motor.

Wipe Parking

If the ignition is changed to STOPPING THE ENGINE/OFF mode while the wipers are on LO, HI, or INT, they will immediately stop.

If the windshield wiper lever is then moved to OFF before the driver door is opened or within 10 minutes, the wipers will restart and move to the base of the windshield.

If the ignition is changed to STOPPING THE ENGINE/OFF while the wipers are performing wipes due to windshield washing or Rainsense, the wipers continue to run until they reach the base of the windshield.

Rainsense™

If equipped, there is a sensor near the top center of the windshield that detects the amount of water on the windshield and automatically controls the frequency of the windshield wiper. To turn this feature on or off, see "Rain Sense Wipers" under *Vehicle Personalization* ⇨ *147*.

Keep this area of the windshield clear of debris to allow for best system performance.

INT (Intermittent Wipes/Rainsense Wipe Sensitivity Control) : When enabled, move the windshield wiper lever to INT. Turn the INT band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

Wiper Arm Assembly Protection

When using an automatic car wash, move the windshield wiper lever to OFF. This disables the automatic Rainsense windshield wipers and/or manual windshield wipers.

With Rainsense, if the transmission is in N (Neutral) and the vehicle speed is very slow, the wipers will automatically stop at the base of the windshield.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers. The wipers will continue until the lever is released or the maximum wash time is reached. When the windshield wiper lever is released, additional wipes may occur depending on how long the windshield washer had been activated. See *Washer Fluid* ⇨ *256* for information on filling the windshield washer fluid reservoir.

⚠ Warning

In freezing weather, do not use the washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Rear Window Wiper/ Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON : Press the upper portion of the button for continuous rear window wipes.

OFF : The rear wiper turns off when the button is returned to the middle position.

INT (Intermittent Rear Wipes) : Press the lower portion of the button for intermittent wipes.

(Rear Washer) : Push the windshield wiper lever forward to spray washer fluid on the rear window. The lever automatically returns to its original position when released.

Rear Wiper Arm Assembly Protection

When using an automatic car wash, move the rear wiper control to OFF. This disables the rear wiper.

If the transmission is in N (Neutral) and the vehicle speed is very slow, the rear wiper will automatically stop at the base of the rear window.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Reverse Gear Wipes

If the rear wiper control is off, the rear wiper will automatically operate continuously when the shift lever is in R (Reverse), and the front windshield wiper is performing low or high speed wipes. If the rear wiper control is off, the shift lever is in R (Reverse), and the front windshield wiper is performing interval wipes, then the rear wiper automatically performs interval wipes.

This feature can be turned on or off. See *Vehicle Personalization* ⇨ *147*.

The windshield washer reservoir is used for the windshield and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid* ⇨ *256*.

Compass

The vehicle may have a compass display on the Driver Information Center (DIC). The compass receives its heading and other information from the Global Positioning System (GPS) antenna, StabiliTrak®, and vehicle speed information.

The compass system is designed to operate for a certain number of miles or degrees of turn before needing a signal from the GPS satellites. When the compass display shows CAL, drive the vehicle for a short distance in an open area where it can receive a GPS signal. The compass system will automatically determine when a GPS signal is restored and provide a heading again. See *Compass Messages* ⇨ *138* for the messages that may be displayed for the compass.

Clock

The infotainment system controls are used to access the time and date settings through the menu system. See "Home Page" in the infotainment manual for information about how to use the menu system.

Setting the Time

To set the time:

1. From the Home Page, press the SETTINGS screen button and press Time and Date.
2. Press Set Time and press + or − to increase or decrease hours, minutes, and AM or PM. Press 12Hr or 24Hr for 12 or 24 hour clock.
3. Press ⬅ to go back to the previous menu.

If auto timing is set, the time displayed on the clock may not update immediately when driving into a new time zone.

To set the date:

1. Press the SETTINGS screen button and press Time and Date.
2. Press Set Date and press + or − to increase or decrease month, day, or year.
3. Press ⬅ to go back to the previous menu.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle may have five accessory power outlets.

The accessory power outlets are:

- Below the climate control system inside the front storage bin.
- Inside the center floor console.
- On the rear of the center floor console. For vehicles with a rear climate control system, there will be two accessory power outlets on the rear of the center floor console.
- In the rear cargo area.

These are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

There is a small cap that must be removed to access the accessory power outlet. When not using the outlet be sure to cover it with the protective cap.

Caution

Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the battery. Power is always supplied to the rear cargo outlet. Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 ampere rating.

Certain accessory power plugs may not be compatible with the accessory power outlet and could overload vehicle or adapter fuses. If a problem is experienced, see your dealer.

When adding electrical equipment, be sure to follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment* ➪ 237.

Caution

Hanging heavy equipment from the power outlet can cause damage not covered by the vehicle warranty. The power outlets are designed for accessory power plugs only, such as cell phone charge cords.

Cigarette Lighter

If equipped, the cigarette lighter is under the climate control system, inside the front storage bin.

To activate the cigarette lighter, push it into the heating element and let go. The lighter pops out when it is ready to be used.

Caution

Holding a cigarette lighter in while it is heating does not let the lighter back away from the heating element when it is hot. Damage from overheating can occur to the lighter or heating element, or a fuse could be blown. Do not hold a cigarette lighter in while it is heating.

Ashtrays

There may be an ashtray under the climate control system on the center stack. Press the door to release the ashtray.

To empty the ashtray, remove it from the instrument panel by holding the edges and pulling straight out. To reinstall, push the tray back into place.

There may also be ashtrays on the center floor console behind the shift lever and in the rear doors.

Caution
If papers, pins, or other flammable items are put in the ashtray, hot cigarettes or other smoking materials could ignite them and possibly damage the vehicle. Never put flammable items in the ashtray.

Warning Lights, Gauges, and Indicators

Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury.

Some warning lights come on briefly when the engine is started to indicate they are working. When one of the warning lights comes on and stays on while driving, or when one of the gauges shows there may be a problem, check the section that explains what to do. Waiting to do repairs can be costly and even dangerous.

Instrument Cluster

English Shown, Metric Similar

Q8_000001669

Cluster Application Displays

The cluster has three interactive display zones.

Use the five-way control on the right steering wheel control to move between the different display zones and scroll through the different displays.

The left and right zones display Driver Information Center (DIC) information. See *Driver Information Center (DIC)* ⇨ *134*.

The center zone displays application information for navigation, audio, phone, or settings. A speedometer can also be displayed in this center zone.

Navigation

If there is no active route, a compass will be displayed. If there is an active route, press SEL to end route guidance or turn the voice prompts on or off.

Audio

While the Audio application page is displayed, press SEL to enter the Audio menu. In the Audio menu search for music, select from favorites, or change the audio source.

Phone

While the Phone application page is displayed, press SEL to enter the Phone menu. In the Phone menu, if there is no active phone call, view recent calls, select from favorites, or scroll through contacts. If there is an active call, mute the phone or switch to handset operation.

Settings

Press SEL while the Settings application page is displayed to enter the Settings menu.

Units : Press SEL while Units is highlighted to enter the Units menu. Choose English or metric units by pressing SEL while the desired item is highlighted. A checkmark will be displayed next to the selected item.

Info Pages : Press SEL while Info Pages is highlighted to select the items to be displayed in the DIC information displays. See *Driver Information Center (DIC)* ⇨ *134*.

Open Source Software : Press SEL while Open Source Software is highlighted to display open source software information.

Speedometer

The speedometer shows the vehicle's speed in either kilometers per hour (km/h) or miles per hour (mph).

Odometer

The odometer shows how far the vehicle has been driven, in either kilometers or miles.

Trip Odometer

The trip odometer shows how far the vehicle has been driven since the trip odometer was last reset.

The trip odometer is accessed and reset through the Driver Information Center (DIC). See *Driver Information Center (DIC)* ⇨ *134*.

Tachometer

The tachometer displays the engine speed in revolutions per minute (rpm).

Caution
If the engine is operated with the rpm's in the warning area at the high end of the tachometer, the vehicle could be damaged, and the damage would not be covered by the vehicle warranty. Do not operate the engine with the rpm's in the warning area.

Fuel Gauge

When the ignition is on, the fuel gauge indicates about how much fuel is left in the tank.

There is an arrow near the fuel gauge pointing to the side of the vehicle the fuel door is on.

When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refueled soon.

Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

- At the service station, the fuel pump shuts off before the gauge reads full.
- It takes a little more or less fuel to fill up than the gauge indicated. For example, the gauge may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gauge moves a little while turning a corner or speeding up.
- The gauge takes a few seconds to stabilize after the ignition is turned on, and goes back to empty when the ignition is turned off.

Engine Coolant Temperature Gauge

Metric

English

This gauge measures the temperature of the vehicle's engine.

While driving under normal operating conditions, if the needle moves into the shaded area, the engine is too hot. Pull off the road, stop the vehicle, and turn off the engine as soon as possible.

Safety Belt Reminders

Driver Safety Belt Reminder Light

There is a driver safety belt reminder light on the instrument cluster.

When the vehicle is started this light flashes and a chime comes on to remind drivers to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the driver remains or becomes unbuckled while the vehicle is moving.

If the driver safety belt is buckled, neither the light nor chime comes on.

Passenger Safety Belt Reminder Light

There is a passenger safety belt reminder light near the passenger airbag status indicator. See *Passenger Sensing System* ⇨ *75*.

When the vehicle is started this light flashes and a chime may come on to remind the front passenger to fasten their safety belt. Then the light stays on solid until the belt is buckled. This cycle may continue several times if the passenger remains or becomes unbuckled while the vehicle is moving.

If the front passenger safety belt is buckled, neither the chime nor the light comes on.

The front passenger safety belt reminder light and chime may turn on if an object is put on the seat such as a briefcase, handbag, grocery bag, laptop, or other electronic device. To turn off the reminder light and/or chime, remove the object from the seat or buckle the safety belt.

Second Row Passenger Belt Reminder Light

Second row seating positions monitored for safety belt use are represented by a colored symbol in the Driver information Center (DIC) indicating safety belt status. When the vehicle is started, three safety belt symbols come on and stay on for several seconds in the instrument cluster to alert the driver that passengers may need to fasten their safety belts. After the passenger safety belt is buckled, the corresponding safety belt symbol in the instrument cluster turns green. If a safety belt is not initially buckled, the instrument cluster displays a gray safety belt symbol. While the vehicle is moving, if a second row passenger that was previously buckled becomes unbuckled, the corresponding safety belt symbol will change to flashing red and a chime may sound.

Airbag Readiness Light

This light shows if there is an electrical problem with the airbag system. The system check includes the airbag sensor(s), the passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System* ➪ *69*.

The airbag readiness light comes on for several seconds when the vehicle is started. If the light does not come on then, have it fixed immediately.

⚠ Warning

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

If there is a problem with the airbag system, a Driver Information Center (DIC) message may also come on. See *Airbag System Messages* ⇨ *145*.

Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System* ⇨ *75* for important safety information. The overhead console has a passenger airbag status indicator.

United States

Canada and Mexico

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol to let you know the status of the front outboard passenger frontal airbag.

If the word ON or the on symbol is lit on the passenger airbag status indicator, it means that the front outboard passenger frontal airbag is allowed to inflate.

If the word OFF or the off symbol is lit on the passenger airbag status indicator, it means that the passenger sensing system has turned off the front outboard passenger frontal airbag.

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the passenger sensing system. See your dealer for service.

⚠ Warning

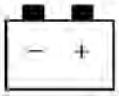
If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness*

(Continued)

Warning (Continued)

Light ⇨ *123* for more information, including important safety information.

Charging System Light



The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. It should go out when the engine is started.

If the light stays on, or comes on while driving, there may be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

When this light comes on, or is flashing, the Driver Information Center (DIC) also displays a message.

See *Battery Voltage and Charging Messages* ⇨ *137*.

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

Malfunction Indicator Lamp (Check Engine Light)

This light is part of the vehicle's emission control on-board diagnostic system. If this light is on while the engine is running, a malfunction has been detected and the vehicle may require service. The light should come on to show that it is working when the ignition is in Service Only Mode. See *Ignition Positions* ⇨ *187*.

Malfunctions are often indicated by the system before any problem is noticeable. Being aware of the light and seeking service promptly when it comes on may prevent damage.

Caution

If the vehicle is driven continually with this light on, the emission control system may not work as well, the fuel economy may be lower, and the vehicle may not run smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.

Caution

Modifications to the engine, transmission, exhaust, intake, or fuel system, or the use of replacement tires that do not meet the original tire specifications, can cause this light to come on. This could lead to costly repairs not covered by the vehicle warranty. This could also affect the vehicle's ability to pass an Emissions Inspection/ Maintenance test. See *Accessories and Modifications* ⇨ *240*.

If the light is flashing : A malfunction has been detected that could damage the emission control system and increase vehicle emissions. Diagnosis and service may be required.

To help prevent damage, reduce vehicle speed and avoid hard accelerations and uphill grades.

If towing a trailer, reduce the amount of cargo being hauled as soon as possible.

If the light continues to flash, find a safe place to park. Turn the vehicle off and wait at least 10 seconds before restarting the engine. If the light is still flashing, follow the previous guidelines and see your dealer for service as soon as possible.

If the light is on steady : A malfunction has been detected. Diagnosis and service may be required.

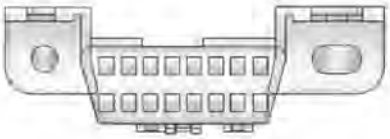
Check the following:

- A loose or missing fuel cap may cause the light to come on. See *Filling the Tank* ⇨ *227*. A few driving trips with the cap properly installed may turn the light off.
- Poor fuel quality can cause inefficient engine operation and poor driveability, which may go away once the engine is warmed up. If this occurs, change the fuel brand. It may require at least one full tank of the proper fuel to turn the light off. See *Fuel* ⇨ *226*.

If the light remains on, see your dealer.

Emissions Inspection and Maintenance Programs

If the vehicle requires an Emissions Inspection/Maintenance test, the test equipment will likely connect to the vehicle's Data Link Connector (DLC).



The DLC is under the instrument panel to the left of the steering wheel. Connecting devices that are not used to perform an Emissions Inspection/Maintenance test or to service the vehicle may affect vehicle operation See *Add-On Electrical Equipment* ⇨ *237*. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The light is on when the engine is running.
- The light does not come on when the ignition is in Service Only Mode.
- Critical emission control systems have not been completely diagnosed. If this happens, the vehicle would not be ready for inspection and might require several days of routine driving before the system is ready for inspection. This can happen if the 12-volt battery has recently been replaced or run down, or if the vehicle has been recently serviced.

See your dealer if the vehicle will not pass or cannot be made ready for the test.

Brake System Warning Light

The vehicle brake system consists of two hydraulic circuits. If one circuit is not working, the remaining circuit can still work to stop the vehicle. For normal braking performance, both circuits need to be working.

If the warning light comes on, there is a brake problem. Have the brake system inspected right away.

BRAKE

Metric **English**

This light should come on briefly when the engine is started. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

If the light comes on and stays on, there is a brake problem.

⚠ Warning

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to a crash. If the light is still on after the vehicle has been pulled off the road and carefully stopped, have the vehicle towed for service.

Electric Parking Brake Light

Metric **English**

This light comes on when the parking brake is applied. If the light continues flashing after the parking brake is released, or while driving, there is a problem with the Electric Parking Brake system or another system. A message may also display in the Driver Information Center (DIC). See *Brake System Messages* ⇨ *137*.

If the light does not come on, or remains flashing, see your dealer.

Service Electric Parking Brake Light

This light should come on briefly when starting the vehicle. If it does not come on, have it fixed so it will be ready to warn if there is a problem.

If this light stays on, there is a problem with the Electric Parking Brake system or another system on the vehicle that is causing the parking brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See the information for the Electric Parking Brake under *Parking Brake* ⇨ *199*. If a message displays in the Driver Information Center (DIC), see *Brake System Messages* ⇨ *137*.

Antilock Brake System (ABS) Warning Light

This light comes on briefly when the engine is started.

If the light does not come on, have it fixed so it will be ready to warn if there is a problem.

If the light comes on while driving, stop as soon as it is safely possible and turn off the vehicle. Then start the engine again to reset the system. If the ABS light stays on, or comes on again while driving, the vehicle needs service. A chime may also sound when the light comes on steady.

If the ABS light is the only light on, the vehicle has regular brakes, but the antilock brakes are not functioning.

If both the ABS and the brake system warning light are on, the vehicle's antilock brakes are not functioning and there is a problem with the regular brakes. See your dealer for service.

See *Brake System Warning Light* ⇨ *127* and *Brake System Messages* ⇨ *137*.

Lane Departure Warning (LDW) Light

If equipped, this light comes on briefly while starting the vehicle. If it does not come on, have the vehicle serviced.

This light is green if LDW is on and ready to operate.

This light changes to amber and flashes to indicate that the lane marking has been crossed without using a turn signal in that direction.

See *Lane Departure Warning (LDW)* ⇨ *224*.

Vehicle Ahead Indicator

If equipped, this indicator will display green when a vehicle is detected ahead and amber when you are following a vehicle ahead much too closely.

See *Forward Collision Alert (FCA) System* ⇨ *219*.

Traction Off Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

The traction off light comes on when the Traction Control System (TCS) has been turned off by pressing and releasing the TCS/StabiliTrak button.

This light and the StabiliTrak OFF light come on when StabiliTrak is turned off.

If the TCS is off, wheel spin is not limited. Adjust driving accordingly.

See *Traction Control/Electronic Stability Control* ⇨ *202*.

StabiliTrak® OFF Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer.

This light comes on when the StabiliTrak system is turned off. If StabiliTrak is off, the Traction Control System (TCS) is also off.

If StabiliTrak and TCS are off, the system does not assist in controlling the vehicle. Turn on the TCS and the StabiliTrak systems, and the warning light turns off.

See *Traction Control/Electronic Stability Control* ⇨ *202*.

Traction Control System (TCS)/StabiliTrak® Light

This light comes on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light is on and not flashing, the TCS and potentially the StabiliTrak system have been disabled. A DIC message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service.

If the light is on and flashing, the TCS and/or the StabiliTrak system is actively working.

See *Traction Control/Electronic Stability Control* ⇨ *202*.

Engine Coolant Temperature Warning Light

This light comes on briefly while starting the vehicle.

If it does not, have the vehicle serviced by your dealer. If the system is working normally the indicator light goes off.

Caution
The engine coolant temperature warning light indicates that the vehicle has overheated. Driving with this light on can damage the engine and it may not be covered by the vehicle warranty. See *Engine Overheating* ⇨ *254*.

The engine coolant temperature warning light comes on when the engine has overheated.

If this happens, pull over and turn off the engine as soon as possible. See *Engine Overheating* ⇨ *254*.

Tire Pressure Light

For vehicles with the Tire Pressure Monitor System (TPMS), this light comes on briefly when the engine is started. It provides information about tire pressures and the TPMS.

When the Light Is On Steady

This indicates that one or more of the tires are significantly underinflated.

A Driver Information Center (DIC) tire pressure message may also display. See *Tire Messages* ⇨ *145*. Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information label. See *Tire Pressure* ⇨ *285*.

When the Light Flashes First and Then Is On Steady

If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on at every ignition cycle. See *Tire Pressure Monitor Operation* ⇨ *288*.

Engine Oil Pressure Light

Caution
Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the vehicle serviced. Always follow the maintenance schedule for changing engine oil.

This light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

Fuel Economy Light

This light is in the Driver Information Center (DIC) display.

For vehicles with the fuel economy mode light, it comes on when the eco (economy) button, located next to the shift lever, is pressed. Press the button again to turn off the light and exit the fuel economy mode. See *Driving for Better Fuel Economy* ⇨ *25* and *Fuel Economy Mode* ⇨ *197* for more information.

Low Fuel Warning Light

This light is near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

Security Light

The security light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system. See *Immobilizer Operation* ⇨ *42*.

High-Beam On Light

This light comes on when the high-beam headlamps are in use.

See *Headlamp High/Low-Beam Changer* ⇨ *159*.

IntelliBeam® Light

This light comes on when the IntelliBeam system, if equipped, is enabled.

See *Exterior Lamp Controls* ⇨ *157*.

Adaptive Forward Lighting (AFL) Light

This light should come on briefly as the vehicle is started. If it does not come on, have the vehicle serviced by your dealer.

This light comes on solid when there is a problem with the AFL system. It flashes when the system is switching between lighting modes. See *Adaptive Forward Lighting (AFL)* ⇨ *160*.

Front Fog Lamp Light

The fog lamp light comes on when the fog lamps are in use.

The light goes out when the fog lamps are turned off. See *Front Fog Lamps* ⇨ *162* for more information.

Lamps On Reminder

This light comes on when the exterior lamps are in use. See *Exterior Lamp Controls* ⇨ *157*.

Cruise Control Light

The cruise control light is white when the cruise control is on and ready, and turns green when the cruise control is set and active.

See *Cruise Control* ⇨ *205*.

Adaptive Cruise Control Light

This light in the Driver Information Center (DIC) comes on when the Adaptive Cruise Control (if equipped) is active. See *Adaptive Cruise Control* ⇨ *207*.

Information Displays

Driver Information Center (DIC)

The DIC displays are shown in the left and right interactive display zones on the instrument cluster. The displays show the status of many vehicle systems. The controls for the DIC are on the right steering wheel control.

∧ or ∨ : Press the five-way control to move up or down in a list.

< or > : Press the five-way control to move between the interactive display zones in the cluster. Press < to go back to the previous menu.

SEL (Select) : Press the center to open a menu or select a menu item. Press and hold to reset values on certain screens.

DIC Information Display Options

The information displays on the DIC can be turned on or off through the Settings menu.

1. Press SEL while viewing the Settings page in the center display zone on the cluster.
2. Scroll to Info Pages and press SEL.
3. Press ∧ or ∨ to move through the list of possible information displays.
4. Press SEL while an item is highlighted to select or deselect that item. When an item is selected, a checkmark will appear next to it.

DIC Information Displays

The following is the list of all possible DIC information displays. Some of the information displays may not be available for your particular vehicle.

Speed : Shows the vehicle speed in either kilometers per hour (km/h) or miles per hour (mph).

Trip 1 and Trip 2 : Shows the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset. The trip odometer can be reset by pressing and holding SEL while this display is active.

Fuel Range : Shows the approximate distance the vehicle can be driven without refueling. LOW will be displayed when the vehicle is low on fuel. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank.

Average Fuel Economy : Shows the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. This number reflects only the approximate average fuel economy that the vehicle has right now, and will change as driving conditions change. The Average Fuel Economy can be reset by pressing and holding SEL while this display is active.

Instantaneous Fuel Economy : Shows the current fuel economy in either liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the approximate fuel economy that the vehicle has right now and changes frequently as driving conditions change.

Average Speed : Shows the average speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. The average speed can be reset by pressing and holding SEL while this display is active.

Timer : This display can be used as a timer. To start the timer, press SEL while this display is active. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press SEL briefly while this display is active and the timer is running. To reset the timer to zero, press and hold SEL while this display is active.

Compass : Shows the direction the vehicle is driving.

Turn Arrow : Shows the next maneuver when using route guidance.

Travel Time : Shows the estimated time duration remaining for the current route.

Distance to Destination : Shows the distance to the destination when using route guidance.

Speed Limit : Shows sign information, which comes from a roadway database in the onboard navigation.

Speed Warning : Allows the driver to set a speed that they do not want to exceed. To set the Speed Warning, press SEL when Speed Warning is displayed. Press ∧ or ∨ to adjust the value. This feature can be turned off by pressing and holding SEL while viewing this page. If the selected speed limit is exceeded, a pop-up warning is displayed with a chime.

Cruise Set Speed : Shows the speed the cruise control or Adaptive Cruise Control is set to.

Follow Distance : Shows the current following distance to the vehicle ahead.

Battery Voltage : Shows the current battery voltage.

Oil Life : Shows an estimate of the oil's remaining useful life.
If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages* ⇨ *140*. The oil should be changed as soon as possible. See *Engine Oil* ⇨ *243*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule. See *Maintenance Schedule* ⇨ *332*.

The Oil Life display must be reset after each oil change. It will not reset itself. Do not to reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system, press and hold SEL for several seconds while the Oil Life display is active. See *Engine Oil Life System* ⇨ *246*.

Tire Pressure : Shows the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). If the pressure is low, the value for that tire is shown in amber. See *Tire Pressure Monitor System* ⇨ *287* and *Tire Pressure Monitor Operation* ⇨ *288*.

Blank Page : Allows for no information to be displayed in the DIC display zone(s).

Vehicle Messages

Messages displayed on the DIC indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may display one after the other.

The messages that do not require immediate action can be acknowledged and cleared by pressing SET/CLR. The messages that require immediate action cannot be cleared until that action is performed. All messages should be taken seriously and clearing the messages does not correct the problem.

The following are some of the vehicle messages that may be displayed depending on your vehicle content.

Battery Voltage and Charging Messages

BATTERY SAVER ACTIVE

This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing features of the vehicle that may be noticed. At the point that features are disabled, this message displays. Turn off unnecessary accessories to allow the battery to recharge.

LOW BATTERY

This message is displayed when the battery voltage is low. See *Battery - North America* ⇨ *259*.

SERVICE BATTERY CHARGING SYSTEM

This message is displayed when there is a fault in the battery charging system. Take the vehicle to your dealer for service.

TRANSPORT MODE ON

This message is displayed when the vehicle is in transport mode. Some features can be disabled while in this mode, including Remote Keyless Entry (RKE), remote start, and the vehicle alarm system. Take the vehicle to your dealer for service to turn transport mode off.

Brake System Messages

BRAKE FLUID LOW

This message is displayed when the brake fluid level is low. See *Brake Fluid* ⇨ *258*.

STEP ON BRAKE TO RELEASE PARK BRAKE

This message is displayed if you attempt to release the Electric Parking Brake without the brake pedal applied. See *Parking Brake* ⇨ *199*.

RELEASE PARKING BRAKE

This message is displayed if the Electric Parking Brake is on while the vehicle is in motion. See *Parking Brake* ⇨ *199*.

SERVICE BRAKE ASSIST

This message may be displayed when there is a problem with the brake boost assist system. When this message is displayed, the brake boost assist motor might be heard operating and you might notice pulsation in the brake pedal. This is normal under these conditions. Take the vehicle to your dealer for service.

SERVICE PARKING BRAKE

This message is displayed when there is a problem with the parking brake. Take the vehicle to your dealer for service.

Compass Messages

CAL

This message is displayed when the compass needs to be calibrated. See *Compass* ⇨ *115*.

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Dashes will be displayed if the compass needs service. See your dealer for service.

Cruise Control Messages

ADAPTIVE CRUISE SET TO XXX

This message displays when the Adaptive Cruise Control (ACC) speed is set. See *Adaptive Cruise Control* ⇨ *207*.

ADAPTIVE CRUISE TEMPORARILY UNAVAILABLE

This message displays when attempting to activate Adaptive Cruise Control (ACC) when it is temporarily unavailable. The ACC system does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care* ⇨ *321*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

CRUISE SET TO XXX

This message displays when the cruise control speed is set. See *Cruise Control* ⇨ *205*.

NO CRUISE BRAKING GAS PEDAL APPLIED

This message displays when Adaptive Cruise Control (ACC) is active and the driver is pressing the gas pedal. When this occurs, ACC will not brake. See *Adaptive Cruise Control* ⇨ *207*.

SERVICE ADAPTIVE CRUISE CONTROL

This message displays when the Adaptive Cruise Control (ACC) needs service. Take the vehicle to your dealer.

SHIFT TO PARK BEFORE EXITING

This message may display if Adaptive Cruise Control (ACC) is engaged holding the vehicle at a stop, and the driver attempts to exit the vehicle. Put the vehicle in P (Park) before exiting.

Door Ajar Messages

DOOR OPEN

A door open symbol will be displayed on the DIC showing which door is open. If the vehicle has been shifted out of P (Park), a DOOR OPEN message will also be displayed. Close the door completely.

HOOD OPEN

This message will display along with a hood open symbol when the hood is open. Close the hood completely.

REAR ACCESS OPEN

This message will display along with a symbol when the liftgate is open. Close the liftgate completely.

Engine Cooling System Messages

A/C OFF DUE TO HIGH ENGINE TEMP

This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. The vehicle can continue to be driven.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

ENGINE OVERHEATED — IDLE ENGINE

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OVERHEATED — STOP ENGINE

This message displays and a continuous chime sounds if the engine cooling system reaches unsafe temperatures for operation. Stop and turn off the vehicle as soon as it is safe to do so to avoid severe damage. This message clears when the engine has cooled to a safe operating temperature.

HIGH COOLANT TEMPERATURE

This message displays if the coolant temperature is hot. See *Engine Overheating* ⇨ *254*.

Engine Oil Messages

CHANGE ENGINE OIL SOON

This message displays when the engine oil needs to be changed. When you change the engine oil, be sure to reset the oil life system. See *Engine Oil Life System* ⇨ *246*, *Driver Information Center (DIC)* ⇨ *134*, *Engine Oil* ⇨ *243*, and *Maintenance Schedule* ⇨ *332*.

ENGINE OIL HOT, IDLE ENGINE

This message displays when the engine oil temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OIL LOW — ADD OIL

On some vehicles, this message displays when the engine oil level may be too low. Check the oil level before filling to the recommended level. If the oil is not low and this message remains on, take the vehicle to your dealer for service. See *Engine Oil* ⇨ *243*.

OIL PRESSURE LOW — STOP ENGINE

This message displays if low oil pressure levels occur. Stop the vehicle as soon as safely possible and do not operate it until the cause of the low oil pressure has been corrected. Check the oil as soon as possible and have the vehicle serviced by your dealer.

Engine Power Messages

ENGINE POWER IS REDUCED

This message displays when the vehicle's engine power is reduced. Reduced engine power can affect the vehicle's ability to accelerate. If this message is on, but there is no reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven at a reduced speed while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer for service as soon as possible.

Fuel System Messages

FUEL LEVEL LOW

This message displays when the vehicle is low on fuel. Refuel as soon as possible.

TIGHTEN GAS CAP

This message displays when the fuel cap is not on tight. Tighten the fuel cap.

Key and Lock Messages

NO REMOTE DETECTED

This message displays when the transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation* ⇨ *27*.

NO REMOTE KEY WAS DETECTED PLACE KEY IN TRANSMITTER POCKET THEN START YOUR VEHICLE

This message displays when trying to start the vehicle if an RKE transmitter is not detected. The

transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation* ⇨ 27.

NO REMOTE PRESS BRAKE TO RESTART

This message is displayed if the remote is no longer detected in the vehicle. Press the brake pedal to restart the vehicle.

NUMBER OF KEYS PROGRAMMED

This message displays when programming new keys to the vehicle.

REMOTE LEFT IN VEHICLE

This message displays when leaving the vehicle with the RKE transmitter still inside.

REPLACE BATTERY IN REMOTE KEY

This message displays when the battery in the RKE transmitter needs to be replaced.

Lamp Messages

AFL (ADAPTIVE FORWARD LIGHTING) LAMPS NEED SERVICE

This message displays when the AFL system is disabled and needs service. See your dealer. See *Adaptive Forward Lighting (AFL)* ⇨ 160.

AUTOMATIC LIGHT CONTROL ON

This message is displayed when the exterior lamp control is in AUTO and the lights have turned on. See *Twilight Sentinel* ⇨ 160.

AUTOMATIC LIGHT CONTROL OFF

This message is displayed when the exterior lamp control is in AUTO and the lights have turned off. See *Twilight Sentinel* ⇨ 160.

XXX TURN INDICATOR FAILURE

When one of the turn signals is out, this message displays to show which bulb needs to be replaced. See *Bulb Replacement* ⇨ 263 and *Replacement Bulbs* ⇨ 270.

TURN SIGNAL ON

This message is displayed if the turn signal has been left on. Turn off the turn signal.

Object Detection System Messages

24 GHz RADARS OFF

This message displays when driving in certain areas where there may be radar interference. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and the Front Automatic Braking (FAB) System may not work or may not work as well. The vehicle does not need service.

AUTOMATIC COLLISION PREP OFF

This message displays when the Front Automatic Braking (FAB) System has been turned off. See *Front Automatic Braking (FAB) System* ⇨ *221*.

AUTOMATIC COLLISION PREP REDUCED

This message displays when the Front Automatic Braking (FAB) System has been set to the Alert setting. This setting disables most FAB functions. Some last-second automatic braking capability is still provided with the Alert setting, but braking is less likely to occur. See *Front Automatic Braking (FAB) System* ⇨ *221*.

AUTOMATIC COLLISION PREP UNAVAILABLE

This message displays when the Front Automatic Braking (FAB) System has been unavailable for some time. The FAB System does not need service.

This can occur under the following conditions:

- The front of the vehicle or windshield is not clean. Keep these areas clean and free of mud, dirt, snow, ice, and slush. For cleaning instructions, see *Exterior Care* ⇨ *321*.
- Heavy rain or snow is interfering with the object detection performance.

This message may also be displayed if there is a problem with the StabiliTrak system. See *Traction Control/Electronic Stability Control* ⇨ *202*.

FORWARD COLLISION ALERT OFF

This message displays when the Forward Collision Alert has been turned off.

FRONT CAMERA BLOCKED CLEAN WINDSHIELD

This message displays when the camera is blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue. The Lane Departure Warning (LDW) system will not operate. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and the Front Automatic Braking (FAB) System may not work or may not work as well.

LANE DEPARTURE WARNING UNAVAILABLE

This message displays when attempting to activate the Lane Departure Warning (LDW) system when it is temporarily unavailable. The LDW system does not need service.

This message could be due to the camera being blocked. Cleaning the outside of the windshield behind the rearview mirror may correct the issue.

REAR AUTO BRAKE/PARK ASSIST OFF

This message displays when the Parking Assist system has been turned off or when there is a temporary condition causing the system to be disabled.

REAR AUTO BRAKE AND PARK ASSIST UNAVAILABLE

This message displays when attempting to activate the parking and backing features of the Driver Assistance System when they are temporarily unavailable. The system does not need service.

This can occur under the following conditions:

- The radar is not clean. Keep the radar sensors free of mud, dirt, snow, ice, and slush. Clean the entire front and/or rear of the vehicle. For cleaning instructions, see *Exterior Care* ⇨ *321*.
- Heavy rain or snow is interfering with the radar object detection or camera performance.

See *Driver Assistance Systems* ⇨ *214*.

SERVICE AUTOMATIC COLLISION PREP

If this message displays, take the vehicle to your dealer to repair the system. Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), and/or the Front Automatic Braking (FAB) System may not work. Do not use these systems until the vehicle has been repaired.

SERVICE DRIVER ASSIST SYSTEM

If this message displays, take the vehicle to your dealer to repair the system.

Adaptive Cruise Control (ACC), Forward Collision Alert (FCA), Front Automatic Braking (FAB) System, Assistance Systems for Parking or Backing, and/or Lane Departure Warning (LDW) system may not work. Do not use these systems until the vehicle has been repaired.

SERVICE FRONT CAMERA

If this message remains on after continued driving, the vehicle needs service. Do not use the Lane Departure Warning (LDW) and Forward Collision Alert (FCA) features. Take the vehicle to your dealer.

SERVICE PARK ASSIST

This message displays if there is a problem with the Parking Assist system. Do not use this system to help you park. See your dealer for service.

SERVICE REAR AUTO BRAKE AND PARK ASSIST

This message displays if there is a problem with the parking and backing features of the Driver Assistance System. Do not use this system to help park or back the vehicle. See your dealer for service.

SIDE BLIND ZONE ALERT OFF

This message indicates that the driver has turned the Side Blind Zone Alert (SBZA) system off.

SERVICE SIDE DETECTION SYSTEM

If this message remains on after continued driving, the vehicle needs service. Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) features will not work. Take the vehicle to your dealer.

SIDE DETECTION SYSTEM UNAVAILABLE

This message indicates that Side Blind Zone Alert (SBZA) and Rear Cross Traffic Alert (RCTA) are disabled either because the sensor is blocked and cannot detect vehicles in the blind zone, or the vehicle is passing through an open area, such as the desert, where there is insufficient data for operation. This message may also activate during heavy rain or due to road spray. The vehicle does not need service. For cleaning, see "Washing the Vehicle" under *Exterior Care* ⇨ *321*.

Ride Control System Messages

SERVICE ALL WHEEL DRIVE

This message displays when there is a problem with the All Wheel Drive (AWD) system. This message could be set by a number of issues. Some may require service of the AWD system some will not. The vehicle will run in normal two-wheel drive mode when this message has been set. This could be caused by:

- A vehicle or an AWD system electronics problem.
- Various vehicle electrical issues.
- Worn out or overheated clutch plates.
- Loss of fluids.

If this message appears, stop when convenient and turn off the ignition for 30 seconds. Restart the vehicle and check for the message on the DIC display. If the message has gone off and stays off, it is not necessary to take your vehicle to the dealer. If the message still displays or appears again when you begin driving, the system needs service. See your dealer.

SERVICE STABILITRAK

This message displays if there is a problem with the StabiliTrak system. See *Traction Control/Electronic Stability Control* ⇨ *202*.

SERVICE SUSPENSION SYSTEM

This message displays if there is a problem with the Selective Ride Control. See *Selective Ride Control* ⇨ *204*.

SERVICE TRACTION CONTROL

This message displays when there is a problem with the Traction Control System (TCS). See *Traction Control/Electronic Stability Control* ⇨ *202*.

SPORT MODE ON

This message displays when Sport Mode has been activated. See *Selective Ride Control* ⇨ *204* and *Manual Mode* ⇨ *196*.

TRACTION CONTROL OFF

This message displays when the Traction Control System (TCS) has been turned off. See *Traction Control/Electronic Stability Control* ⇨ *202*.

TRACTION CONTROL ON

This message displays when the Traction Control System (TCS) has been turned on. See *Traction Control/Electronic Stability Control* ⇨ *202*.

Airbag System Messages

SERVICE AIRBAG

This message displays if there is a problem with the airbag system. See your dealer for service.

Security Messages

THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

Service Vehicle Messages

SERVICE POWER STEERING

This message displays and a chime may sound when there may be a problem with the power steering system. If this message displays and a reduction in steering performance or loss of power steering assistance is noticed, see your dealer.

SERVICE VEHICLE SOON

This message is displayed if there is a problem with the vehicle. Take the vehicle to your dealer for service.

Starting the Vehicle Messages

PRESS BRAKE TO START

This message is displayed when attempting to start the vehicle without first pressing the brake pedal.

SERVICE KEYLESS START SYSTEM

This message is displayed if there is a problem with the pushbutton start system. Take the vehicle to your dealer for service.

Tire Messages

SERVICE TIRE MONITOR SYSTEM

This message displays if there is a problem with the Tire Pressure Monitor System (TPMS). See *Tire Pressure Monitor Operation* ⇨ *288*.

TIRE LEARNING ACTIVE

This message displays when the system is learning new tires. See *Tire Pressure Monitor Operation* ⇨ *288*.

TIRE PRESSURE LOW ADD AIR TO TIRE

This message displays when the pressure in one or more of the tires is low.

This message also displays LEFT FRONT, RIGHT FRONT, LEFT REAR, or RIGHT REAR to indicate the location of the low tire.

The low tire pressure warning light will also come on. See *Tire Pressure Light* ⇨ *131*.

If a tire pressure message appears on the DIC, stop as soon as possible. Inflate the tires by adding air until the tire pressure is equal to the values shown on the Tire and Loading Information label. See *Tires* ⇨ *278*, *Vehicle Load Limits* ⇨ *182*, and *Tire Pressure* ⇨ *285*.

More than one tire pressure message can appear at a time. The DIC also shows the tire pressure values. See *Driver Information Center (DIC)* ⇨ *134*.

Transmission Messages

SERVICE TRANSMISSION

This message displays if there is a problem with the transmission. See your dealer.

SHIFT DENIED

This message displays when using the Driver Shift Control (DSC) and attempting to shift to a gear not appropriate for the vehicle speed and engine revolutions per minute (rpm). See *Manual Mode* ⇨ *196*.

SHIFT TO PARK

This message displays when the transmission needs to be shifted to P (Park). This may appear when turning the ignition off if the vehicle is not in P (Park).

TRANSMISSION HOT — IDLE ENGINE

This message displays and a chime sounds if the transmission fluid in the vehicle gets hot. Driving with the transmission fluid temperature high can cause damage to the vehicle. Stop the vehicle and let it idle to allow the transmission to cool. This message clears when the fluid temperature reaches a safe level.

Vehicle Reminder Messages

ICE POSSIBLE DRIVE WITH CARE

This message is displayed when ice conditions are possible.

TURN WIPER CONTROL TO INTERMITTENT FIRST

This message is displayed when attempting to adjust the intermittent wiper speed without intermittent selected on the wiper control. See *Windshield Wiper/Washer* ⇨ *113*.

Vehicle Speed Messages

SPEED LIMIT EXCEEDED

This message is displayed when the vehicle speed is greater than the set speed. See "Speed Warning" under *Driver Information Center (DIC)* ⇨ *134*.

Washer Fluid Messages

WASHER FLUID LOW ADD FLUID

This message may display when the washer fluid level is low. Fill the windshield washer reservoir as soon as possible. See *Engine Compartment Overview* ⇨ *242* for the location of the windshield washer reservoir. Also, see *Washer Fluid* ⇨ *256*.

Vehicle Personalization

Use the audio system controls to access the personalization menus for customizing vehicle features.

The following are all possible personalization features. Depending on the vehicle, some may not be available.

Infotainment System Audio System Controls

To access the personalization menu:

1. Press SETTINGS on the Home page on the infotainment system display.
2. Press the desired feature to display a list of available options.
3. Press to select the desired feature setting.
4. Press the ❮ Back screen button to return to the previous menu.

Personalization Menus

The following list of menu items may be available:

- Time and Date
- Language (Language)
- Valet Mode
- Radio
- Vehicle
- Bluetooth
- Apple CarPlay
- Android Auto
- Voice
- Display
- Rear Camera
- Return to Factory Settings
- Software Information

Each menu is detailed in the following information.

Time and Date

Manually set the time and date. See *Clock* ⇨ *116*.

Language (Language)

Select Language, then select from the available language(s).

The selected language will display on the system, and voice recognition will reflect the selected language.

Valet Mode (If Equipped)

This will lock the infotainment system and steering wheel controls. It may also limit access to vehicle storage locations (if equipped).

To enable valet mode:

1. Enter a four-digit code on the keypad.
2. Select Enter to go to the confirmation screen.
3. Re-enter the four-digit code.

Press LOCK or UNLOCK to lock or unlock the system. Press Back to go back to the previous menu.

Radio

Press to display the Radio Menu and the following may be displayed:

- Manage Favorites
- Number of Favorites Shown
- Audible Touch Feedback
- Bose Audio Pilot
- Maximum Startup Volume

Manage Favorites

This allows favorites to be edited. See "Manage Favorites" in "Settings" under "Radio" in the infotainment manual.

Number of Favorites Shown

Press to set the number of favorites to display.

Select the desired number or select Auto and the infotainment system will automatically adjust the number of favorites shown.

Audible Touch Feedback

This allows Audible Touch Feedback to be turned on or off.

Select Off or On.

Bose Audio Pilot

This feature adjusts the volume based on the noise in the vehicle. See "Bose AudioPilot Noise Compensation Technology" under "Infotainment System Settings" in the infotainment manual.

Maximum Startup Volume

This feature sets the maximum startup volume. If the vehicle is started and the volume is greater than this level, the volume is adjusted to this level. To set the maximum startup volume, press + or − to increase or decrease.

Vehicle

Select and the following may be displayed:

- Climate and Air Quality
- Collision/Detection Systems
- Comfort and Convenience
- Lighting
- Power Door Locks
- Remote Lock, Unlock, Start

Climate and Air Quality

Select and the following may be displayed:

- Auto Fan Max Speed
- Air Quality Sensor
- Auto Heated Seats
- Auto Defog
- Auto Rear Defog

Auto Fan Max Speed

This feature will set the maximum auto fan speed.

Select Low, Medium, or High.

Air Quality Sensor

This allows for selection of air quality sensor operation at high or low sensitivity.

Select Off, Low Sensitivity, or High Sensitivity.

Auto Heated Seats

When enabled, this feature will automatically activate heated seats at the level required by the interior temperature. The auto heated seats

can be turned off by using the heated seat buttons on the center stack.

Select Off or On.

Auto Defog

When set to On, the front defog will automatically react to temperature and humidity conditions that may cause fogging.

Select Off or On.

Auto Rear Defog

If equipped, this allows auto rear defog to be turned on or off.

Select Off or On.

Collision/Detection Systems

Select the Collision/Detection Systems menu and the following may display:

- Alert Type
- Auto Collision Preparation
- Go Notifier
- Side Blind Zone Alert
- Rear Cross Traffic Alert

Alert Type

This feature will set crash alerts to beeps or seat vibrations. This setting affects all crash alerts including:

- Forward Collision
- Lane Departure Warning
- Adaptive Cruise Control
- Parking Assist
- Backing Warning

Select Beeps or Safety Alert Seat.

Auto Collision Preparation

This feature will turn on or off the Forward Collision Alert (FCA) and Front Automatic Braking (FAB). The Off setting disables all FCA and FAB functions. With the Alert and Brake setting, both FCA and FAB are available. The Alert setting disables FAB, but some last-second automatic braking capability is still provided, though less likely to occur. See *Front Automatic Braking (FAB) System* ⇨ *221*.

Select Off, Alert and Brake, or Alert.

Go Notifier

This feature will give a reminder that Adaptive Cruise Control provides when it has brought the vehicle to a complete stop behind another stopping vehicle, and then that vehicle drives on. See *Adaptive Cruise Control* ⇨ *207*.

Select Off or On.

Side Blind Zone Alert

This allows the feature to be turned on or off. See *Side Blind Zone Alert (SBZA)* ⇨ *222*.

Select Off or On.

Rear Cross Traffic Alert

Select Off or On. See *Assistance Systems for Parking or Backing* ⇨ *215*.

Comfort and Convenience

Select and the following may be displayed:

- Auto Memory Recall
- Easy Exit Options
- Chime Volume

- Reverse Tilt Mirror
- Auto Wipe in Reverse Gear

Auto Memory Recall

This feature automatically recalls the current driver's previously stored 1 or 2 button positions when entering the vehicle. See *Memory Seats* ⇨ *56*.

Select Off or On.

Easy Exit Options

This feature moves the seat rearward automatically allowing the driver more room to exit the vehicle. See *Memory Seats* ⇨ *56*.

Select Off or On.

Chime Volume

This allows the selection of the chime volume level.

Press + or − to adjust the volume.

Reverse Tilt Mirror

This allows the feature to be turned on or off.

Select Off, On - Driver and Passenger, On - Driver, or On - Passenger.

Auto Wipe in Reverse Gear

When on and the front wiper is on, the rear wiper will automatically activate when the vehicle is shifted into R (Reverse).

Select Off or On.

Lighting

Select and the following may be displayed:

- Vehicle Locator Lights
- Exit Lighting

Vehicle Locator Lights

This feature will flash the exterior lamps when on the Remote Keyless Entry (RKE) transmitter is pressed to locate the vehicle.

Select Off or On.

Exit Lighting

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Select Off, 30 Seconds, 60 Seconds, or 120 Seconds.

Power Door Locks

Select and the following may be displayed:

- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock

Unlocked Door Anti Lock Out

When on, this feature will keep the driver door from locking when the door is open. If Off is selected, the Delayed Door Lock menu will be available.

Select Off or On.

Auto Door Unlock

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park).

Select Off, All Doors, or Driver Door.

Delayed Door Lock

When on, this feature will delay the locking of the doors. To override the delay, press the power door lock switch on the door.

Select Off or On.

Remote Lock, Unlock, Start

Select and the following may be displayed:

- Remote Unlock Light Feedback
- Remote Lock Feedback
- Remote Door Unlock
- Remote Start Auto Cool Seats
- Remote Start Auto Heat Seats
- Passive Door Unlock
- Passive Door Lock
- Remote Left in Vehicle Alert

Remote Unlock Light Feedback

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Select Off or On.

Remote Lock Feedback

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Select Off, Lights and Horn, Lights Only, or Horn Only.

Remote Door Unlock

This allows selection of which doors will unlock when pressing on the RKE transmitter.

Select All Doors or Driver Door.

Remote Start Auto Cool Seats

If equipped and turned on, this feature will turn the ventilated seats on when using remote start on warm days.

Select Off or On.

Remote Start Auto Heat Seats

If equipped and turned on, this feature will turn the heated seats on when using remote start on cold days.

Select Off or On.

Passive Door Unlock

This allows the selection of what doors will unlock when using the button on the driver door to unlock the vehicle.

Select All Doors or Driver Door.

Passive Door Lock

This feature can be turned on or off, or can be used to select feedback when using the button on the driver door to lock the vehicle. See *Remote Keyless Entry (RKE) System Operation* ⇨ 27.

Select Off, On with Horn Chirp, or On.

Remote Left in Vehicle Alert

This feature sounds an alert when the RKE transmitter is left in the vehicle.

Select Off or On.

Bluetooth

Select and the following may be displayed:

- Pair New Device
- Device Management

- Ringtones
- Voice Mail Numbers

Pair New Device

Select to pair a new device. See "Pairing" in "Infotainment Controls" under "Bluetooth" in the infotainment manual.

Device Management

Select to connect to a different phone source, disconnect a phone, or delete a phone.

Ringtones

Press to change the ring tone for the specific phone. The phone does not need to be connected to change the ring.

Voice Mail Numbers

This feature displays the voice mail number for all connected phones. To change the voice mail number, select EDIT or press the EDIT button. Type a new number, then select SAVE or press the SAVE button.

Apple CarPlay™

Select and the following may display:

- Apple CarPlay
- Manage Apple CarPlay Devices

Apple CarPlay

This feature allows Apple devices to be connected to the infotainment system through a USB port.

Select Off or On.

Manage Apple CarPlay Devices

Select to manage Apple devices. Apple CarPlay must be on for this feature to be accessed.

Android Auto

Select and the following may display:

- Android Auto
- Manage Android Auto Devices

Android Auto

This feature allows Android devices to be connected to the infotainment system through a USB port.

Select Off or On.

Manage Android Auto Devices

Select to manage Android devices. Android Auto must be on for this feature to be accessed.

Voice

Select and the following may be displayed:

- Confidence Threshold
- Prompt Length
- Audio Feedback Speed

Confidence Threshold

This feature allows the adjustment of the sensitivity of the speech recognition system.

Select Confirm More or Confirm Less.

Prompt Length

This feature adjusts the voice prompt length.

Select Short or Long.

Audio Feedback Speed

This feature adjusts the audio feedback speed.

Select Slow, Medium, or Fast.

Display

Select and the following may be displayed:

- Mode
- Calibrate Touchscreen
- Turn Display Off

Mode

Select to change the display screen for day or night driving.

Select Auto, Day, or Night.

Calibrate Touchscreen

Select to calibrate the touchscreen, then follow the prompts.

Turn Display Off

Select to turn the display off. Press anywhere on the display area or any faceplate button to turn the display on.

Rear Camera

Select and the following may be displayed:

- Guidance Lines
- Rear Park Assist Symbols

Guidance Lines

Select to turn Off or On. See *Assistance Systems for Parking or Backing* ⇨ *215*.

Rear Park Assist Symbols

Select to turn Off or On. See *Assistance Systems for Parking or Backing* ⇨ *215*.

Return to Factory Settings

Select and the following may be displayed:

- Restore Vehicle Settings
- Clear All Private Data
- Restore Radio Settings

Restore Vehicle Settings

This allows selection of restoring vehicle settings.

Select Cancel or Restore.

Clear All Private Data

This allows selection to clear all private information from the vehicle.

Select Cancel or Delete.

Restore Radio Settings

This allows selection to restore radio settings.

Select Cancel or Restore.

Software Information

Select to view the infotainment system current software information.

Universal Remote System

See *Radio Frequency Statement* ⇨ *356*.

Universal Remote System Programming

If equipped, these buttons are in the overhead console.

This system can replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices. These instructions refer to a garage door opener, but can be used for other devices.

Do not use the Universal Remote system with any garage door opener that does not have the stop and reverse feature. This includes any garage door opener model manufactured before April 1, 1982.

Read these instructions completely before programming the Universal Remote system. It may help to have another person assist with the programming process.

Keep the original hand-held transmitter for use in other vehicles as well as for future programming. Erase the programming when vehicle ownership is terminated. See "Erasing Universal Remote System Buttons" later in this section.

To program a garage door opener, park outside directly in line with and facing the garage door opener receiver. Clear all people and objects near the garage door.

Make sure the hand-held transmitter has a new battery for quick and accurate transmission of the radio-frequency signal.

Programming the Universal Remote System

For questions or help programming the Universal Remote system, call 1-800-355-3515 or see www.homelink.com.

Programming involves time-sensitive actions, and may time out causing the procedure to be repeated.

To program up to three devices:

1. Hold the end of the hand-held transmitter about 3 to 8 cm (1 to 3 in) away from the Universal Remote system buttons with the indicator light in view. The hand-held transmitter was supplied by the manufacturer of the garage door opener receiver.
2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Remote system buttons to be used to operate the garage door. Do not release either button until

the indicator light changes from a slow to a rapid flash. Then release both buttons.

Some garage door openers may require substitution of Step 2 with the procedure under "Radio Signals for Canada and Some Gate Operators" later in this section.

3. Press and hold the newly programmed Universal Remote system button for five seconds while watching the indicator light and garage door activation.
   - If the indicator light stays on continuously or the garage door moves when the button is pressed, then programming is complete. There is no need to complete Steps 4–6.
   - If the indicator light does not come on or the garage door does not move, a second button press may be required. For a second time, press and hold the newly programmed button for five seconds. If the light stays on or the garage door moves, programming is complete.
   - If the indicator light blinks rapidly for two seconds, then changes to a solid light and the garage door does not move, continue with programming Steps 4–6.

Learn or Smart Button

4. After completing Steps 1–3, locate the Learn or Smart button inside the garage on the garage door opener receiver. The name and color of the button may vary by manufacturer.
5. Press and release the Learn or Smart button. Step 6 must be completed within 30 seconds of pressing this button.
6. Inside the vehicle, press and hold the newly programmed Universal Remote system button for two seconds and then release it. If the garage door does not move or the lamp on the garage door opener receiver does not flash, press and hold the same button a second time for two seconds, then release it. Again, if the door does not move or the garage door lamp does not flash, press and hold the same button a third time for two seconds, then release it.

The Universal Remote system should now activate the garage door.

Repeat the process for programming the two remaining buttons.

Radio Signals for Canada and Some Gate Operators

For questions or programming help call 1-800-355-3515 or see www.homelink.com.

Canadian radio-frequency laws and some U.S. gate operators require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for the Universal Remote system to pick up the signal during programming.

If the programming did not work, replace Step 2 under "Programming the Universal Remote System" with the following:

Press and hold the Universal Remote system button while pressing and releasing the hand-held transmitter button every two seconds until the signal has been successfully accepted by the Universal Remote system. The Universal Remote system indicator light will flash slowly at first and then rapidly. Proceed with Step 3 under "Programming the Universal Remote System" to complete.

Universal Remote System Operation

Using the Universal Remote System

Press and hold the appropriate Universal Remote system button for at least one-half second. The indicator light will come on while the signal is being transmitted.

Erasing Universal Remote System Buttons

Erase all programmed buttons when vehicle ownership is terminated.

To erase:

1. Press and hold the two outside buttons until the indicator light begins to flash. This should take about 10 seconds.
2. Release both buttons.

Reprogramming a Single Universal Remote System Button

To reprogram any of the system buttons:

1. Press and hold any one of the buttons. Do not release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, proceed with Step 1 under "Programming the Universal Remote System."

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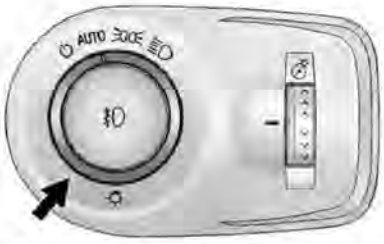
Exterior Lighting

Exterior Lamp Controls



This control is on the instrument panel to the left of the steering column.

Turn the control to the following positions:

⏻ **(Off)** : Briefly turn to this position to turn the automatic light control off or on again.

AUTO (Automatic) : Automatically turns the exterior lamps on and off, depending on outside lighting.

(Parking Lamps) : Turns on the parking lamps including all lamps, except the headlamps.

(Headlamps) : Turns on the headlamps together with the parking lamps and instrument panel lights. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

(Front Fog Lamps, If Equipped) : Press to turn the lamps on or off.

See *Front Fog Lamps* ⇨ *162*.

IntelliBeam® System

If equipped, this system turns the vehicle's high-beam headlamps on and off according to surrounding traffic conditions.

The system turns the high-beam headlamps on when it is dark enough and there is no other traffic present.

This light comes on in the instrument cluster when the IntelliBeam system is enabled.

Turning On and Enabling IntelliBeam

To enable the IntelliBeam system, with the turn signal lever in the neutral position, turn the exterior lamp control to AUTO. The blue high-beam on light appears on the instrument cluster when the high beams are on.

Driving with IntelliBeam

The system only activates the high beams when driving over 40 km/h (25 mph).

There is a sensor near the top center of the windshield that automatically controls the system. Keep this area of the windshield clear of debris to allow for best system performance.

The high-beam headlamps remain on, under the automatic control, until one of the following situations occurs:

- The system detects an approaching vehicle's headlamps.
- The system detects a preceding vehicle's taillamps.
- The outside light is bright enough that high-beam headlamps are not required.
- The vehicle's speed drops below 20 km/h (12 mph).
- The IntelliBeam system can be disabled by the High/Low-Beam Changer or the Flash-to-Pass feature. If this happens, the High/Low-Beam Changer must be activated two times within five seconds to reactivate the IntelliBeam system. The instrument cluster light will come on to indicate the IntelliBeam is reactivated. See *Headlamp High/Low-Beam Changer* ⇨ *159* or *Flash-to-Pass* ⇨ *159*.

The high beams may not turn off automatically if the system cannot detect another vehicle's lamps because of any of the following:

- The other vehicle's lamps are missing, damaged, obstructed from view, or otherwise undetected.
- The other vehicle's lamps are covered with dirt, snow, and/or road spray.
- The other vehicle's lamps cannot be detected due to dense exhaust, smoke, fog, snow, road spray, mist, or other airborne obstructions.
- The vehicle's windshield is dirty, cracked, or obstructed by something that blocks the view of the light sensor.
- The vehicle is loaded such that the front end points upward, causing the light sensor to aim high and not detect headlamps and taillamps.
- Driving on winding or hilly roads.

The high-beam headlamps may need to be disabled if any of the above conditions exist.

Headlamp High/ Low-Beam Changer

Push the turn signal lever away from you and release to turn the high beams on. To return to low beams, push the lever again or pull it toward you and release.

This indicator light turns on in the instrument cluster when the high-beam headlamps are on.

Flash-to-Pass

The flash-to-pass feature works with the low beams or Daytime Running Lamps (DRL) on or off.

To flash the high beams, pull the turn signal lever all the way toward you, then release it.

Daytime Running Lamps (DRL)

DRL can make it easier for others to see the front of your vehicle during the day. Fully functional DRL are required on all vehicles first sold in Canada.

A light sensor on top of the instrument panel makes the DRL work, so be sure it is not covered.

The DRL system makes the low-beam headlamps come on at a reduced brightness or for vehicles with High Intensity Discharge (HID) headlamps, the DRL lights will come on when the following conditions are met:

- The ignition is in the ON/ RUN mode.
- The exterior lamp control is in AUTO.
- The engine is running.
- The vehicle is not in P (Park).

When the DRL are on, only the low-beam headlamps, at a reduced level of brightness, will be on. The high-beam headlamps, taillamps, sidemarker, instrument panel lamps, and other lamps will not be on.

The headlamps automatically change from DRL to the regular headlamps depending on the darkness of the surroundings. The other lamps that come on with the headlamps will also come on.

When it is bright enough outside, the headlamps go off and the DRL come on.

To turn the DRL lamps off or on again, turn the exterior lamp control to the off position and then release. For vehicles first sold in Canada, the DRL cannot be turned off.

This vehicle may have a DRL disabling function. When the DRL are on and a turn signal is activated, the DRL on that side will be off until the turn signal goes off.

Adaptive Forward Lighting (AFL)

If equipped with uplevel headlamps, the AFL System adjusts the headlamps to provide greater road illumination in various driving conditions.

To enable AFL, set the exterior lamp control to the AUTO position. Moving the control out of the AUTO position will deactivate the system. AFL will operate when the vehicle speed is greater than 3 km/h (2 mph). AFL will not operate when the transmission is in R (Reverse). AFL is not immediately operable after starting the vehicle. Driving a short distance is required to calibrate the AFL. See *Exterior Lamp Controls* ⇨ *157*.

Curve Lighting

The light beam pivots based on the steering wheel position and vehicle speed of at least 10 km/h (6 mph). The headlamps shine at an angle of up to 15 degrees to the right or left of the direction of travel.

Twilight Sentinel

This feature automatically turns the lamps on and off. A light sensor on top of the instrument panel makes the Twilight Sentinel® work, so be sure it is not covered.

With Twilight Sentinel the following will happen:

- When it is dark enough outside, and the exterior lamp control is in the AUTO position, the Daytime Running Lamps (DRL) go off, and the headlamps and parking lamps come on. The other lamps that come on with the headlamps also come on.

- When it is bright enough outside, the headlamps go off, and the DRL come on, as long as the exterior lamp control is in the AUTO position. See *Exterior Lamp Controls* ⇨ *157*.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlamp system changes to the DRL. During that delay, the instrument cluster may not be as bright as usual. Make sure the instrument panel brightness control is in full bright position. See *Instrument Panel Illumination Control* ⇨ *163*.

The vehicle can be idled with the lamps off, even when it is dark outside. After starting the vehicle, turn the exterior lamps control to ⏻, then release it. The lamps will remain off until the control is turned to ⏻ again.

Twilight Sentinel also provides exterior illumination when exiting the vehicle until one of the following occurs:

- The exterior lamp control is moved to ⏻ from the AUTO position or to ≡OO≡.
- The delay time selected has elapsed.

See *Vehicle Personalization* ⇨ *147* to select the delay time. You can also select no delay time.

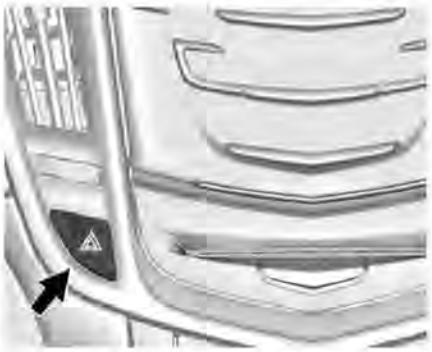
If the ignition is turned off with the exterior lamp control in the parking lamp or headlamp position, the Twilight Sentinel delay will not occur. The lamps will turn off as soon as the control is turned off.

The regular headlamp system should be turned on when needed.

Lights On with Wipers

If the windshield wipers are activated in daylight with the engine on, and the exterior lamp control is in AUTO, the headlamps, parking lamps, and other exterior lamps come on. The transition time for the lamps coming on varies based on wiper speed. When the wipers are not operating, these lamps turn off. Move the exterior lamp control to ⏻ or ≡OO≡ to disable this feature.

Hazard Warning Flashers



⚠ **(Hazard Warning Flashers) :** Press this button on the instrument panel to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble. Press again to turn the flashers off.

Turn and Lane-Change Signals

Move the lever all the way up or down to signal a turn.

An arrow on the instrument cluster will flash in the direction of the turn or lane change.

Raise or lower the lever until the arrow starts to flash to signal a lane change. The turn signal flashes three times.

The lever returns to its starting position when it is released.

If after signaling a turn or lane change the arrow flashes rapidly or does not come on, a signal bulb may be burned out.

Replace any burned out bulbs. If a bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers* ⇨ *271*.

Front Fog Lamps

The front fog lamp button is on the exterior lamp control on the outboard side of the steering wheel.

The ignition must be on to turn on the fog lamps.

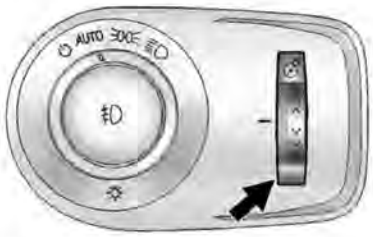
(Front Fog Lamps) : Press to turn the fog lamps on or off. An indicator light on the instrument cluster comes on when the fog lamps are on.

The fog lamps come on together with the parking lamps.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Interior Lighting

Instrument Panel Illumination Control



The brightness of the instrument panel lights and steering wheel controls can be adjusted.

(Instrument Panel Brightness) : Move and hold the thumbwheel up or down to brighten or dim the lights.

The brightness of the displays automatically adjusts based on outdoor lighting. The instrument panel illumination control will set the lowest level to which the displays will automatically be adjusted.

Cargo Lamp

The cargo lamp is located in the rear compartment and is controlled by the dome lamp. See *Dome Lamps* ⇨ *163*.

Courtesy Lamps

The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.

Dome Lamps

To change the dome lamp settings, press the following:

(Dome Lamp Override) : Turns the lamp off, even when a door is open.

(Door) : The lamp comes on when a door is opened.

(On) : Turns the dome lamp on.

Reading Lamps

There are reading lamps in the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

- Press or next to each overhead console reading lamp.
- Press the lamp lens on the rear passenger reading lamps.

Lighting Features

Entry Lighting

Some exterior lamps and interior lights turn on briefly at night, or in areas with limited lighting, when 🔓 is pressed on the Remote Keyless Entry (RKE) transmitter. After about 30 seconds the exterior lamps turn off, and then the dome and remaining interior lights dim to off. The entry lighting can be manually turned off by changing the ignition out of the off position, or by pressing 🔒 on the RKE transmitter.

This feature can be changed. See *Vehicle Personalization* ⇨ *147*.

Exit Lighting

Some exterior lamps and interior lamps come on at night, or in areas with limited lighting, when the driver door is opened after the ignition is turned off. The exterior lamps and interior lamps remain on for a set amount of time, then automatically turn off.

The exterior lamps turn off immediately by turning the exterior lamp control off.

This feature can be changed. See *Vehicle Personalization* ⇨ *147*.

Battery Load Management

The vehicle has Electric Power Management (EPM) that estimates the battery's temperature and state of charge. It then adjusts the voltage for best performance and extended life of the battery.

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltmeter gauge or a voltage display on the Driver Information Center (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all of the power needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action,

this action may be noticeable to the driver. If so, a DIC message might be displayed and it is recommended that the driver reduce the electrical loads as much as possible. See *Battery Voltage and Charging Messages* ⇨ *137*.

Battery Power Protection

The battery saver feature is designed to protect the vehicle's battery.

If some interior lamps are left on and the ignition is turned off, the battery rundown protection system automatically turns the lamp off after some time.

Exterior Lighting Battery Saver

The exterior lamps turn off about 10 minutes after the ignition is turned off, if the parking lamps or headlamps have been manually left on. This protects against draining the battery. To restart the 10-minute timer, turn the exterior lamp control to the off position and then back to the parking lamp or headlamp position.

To keep the lamps on for more than 10 minutes, the ignition must be in the ACC/ACCESSORY or ON/RUN position.

Infotainment System

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Infotainment 166

Introduction

Infotainment

See the infotainment manual for information on the radio, audio players, phone, navigation system, and voice or speech recognition. It also includes information on settings and downloadable applications (if equipped).

Climate Controls

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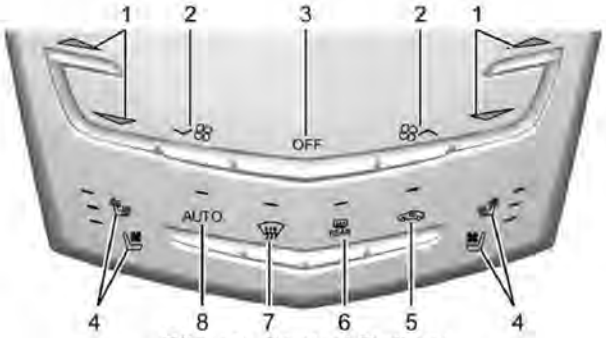
Climate Control Systems

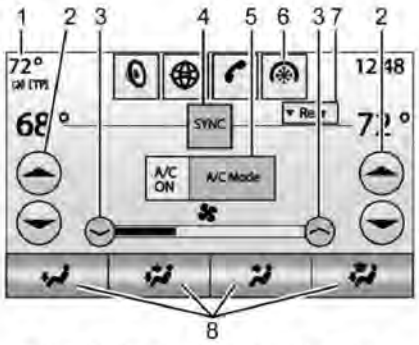
Dual Automatic Climate Control System

The climate control buttons and the touch screen are used to adjust the heating, cooling, and ventilation.



Climate Control Buttons

1. Driver and Passenger Temperature Controls
2. Fan Control
3. OFF (Fan)
4. Driver and Passenger Heated and Ventilated Seats
5. Recirculation
6. Rear Window Defogger
7. Defrost
8. AUTO (Automatic Operation)



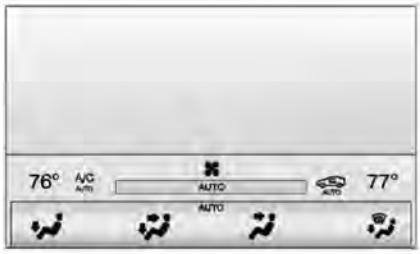
Climate Touch Screen Controls

1. Outside Temperature Display
2. Driver and Passenger Temperature Controls
3. Fan Control
4. SYNC (Synchronized Temperature)
5. A/C Mode (Air Conditioning)
6. Climate Control Selection (Application Tray Button)
7. Rear (Rear Climate Control Touch Screen)
8. Air Delivery Mode Control

Climate Control Touch Screen

The fan, air delivery mode, air conditioning, driver and passenger temperatures, and SYNC settings can be controlled by pressing CLIMATE on the infotainment home screen or the climate button in the touch screen application tray. A selection can then be made on the front climate control page displayed. See the infotainment manual.

Climate Control Status Screen



The climate control status screen appears briefly when the climate control buttons on the faceplate are adjusted. The air delivery mode can be adjusted on the climate control status screen.

Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning, and recirculation in order to heat or cool the vehicle to the desired temperature.

When the indicator light is on or AUTO is displayed on the touch screen, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and the display will show the selected settings. Auto operation can be turned off individually for climate settings.

For automatic operation:

1. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Then adjust the temperature as needed for best comfort.

To improve fuel efficiency and to cool the vehicle faster, recirculation may be automatically selected in warm weather. The recirculation light will not come on. Press to select recirculation; press it again to select outside air.

OFF (Fan) : Press to turn the fan on or off. The temperature control and air delivery mode can still be adjusted.

△ / ▽ (Driver and Passenger Temperature Controls) : The temperature can be adjusted separately for the driver and the passenger. Press to increase or decrease the temperature. Press and hold to rapidly increase or decrease the temperature.

The driver and passenger temperatures can also be adjusted by pressing the controls on the touch screen.

SYNC (Synchronized Temperature) : Press SYNC on the touch screen to link all climate zone settings to the driver settings. Adjust the driver side temperature control to change the linked temperature. When the passenger settings are adjusted, the SYNC button is displayed when the temperatures are unlinked.

Manual Operation

∨ or ∧ (Fan Control) : Press the fan control buttons or the touch screen fan control, to increase or decrease the fan speed. Press and hold the buttons or the touch screen control to adjust speed more quickly. The fan speed setting displays. Pressing either button cancels automatic fan control and the fan can be controlled manually. Press AUTO to return to automatic operation. To turn off the fan and climate control system, press and hold the fan down button or touch screen fan control until it is off.

Air Delivery Mode Control : When the climate information is displayed, press the desired air delivery mode on the touch screen to change the direction of the airflow. The selected air delivery mode button is lit. Pressing any of the air delivery buttons cancels automatic air delivery control and the direction of the airflow can be controlled manually. Press AUTO to return to automatic operation.

To change the current mode, select one of the following:

(Vent) : Air is directed to the instrument panel outlets.

(Bi-Level) : Air is divided between the instrument panel outlets and the floor outlets.

(Floor) : Air is directed to the floor outlets.

(Defog) : Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.

(Defrost) : Clears the windshield of fog or frost more quickly. Air is directed to the windshield. Press the button to turn on or off. Changing the air delivery mode also turns the defrost off.

AC Mode (Air Conditioning) : Press the AC Mode touch screen control to turn the automatic air conditioning on or off. If the fan is

turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed.

Automatic Air Recirculation : When the AUTO indicator light is on, the air inside the vehicle may automatically recirculate as needed to help quickly cool the inside of the vehicle.

If equipped, an air quality sensor may also activate recirculation when it detects increasing levels of poor quality air outside the vehicle. The air quality sensor will not maintain recirculation for an extended period and may not activate during cold weather. To adjust the sensitivity of the air quality sensor, see "Climate and Air Quality" under *Vehicle Personalization* ⇨ *147*.

The air quality sensor system does not protect against carbon monoxide (CO), which cannot be seen or smelled. See *Engine Exhaust* ⇨ *193*.

(Recirculation) : Press to alternate between recirculating air inside the vehicle or pulling in outside air. The indicator light on the button is lit when recirculation mode is active. This helps to quickly cool the air inside the vehicle or reduce the outside air and odors that may enter.

Pressing this button cancels automatic recirculation. Press AUTO to return to automatic operation; recirculation runs automatically as needed.

Manual recirculation mode is not available when in Defrost or Defog modes.

Auto Defog : The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. If the climate control system does not detect possible window fogging, it returns to normal operation. To turn Auto Defog off or on, see "Climate and Air Quality" under *Vehicle Personalization* ⇨ *147*.

Rear Window Defogger

(Rear Window Defogger) : Press to turn the rear window defogger on or off. An indicator light on the button comes on to show that the rear window defogger is on.

The rear window defogger can be set to automatic operation. See "Climate and Air Quality" under *Vehicle Personalization* ⇨ *147*. When Auto Rear Defog is selected, the rear window defogger turns on automatically when the interior temperature is cold and the outside temperature is about 4 °C (40 °F) and below.

The heated outside mirrors turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirrors.

Caution

Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect the radio's ability to pick up stations clearly. The repairs would not be covered by the vehicle warranty.

Manual Heated and Ventilated Seats (If Equipped) : Press or to heat the driver or passenger seat cushion and seatback.

Press or to ventilate the driver or passenger seat. See *Heated and Ventilated Seats* ⇨ *13*.

Auto Heated Seats (If Equipped) : When the vehicle is on, the heated seats are automatically activated at the level required by the vehicle's interior temperature. The active high, medium, low, or off heated seat level will be indicated by the manual heated seat buttons. Use the manual heated seat buttons to turn auto heated seats off. See *Heated and Ventilated Seats* ⇨ *13* and *Vehicle Personalization* ⇨ *147*.

Remote Start Climate Control Operation : If equipped, the climate control system may run when the vehicle is started remotely. The system uses the driver's previous settings to heat or cool the inside of the vehicle. The rear defog may come on during remote start based on cold ambient conditions. The rear defog indicator light does not come on during a remote start. If the vehicle has heated or ventilated seats, they may come on during a remote start. See *Remote Vehicle Start* ⇨ *33* and *Heated and Ventilated Seats* ⇨ *13*.

The rear window defogger turns on if it is cold outside.

Sensor

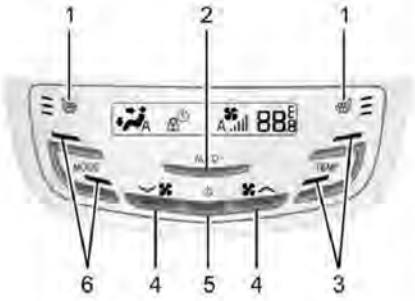
The solar sensor, located on top of the instrument panel near the windshield, monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

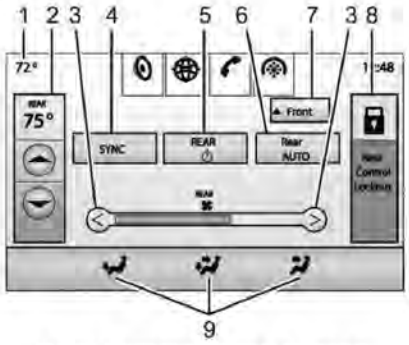
Rear Climate Control System

If equipped with a rear climate control system, the settings can be adjusted with the rear climate control buttons and the touch screen.



Rear Climate Control Buttons

1. Heated Rear Seats (If Equipped)
2. AUTO (Automatic Operation)
3. TEMP (Temperature Control)
4. Fan Control
5. ⏻ (On/Off)
6. Air Delivery Mode Control



Rear Climate Touch Screen Controls

1. Outside Temperature Display
2. Rear Climate Temperature Control
3. Fan Control
4. SYNC (Synchronized Temperatures)
5. REAR ⏻ (On/Off)
6. Rear AUTO (Automatic Operation)
7. Front (Front Climate Control Touch Screen)
8. Rear Control Lockout
9. Air Delivery Mode Control

Rear : Press this button on the front climate control touch screen to open the rear climate control screen. The rear climate control settings can now be adjusted from the front passenger area.

⏻ (On/Off) : Press ⏻ or REAR ⏻ to turn the rear climate control on or off. The rear climate control system can also be turned off by pressing the fan down button until the system turns off. If the rear climate control is turned off using REAR ⏻ on the touch screen, the ⏻ button on the rear climate control faceplate must be pressed twice to turn the system back on.

SYNC : Press the SYNC button on the touch screen to match the rear climate control temperature to the front climate control driver temperature. The SYNC button will be lit. Press the TEMP, MODE, or AUTO button twice to unlink the set driver and rear temperatures. The SYNC button turns off.

Rear Control Lockout : Press to lock or unlock control of the rear climate control system from the rear seat passengers. When locked the rear climate control can only be adjusted from the front seat.

Automatic Operation

Rear AUTO : Press to turn on or off. The air delivery and fan speed are controlled automatically. The AUTO indicator appears on the display. If any of the climate control settings are manually adjusted, this cancels full automatic operation.

Manual Operation

<fan> > (Fan Control) : Press briefly or press and hold the rear climate control buttons or touch screen to increase or decrease the airflow. Pressing <fan> > when the system is off will turn the system on. The air delivery mode remains in its previous setting.

+/− (Temperature Control) : Press briefly or press and hold the rear temperature control buttons or touch screen to adjust the rear passenger temperature. Press + for warmer air and press − for cooler air.

<mode1>/<mode2>/<mode3> (Air Delivery Mode Control) : Press the desired mode button on the touch screen or the MODE button on the rear faceplate to change the direction of the airflow in the rear seating area.

<heat1> or <heat2> (Heated Rear Seats, If Equipped) : Press <heat1> or <heat2> to heat the left or right outboard seat cushion and seatback. See *Heated Rear Seats* ⇨ *61*.

Air Vents

Move the sliding knob on the air outlets up and down or left and right to direct the airflow. Use the thumbwheels near the air outlets to open or close off the airflow.

Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windshield that could block the flow of air into the vehicle.
- Keep the path under the front seats clear of objects to help circulate the air inside the vehicle more effectively.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.
- Do not insert any objects in the outlets, as failure of the mechanism may occur.

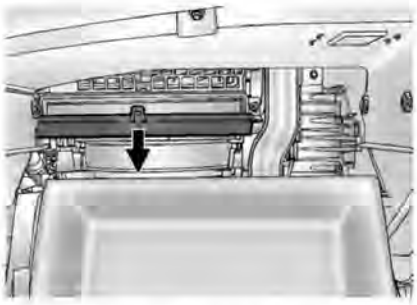
Maintenance

Passenger Compartment Air Filter

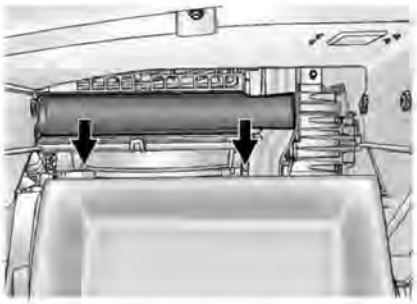
The filter reduces the dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle.

The filter should be replaced as part of routine scheduled maintenance, see *Maintenance Schedule* ⇨ *332*. To find out what type of filter to use, see *Maintenance Replacement Parts* ⇨ *341*.

1. Open the glove box completely and remove the four screws along the upper portion of the glove box.
2. When released, lower the upper portion of the glove box.
3. Locate the service door for the passenger compartment air filter.



4. Release the latch holding the service door. Lower the service door.



5. Remove the old air filter.
6. Install the new air filter.
7. Close the service door and latches.
8. Reinstall the upper portion of the glove box.

See your dealer if additional assistance is needed.

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Driving Information

Distracted Driving

Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgment and do not let other activities divert your attention away from the road. Many local governments have enacted laws regarding driver distraction. Become familiar with the local laws in your area.

To avoid distracted driving, always keep your eyes on the road, hands on the wheel, and mind on the drive.

- Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.
- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.
- Become familiar with vehicle features before driving, such as programming favorite radio stations and adjusting climate control and seat settings. Program all trip information into any navigation device prior to driving.
- Wait until the vehicle is parked to retrieve items that have fallen to the floor.
- Stop or park the vehicle to tend to children.
- Keep pets in an appropriate carrier or restraint.
- Avoid stressful conversations while driving, whether with a passenger or on a cell phone.

⚠ Warning

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Refer to the infotainment manual for more information on using that system, including pairing and using a cell phone

Defensive Driving

Defensive driving means "always expect the unexpected." The first step in driving defensively is to wear the safety belt. See *Safety Belts* ⇨ *62*.

- Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready.
- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

Drunk Driving

Death and injury associated with drinking and driving is a global tragedy.

⚠ Warning

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking.

Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power brake assist but it will be used when the brake is applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

Steering

Hydraulic Power Steering

This vehicle has hydraulic power steering. It may require maintenance. See *Power Steering Fluid* ⇨ *256*.

If power steering assist is lost because the engine stops or because of a system malfunction, the vehicle can be steered but may require increased effort. See your dealer if there is a problem.

Caution
If the steering wheel is turned until it reaches the end of its travel, and is held in that position for more than 15 seconds, damage may occur to the power steering system and there may be loss of power steering assist.

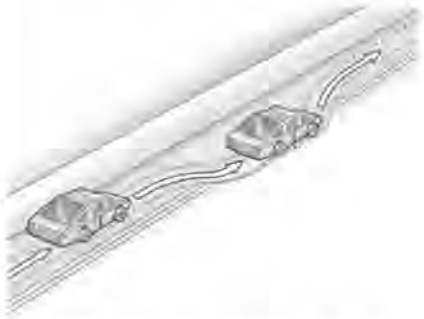
Curve Tips

- Take curves at a reasonable speed.
- Reduce speed before entering a curve.
- Maintain a reasonable steady speed through the curve.
- Wait until the vehicle is out of the curve before accelerating gently into the straightaway.

Steering in Emergencies

- There are some situations when steering around a problem may be more effective than braking.
- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- Antilock Brake System (ABS) allows steering while braking.

Off-Road Recovery



The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

1. Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.
2. Turn the steering wheel about one-eighth of a turn, until the right front tire contacts the pavement edge.

3. Turn the steering wheel to go straight down the roadway.

Loss of Control

Skidding

There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid — wheels are not rolling.
- Steering or Cornering Skid — too much speed or steering in a curve causes tires to slip and lose cornering force.
- Acceleration Skid — too much throttle causes the driving wheels to spin.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

If the vehicle starts to slide, follow these suggestions:

- Ease your foot off the accelerator pedal and steer the way you want the vehicle to go. The vehicle may straighten out. Be ready for a second skid if it occurs.
- Slow down and adjust your driving according to weather conditions. Stopping distance can be longer and vehicle control can be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognize warning clues — such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.
- Try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide.

Remember: Antilock brakes help avoid only the braking skid.

Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

⚠ Warning

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

Hydroplaning

Hydroplaning is dangerous. Water can build up under the vehicle's tires so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When the vehicle is hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. The best advice is to slow down when the road is wet.

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires* ⇨ *278*.
- Turn off cruise control.

Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

⚠ Warning

Using the brakes to slow the vehicle on a long downhill slope can cause brake overheating, can reduce brake performance, and could result in a loss of braking. Shift the transmission to a lower gear to let the engine assist the brakes on a steep downhill slope.

⚠ Warning

Coasting downhill in N (Neutral) or with the ignition off is dangerous. This can cause overheating of the brakes and loss of steering. Always have the engine running and the vehicle in gear.

- Drive at speeds that keep the vehicle in its own lane. Do not swing wide or cross the center line.
- Be alert on top of hills; something could be in your lane (e.g., stalled car, accident).
- Pay attention to special road signs (e.g., falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Snow or ice between the tires and the road creates less traction or grip, so drive carefully. Wet ice can occur at about 0 °C (32 °F) when freezing rain begins to fall. Avoid driving on wet ice or in freezing rain until roads can be treated.

For Slippery Road Driving:

- Accelerate gently. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick.
- Turn on Traction Control. See *Traction Control/Electronic Stability Control* ⇨ *202*.
- Antilock Brake System (ABS) improves vehicle stability during hard stops, but the brakes should be applied sooner than when on dry pavement. See *Antilock Brake System (ABS)* ⇨ *198*.
- Allow greater following distance and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.
- Turn off cruise control.

Blizzard Conditions

Stay with the vehicle unless there is help nearby. If possible, use Roadside Assistance. See *Roadside Service* ⇨ *349*. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to an outside mirror.

⚠ Warning

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO), which

(Continued)

Warning (Continued)

cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle is stuck in snow:

- Clear snow from the base of the vehicle, especially any blocking the exhaust pipe.
- Open a window about 5 cm (2 in) on the vehicle side that is away from the wind, to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to circulate the air inside the vehicle and set the fan speed to the highest setting. See "Climate Control Systems."

For more information about CO, see *Engine Exhaust* ⇨ *193*.

To save fuel, run the engine for short periods to warm the vehicle and then shut the engine off and partially close the window. Moving about to keep warm also helps.

If it takes time for help to arrive, when running the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible, to save fuel.

If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method. See *Traction Control/Electronic Stability Control* ⇨ *202*.

⚠ Warning

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 56 km/h (35 mph).

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a low forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see *Towing the Vehicle* ⇨ *317*.

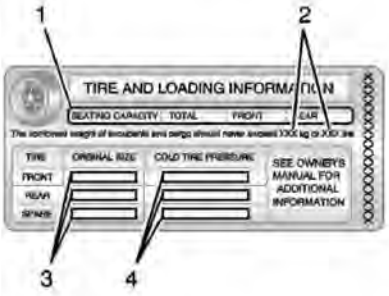
Vehicle Load Limits

It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo, and all nonfactory-installed options. Two labels on the vehicle may show how much weight it may properly carry, the Tire and Loading Information label and the Certification/Tire label.

⚠ Warning

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also reduce stopping distance, damage the tires, and shorten the life of the vehicle.

Tire and Loading Information Label



Example Label

A vehicle-specific Tire and Loading Information label is attached to the center pillar (B-pillar). The tire and loading information label shows the number of occupant seating positions (1), and the maximum vehicle capacity weight (2) in kilograms and pounds.

The Tire and Loading Information label also shows the size of the original equipment tires (3) and the recommended cold tire inflation pressures (4). For more information on tires and inflation see *Tires* ⇨ *278* and *Tire Pressure* ⇨ *285*.

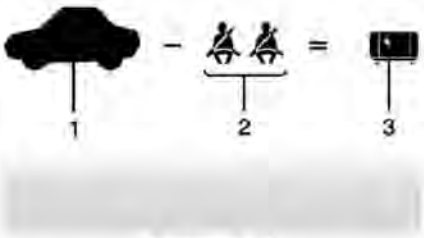
There is also important loading information on the vehicle Certification/Tire label. It may show the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification/Tire Label" later in this section.

"Steps for Determining Correct Load Limit–

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.

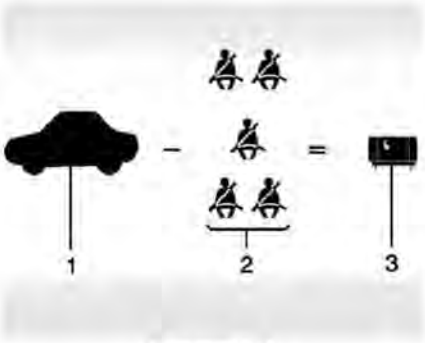
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.)
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle."

See *Trailer Towing* ⇨ *233* for important information on towing a trailer, towing safety rules and trailering tips.



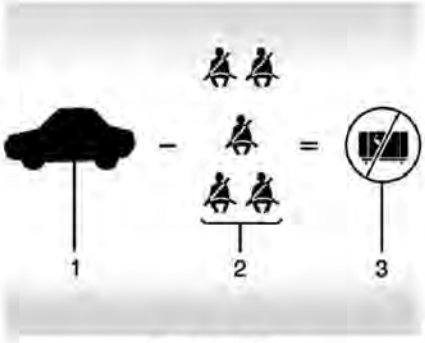
Example 1

1. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).
3. Available Occupant and Cargo Weight = 317 kg (700 lbs).



Example 2

1. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).
3. Available Cargo Weight = 113 kg (250 lbs).



Example 3

1. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).
2. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).
3. Available Cargo Weight = 0 kg (0 lbs).

Refer to the vehicle's tire and loading information label for specific information about the vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's capacity weight.

Certification/Tire Label

Label Example

A vehicle-specific Certification/ Tire label is attached to the center pillar (B-pillar).

The label may show the size of the vehicle's original tires and the inflation pressures needed to obtain the gross weight capacity of the vehicle. The label shows the gross weight capacity of the vehicle. This is called the Gross

Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tire label may also show the maximum weights for the front and rear axles, called the Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, weigh the vehicle at a weigh station. Your dealer can help with this. Be sure to spread the load equally on both sides of the centerline.

Caution

Overloading the vehicle may cause damage. Repairs would not be covered by the vehicle warranty. Do not overload the vehicle.

⚠ Warning

Things inside the vehicle can strike and injure people in a sudden stop or turn, or in a crash.

- Put things in the cargo area of the vehicle. In the cargo area, put them as far forward as possible. Try to spread the weight evenly.
- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.
- Do not leave an unsecured child restraint in the vehicle.
- Secure loose items in the vehicle.
- Do not leave a seat folded down unless needed.

Starting and Operating

New Vehicle Break-In

Caution

The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:

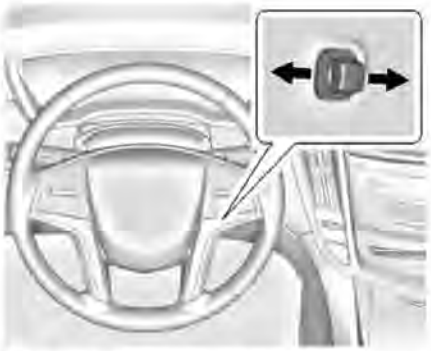
- Do not drive at any one constant speed, fast or slow, for the first 805 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.
- Avoid making hard stops for the first 322 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this

(Continued)

Caution (Continued)
breaking-in guideline every time you get new brake linings. Following break-in, engine speed and load can be gradually increased.

Adjustable Throttle and Brake Pedal

If equipped, the position of the throttle and brake pedals can be changed. The pedals can only be adjusted when the vehicle is in P (Park).



The switch used to adjust the pedals is below the windshield wiper lever. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

Adjust the throttle and brake pedals while the vehicle is in P (Park) without pressing on the pedals.

Ignition Positions

The vehicle has an electronic keyless ignition with pushbutton start.

Pressing the button cycles it through three modes: ACC/ACCESSORY, ON/RUN/START, and STOPPING THE ENGINE/OFF.

If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the keyless entry system. See *Key and Lock Messages* ⇨ *140*.

To shift out of P (Park), the vehicle must be in ON/RUN mode and the brake pedal must be applied.

STOPPING THE ENGINE/OFF (No Indicator Light) : When the vehicle is stopped, press the ENGINE START/STOP button once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP)* ⇨ *191*.

If the vehicle is not in P (Park), the ignition will return to ACC/ ACCESSORY and display the message SHIFT TO PARK in the Driver Information Center (DIC). See *Driver Information Center (DIC)* ⇨ *134*. When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop, shift to P (Park), and turn the ignition to OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the OFF position.
4. Set the parking brake. See *Parking Brake* ⇨ *199*.

⚠ Warning

Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over and must be shut off while driving, press and hold the ENGINE START/ STOP button for longer than two seconds, or press twice in five seconds.

ACC/ACCESSORY (Amber Indicator Light) : This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ ACCESSORY to OFF after 10 minutes to prevent battery rundown.

ON/RUN/START (Green Indicator Light) : This mode is for driving and starting. With the ignition off and the brake pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Gasoline Engine* ⇨ *189*. The ignition will then remain in ON/RUN.

Service Only Mode

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off, and the brake pedal not applied, pressing and holding the button for more than five seconds will place the vehicle in Service Only Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Only Mode. Press the button again to turn the vehicle off.

Starting the Gasoline Engine

Place the transmission in the proper gear by moving the shift lever to P (Park) or N (Neutral). To restart the engine when the vehicle is already moving, use N (Neutral).

Caution

Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.

Caution

If the steering wheel is turned until it reaches the end of its travel, and is held in that position while starting the vehicle, damage may occur to the hydraulic power steering system and there may be loss of power steering assist.

Caution

If you add electrical parts or accessories, you could change the way the engine operates. Any resulting damage would not be covered by the vehicle warranty. See *Add-On Electrical Equipment* ⇨ *237*.

To start the vehicle:

Starting Procedure

1. With the Keyless Access system, the RKE transmitter must be in the vehicle. Press the ENGINE START/STOP button with the brake pedal applied. When the engine begins cranking, let go of the button. The idle speed will go down as the engine warms up. Do not race the engine immediately after starting it.

If the RKE transmitter is not in the vehicle, if there is interference, or the RKE battery is low, a Driver Information Center (DIC) message will display. See *Driver Information Center (DIC)* ⇨ *134* and *Remote Keyless Entry (RKE) System Operation* ⇨ *27*.

Caution

Cranking the engine for long periods of time, by pressing ENGINE START/STOP immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to let the cranking motor cool down.

2. If the engine does not start after five to 10 seconds, especially in very cold weather (below −18 °C or 0 °F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor and holding it there as you press the ENGINE START/STOP button, for up to a maximum of 15 seconds. Wait at least 15 seconds between each try, to allow the cranking motor to cool down. When the engine starts, let go of the button and the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.

Engine Heater

The engine coolant heater, if available, can help in cold weather conditions at or below −18 °C (0 °F) for easier starting and better fuel economy during engine warm-up. Plug in the coolant heater at least four hours before starting the vehicle. An internal thermostat in the plug end of the cord will prevent engine coolant heater operation at temperatures above −18 °C (0 °F).

To Use the Engine Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. The cord is located near the air cleaner.

   Check the heater cord for damage. If it is damaged, do not use it. See your dealer for a replacement. Inspect the cord for damage yearly.
3. Plug it into a normal, grounded 110-volt AC outlet.

⚠ Warning

Improper use of the heater cord or an extension cord can damage the cord and may result in overheating and fire.

- Plug the cord into a three-prong electrical utility receptacle that is protected

(Continued)

Warning (Continued)

by a ground fault detection function. An ungrounded outlet could cause an electric shock.

- Use a weatherproof, heavy-duty, 15 amp-rated extension cord if needed. Failure to use the recommended extension cord in good operating condition, or using a damaged heater or extension cord, could make it overheat and cause a fire, property damage, electric shock, and injury.
- Do not operate the vehicle with the heater cord permanently attached to the vehicle. Possible heater cord and thermostat damage could occur.

(Continued)

Warning (Continued)

- While in use, do not let the heater cord touch vehicle parts or sharp edges. Never close the hood on the heater cord.
- Before starting the vehicle, unplug the cord, reattach the cover to the plug, and securely fasten the cord. Keep the cord away from any moving parts.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts. If you do not it could be damaged.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

Retained Accessory Power (RAP)

These accessories can be used after the engine is turned off:

- Infotainment system (up to 10 minutes or until the driver door is opened).
- Power windows, sunroof (if equipped), and power outlets (up to 10 minutes or until any door is opened).

Shifting Into Park

1. Hold the brake pedal down and set the parking brake. See *Parking Brake* ⇨ *199*.
2. Move the shift lever into P (Park) by pushing the lever all the way toward the front of the vehicle.
3. Turn the ignition off.

Leaving the Vehicle with the Engine Running

⚠ Warning

It can be dangerous to leave the vehicle with the engine running. It could overheat and catch fire.

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park* ⇨ *191*.
If you are towing a trailer, see *Driving Characteristics and Towing Tips* ⇨ *229*.

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is firmly set before you leave it. After you have moved the shift lever into P (Park), hold down the regular brake pedal. See if you can move the shift lever away from P (Park) without first pulling it toward you. If you can, it means that the shift lever was not fully locked into P (Park).

Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see "Shifting Into P (Park)" listed previously.

If torque lock does occur, your vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips* ⇨ *229*.

Shifting out of Park

This vehicle is equipped with an automatic transmission shift lock control system. The shift lock control is designed to prevent movement of the shift lever out of P (Park), unless the ignition is in ON/RUN and the brake pedal is applied.

The shift lock control is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting - North America* ⇨ *314*.

To shift out of P (Park):

1. Apply the brake pedal.
2. Press the ENGINE START/ STOP button.
3. Press the shift lever button.
4. Move the shift lever to the desired position.

If you still are unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.
3. Move the shift lever to the desired position.

If you still cannot move the shift lever from P (Park), consult your dealer or a professional towing service.

Parking over Things That Burn

⚠ Warning

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Engine Exhaust

⚠ Warning

Engine exhaust contains carbon monoxide (CO), which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or tail pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.
- The vehicle exhaust system has been modified, damaged, or improperly repaired.

(Continued)

Warning (Continued)

- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

Running the Vehicle While Parked

It is better not to park with the engine running.

If the vehicle is left with the engine running, follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park* ⇨ *191* and *Engine Exhaust* ⇨ *193*.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips* ⇨ *229*.

Automatic Transmission

There are several different positions for the shift lever.

P : This position locks the front wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

⚠ Warning

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park* ⇨ *191* and *Driving Characteristics and Towing Tips* ⇨ *229*.

Make sure the shift lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. You must fully apply the regular brakes first and then press the shift lever button before you can shift from P (Park) when the ignition is in ON/RUN. If you cannot shift out of P (Park), ease pressure on the shift lever and push the shift lever all the way into P (Park) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See *Shifting out of Park* ⇨ *192*.

Caution

Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.

R : Use this gear to back up.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging your transmission. See *If the Vehicle Is Stuck* ⇨ *182*.

N : In this position, the engine does not connect with the wheels. To restart when the vehicle is already moving, use N (Neutral) only. You can also use N (Neutral) when the vehicle is being towed.

⚠ Warning

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

Caution

Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.

D : This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Going less than 35 mph (55 km/h), push the accelerator pedal about halfway down.
- Going about 35 mph (55 km/h) or more, push the accelerator all the way down.

  The transmission will shift down to a lower gear and have more power.

Downshifting the transmission in slippery road conditions could result in skidding. See "Skidding" under *Loss of Control* ⇨ *179*.

Caution
Spinning the tires or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. The repair will not be covered by the vehicle warranty. If you are (Continued)

Caution (Continued)
stuck, do not spin the tires. When stopping on a hill, use the brakes to hold the vehicle in place.

Manual Mode

Driver Shift Control (DSC)

Caution
Driving with the engine at a high rpm without upshifting while using Driver Shift Control (DSC), could damage the vehicle. Always upshift when necessary while using DSC.

DSC allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).

If you do not move the shift lever forward or rearward, the vehicle will be in Sport Mode. When you are in Sport Mode the vehicle will still shift automatically. The transmission may remain in a gear longer than it would in the normal driving mode based on braking, throttle input, and vehicle lateral acceleration.

SPORT MODE ON will be displayed in the DIC. See *Ride Control System Messages* ⇨ *144*. The word "sport" will display below the odometer. The gear position will also be indicated in the tachometer.

Within Sport Mode there is a further performance feature called Performance Mode Lift Foot (PMLF) Mode. The feature is activated automatically when sports oriented driving is detected, based on cornering and on/off throttle application. PMLF allows the transmission to hold

the current gear instead of upshifting when the throttle is lifted.

2. To enter M (Manual Mode), press the shift lever forward to upshift or rearward to downshift.

   An M will be displayed in the DIC.

3. To return to Sport Mode from M (Manual Mode), press and briefly hold the shift lever forward.

Gear position is indicated in the bottom right corner of the display area in the instrument cluster. The number indicates the requested gear range when moving the shift lever forward or rearward.

While using the DSC feature, the vehicle will have firmer, quicker shifting. You can use this for sport driving or when climbing or descending hills, to stay in gear longer, or to downshift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine revolutions per minute (rpm). The transmission will not automatically shift to the next lower gear if the engine rpm is too high, nor to the next higher gear when the maximum engine rpm is reached.

If shifting is prevented for any reason, the currently selected gear will flash multiple times, indicating that the transmission has not shifted gears.

While in the DSC mode, the transmission will automatically downshift when the vehicle comes to a stop. This will allow for more power during take-off.

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into second gear. A higher gear ratio allows you to gain more traction on slippery surfaces.

Fuel Economy Mode

Driving habits can affect fuel mileage. For driving tips to get the best fuel economy possible, see *Driving for Better Fuel Economy* ⇨ 25.

The vehicle may have a fuel economy mode. When engaged, fuel economy mode can improve the vehicle's fuel economy.

Pressing the eco button by the shift lever will engage fuel economy mode. When activated, the eco light in the instrument cluster will come

on. See *Fuel Economy Light* ⇨ *132*. Pressing the button a second time will turn fuel economy mode off.

When fuel economy mode is on:

- The transmission will upshift sooner, and downshift later.
- The torque converter will lock up sooner, and stay on longer.
- The gas pedal will be less sensitive.
- The vehicle's computers will more aggressively shut off fuel to the engine under deceleration.
- The engine operates at lower rpm's in fuel economy mode, which can increase noise and vibration. This is normal.

Drive Systems

All-Wheel Drive

Vehicles with this feature transfer torque as required to the rear wheels. It is fully automatic, and adjusts itself as needed for road conditions.

AWD system performance will be automatically reduced when you use the compact spare. To restore full AWD operation and prevent excessive wear on the system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire* ⇨ *313*.

Brakes

Antilock Brake System (ABS)

This vehicle has ABS, an advanced electronic braking system that helps prevent a braking skid.

When the vehicle begins to drive away, ABS checks itself. A momentary motor or clicking noise might be heard while this test is going on, and it might even be noticed that the brake pedal moves a little. This is normal.

If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light* ⇨ *128*.

If driving safely on a wet road and it becomes necessary to slam on the brakes and continue braking to avoid a sudden obstacle, a computer senses the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help you steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You may hear the ABS pump or motor operating and feel the brake pedal pulsate. This is normal.

Braking in Emergencies

ABS allows you to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

Parking Brake

The Electric Parking Brake (EPB) switch is on the center console. The EPB can always be activated, even if the ignition is off. To prevent draining the battery, avoid repeated cycles of the EPB when the engine is not running.

The system has a red parking brake status light and an amber parking brake warning light. See *Electric Parking Brake Light* ⇨ *128* and *Service Electric Parking Brake Light* ⇨ *128*. There are also parking brake-related Driver Information Center (DIC) messages. See *Brake System Messages* ⇨ *137*. In case of insufficient electrical power, the EPB cannot be applied or released.

Before leaving the vehicle, check the red parking brake status light to ensure that the parking brake is applied.

EPB Apply

To apply the EPB:

1. Be sure the vehicle is at a complete stop.
2. Lift up the EPB switch momentarily.

The red parking brake status light will flash and then stay on once the EPB is fully applied. If the red parking brake status light flashes continuously, then the EPB is only partially applied or there is a problem with the EPB. A DIC message will display. Release the EPB and try to apply it again. If the light does not come on, or keeps flashing, have the vehicle serviced. Do not drive the vehicle if the red parking brake status light is flashing. See your dealer. See *Electric Parking Brake Light* ⇨ *128*.

If the amber parking brake warning light is on, lift up on the EPB switch and hold it up. Continue to hold the switch until the red parking brake status light remains on. If the amber parking brake warning light remains on, see your dealer.

If the EPB is applied while the vehicle is moving, the vehicle will decelerate as long as the switch is held up. If the switch is held up until the vehicle comes to a stop, the EPB will remain applied.

The vehicle may automatically apply the EPB in some situations when the vehicle is not moving. This is normal, and is done to periodically check the correct operation of the EPB system.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

EPB Release

To release the EPB:

1. Place the ignition in ACC/ ACCESSORY or ON/RUN.
2. Apply and hold the brake pedal.
3. Push down momentarily on the EPB switch.

The EPB is released when the red parking brake status light is off.

If the amber parking brake warning light is on, release the EPB by pushing down on the EPB switch and holding it down. Continue to hold the switch until the red parking brake status light is off. If either light stays on after release is attempted, see your dealer.

Caution
Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.

Automatic EPB Release

The EPB automatically releases differently on vehicles with and without Adaptive Cruise Control (ACC). Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

- With ACC, the EPB will automatically release when the engine is running, the brake pedal is applied, and the transmission is shifted out of P (Park).
- Without ACC, the EPB will automatically release when the engine is running, the transmission is placed into gear, and an attempt is made to drive away by pressing the accelerator pedal.

If parking on a hill, or if the vehicle is pulling a trailer, see *Driving Characteristics and Towing Tips* ⇨ *229*.

Brake Assist

The Brake Assist feature is designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature uses the stability system hydraulic brake control module to supplement the power brake system under conditions where the driver has quickly and forcefully applied the brake pedal in an attempt to quickly stop or slow down the vehicle. The stability system hydraulic brake control module increases brake pressure at each corner of the vehicle until the ABS activates. Minor brake pedal pulsation or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates. The Brake Assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

Hill Start Assist (HSA)

This vehicle has an HSA feature, which may be useful when the vehicle is stopped on a grade sufficient enough to activate HSA. This feature is designed to prevent the vehicle from rolling, either forward or rearward, during vehicle drive off. After the driver completely stops and holds the vehicle in a complete standstill on a grade, HSA will be automatically activated. During the transition period between when the driver releases the brake pedal and starts to accelerate to drive off on a grade, HSA holds the braking pressure for a maximum of two seconds to ensure that there is no rolling. The brakes will automatically release when the accelerator pedal is applied within the two-second window. It will not activate if the vehicle is in a drive gear and facing downhill, or if the vehicle is facing uphill and in R (Reverse).

Ride Control Systems

Traction Control/ Electronic Stability Control

System Operation

The vehicle has a Traction Control System (TCS) and StabiliTrak®, an electronic stability control system. These systems help limit wheel slip and assist the driver in maintaining control, especially on slippery road conditions.

TCS activates if it senses that any of the drive wheels are spinning or beginning to lose traction. When this happens, TCS applies the brakes to the spinning wheels and reduces engine power to limit wheel spin.

StabiliTrak activates when the vehicle senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak selectively applies braking pressure to any one of the vehicle wheel brakes to assist the driver in keeping the vehicle on the intended path. Trailer Sway Control (TSC) is also on automatically when the vehicle is started. See *Trailer Sway Control (TSC)* ⇨ *236*.

If cruise control is being used and traction control or StabiliTrak begins to limit wheel spin, cruise control will disengage. Cruise control may be turned back on when road conditions allow.

Both systems come on automatically when the vehicle is started and begins to move. The systems may be heard or felt while they are operating or while performing diagnostic checks. This is normal and does not mean there is a problem with the vehicle.

It is recommended to leave both systems on for normal driving conditions, but it may be necessary to turn TCS off if the vehicle gets stuck in sand, mud, ice, or snow. See *If the Vehicle Is Stuck* ⇨ *182* and "Turning the Systems Off and On" later in this section.

The indicator light for both systems is in the instrument cluster. This light will:

- Flash when TCS is limiting wheel spin.
- Flash when StabiliTrak is activated.
- Turn on and stay on when either system is not working.

If either system fails to turn on or to activate, a message displays in the Driver Information Center (DIC), and comes on and stays on to indicate that the system is inactive and is not assisting the driver in maintaining control. The vehicle is safe to drive, but driving should be adjusted accordingly.

If comes on and stays on:

1. Stop the vehicle.
2. Turn the engine off and wait 15 seconds.
3. Start the engine.

Drive the vehicle. If comes on and stays on, the vehicle may need more time to diagnose the problem. If the condition persists, see your dealer.

Turning the Systems Off and On

The button for TCS and StabiliTrak is on the center stack.

Caution
Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle driveline could be damaged.

To turn off only TCS, press and release the button. The traction off light displays in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages* ⇨ *144*.

To turn TCS on again, press and release the button. The traction off light displayed in the instrument cluster will turn off. The appropriate message is displayed in the DIC. See *Ride Control System Messages* ⇨ *144*.

If TCS is limiting wheel spin when the button is pressed, the system will not turn off until the wheels stop spinning.

To turn off both TCS and StabiliTrak, press and hold the button until the traction off light and the StabiliTrak OFF light come on and stay on in the instrument cluster. The appropriate message is displayed in the DIC. See *Ride Control System Messages* ⇨ *144*.

To turn TCS and StabiliTrak on again, press and release the button. The traction off light and the StabiliTrak OFF light in the instrument cluster turn off. The appropriate message is displayed in the DIC. See *Ride Control System Messages* ⇨ *144*.

Adding accessories can affect the vehicle performance. See *Accessories and Modifications* ⇨ *240*.

Limited-Slip Rear Axle

Vehicles with a limited-slip rear axle can give more traction on snow, mud, ice, sand, or gravel. When traction is low, this feature allows the drive wheel with the most traction to move the vehicle. The limited-slip rear axle also gives the driver enhanced control when cornering hard or completing a maneuver, such as a lane change.

Selective Ride Control

The vehicle may have a ride control system called Selective Ride Control. The setting can be changed at any time. Based on road conditions, steering wheel angle, and the vehicle speed, the system automatically adjusts to provide the best handling while providing a smooth ride. The Tour and Sport modes will feel similar on a smooth road.

Tour : Use for normal city and highway driving. This setting provides a smooth, soft ride.

Sport : Use where road conditions or personal preference demand more control. This setting provides more "feel," or response to road conditions through increased steering effort and suspension control. Transmission shift points and shift firmness are also enhanced.

The vehicle is normally in the Tour Mode. To switch from Tour Mode to Sport Mode, move the shift lever to the left while the transmission is in D (Drive). Sport Mode is automatically engaged when the shift lever is moved to the left. Moving the shift lever forward or rearward will put the transmission in the M (Manual) Mode.

The Driver Information Center (DIC) will display SPORT MODE ON when the Sport Mode has been activated. When the shift lever is moved to the right in D (Drive), the system will revert back to Tour Mode. See *Manual Mode* ⇨ *196*.

If there is a problem detected with Selective Ride Control, SERVICE SUSPENSION SYSTEM displays on the DIC. See *Ride Control System Messages* ⇨ *144*. Driving should be adjusted accordingly.

Cruise Control

With cruise control, a speed of about 40 km/h (25 mph) or more can be maintained without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

⚠ Warning

Cruise control can be dangerous where you cannot drive safely at a steady speed. Do not use cruise control on winding roads or in heavy traffic.

Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

If the StabiliTrak® system begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *Traction Control/Electronic Stability Control* ⇨ *202*. If a collision alert occurs when cruise control is activated, cruise control is disengaged. See *Forward Collision Alert (FCA) System* ⇨ *219*. When road conditions allow the cruise control to be safely used, you can apply the cruise control again.

If the brakes are applied, cruise control disengages.

(On/Off) : Press to turn the system on and off. A white indicator appears in the instrument cluster when cruise is turned on.

+RES (Resume/Accelerate) : If there is a set speed in memory, press the control up briefly to resume to that speed or press and hold to accelerate. If cruise control is already active, use to increase vehicle speed.

SET− (Set/Coast) : Press the control down briefly to set the speed and activate cruise control. If cruise control is already active, use to decrease vehicle speed.

(Cancel) : Press to disengage cruise control without erasing the set speed from memory.

Setting Cruise Control

If the button is on when not in use, SET− or +RES could get pressed and the vehicle could go into cruise when not desired. Keep the button off when cruise is not being used.

1. Press to turn the cruise system on.
2. Get up to the desired speed.
3. Move the control down to SET− and release it.
4. Remove foot from the accelerator pedal.

The cruise control indicator on the instrument cluster turns green after the cruise control has been set to the desired speed. See *Instrument Cluster* ⇨ *119*.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied or is pressed, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle reaches about 40 km/h (25 mph) or more, press +RES up briefly. The vehicle returns to the previous set speed.

Increasing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

- Press and hold +RES up until the vehicle accelerates to the desired speed, then release it.
- To increase vehicle speed in small increments, press +RES up briefly. For each press, the vehicle goes about 1.6 km/h (1 mph) faster.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *119*. The increment value used depends on the units displayed.

Reducing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated:

- Press and hold SET− down until the desired lower speed is reached, then release it.
- To slow down in small increments, press SET− down briefly. For each press, the vehicle goes about 1.6 km/h (1 mph) slower.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *119*. The increment value used depends on the units displayed.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previously set cruise speed. While pressing the accelerator pedal or shortly following the release to override cruise control, briefly pressing SET− will result in cruise set to the current vehicle speed.

Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the

accelerator pedal to maintain your speed. When going downhill, you might have to brake or shift to a lower gear to keep your speed down. If the brake pedal is applied, the cruise control will disengage.

Ending Cruise Control

There are four ways to end cruise control:

- Step lightly on the brake pedal.
- Press .
- Shift the transmission to N (Neutral).
- To turn off the cruise control, press .

Erasing Speed Memory

The cruise control set speed is erased from memory if is pressed or if the ignition is turned off.

Adaptive Cruise Control

If equipped with Adaptive Cruise Control (ACC), it allows the driver to select the cruise control set speed and following gap. Read this entire section before using this system. The following gap is the following time between your vehicle and a vehicle detected directly ahead in your path moving in the same direction. If no vehicle is detected in your path, ACC works like regular cruise control. ACC uses camera and radar sensors. See *Radio Frequency Statement* ⇨ *356*.

If a vehicle is detected in your path, ACC can apply acceleration or limited, moderate braking to maintain the selected following gap. To disengage ACC, apply the brake. If ACC is controlling your vehicle speed when the traction control system (TCS) or electronic stabilty control system activates, the ACC may automatically disengage. See *Traction Control/Electronic Stability Control* ⇨ *202*. When road conditions allow ACC to be safely used, the ACC can be turned back on.

ACC will not engage if the TCS or StabiliTrak electronic stability control system is disabled.

⚠ Warning

ACC has limited braking ability and may not have time to slow the vehicle down enough to avoid a collision with another vehicle you are following. This can occur when vehicles suddenly slow or stop ahead, or enter your lane. Also see "Alerting the Driver" in this section. Complete attention is always required while driving and you should be ready to take action and apply the brakes. See *Defensive Driving* ⇨ *177*.

⚠ Warning

ACC will not detect or brake for children, pedestrians, animals, or other objects.

Do not use ACC when:

- On winding and hilly roads or when the sensors are blocked by snow, ice, or dirt. The system may not detect

(Continued)

Warning (Continued)

a vehicle ahead. Keep the entire front of the vehicle clean.

- Visibility is low, such as in fog, rain, or snow conditions. ACC performance is limited under these conditions.
- On slippery roads where fast changes in tire traction can cause excessive wheel slip.

(On/Off) : Press to turn the system on or off. A white cruise control indicator comes on.

+RES (Resume/Accelerate) : Press the control up briefly to resume to the previous set speed or hold upwards to accelerate. If cruise control is already active, use to increase vehicle speed.

SET– (Set/Coast) : Press the control down briefly to set the speed and activate ACC. If cruise control is already active, use to decrease vehicle speed.

(Cancel) : Press to disengage ACC without erasing the set speed from memory.

(Follow Distance Gap) : Press to select a following gap time (or distance) setting for ACC of Far, Medium, or Near.

Setting Adaptive Cruise Control

If cruise control is on when not in use, the cruise control on/off control could get pressed and cruise control could become active when not desired. Keep the cruise control off when cruise is not being used.

Select the set speed desired for cruise. This is the vehicle speed when no vehicle is detected in its path slower than the set speed.

ACC will not set at a speed less than 25 km/h (16 mph), although it can be resumed when driving at lower speeds.

To set ACC:

1. Press .
2. Get up to the desired speed.
3. Press and release the SET– control.
4. Remove foot from the accelerator.

After ACC is set, it may immediately apply the brakes if a vehicle ahead is detected closer than the selected following gap.

The ACC indicator displays on the instrument cluster. When the ACC is active, the indicator turns green.

Be mindful of speed limits, surrounding traffic speeds, and weather conditions when selecting the set speed.

Resuming a Set Speed

If the ACC is set at a desired speed and then the brakes are applied, the ACC is disengaged without erasing the set speed from memory.

To begin using ACC again, press +RES up briefly. The vehicle returns to the previous set speed.

Increasing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the accelerator to get to the higher speed. Press SET– down. Release the control and the accelerator pedal. The vehicle will now cruise at the higher speed.

  When the accelerator pedal is pressed, ACC will not brake because it is overridden. A warning message will appear on the Driver Information Center (DIC). See *Cruise Control Messages* ⇨ *138*.
- Press and hold +RES up until the desired set speed appears on the display, then release it.
- To increase vehicle speed in small increments, press +RES up briefly. For each press, the vehicle goes to the next 1 km/h (1 mph) faster mark on the speedometer.

When it is determined that there is no vehicle ahead or the vehicle ahead is beyond the selected following gap, then the vehicle speed will increase to the set speed.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *119*. The increment value used depends on the units displayed.

Reducing Speed While ACC is at a Set Speed

If ACC is already activated, do one of the following:

- Use the brake to get to the desired lower speed. Press SET– down and release the accelerator pedal. The vehicle will now cruise at the lower speed.
- Press and hold SET– down until the desired lower speed is reached, then release it.
- To decrease the vehicle speed in smaller increments, press SET– down briefly. For each press, the vehicle goes to the next 1 km/h (1 mph) slower mark on the speedometer.

The speedometer reading can be displayed in either English or metric units. See *Instrument Cluster* ⇨ *119*. The increment value used depends on the units displayed.

Selecting the Follow Distance

When a slower moving vehicle is detected ahead within the selected following gap, ACC will adjust the vehicle's speed and attempt to maintain the follow distance gap selected.

Press on the steering wheel to adjust the following gap. When pressed, the current gap setting displays briefly on the instrument cluster. Subsequent presses cycle the gap button through three settings: Far, Medium, or Near.

When pressed, the current gap setting displays briefly on the instrument cluster. The gap setting will be maintained until it is changed.

Since each gap setting corresponds to a following time (Far, Medium, or Near), the following distance will vary based on vehicle speed. The faster the vehicle speed, the further back your vehicle will follow a vehicle detected ahead. Consider traffic and weather conditions when selecting the following gap. The range of selectable gaps may not be appropriate for all drivers and driving conditions.

Changing the gap setting automatically changes the alert timing sensitivity (Far, Medium, or Near) for the Forward Collision Alert (FCA) feature. See *Forward Collision Alert (FCA) System* ⇨ *219*.

Alerting the Driver

If ACC is engaged, driver action may be required when ACC cannot apply sufficient braking because of approaching a vehicle too rapidly.

When this condition occurs, six red lights will flash on the windshield and either eight beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. See "Collision/Detection Systems" under *Vehicle Personalization* ⇨ *147*.

See *Defensive Driving* ⇨ *177*.

Approaching and Following a Vehicle

The vehicle ahead symbol is in the instrument cluster.

The vehicle ahead symbol only displays when a vehicle is detected in your vehicle's path moving in the same direction.

If this symbol is not displaying, ACC will not respond to or brake to vehicles ahead.

ACC automatically slows the vehicle down and adjusts vehicle speed to follow the vehicle in front at the selected follow gap. The vehicle speed increases or decreases to follow the vehicle in front of you, but will not exceed the set speed. It may apply limited braking, if necessary. When braking is active, the brake lights will come on. The automatic braking may feel or sound different than if the brakes were applied manually. This is normal.

Stationary or Very Slow-Moving Objects

⚠ Warning

Adaptive Cruise Control (ACC) may not detect and react to stopped or slow-moving vehicles ahead of you. For example, the system may not brake for a vehicle it has never detected moving. This can occur in stop-and-go traffic or when a vehicle suddenly appears due to a vehicle ahead changing lanes.

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Warning (Continued)

Your vehicle may not stop and could cause a crash. Use caution when using ACC. Your complete attention is always required while driving and you should be ready to take action and apply the brakes.

ACC Automatically Disengages

ACC may automatically disengage and the driver will need to manually apply the brakes to slow the vehicle when:

- The sensors are blocked.
- The Traction Control System (TCS) or electronic stability control system has activated or been disabled.
- There is no traffic and nothing to detect on the side of the road.
- There is a fault in the system.
- The brakes get heated.

The ACC active symbol will not be displayed when ACC is no longer active.

Notification to Resume ACC

ACC will maintain a follow time/ distance gap behind a detected vehicle and slow your vehicle to a stop behind that vehicle.

If the vehicle ahead has driven away and ACC has not resumed, the vehicle ahead symbol will flash as a reminder. In addition, the left and right sides of the Safety Alert Seat will pulse three times, or three beeps will sound. See "Alert Type" and "Go Notifier" in "Collision/ Detection Systems" under *Vehicle Personalization* ⇨ *147*.

When the vehicle ahead drives away, press +RES or the accelerator pedal to resume ACC. If stopped for more than two minutes or if the driver door is opened and the driver safety belt is unbuckled, the ACC automatically applies the electric parking brake to hold the vehicle. The electric parking brake status light will turn

on. See *Parking Brake* ⇨ *199*. To release the electric parking brake, press the accelerator pedal.

A DIC warning message may display indicating to shift to P (Park) before exiting the vehicle. See *Vehicle Messages* ⇨ *137*.

⚠ Warning

If ACC has stopped the vehicle, and if ACC is disengaged, turned off, or canceled, the vehicle will no longer be held at a stop. The vehicle can move. When ACC is holding the vehicle at a stop, always be prepared to manually apply the brakes.

⚠ Warning

Leaving the vehicle without placing it in P (Park) can be dangerous. Do not leave the vehicle while it is being held at a stop by ACC. Always place the

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Warning (Continued)

vehicle in P (Park) and turn off the ignition before leaving the vehicle.

ACC Override

If using the accelerator pedal while ACC is active, a warning message on the DIC will indicate that automatic braking will not occur. See *Vehicle Messages* ⇨ *137*. ACC will resume operation when the accelerator pedal is not being pressed.

⚠ Warning

The ACC will not automatically apply the brakes if your foot is resting on the accelerator pedal. You could crash into a vehicle ahead of you.

Curves in the Road

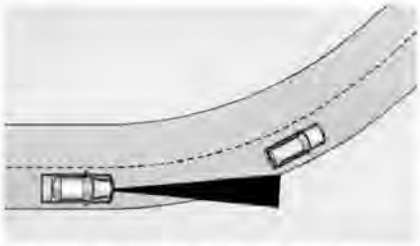
⚠ Warning

On curves, ACC may not detect a vehicle ahead in your lane. You could be startled if the vehicle accelerates up to the set speed, especially when following a vehicle exiting or entering exit ramps. You could lose control of the vehicle or crash. Do not use ACC while driving on an entrance or exit ramp. Always be ready to use the brakes if necessary.

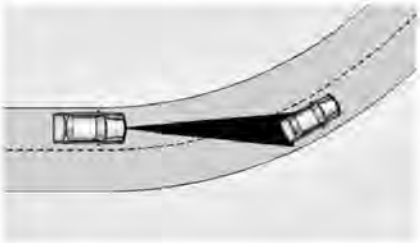
⚠ Warning

On curves, ACC may respond to a vehicle in another lane, or may not have time to react to a vehicle in your lane. You could crash into a vehicle ahead of you, or lose control of your vehicle. Give extra attention in curves and be ready to use the brakes if necessary. Select an appropriate speed while driving in curves.

ACC may operate differently in a sharp curve. It may reduce the vehicle speed if the curve is too sharp.



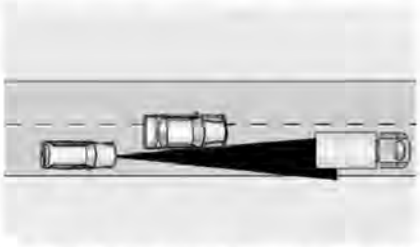
When following a vehicle and entering a curve, ACC may not detect the vehicle ahead and accelerate to the set speed. When this happens the vehicle ahead symbol will not appear.



ACC may detect a vehicle that is not in your lane and apply the brakes.

ACC may occasionally provide an alert and/or braking that is considered unnecessary. It could respond to vehicles in different lanes, signs, guardrails, and other stationary objects when entering or exiting a curve. This is normal operation. The vehicle does not need service.

Other Vehicle Lane Changes



ACC will not detect a vehicle ahead until it is completely in the lane. The brake may need to be manually applied.

Do Not Use ACC on Hills and When Towing a Trailer

Do not use ACC when driving on steep hills or when towing a trailer. ACC will not detect a vehicle in the lane while driving on steep hills. The driver will often need to take over acceleration and braking on steep hills, especially when towing a trailer. If the brakes are applied, the ACC disengages.

Ending ACC

There are three ways to end ACC:

- Step lightly on the brake pedal.
- Press .
- Press .

Erasing Speed Memory

The cruise control set speed is erased from memory if is pressed or if the ignition is turned off.

Cleaning the Sensing System

The camera sensor on the back of the rearview mirror and the radar sensors on the front of the vehicle can become blocked by snow, ice, dirt, or mud. These areas need to be cleaned for ACC to operate properly.

For cleaning instructions, see "Washing the Vehicle" under *Exterior Care* ⇨ *321*.

System operation may also be limited under snow, heavy rain or road spray conditions.

Driver Assistance Systems

This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, backing, and parking. Read this entire section before using these systems.

⚠ Warning

Do not rely on the Driver Assistance Systems. These systems do not replace the need for paying attention and driving safely. You may not hear or feel alerts or warnings provided by these systems. Failure to use proper care when driving may result in injury, death, or vehicle damage. See *Defensive Driving* ⇨ *177*.

(Continued)

Warning (Continued)

Under many conditions, these systems will not:

- Detect children, pedestrians, bicyclists, or animals.
- Detect vehicles or objects outside the area monitored by the system.
- Work at all driving speeds.
- Warn you or provide you with enough time to avoid a crash.
- Work under poor visibility or bad weather conditions.
- Work if the detection sensor is not cleaned or is covered by ice, snow, mud, or dirt.

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

Audible or Safety Alert Seat

Some driver assistance features alert the driver of obstacles by beeping. To change the volume of the warning chime, see "Comfort and Convenience" under *Vehicle Personalization* ⇨ *147*.

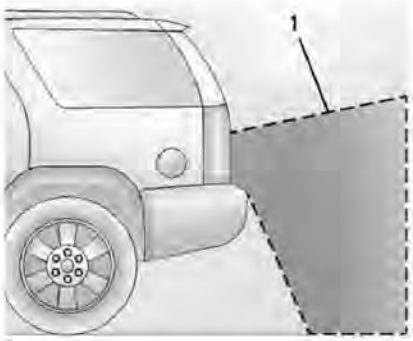
If equipped with the Safety Alert Seat, the driver seat cushion may provide a vibrating pulse alert instead of beeping. To change this, see "Collision/Detection Systems" under *Vehicle Personalization* ⇨ *147*.

Assistance Systems for Parking or Backing

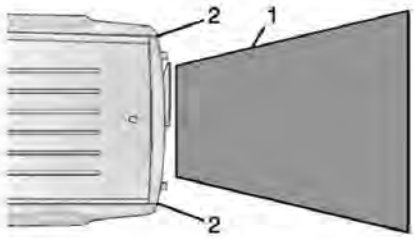
If equipped, the Rear Vision Camera (RVC), Rear Parking Assist (RPA), Front Parking Assist (FPA), Rear Automatic Braking (RAB) and Backing Warning System, and Rear Cross Traffic Alert (RCTA) may help the driver park or avoid objects. Always check around the vehicle when parking or backing.

Rear Vision Camera (RVC)

When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the center stack display. The previous screen displays when the vehicle is shifted out of R (Reverse) after a short delay. To return to the previous screen sooner, press a button on the infotainment system, shift into P (Park), or reach a vehicle speed of 8 km/h (5 mph).



1. View Displayed by the Camera



1. View Displayed by the Camera
2. Corners of the Rear Bumper

Displayed images may be farther or closer than they appear. The area displayed is limited and objects that are close to either corner of the bumper or under the bumper do not display.

A warning triangle may display on the RVC screen to show that RPA has detected an object. This triangle changes from amber to red and increases in size the closer the object.

⚠ Warning

The camera(s) do not display children, pedestrians, bicyclists, crossing traffic, animals, or any other object outside of the cameras' field of view, below the bumper, or under the vehicle. Shown distances may be different from actual distances. Do not drive or park the vehicle using only these camera(s). Always check behind and around the vehicle before driving. Failure to use proper care may result in injury, death, or vehicle damage.

Parking Assist

With RPA, and if equipped with FPA, as the vehicle moves at speeds of less than 8 km/h (5 mph) the sensors on the bumpers may detect objects up to 2.5 m (8 ft) behind and 1.2 m (4 ft) in front of the vehicle within a zone 25 cm (10 in) high off the ground and below bumper level. These detection distances may be shorter during warmer or humid weather. Blocked sensors will not detect objects and can also cause false detections. Keep the sensors clean of mud, dirt, snow, ice, and slush; and clean sensors after a car wash in freezing temperatures.

⚠ Warning

The Parking Assist system does not detect children, pedestrians, bicyclists, animals, or objects located below the bumper or that are too close or too far from the vehicle. It is not available at speeds greater than 8 km/h (5 mph). To prevent injury, death, or vehicle damage, even with parking assist, always check the area around the vehicle and check all mirrors before moving forward or backing.

The instrument cluster may have a parking assist display with bars that show "distance to object" and object location information for RPA, and on some vehicles, for FPA. As the object gets closer, more bars light up and the bars change color from yellow to amber to red.

When an object is first detected in the rear, one beep will be heard from the rear, or both sides of the Safety Alert Seat will pulse two times. When an object is very close (<0.6 m (2 ft) in the vehicle rear, or <0.3 m (1 ft) in the vehicle front), five beeps will sound from the front or rear depending on object location, or both sides of the Safety Alert Seat will pulse five times. Beeps for FPA are higher pitched than for RPA.

Backing Warning and Rear Automatic Braking

Vehicles with Adaptive Cruise Control (ACC) have the Backing Warning and Rear Automatic Braking (RAB) system. The Backing Warning part of this system can warn of rear objects when backing up at speeds greater than 8 km/h (5 mph).

The Backing Warning System will beep once from the rear when an object is first detected, or pulse twice on both sides of the Safety Alert Seat. When the system detects a potential crash, beeps will be heard from the rear, or five pulses will be felt on both sides of the Safety Alert Seat. There may also be a brief, sharp application of the brakes.

⚠ Warning

The Backing Warning System only operates at speeds greater than 8 km/h (5 mph). It does not detect children, pedestrians,

(Continued)

Warning (Continued)

bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. In some situations, such as at higher backing speeds, there may not be enough time for the short, sharp application of the vehicle brake system to occur. To prevent injury, death, or vehicle damage, even with the Backing Warning System, always check the area around the vehicle and check all mirrors before backing.

When the vehicle is in R (Reverse) and if it is backing too fast to avoid a crash with a detected object directly behind the vehicle, the Rear Automatic Braking (RAB) system may automatically brake hard to a stop to help avoid or reduce the harm caused by a backing crash.

⚠ Warning

Rear Automatic Braking may not avoid many types of backing crashes. Do not wait for the automatic braking to apply. This system is not designed to replace driver braking and only works in R (Reverse) when an object is detected directly behind the vehicle. It may not brake or stop in time to avoid a crash. It will not brake for objects when the vehicle is moving at very low speeds. It does not detect children, pedestrians, bicyclists, animals, or objects below the bumper or that are too close or too far from the vehicle. To prevent injury, death, or vehicle damage, even with Rear Automatic Braking, always check the area around the vehicle before and while backing.

Pressing the brake pedal after the vehicle comes to a stop will release the Rear Automatic Braking. If the

brake pedal is not pressed soon after the stop, the Electric Parking Brake (EPB) may be set. When it is safe, press the accelerator pedal firmly at any time to override the Rear Automatic Braking.

⚠ Warning

There may be instances where unexpected or undesired automatic braking occurs. If this happens, either press the brake pedal or firmly press the accelerator pedal to release the brakes from the Rear Automatic Braking system. Before releasing the brakes, check the RVC screen and check the area around the vehicle to make sure it is safe to proceed.

Rear Cross Traffic Alert (RCTA)

If equipped, Rear Cross Traffic Alert (RCTA), displays a red warning triangle with a left or right pointing arrow on the RVC screen to warn of traffic coming from the left or right. This system detects objects coming from up to 20 m (65 ft) from the left or right side of the vehicle. When an object is detected, either three beeps sound from the left or right or three Safety Alert Seat pulses occur on the left or right side, depending on the direction of the detected vehicle.

Use caution while backing up when towing a trailer, as the RCTA detection zones that extend out from the back of the vehicle do not move further back when a trailer is towed.

Turning the Features On or Off

The P button near the shift lever is used to turn on or off the Front and Rear Parking Assist, Rear Automatic Braking, and Backing Warning System at the same time. The indicator light next to the button comes on when the features are on and turns off when the features have been disabled.

Turn off parking assist and Rear Automatic Braking when towing a trailer.

To turn the RPA symbols or rear guidance lines on or off, see "Rear Camera" under *Vehicle Personalization* ⇨ *147*.

RCTA can be turned on or off through vehicle personalization. See "Collision/Detection Systems" under *Vehicle Personalization* ⇨ *147*.

Assistance Systems for Driving

If equipped, when driving the vehicle in a forward gear, Forward Collision Alert (FCA), Lane Departure Warning (LDW), Side Blind Zone Alert (SBZA), and/or the Front Automatic Braking (FAB) System can help to avoid a crash or reduce crash damage.

Forward Collision Alert (FCA) System

If equipped, the FCA system may help to avoid or reduce the harm caused by front-end crashes. When approaching a vehicle ahead too quickly, FCA provides a red flashing alert on the windshield and rapidly beeps or pulses the driver seat. FCA also lights an amber visual alert if following another vehicle much too closely.

FCA detects vehicles within a distance of approximately 60 m (197 ft) and operates at speeds above 40 km/h (25 mph). If the vehicle has Adaptive Cruise Control (ACC), it can detect vehicles to distances of approximately 110 m (360 ft) and operates at all speeds. See *Adaptive Cruise Control* ⇨ *207*.

⚠ Warning

FCA is a warning system and does not apply the brakes. When approaching a slower-moving or

(Continued)

Warning (Continued)

stopped vehicle ahead too rapidly, or when following a vehicle too closely, FCA may not provide a warning with enough time to help avoid a crash. FCA does not warn of pedestrians, animals, signs, guardrails, bridges, construction barrels, or other objects. Be ready to take action and apply the brakes. For more information, see *Defensive Driving* ⇨ *177*.

FCA can be disabled with the FCA steering wheel control, or if your vehicle is equipped with Adaptive Cruise Control (ACC), through vehicle personalization. See the "Auto Collision Preparation" portion of "Collision/Detection Systems" under *Vehicle Personalization* ⇨ *147*.

Detecting the Vehicle Ahead

FCA warnings will not occur unless the FCA system detects a vehicle ahead. When a vehicle is detected, the vehicle ahead indicator will display green. Vehicles may not be detected on curves, highway exit ramps, or hills, due to poor visibility; or if a vehicle ahead is partially blocked by pedestrians or other objects. FCA will not detect another vehicle ahead until it is completely in the driving lane.

⚠ Warning

FCA does not provide a warning to help avoid a crash, unless it detects a vehicle. FCA may not detect a vehicle ahead if the FCA sensor is blocked by dirt, snow,

(Continued)

Warning (Continued)

or ice, or if the windshield is damaged. It may also not detect a vehicle on winding or hilly roads, or in conditions that can limit visibility such as fog, rain, or snow, or if the headlamps or windshield are not cleaned or in proper condition. Keep the windshield, headlamps, and FCA sensors clean and in good repair.

Collision Alert

When your vehicle approaches another detected vehicle too rapidly, the red FCA display will flash on the windshield. Also, eight rapid high-pitched beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times. When this Collision Alert occurs, the brake system may prepare for driver braking to occur more rapidly which can cause a brief, mild deceleration. Continue to apply the brake pedal as needed. Cruise control may be disengaged when the Collision Alert occurs.

Tailgating Alert

The vehicle-ahead indicator will display amber when you are following a detected vehicle ahead much too closely.

Selecting the Alert Timing

The Collision Alert control is on the steering wheel. Press on the steering wheel to set the FCA timing to far, medium, near, or on some vehicles, off. The first button press shows the current setting on the DIC. Additional button presses will change this setting. The chosen setting will remain until it is changed and will affect the timing of both the Collision Alert and the Tailgating Alert features. The timing of both alerts will vary based on vehicle speed. The faster the vehicle speed, the farther away the alert will occur.

Consider traffic and weather conditions when selecting the alert timing. The range of selectable alert timing may not be appropriate for all drivers and driving conditions.

If your vehicle is equipped with Adaptive Cruise Control (ACC), changing the FCA timing setting automatically changes the following gap setting (Far, Medium, or Near).

Unnecessary Alerts

FCA may provide unnecessary alerts for turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.

Cleaning the System

If the FCA system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor on the back of the rearview mirror, and cleaning the front of the vehicle where radar sensors are located (if equipped with ACC), may correct the issue.

Front Automatic Braking (FAB) System

If the vehicle has Adaptive Cruise Control (ACC), it also has FAB, which includes Intelligent Brake Assist (IBA). When the system detects a vehicle ahead in your path that is traveling in the same direction that you may be about to crash into, it can provide a boost to braking or automatically brake the vehicle. This can help avoid or lessen the severity of crashes when driving in a forward gear. Depending on the situation, the vehicle may automatically brake moderately or hard. This front automatic braking can only occur if a vehicle is detected. This is shown by the FCA vehicle ahead indicator being lit. See *Forward Collision Alert (FCA) System* ⇨ *219*.

The system works when driving in a forward gear above 4 km/h (2 mph). It can detect vehicles up to approximately 60 m (197 ft).

⚠ Warning

FAB is an emergency crash preparation feature and is not designed to avoid crashes. Do not rely on FAB to brake the vehicle. FAB will not brake outside of its operating speed range and only responds to detected vehicles.

FAB may not:

- Detect a vehicle ahead on winding or hilly roads.
- Detect all vehicles, especially vehicles with a trailer, tractors, muddy vehicles, etc.
- Detect a vehicle when weather limits visibility, such as in fog, rain, or snow.
- Detect a vehicle ahead if it is partially blocked by pedestrians or other objects.

(Continued)

Warning (Continued)

Complete attention is always required while driving, and you should be ready to take action and apply the brakes and/or steer the vehicle to avoid crashes.

FAB may slow the vehicle to a complete stop to try to avoid a potential crash. If this happens, FAB may engage the Electric Parking Brake (EPB) to hold the vehicle at a stop. To release automatic braking, release the EPB or firmly press the accelerator pedal.

⚠ Warning

FAB may automatically brake the vehicle suddenly in situations where it is unexpected and undesired. It could respond to a turning vehicle ahead, guardrails, signs, and other non-moving objects. To override FAB, firmly press the accelerator pedal, if it is safe to do so.

Intelligent Brake Assist (IBA)

IBA may activate when the brake pedal is applied quickly by providing a boost to braking based on the speed of approach and distance to a vehicle ahead.

Minor brake pedal pulsations or pedal movement during this time is normal and the brake pedal should continue to be applied as needed. IBA will automatically disengage only when the brake pedal is released.

⚠ Warning

IBA may increase vehicle braking in situations when it may not be necessary. You could block the flow of traffic. If this occurs, take your foot off the brake pedal and then apply the brakes as needed.

FAB and IBA can be disabled through vehicle personalization. See "Auto Collision Preparation" in "Collision/Detection Systems" under *Vehicle Personalization* ⇨ *147*.

⚠ Warning

Using FAB or IBA while towing a trailer could cause you to lose control of the vehicle and crash. Turn the system to Off when towing a trailer.

Side Blind Zone Alert (SBZA)

If equipped, the SBZA system is a lane-changing aid that assists drivers with avoiding crashes that occur with moving vehicles in the side blind zone (or spot) areas. The SBZA warning display will light up in the corresponding outside side mirror and will flash if the turn signal is on.

⚠ Warning

SBZA does not alert the driver to vehicles rapidly approaching outside of the side blind zones, pedestrians, bicyclists,

(Continued)

Warning (Continued)

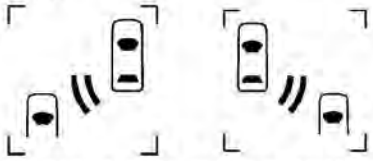
or animals. It may not provide alerts when changing lanes under all driving conditions. Failure to use proper care when changing lanes may result in injury, death, or vehicle damage. Before making a lane change, always check mirrors, glance over your shoulder, and use the turn signals.

SBZA Detection Zones

The SBZA sensor covers a zone of approximately one lane over from both sides of the vehicle, or 3.5 m (11 ft). The height of the zone is approximately between 0.5 m (1.5 ft) and 2 m (6 ft) off the ground. This zone starts at approximately the middle of the vehicle and goes back 5 m (16 ft).

How the System Works

The SBZA symbol lights up in the side mirrors when the system detects a moving vehicle in the next lane over that is in the side blind zone. This indicates it may be unsafe to change lanes. Before making a lane change, check the SBZA display, check mirrors, glance over your shoulder, and use the turn signals.



Left Side Mirror Display **Right Side Mirror Display**

When the vehicle is started, both outside mirror SBZA displays will briefly come on to indicate the system is operating. When the vehicle is in a forward gear, the left or right side mirror display will light up if a moving vehicle is detected in that blind zone. If the turn signal is activated in the same direction of a detected vehicle, this display will flash as an extra warning not to change lanes.

SBZA can be disabled through vehicle personalization. See "Collision Detection Systems" under *Vehicle Personalization* ⇨ *147*. If SBZA is disabled by the driver, the SBZA mirror displays will not light up.

When the System Does Not Seem to Work Properly

SBZA displays may not come on when passing a vehicle quickly, for a stopped vehicle, or when towing a trailer. The SBZA detection zones that extend back from the side of the vehicle do not move further back when a trailer is towed. Use caution while changing lanes when towing a

trailer. SBZA may alert to objects attached to the vehicle, such as a trailer, bicycle, or object extending out to either side of the vehicle. This is normal system operation; the vehicle does not need service.

SBZA may not always alert the driver to vehicles in the side blind zone, especially in wet conditions. The system does not need to be serviced. The system may light up due to guardrails, signs, trees, shrubs, and other non-moving objects. This is normal system operation; the vehicle does not need service.

SBZA may not operate when the SBZA sensors in the left or right corners of the rear bumper are covered with mud, dirt, snow, ice, or slush, or in heavy rainstorms. For cleaning instructions, see "Washing the Vehicle" under *Exterior Care* ⇨ *321*. If the DIC displays the system unavailable message after cleaning both sides of the vehicle toward the rear corners of the vehicle, see your dealer.

If the SBZA displays do not light up when vehicles are in the blind zone and the system is clean, the system may need service. Take the vehicle to your dealer.

When SBZA is disabled for any reason other than the driver turning it off, the Side Blind Zone Alert On option will not be available on the personalization menu.

Radio Frequency Information

See *Radio Frequency Statement* ⇨ *356*.

Lane Departure Warning (LDW)

If equipped, LDW may help avoid crashes due to unintentional lane departures. It may provide an alert if the vehicle is crossing a lane without using a turn signal in that direction. LDW uses a camera sensor to detect the lane markings at speeds of 56 km/h (35 mph) or greater.

⚠ Warning

The LDW system does not steer the vehicle. The LDW system may not:

- Provide enough time to avoid a crash.
- Detect lane markings under poor weather or visibility conditions. This can occur if the windshield or headlamps are blocked by dirt, snow, or ice; if they are not in proper condition; or if the sun shines directly into the camera.
- Detect road edges.
- Detect lanes on winding or hilly roads.

If LDW only detects lane markings on one side of the road, it will only warn you when departing the lane on the side where it has detected a lane marking. Always keep your attention on the road and

(Continued)

Warning (Continued)

maintain proper vehicle position within the lane, or vehicle damage, injury, or death could occur. Always keep the windshield, headlamps, and camera sensors clean and in good repair. Do not use LDW in bad weather conditions.

How the System Works

The LDW camera sensor is on the windshield ahead of the rearview mirror.

To turn LDW on and off, press near the shift lever. The control indicator will light when LDW is on.

When LDW is on, is green if LDW is available to warn of a lane departure. If the vehicle crosses a detected lane marking without using the turn signal in that direction, changes to amber and flashes. Additionally, there will be three beeps, or the driver seat will pulse three times, on the right or left, depending on the lane departure direction.

When the System Does Not Seem to Work Properly

The system may not detect lanes as well when there are:

- Close vehicles ahead.
- Sudden lighting changes, such as when driving through tunnels.
- Banked roads.

If the LDW system is not functioning properly when lane markings are clearly visible, cleaning the windshield may help.

LDW alerts may occur due to tar marks, shadows, cracks in the road, temporary or construction lane markings, or other road imperfections. This is normal system operation; the vehicle does not need service. Turn LDW off if these conditions continue.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of this vehicle. When driving in the U.S. and Canada, to help keep the engine clean and maintain optimum vehicle performance, we recommend using TOP TIER Detergent Gasolines. See www.toptiergas.com for a list of TOP TIER Detergent Gasolines.

TOP TIER Detergent Gasoline

CATEGORIE SUPERIEURE Essences Detergentes

Use regular unleaded gasoline meeting ASTM specification D4814 with a posted octane rating of 87 or higher. Do not use gasoline with an octane rating below 87, as it may cause engine damage and will lower fuel economy.

Use of Seasonal Fuels

Use summer and winter fuels in the appropriate season. The fuels industry automatically modifies the fuel for the appropriate season. If fuel is left in the vehicle tank for long periods of time, driving or starting could be affected. Drive the vehicle until the fuel is at one-half tank or less, then refuel with the current seasonal fuel.

Prohibited Fuels

Gasolines containing oxygenates such as ethers and ethanol, as well as reformulated gasolines, are available in some cities. If these gasolines comply with the previously described specification, then they are acceptable to use. However, E85 (85% ethanol) and other fuels containing more than 15% ethanol must be used only in FlexFuel vehicles.

Caution

Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.

Some gasolines, mainly high octane racing gasolines, can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). Do not use gasolines and/or fuel additives with MMT as they can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp may turn on. If this occurs, see your dealer for service.

California Fuel Requirements

If the vehicle is certified to meet California Emissions Standards, it is designed to operate on fuels that meet California specifications. See the underhood emission control label. If this fuel is not available in states adopting California Emissions Standards, the vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system performance might be affected. The malfunction indicator lamp could turn on and the vehicle may not pass a smog-check test. See *Malfunction Indicator Lamp (Check Engine Light)* ⇨ *125*. If this occurs, return to your authorized dealer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs may not be covered by the vehicle warranty.

Fuels in Foreign Countries

If planning to drive in countries outside the U.S. or Canada, the proper fuel might be hard to find. Check regional auto club or fuel retail brand websites for availability in the country where driving. Never use leaded gasoline, fuel containing methanol, manganese, or any other fuel not recommended. Costly repairs caused by use of improper fuel would not be covered by the vehicle warranty.

Fuel Additives

To keep fuel systems clean, TOP TIER Detergent Gasoline is recommended. See *Fuel* ⇨ *226*.

If TOP TIER Detergent Gasoline is not available, one bottle of Fuel System Treatment PLUS added to the fuel tank at every engine oil change, can help. Fuel System Treatment PLUS is the only gasoline additive recommended by General Motors. It is available at your dealer.

Filling the Tank

⚠ Warning

Fuel vapors and fuel fires burn violently and can cause injury or death.

- To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island.
- Turn off the engine when refueling.
- Keep sparks, flames, and smoking materials away from fuel.
- Do not leave the fuel pump unattended.
- Do not use a cell phone while refueling.
- Do not reenter the vehicle while pumping fuel.
- Keep children away from the fuel pump and never let children pump fuel.

(Continued)

Warning (Continued)

- Fuel can spray out if the fuel cap is opened too quickly. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop, then unscrew the cap all the way.

The fuel cap is located behind a hinged fuel door on the passenger side of the vehicle. If equipped, the fuel door is locked when the vehicle doors are locked. Press on the RKE transmitter to unlock. To open the fuel door, push and release the rearward center edge of the door.

To remove the fuel cap, turn it slowly counterclockwise.

While refueling, hang the tethered fuel cap from the hook on the fuel door.

⚠ Warning

Overfilling the fuel tank by more than three clicks of a standard fill nozzle may cause:

- Vehicle performance issues, including engine stalling and damage to the fuel system.
- Fuel spills.
- Potential fuel fires.

Be careful not to spill fuel. Wait a few seconds after you have finished pumping before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care* ⇨ *321*.

When replacing the fuel cap, turn it clockwise until it clicks once. Make sure the cap is fully installed. The diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See *Malfunction Indicator Lamp (Check Engine Light)* ⇨ *125*.

⚠ Warning

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

Caution

If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap may not fit properly, may cause the malfunction

(Continued)

Caution (Continued)

indicator lamp to light, and could damage the fuel tank and emissions system. See *Malfunction Indicator Lamp (Check Engine Light)* ⇨ *125*.

Filling a Portable Fuel Container

⚠ Warning

Filling a portable fuel container while it is in the vehicle can cause fuel vapors that can ignite either by static electricity or other means. You or others could be badly burned and the vehicle could be damaged. Always:

- Use approved fuel containers.
- Remove the container from the vehicle, trunk, or pickup bed before filling.

(Continued)

Warning (Continued)

- Place the container on the ground.
- Place the nozzle inside the fill opening of the container before dispensing fuel, and keep it in contact with the fill opening until filling is complete.
- Fill the container no more than 95% full to allow for expansion.
- Do not smoke, light matches, or use lighters while pumping fuel.
- Avoid using cell phones or other electronic devices.

Trailer Towing

General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer. Read the entire section before towing a trailer.

For towing a disabled vehicle, see *Towing the Vehicle* ⇨ *317*. For towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing* ⇨ *317*.

Driving Characteristics and Towing Tips

Driving with a Trailer

When towing a trailer:

- Become familiar with the state and local laws that apply specifically to trailer towing.

- Do not tow a trailer during the first 800 km (500 mi), to prevent damage to the engine, axle, or other parts.
- Then, during the first 800 km (500 mi) of trailer towing, do not drive over 80 km/h (50 mph) and do not make starts at full throttle.
- The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.
- Do not use Adaptive Cruise Control when towing.
- The Front Automatic Braking System should be set to Off when towing. See *Front Automatic Braking (FAB) System* ⇨ *221*.
- Turn off Parking Assist when towing.

⚠ Warning

When towing a trailer, exhaust gases may collect at the rear of the vehicle and enter if the liftgate, trunk/hatch, or rear-most window is open.

When towing a trailer:

- Do not drive with the liftgate, trunk/hatch, or rear-most window open.
- Fully open the air outlets on or under the instrument panel.
- Also adjust the climate control system to a setting that brings in only outside air. See "Climate Control Systems" in the Index.

For information about carbon monoxide, see *Engine Exhaust* ⇨ *193*.

Towing a trailer requires a certain amount of experience. The combination you are driving is longer and not as responsive as the vehicle itself. Get acquainted with the handling and braking of the rig before setting out for the open road.

Before starting, check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tires, and mirrors. If the trailer has electric brakes, start the combination moving and then apply the trailer brake controller by hand to be sure the brakes work.

During the trip, check occasionally to be sure that the load is secure and the lamps and any trailer brakes still work.

Towing with a Stability Control System

When towing, the sound of the stability control system might be heard. The system is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid situations that require heavy braking and sudden turns.

Passing

More passing distance is needed when towing a trailer. Because the rig is longer, it is necessary to go farther beyond the passed vehicle before returning to the lane.

Backing Up

Hold the bottom of the steering wheel with one hand. To move the trailer to the left, move your hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

Making Turns

Caution
Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.

When turning with a trailer, make wider turns than normal so the trailer will not strike soft shoulders, curbs, road signs, trees, or other objects. Use the turn signal well in advance and avoid jerky or sudden maneuvers.

Turn Signals When Towing a Trailer

The turn signal indicators on the instrument cluster flash whenever signaling a turn or lane change. Properly hooked up, the trailer lamps also flash, telling other drivers the vehicle is turning, changing lanes, or stopping.

When towing a trailer, the arrows on the instrument cluster flash for turns even if the bulbs on the trailer are burned out. Check occasionally to be sure the trailer bulbs are still working.

Driving on Grades

Reduce speed and shift to a lower gear before starting down a long or steep downgrade. If the transmission is not shifted down, the brakes might have to be used so much that they would get hot and no longer work well.

The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.

When towing at high altitude on steep uphill grades, engine coolant boils at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle could show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating* ⇨ *254*.

Parking on Hills

⚠ Warning

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the brake pedal until the chocks absorb the load.
4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
5. Release the brake pedal.

Leaving After Parking on a Hill

1. Apply and hold the brake pedal while you:
   - Start the engine.
   - Shift into a gear.
   - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance When Trailer Towing

The vehicle needs service more often when pulling a trailer. See the *Maintenance Schedule* ⇨ *332*. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system, and brake system. Inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Engine Cooling When Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating* ⇨ *254*.

Trailer Towing

Before pulling a trailer, there are three important considerations that have to do with weight:

- The weight of the trailer.
- The weight of the trailer tongue.
- The total weight on the vehicle's tires.

Weight of the Trailer

How heavy can a trailer safely be?

It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature and how much the vehicle is used to pull a trailer are all important. It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry. See "Weight of the Trailer Tongue" later in this section.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Use the following chart to determine how much the vehicle can weigh, based upon the vehicle model and options.

Vehicle	Maximum Trailer Weight	GCWR*	Maximum Tongue Weight
3.6L Engine, FWD without Trailering Package	1 134 kg (2,500 lb)	3 185 kg (7,022 lb)	113 kg (250 lb)
3.6L Engine, FWD with Trailering Package	1 588 kg (3,500 lb)	3 640 kg (8,025 lb)	159 kg (350 lb)
3.6L Engine, AWD without Trailering Package	1 134 kg (2,500 lb)	3 270 kg (7,209 lb)	113 kg (250 lb)
3.6L Engine, AWD with Trailering Package	1 588 kg (3,500 lb)	3 725 kg (8,212 lb)	159 kg (350 lb)
*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversions. The GCWR for the vehicle should not be exceeded.			

Ask your dealer for trailering information or advice.

Weight of the Trailer Tongue

The tongue load (1) of any trailer is an important weight to measure because it affects the total gross weight of the vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo carried in it, and the people who will be riding in the vehicle. If there are a lot of options, equipment, passengers or cargo in the vehicle, it will reduce the tongue weight the vehicle can carry, which will also reduce the trailer weight the vehicle can tow. If towing a trailer, the tongue load must be added to the GVW because the vehicle will be carrying that weight, too. See *Vehicle Load Limits* ⇨ *182* for more information about the vehicle's maximum load capacity.

1 2

If a weight-carrying hitch or a weight-distributing hitch is being used, the trailer tongue (1) should weigh 10-15 percent of the total loaded trailer weight (2).

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

Trailering may be limited by the vehicle's ability to carry tongue weight. Tongue weight cannot cause the vehicle to exceed the GVWR (Gross Vehicle Weight Rating) or the RGAWR (Rear Gross Axle Weight Rating). The effect of additional weight may reduce the trailering capacity more than the total of the additional weight.

It is important that the vehicle does not exceed any of its ratings — GCWR, GVWR, RGAWR, Maximum Trailer Rating or Tongue Weight. The only way to be sure it is not exceeding any of these ratings is to weigh the vehicle and trailer.

Total Weight on the Vehicle's Tires

Be sure the vehicle's tires are inflated to the upper limit for cold tires. These numbers can be found on the Certification label or see *Vehicle Load Limits* ⇨ *182*. Make sure not to go over the GVW limit for the vehicle, or the GAWR, including the weight of the trailer tongue. If using a weight distributing hitch, make sure not to go over the rear axle limit before applying the weight distribution spring bars.

Towing Equipment

Hitches

It is important to have the correct hitch equipment. Crosswinds, large trucks going by, and rough roads are a few reasons why the right hitch is needed.

- The rear bumper on the vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will any holes be made in the body of the vehicle when the trailer hitch is installed? If there are, then be sure to seal the holes later when the hitch is removed. If the holes are not sealed, dirt, water, and deadly carbon monoxide (CO) from the exhaust can get into the vehicle. See *Engine Exhaust* ⇨ *193*.

Hitch Cover

To remove the hitch cover, if equipped:

1. Turn the fasteners on the lower tabs 90 degrees counterclockwise.

2. Lift the lower edge of the cover about 45 degrees.
3. Pull the cover downward to disengage the upper attachments.

To reinstall the hitch cover:

1. Hold the cover at a 45 degree angle to the vehicle and push the upper tabs in the hitch cover into the slots in the fascia.
2. Move the bottom of the cover forward until the lower tabs line up with the lower fascia slots.
3. Snap the hitch cover into place by pushing the upper corners forward.
4. Turn the fasteners on the lower tabs 90 degrees clockwise to lock the cover in place.

Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Always leave just enough slack so the rig can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

A loaded trailer that weighs more than 450 kg (1,000 lb) needs to have its own brake system that is adequate for the weight of the trailer. Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted, and maintained properly.

Because the vehicle has antilock brakes, do not tap into the vehicle's brake system. If you do, both brake systems will not work well, or at all.

Trailer Sway Control (TSC)

The vehicle has a TSC feature as part of the StabiliTrak system. If TSC detects that the trailer is swaying, the vehicle's brakes are automatically applied.

When TSC is applying the brakes, the TCS/StabiliTrak indicator light flashes to notify the driver to reduce speed. If the trailer continues to sway, StabiliTrak will reduce engine torque to help slow the vehicle.

TSC will not function if StabiliTrak is turned off. See *Traction Control/ Electronic Stability Control* ⇨ *202*.

Conversions and Add-Ons

Add-On Electrical Equipment

⚠ Warning

The Data Link Connector (DLC) is used for vehicle service and Emission Inspection/ Maintenance testing. See *Malfunction Indicator Lamp (Check Engine Light)* ⇨ *125*.
A device connected to the DLC — such as an aftermarket fleet or driver-behavior tracking device — may interfere with vehicle systems. This could affect vehicle operation and cause a crash. Such devices may also access information stored in the vehicle's systems.

Caution

Some electrical equipment can damage the vehicle or cause components to not work and would not be covered by the vehicle warranty. Always check with your dealer before adding electrical equipment.

Add-on equipment can drain the vehicle's 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see *Servicing the Airbag-Equipped Vehicle* ⇨ *79* and *Adding Equipment to the Airbag-Equipped Vehicle* ⇨ *79*.

Vehicle Care

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General Information

For service and parts needs, visit your dealer. You will receive genuine GM parts and GM-trained and supported service people.

Genuine GM parts have one of these marks:

ACDelco

Genuine GM | Parts

GM Accessories

California Proposition 65 Warning

WARNING: Most motor vehicles, including this one, contain and/or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems, many fluids, and some component wear by-products contain and/or emit these chemicals.

See *Battery - North America* ⇨ *259* and *Jump Starting - North America* ⇨ *314*.

California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, safety belt pretensioners, and lithium batteries contained in Remote Keyless Entry transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.

Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to suspension components caused by modifying vehicle height outside of factory settings will not be covered by the warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorize the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle* ⇨ *79*.

Vehicle Checks

Doing Your Own Service Work

⚠ Warning

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner manual procedures and consult the service manual for your vehicle before doing any service work.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can. To order the proper service manual, see *Service Publications Ordering Information* ⇨ *355*.

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle* ⇨ *79*.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records* ⇨ *342*.

Caution
Even small amounts of contamination can cause damage to vehicle systems. Do not allow contaminants to contact the fluids, reservoir caps, or dipsticks.

Hood

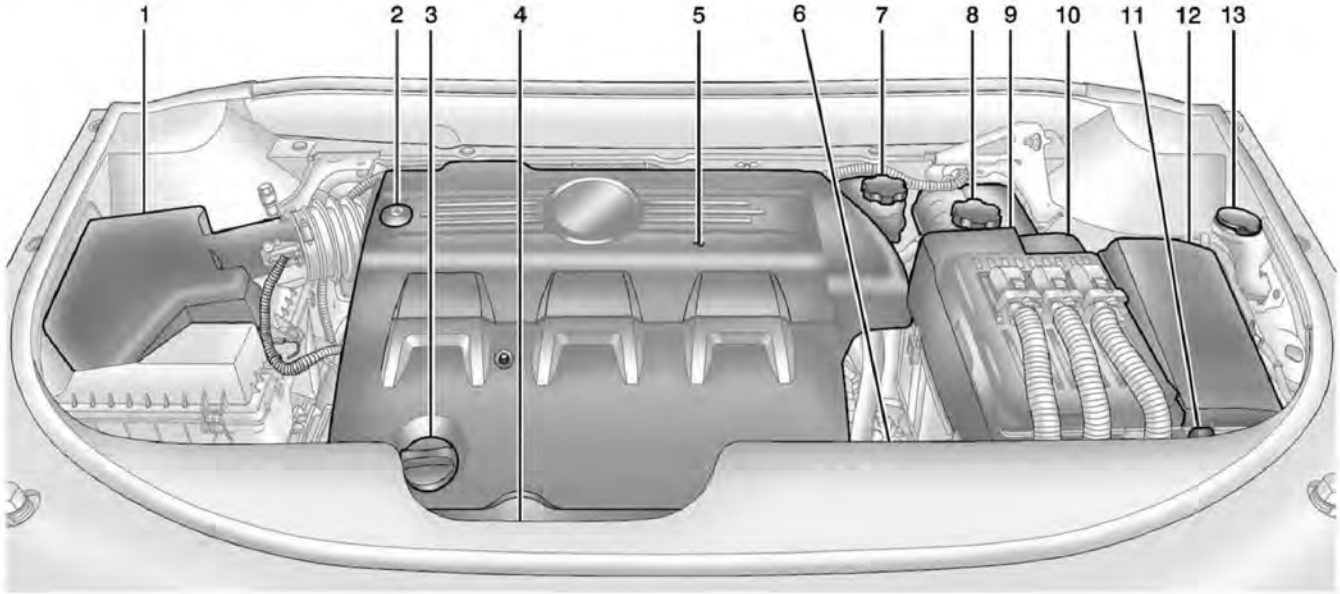
To open the hood:

1. Pull the release handle with the above symbol on it. It is located below the instrument panel to the left of the steering wheel.

2. Move the secondary hood release lever up to release the striker. The lever is located near the middle of the hood.
3. Lift the hood.

Before closing the hood, be sure all the filler caps are on properly.

Engine Compartment Overview



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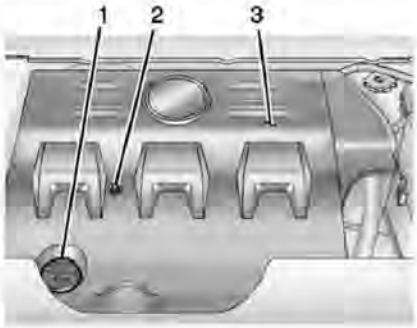
1. *Engine Air Cleaner/Filter* ⇨ *247*.
2. Power Steering Reservoir and Cap (Under Engine Cover). See *Power Steering Fluid* ⇨ *256*.
3. Engine Oil Fill Cap. See *Engine Oil* ⇨ *243*.
4. Engine Oil Dipstick (Out of View). See *Engine Oil* ⇨ *243*.
5. *Engine Cover* ⇨ *243*.
6. Transmission Fluid Cap and Dipstick (Out of View). See *Automatic Transmission Fluid* ⇨ *247*.
7. Brake Fluid Reservoir. See *Brakes* ⇨ *257*.
8. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant* ⇨ *249*.
9. Battery (Out of View). See *Battery - North America* ⇨ *259*.
10. Remote Positive (+) Terminal. See *Jump Starting - North America* ⇨ *314*.
11. Remote Negative (−) Terminal (Out of View). See *Jump Starting - North America* ⇨ *314*.
12. *Engine Compartment Fuse Block* ⇨ *271*.
13. Windshield Washer Fluid Reservoir. See *Washer Fluid* ⇨ *256*.

Engine Cover



1. Oil Fill Cap
2. Engine Cover Bolt
3. Engine Cover

To remove:

1. Remove the oil fill cap (1).
2. Remove the engine cover bolt (2).
3. Raise the engine cover (3) to release from the retainers.
4. Lift and remove the engine cover.
5. Reverse Steps 1–4 to reinstall engine cover.

Engine Oil

To ensure proper engine performance and long life, careful attention must be paid to engine oil. Following these simple, but important steps will help protect your investment:

- Use engine oil approved to the proper specification and of the proper viscosity grade. See "Selecting the Right Engine Oil" in this section.
- Check the engine oil level regularly and maintain the proper oil level. See "Checking Engine Oil" and "When to Add Engine Oil" in this section.

- Change the engine oil at the appropriate time. See *Engine Oil Life System* ⇨ *246*.
- Always dispose of engine oil properly. See "What to Do with Used Oil" in this section.

Checking Engine Oil

It is a good idea to check the engine oil level at each fuel fill. In order to get an accurate reading, the vehicle must be on level ground. The engine oil dipstick handle is a loop. See *Engine Compartment Overview* ⇨ *242* for the location of the engine oil dipstick.

1. If the engine has been running recently, turn off the engine and allow several minutes for the oil to drain back into the oil pan. Checking the oil level too soon after engine shutoff will not provide an accurate oil level reading.

⚠ Warning

The engine oil dipstick handle may be hot; it could burn you. Use a towel or glove to touch the dipstick handle.

2. Pull out the dipstick and wipe it with a clean paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

When to Add Engine Oil

If the oil is below the cross-hatched area at the tip of the dipstick, add 1 L (1 qt) of the recommended oil and then recheck the level. See "Selecting the Right Engine Oil" in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications* ⇨ *344*.

Caution

Do not add too much oil. Oil levels above or below the acceptable operating range shown on the dipstick are harmful to the engine. If you find that you have an oil level above the operating range, i.e., the engine has so much oil that the oil level gets above the cross-hatched area that shows the proper operating range, the engine could be damaged. You should drain out the excess oil or limit driving of the vehicle and seek a service professional to remove the excess amount of oil.

See *Engine Compartment Overview* ⇨ *242* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when finished.

Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade. See *Recommended Fluids and Lubricants* ⇨ *340*.

Specification

Ask for and use engine oils that meet the dexos1™ specification. Engine oils that have been approved by GM as meeting the dexos1 specification are marked with the dexos1 approved logo. See www.gmdexos.com.

Caution
Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty.

Viscosity Grade

Use SAE 5W-30 viscosity grade engine oil.

Cold Temperature Operation: In an area of extreme cold, where the temperature falls below −29 °C (−20 °F), an SAE 0W-30 oil may be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, it is recommended to select an oil of the correct specification. See "Specification" earlier in this section.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils meeting the dexos1 specification are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the

trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Engine Oil Life System

When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. See *Engine Oil Messages* ⇨ *140*. Change the oil as soon as possible within the next 1 000 km (600 mi). It is possible that, if driving under the best conditions, the oil life system might indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. To reset the system:

1. Using the DIC controls on the right side of the steering wheel, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC)* ⇨ *134*. When remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages* ⇨ *140*.
2. Press SEL on the DIC controls and hold SEL down for a few seconds to clear the CHANGE ENGINE OIL SOON message and reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

The system is reset when the CHANGE ENGINE OIL SOON message is off.

If the CHANGE ENGINE OIL SOON message comes back on when the vehicle is started, the engine oil life system has not been reset. Repeat the procedure.

Automatic Transmission Fluid

A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer and have it repaired as soon as possible.

Change the fluid and filter at the intervals listed in *Maintenance Schedule* ⇨ *332*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants* ⇨ *340*.

Engine Air Cleaner/Filter

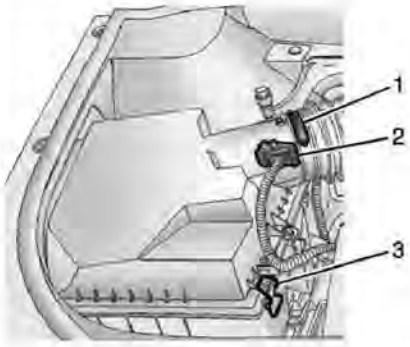
See *Engine Compartment Overview* ⇨ *242* for the location of the engine air cleaner/filter.

When to Inspect the Engine Air Cleaner/Filter

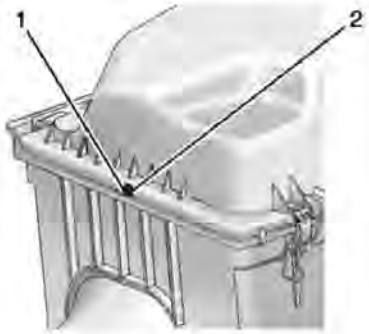
For intervals on changing and inspecting the engine air cleaner/filter, see *Maintenance Schedule* ⇨ *332*.

How to Inspect the Engine Air Cleaner/Filter

Do not start the engine or have the engine running with the engine air cleaner/filter housing open. Before removing the engine air cleaner/filter, make sure that the engine air cleaner/filter housing and nearby components are free of dirt and debris. Remove the engine air cleaner/filter. Lightly tap and shake the engine air cleaner/filter (away from the vehicle), to release loose dust and dirt. Inspect the engine air cleaner/filter for damage, and replace if damaged. Do not clean the engine air cleaner/filter or components with water or compressed air.



1. Air Duct Clamp
2. Electrical Connector
3. Retaining Clips



1. Cover Cut Outs
2. Air Filter Tabs

To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood* ⇨ *241*.
2. Locate the air filter housing on the front passenger side of the engine compartment. See *Engine Compartment Overview* ⇨ *242*.
3. Disconnect the outlet duct by loosening the air duct clamp (1).
4. Disconnect the electrical connector (2). First, remove the connector lock clip at the bottom of the connector, then press on the top and bottom of the connector to remove.
5. Lift the retaining clips (3) on the air filter housing.
6. Tilt and lift the cover slightly upward and slide the cover away from outside edge of the vehicle. Remove the air filter.
7. To install the air filter, place filter inside box where the pleats fit in between the tabs inside the lower box. Ensure that the cover cut outs (1) on both sides match the air filter tabs (2) on both sides.
8. Replace air cleaner cover by inserting the four tabs into the slots. Lower cover to meet bottom of the box. Attach the retaining clips (3).
9. Reconnect outlet duct to the cover and tighten the air duct clamp (1).
10. Reconnect the electrical connector (2). Install connector lock clip to the bottom of the connector.

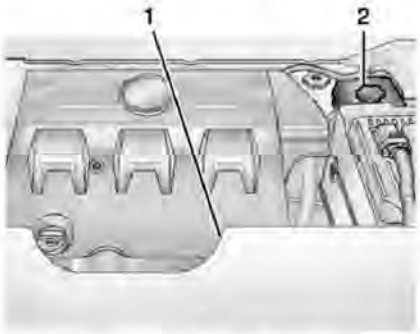
⚠ Warning

Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

Caution

If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when you are driving.

Cooling System



1. Engine Cooling Fan (Out of View)
2. Engine Coolant Surge Tank and Pressure Cap

⚠ Warning

An electric engine cooling fan under the hood can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood electric fan.

If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. The vehicle should be parked on a level surface.

The coolant level should be between the MIN and MAX lines. If it is not, the vehicle may have a leak at the radiator hoses, heater hoses, radiator, water pump, or somewhere else in the cooling system.

⚠ Warning

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.

If there seems to be no leak, with the engine on, check to see if the engine cooling fan is running. If the engine is overheating, the fan should be running. If it is not, the vehicle needs service. Turn off the engine.

Caution

Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner. Any repairs would not be covered by the vehicle warranty. Always use DEX-COOL (silicate-free) coolant in the vehicle.

Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL® engine coolant. This coolant needs to be checked and replaced at appropriate intervals. See *Maintenance Schedule* ⇨ *332*.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating* ⇨ *254*.

What to Use

⚠ Warning

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. If using this mixture, nothing else needs to be added. This mixture:

- Gives freezing protection down to −37 °C (−34 °F), outside temperature.
- Gives boiling protection up to 129 °C (265 °F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminum parts.
- Helps keep the proper engine temperature.

Caution

If improper coolant mixture, inhibitors, or additives are used in the vehicle cooling system, the engine could overheat and be damaged. Too much water in the mixture can freeze and crack engine cooling parts. The repairs

(Continued)

Caution (Continued)

would not be covered by the vehicle warranty. Use only the proper mixture of engine coolant for the cooling system. See *Recommended Fluids and Lubricants* ⇨ *340*.

Never dispose of engine coolant by putting it in the trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

Checking Coolant

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. If coolant is visible but the coolant level mark is not visible, you can use the top rib on the middle of the coolant surge tank as a reference to add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant, but be sure the cooling system is cool before this is done. See *Engine Overheating* ⇨ *254*.

The coolant surge tank is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview* ⇨ *242*.

How to Add Coolant to the Coolant Surge Tank

Caution

This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.

⚠ Warning

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. Never turn the cap when the cooling system, including the surge tank pressure cap, is hot. Wait for the cooling system and surge tank pressure cap to cool.

⚠ Warning

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or

(Continued)

Warning (Continued)

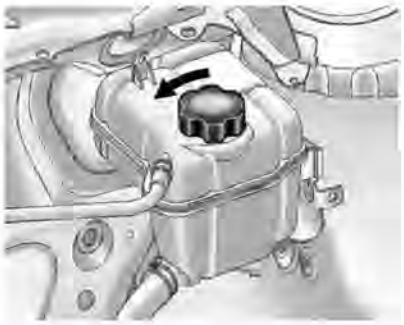
others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Caution

In cold weather, water can freeze and crack the engine, radiator, heater core, and other parts. Use the recommended coolant and the proper coolant mixture.

⚠ Warning

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.



1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This will allow any pressure still left to be vented out the discharge hose.
2. Keep turning the pressure cap slowly and remove it.
3. Fill the coolant surge tank with the proper mixture to the indicated level mark.
4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper mixture to the coolant surge tank until the level reaches the indicated level mark.
5. Replace the pressure cap tightly.
6. Verify coolant level after the engine is shut off and the coolant is cold. If necessary, repeat coolant fill procedure Steps 1-6.

   If the coolant still is not at the proper level when the system cools down again, see your dealer.

Caution

If the pressure cap is not tightly installed, coolant loss and possible engine damage may occur. Be sure the cap is properly and tightly secured.

The cooling system in the vehicle is filled with DEX-COOL® engine coolant. This coolant needs to be checked and replaced at appropriate intervals. See *Maintenance Schedule* ⇨ *332*.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating* ⇨ *254*.

How to Add Coolant to the Coolant Surge Tank

Caution

This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.

⚠ Warning

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. Never turn

(Continued)

Warning (Continued)

the cap when the cooling system, including the surge tank pressure cap, is hot. Wait for the cooling system and surge tank pressure cap to cool.

⚠ Warning

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Caution

In cold weather, water can freeze and crack the engine, radiator, heater core, and other parts. Use the recommended coolant and the proper coolant mixture.

⚠ Warning

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.

1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This will allow any pressure still left to be vented out the discharge hose.
2. Keep turning the pressure cap slowly and remove it.
3. Fill the coolant surge tank with the proper mixture to the indicated level mark.
4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper mixture to the coolant surge tank until the level reaches the indicated level mark.
5. Replace the pressure cap tightly.
6. Verify coolant level after the engine is shut off and the coolant is cold. If necessary, repeat coolant fill procedure Steps 1–6.

   If the coolant still is not at the proper level when the system cools down again, see your dealer.

Caution

If the pressure cap is not tightly installed, coolant loss and possible engine damage may occur. Be sure the cap is properly and tightly secured.

Engine Overheating

The vehicle has an indicator to warn of engine overheating.

There is an engine coolant temperature warning light on the vehicle's instrument cluster. See *Engine Coolant Temperature Gauge* ⇨ *122*.

If the decision is made not to lift the hood when this warning appears, but instead get service help right away. See *Roadside Service* ⇨ *349*.

If the decision is made to lift the hood, make sure the vehicle is parked on a level surface.

Then check to see if the engine cooling fans are running. If the engine is overheating, both fans should be running. If they are not, do not continue to run the engine and have the vehicle serviced.

Caution

Running the engine without coolant may cause damage or a fire. Vehicle damage would not be covered by the vehicle warranty.

If Steam Is Coming from the Engine Compartment

⚠ Warning

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down.

(Continued)

Warning (Continued)

Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when the engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop the engine if it overheats, and get out of the vehicle until the engine is cool.

If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day.
- Stops after high-speed driving.
- Idles for long periods in traffic.
- Tows a trailer.

If the overheat warning displays with no sign of steam:

1. Turn the air conditioning off.
2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
3. When it is safe to do so, pull off the road, shift to P (Park) or N (Neutral), and let the engine idle.

If the temperature overheat gauge is no longer in the overheat zone or an overheat warning no longer displays, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe vehicle distance from the vehicle in front. If the warning does not come back on, continue to drive normally and have the cooling system checked for proper fill and function.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

Power Steering Fluid

See *Engine Compartment Overview* ⇨ *242* for reservoir location.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless a leak is suspected in the system or unusual noise is heard. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

To check the power steering fluid:

1. Turn the engine off and let the engine compartment cool down.
2. Remove the engine cover, if required. See *Engine Cover* ⇨ *243*.
3. Wipe the cap and the top of the reservoir clean.
4. Unscrew the cap and wipe the dipstick with a clean rag.
5. Replace the cap and completely tighten it.
6. Remove the cap again and look at the fluid level on the dipstick.

The level should be within the HOT mark. If necessary, add only enough fluid to bring the level within the mark.

What to Use

Caution
Use of the incorrect fluid may damage the vehicle and the damages may not be covered by the vehicle warranty. Always use the correct fluid listed in *Recommended Fluids and Lubricants* ⇨ *340*.

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants* ⇨ *340*. Always use the proper fluid.

Washer Fluid

What to Use

When windshield washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid

The WASHER FLUID LOW ADD FLUID message appears on the Driver Information Center (DIC) when the fluid level is low. See *Washer Fluid Messages* ⇨ *146*.

Open the cap with the washer symbol on it. Add washer fluid up to the fill mark. See *Engine Compartment Overview* ⇨ *242* for reservoir location.

Caution

- Do not use washer fluid that contains any type of water repellent coating. This can cause the wiper blades to chatter or skip.

(Continued)

Caution (Continued)

- Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.
- Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.
- When using concentrated washer fluid, follow the manufacturer instructions for adding water.
- Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.

Brakes

Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or can be heard all the time when the vehicle is moving, except when applying the brake pedal firmly.

⚠ Warning

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

Caution

Continuing to drive with worn-out brake pads could result in costly brake repair.

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications. See *Capacities and Specifications* ⇨ *344*.

Brake pads should be replaced as complete sets.

Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service may be required.

Replacing Brake System Parts

Always replace brake system parts with new, approved replacement parts. If this is not done, the brakes may not work properly. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed or if parts are improperly installed.

Brake Fluid

The brake master cylinder reservoir is filled with GM approved DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview* ⇨ *242* for the location of the reservoir.

Checking Brake Fluid

With the vehicle in P (Park) on a level surface, the brake fluid level should be between the minimum and maximum marks on the brake fluid reservoir.

There are only two reasons why the brake fluid level in the reservoir may go down:

- Normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake hydraulic system. Have the brake hydraulic system fixed. With a leak, the brakes will not work well.

Always clean the brake fluid reservoir cap and the area around the cap before removing it.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove fluid, as necessary, only when work is done on the brake hydraulic system.

⚠ Warning

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light* ⇨ *127*.

Brake fluid absorbs water over time which degrades the effectiveness of the brake fluid. Replace brake fluid at the specified intervals to prevent increased stopping distance. See *Maintenance Schedule* ⇨ *332*.

What to Add

Use only GM approved DOT 3 brake fluid from a clean, sealed container. See *Recommended Fluids and Lubricants* ⇨ *340*.

⚠ Warning

The wrong or contaminated brake fluid could result in damage to the brake system. This could result in the loss of braking leading to a possible injury. Always use the proper GM approved brake fluid.

Caution

If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Immediately wash off any painted surface.

Battery - North America

The original equipment battery is maintenance free. Do not remove the cap and do not add fluid.

Refer to the replacement number on the original battery label when a new battery is needed.

⚠ Warning

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. **WASH HANDS AFTER HANDLING.** See *California Proposition 65 Warning* ⇨ *239*.

Vehicle Storage

⚠ Warning

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. See *Jump Starting - North America* ⇨ *314* for tips on working around a battery without getting hurt.

Infrequent Usage: Remove the black, negative (−) cable from the battery to keep the battery from running down.

Extended Storage: Remove the black, negative (−) cable from the battery or use a battery trickle charger.

All-Wheel Drive

Transfer Case

Under normal driving conditions, transfer case fluid does not require maintenance unless there is a fluid leak or unusual noise. If required, have the transfer case serviced by your dealer.

Starter Switch Check

⚠ Warning

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.
2. Apply both the parking brake and the regular brake.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

Automatic Transmission Shift Lock Control Function Check

⚠ Warning

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.
2. Apply the parking brake. Be ready to apply the regular brake immediately if the vehicle begins to move.
3. With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the shift lever out of P (Park) with normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

Park Brake and P (Park) Mechanism Check

⚠ Warning

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front

(Continued)

Warning (Continued)

of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

Wiper Blade Replacement

Windshield wiper blades should be inspected for wear or cracking.

It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn. For proper windshield wiper blade length and type, see *Maintenance Replacement Parts* ⇨ *341*.

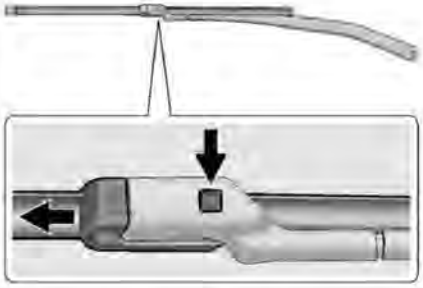
Caution

Allowing the wiper arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that occurs would not be covered by the vehicle warranty. Do not allow the wiper arm to touch the windshield.

Front Wiper Blade Replacement

To replace the wiper blade assembly:

1. Pull the windshield wiper assembly away from the windshield.



2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
3. Remove the wiper blade.
4. Reverse Steps 1–3 for wiper blade replacement.

Rear Wiper Blade Replacement

The rear wiper blade and wiper arm have a cover for protection. The cover must be removed before the wiper blade can be replaced.

To remove the cover:

1. Slide a plastic tool under the cover and push upward to unsnap.
2. Slide the cover toward the wiper blade tip to unhook it from the blade assembly.
3. Remove the cover.
4. After wiper blade replacement, ensure that the cover hook slides into the slot in the blade assembly.
5. Snap the cover down to secure.

To remove the wiper blade:

1. Lift the wiper arm away from the window.
2. Push the release lever (2) to disengage the hook and push the wiper arm (1) out of the blade assembly (3).
3. Push the new blade assembly securely on the wiper arm until the release lever clicks into place.
4. Replace the wiper cover.

Windshield Replacement

Driver Assistance Systems

When a windshield replacement is needed and the vehicle is equipped with a front-looking camera sensor for the Driver Assistance Systems, the windshield must be installed according to GM specifications for these systems to work properly. If it is not, there may be unexpected behavior and/or messages from these systems. See *Object Detection System Messages* ⇨ *141*.

Headlamp Aiming

Headlamp aim has been preset and should need no further adjustment.

If the vehicle is damaged in a crash, the headlamp aim may be affected. If adjustment to the headlamps is necessary, see your dealer.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs* ⇨ *270*.

For any bulb changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

⚠ Warning

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

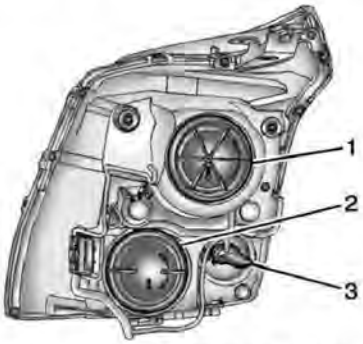
High Intensity Discharge (HID) Lighting

⚠ Warning

The high intensity discharge lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.

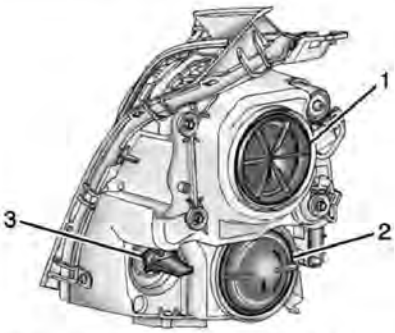
After an HID headlamp bulb has been replaced, the beam might be a slightly different shade than it was originally. This is normal.

Headlamps



Base Headlamp Assembly (Rear View Passenger Side)

1. Low-Beam Headlamp/ Daytime Running Lamp (DRL)
2. High-Beam Headlamp
3. Turn Signal Lamp



Uplevel Headlamp Assembly (Rear View Driver Side)

1. High/Low-Beam Headlamp (To be replaced at dealer only)
2. Daytime Running Lamp (DRL)
3. Turn Signal Lamp

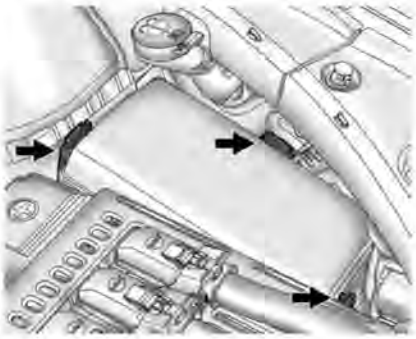
Driver Side

The removal of the underhood electrical center cover is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood* ⇨ *241*.

⚠ Warning

Liquids from environment or spillage and/or tools placed on top of or used in the underhood electrical center while the cover is removed can pose a risk of electrical shock/burn to anyone in the vicinity. These conditions can also cause damage to electrical components on the vehicle. Keep liquids and tools away from the underhood electrical center when the cover is removed.



2. Unlatch the three clips and lift up the underhood electrical center cover to remove.

Passenger Side

The removal of the air filter/cleaner assembly and base is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood* ⇨ *241*.
2. Remove the air cleaner/filter cover. See *Engine Air Cleaner/ Filter* ⇨ *247*.
3. Lift the air cleaner/filter assembly base to disengage from the three pins.

Low-Beam Headlamps/Daytime Running Lamps (DRL), High-Beam Headlamps (Base)

1. From the back side of the headlamp assembly, remove the top cap to replace the low-beam headlamp/DRL bulb.

2. From the back side of the headlamp assembly, remove the bottom cap to replace the high-beam headlamp bulb.
3. Disconnect the electrical connector.
4. Remove the bulb socket from the headlamp assembly.
5. Replace the bulb in the bulb socket.
6. Install the bulb socket in the headlamp assembly.
7. Connect the electrical connector.

8. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
9. For the driver side, reinstall the underhood electrical center cover by latching the three clips.
10. For the passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

High/Low-Beam Headlamps (Uplevel)

The high/low-beam headlamps on the uplevel are High Intensity Discharge (HID) and should be replaced by your dealer.

Daytime Running Lamp (DRL) (Uplevel)

1. From the back side of the headlamp assembly, remove the bottom cap to replace the DRL bulb.
2. Disconnect the electrical connector.
3. Remove the DRL bulb socket from the headlamp assembly.
4. Replace the bulb in the bulb socket.
5. Install the bulb socket in the headlamp assembly.
6. Connect the electrical connector.
7. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
8. For the driver side, reinstall the underhood electrical center cover by latching the three clips.
9. For the passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

Front Turn Signal Lamp (Base and Uplevel)

To replace the front turn signal lamp:

1. Remove the turn signal lamp bulb socket from the headlamp assembly.
2. Remove the turn signal lamp bulb from the socket.
3. Replace the bulb in the bulb socket.

4. Install the bulb socket in the headlamp assembly.
5. For the driver side, reinstall the underhood electrical center cover by latching the three clips.
6. For the passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

Turn Signal Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate* ⇨ 37.

2. Remove the push pin (1) on the taillamp cover (2).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten the snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.

6. Turn the turn signal lamp bulb socket counterclockwise to remove it from the taillamp assembly.
7. Pull the bulb straight out from the socket.
8. Press a new bulb into the socket, insert it into the taillamp assembly, and turn the bulb socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

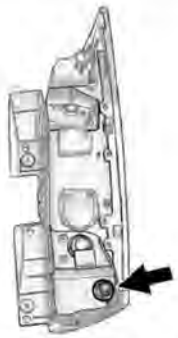
Back-Up Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate* ⇨ *37*.

2. Remove the push pin (1) on the taillamp cover (2).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from the snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.

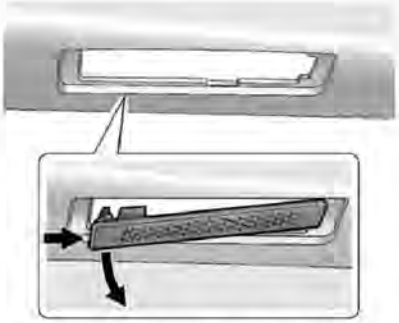


6. Disconnect the wiring harness connector from the back-up bulb/socket assembly.
7. Turn the back-up bulb socket counterclockwise to remove it from the taillamp assembly.
8. Install a new bulb/socket assembly into the taillamp assembly, and turn the bulb/socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

License Plate Lamp

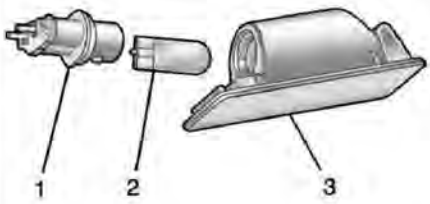
To replace one of these bulbs:

1. Open the liftgate. See *Liftgate* ⇨ *37*.



Passenger Side Shown, Driver Side Similar

2. Push the left end of the lamp assembly toward the right.
3. Turn the lamp assembly down to remove it from the liftgate.



4. Turn the bulb socket (1) counterclockwise to remove it from the lamp assembly (3).
5. Pull the bulb (2) straight out of the bulb socket.
6. Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install into the lamp assembly.
7. Turn the lamp assembly into the liftgate, engaging the clip side first.
8. Push on the lamp side opposite the clip until the lamp assembly snaps into place.

Replacement Bulbs

Exterior Lamp	Bulb Number
Back-up Lamp	Hyperclick PH16W
Daytime Running Lamp	7443 ULL
Headlamp High-Beam	9005LL
Headlamp Low-Beam	H11LL
License Plate Lamp	W5WLL
Turn Signal Front	7444NA
Tail/Turn Signal Rear	7440

For replacement bulbs not listed here, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect power devices in the vehicle.

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

Windshield Wipers

If the wiper motor overheats due to heavy snow or ice, the windshield wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windshield before using the windshield wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

Fuses and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit breakers. This greatly reduces the chance of damage caused by electrical problems.

To check a fuse, look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating.

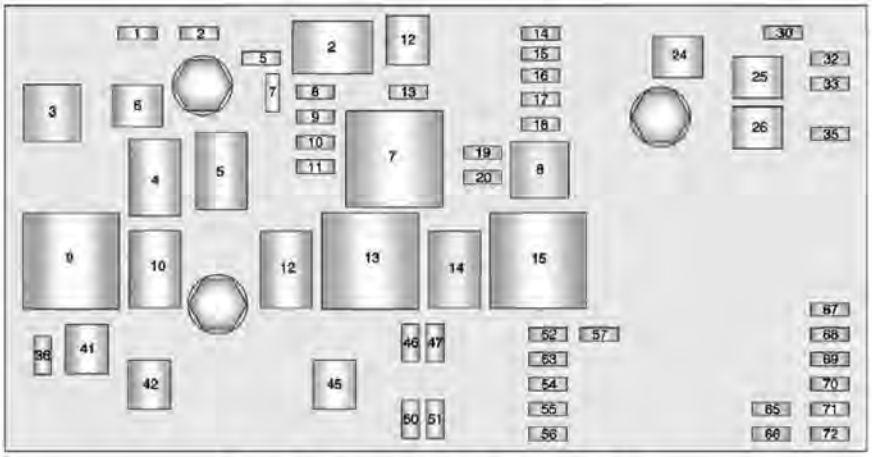
Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as possible.

To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse Block* ⇨ *271*, *Instrument Panel Fuse Block* ⇨ *274*, and *Rear Compartment Fuse Block* ⇨ *276*.

Engine Compartment Fuse Block

To remove the fuse block cover, press the clips on the cover and lift it straight up.

Caution
Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.



Engine Compartment Fuse Block

The vehicle may not be equipped with all of the fuses, relays, and features shown.

J-Case Fuses	Usage
6	Wiper
12	Vacuum Pump
24	Antilock Brake System Pump

J-Case Fuses	Usage
25	Rear Electrical Center 1
26	Rear Electrical Center 2
41	Cooling Fan 2
42	Starter
45	Cooling Fan 1

Mini Fuses	Usage
1	Engine Control Module Battery
2	Transmission Control Module Battery
5	Engine Control Module Run Crank
7	Post-Catalytic Converter O2 Sensor
8	Pre-Catalytic Converter O2 Sensor
9	Engine Control Module Powertrain
10	Fuel Injectors – Even
11	Fuel Injectors – Odd
13	Washer
14	Heated Steering Wheel
15	Not Used
16	Instrument Cluster/ Malfunction Indicator Lamp/Ignition
17	Air Quality Sensor

Mini Fuses	Usage
18	Not Used
19	Transmission Control Module Run Crank
20	Rear Electrical Center Run Crank
30	Switch Back Light
32	Battery Sense (Regulated Voltage Control)
33	Adaptive Forward Lighting
35	Electronic Brake Control Module
36	Air Conditioning Compressor Clutch
46	Low-Beam Headlamp – Right
47	Low-Beam Headlamp – Left
50	Front Fog Lamps
51	Horn
52	Fuel System Control Module

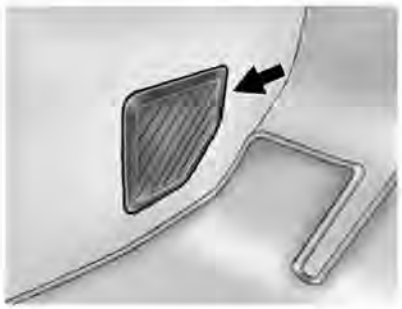
Mini Fuses	Usage
53	Headlamp Level
54	Sensing Diagnostic Module Ignition
55	High-Beam Headlamp – Right
56	High-Beam Headlamp – Left
57	Ignition Steering Column Lock
65	Trailer Right Stoplamp
66	Trailer Left Stoplamp
67	Spare
68	Spare
69	Spare
70	Spare
71	Spare
72	Spare

Mini Relays	Usage
7	Powertrain
9	Cooling Fan 2
13	Cooling Fan 1
15	Run/Crank

Micro Relays	Usage
2	Vacuum Pump
4	Wiper Control
5	Wiper Speed
10	Starter
12	Cool Fan 3
14	Low Beam/HID

U Micro Relays	Usage
3	Air Conditioning Compressor Clutch
8	Not Used

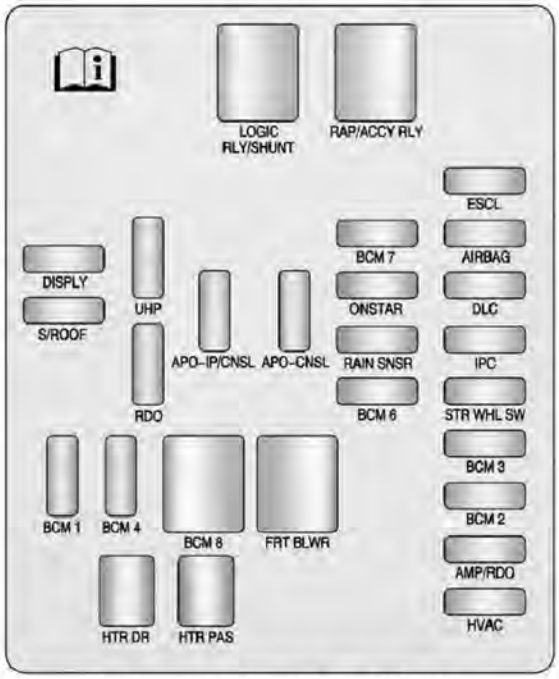
Instrument Panel Fuse Block



The instrument panel fuse block is located in the center console between the driver and passenger seats. To access the fuses, open the fuse panel door from the passenger side by pulling it out.

To reinstall the door, push the door back into its original location.

The vehicle may not be equipped with all of the fuses, relays and features shown.



Instrument Panel Fuse Block

Mini Fuses	Usage
DISPLY	Display
S/ROOF	Sunroof
UHP	Universal Handsfree Phone (If Equipped)
RDO	Radio
APO – IP/CNSL	Auxiliary Power Outlet – Instrument Panel/Console
APO – CNSL	Auxiliary Power Outlet – Floor Console
BCM 1	Body Control Module 3
BCM 4	Body Control Module 4
BCM 7	Body Control Module 7
ONSTAR	OnStar® System (If Equipped)

Mini Fuses	Usage
RAIN SNSR	Rain Sensor
BCM 6	Body Control Module 6
ESCL	Electronic Steering Column Lock
AIRBAG	Sensing and Diagnostic Module
DLC	Data Link Connector
IPC	Instrument Cluster
STR WHL SW	Steering Wheel Switch
BCM 3	Body Control Module 1
BCM 2	Body Control Module 2
AMP/RDO	Amplifier/Radio
HVAC	Heating Ventilation & Air Conditioning

J-Case Fuses	Usage
BCM 8	Body Control Module 8
FRT BLWR	Front Blower

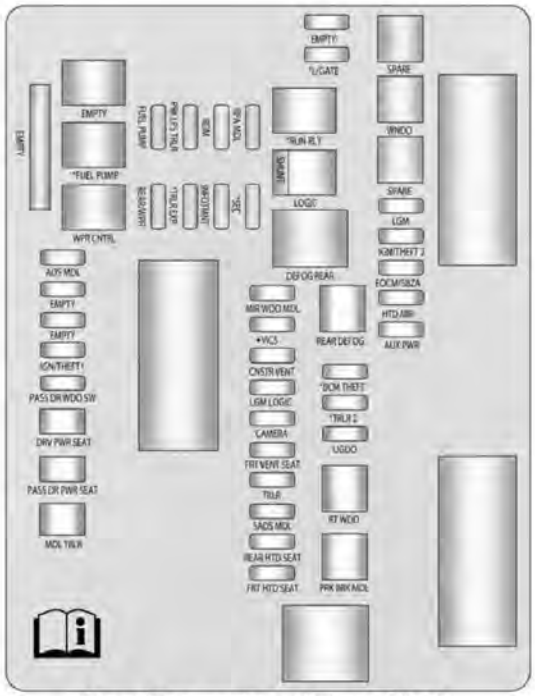
Relays	Usage
LOGIC RLY/ SHUNT	Logistics Relay/ Shunt
RAP/ ACCY RLY	Retained Accessory Power/ Accessory Relay

Breakers	Usage
HTR DR	Heated Driver Seat
HTR PAS	Heated Passenger Seat

Rear Compartment Fuse Block

The rear compartment fuse block is in the cargo area, on the driver side of the vehicle behind the lower trim panel. To open, turn the latch with a flat bladed tool and pull the trim panel from the edges to fold it down.

The vehicle may not be equipped with all of the fuses, relays, and features shown.



Rear Compartment Fuse Block

Fuses	Usage
AOS MDL	Automatic Occupant Sensing Module
AUX PWR	Auxiliary Power Outlet
* BCM THEFT	Body Control Module Theft
CAMERA	Rear Vision Camera
CNSTR VENT	Canister Vent
DRV PWR SEAT	Driver Power Seat
EOCM/ SBZA	External Object Calculating Module/ Side Blind Zone Alert
EMPTY	Not Used
FRT HTD SEAT	Front Heated Seats
FRT VENT SEAT	Front Ventilated Seats
FUEL PUMP	Fuel Pump
HTD MIR	Heated Mirror

Fuses	Usage
IGN/ THEFT 1	Ignition/Theft 1
IGN/ THEFT 2	Ignition/Theft 2
INFOTMNT	Infotainment
* L/GATE	Liftgate
LGM	Liftgate Module
LGM LOGIC	Liftgate Module Logic
MDL TRLR	Trailer Module
MIR WDO MDL	Mirror Window Module
PRK BRK MDL	Park Brake Module
PASS DR WDO SW	Passenger Door Window Switch
PASS DR PWR SEAT	Passenger/Driver Power Seats
PRK LPS TRLR	Trailer Park Lamps
RDM	Rear Drive Module

Fuses	Usage
REAR DEFOG	Rear Defog
REAR HTD SEAT	Rear Heated Seats
REAR/WPR	Rear Wiper
RT WDO	Right Window
RPA MDL	Rear Parking Assist Module
SADS MDL	Semi Active Damping System Module
* SEC	Security
SHUNT	Shunt
SPARE	Not Used
SPARE FUSES	Spare Fuses
* TRLR EXP	Trailer Export
TRLR	Trailer Module
* TRLR 2	Trailer 2
UGDO	Universal Garage Door Opener

Fuses	Usage
VICS	Vehicle Information Communications System (Export)
WNDO	Power Window

Relays	Usage
DEFOG REAR	Rear Window Defogger
* FUEL PUMP	Fuel Pump
LOGIC	Logistic Relay (Export)
* RUN RLY	Run Relay
SPARE	Not Used
WPR CONTRL	Wiper Control

*Denotes uplevel content.

Wheels and Tires

Tires

Every new GM vehicle has high-quality tires made by a leading tire manufacturer. See the warranty manual for information regarding the tire warranty and where to get service. For additional information refer to the tire manufacturer.

⚠ Warning

- Poorly maintained and improperly used tires are dangerous.
- Overloading the tires can cause overheating as a result of too much flexing. There could be a blowout and a serious crash. See *Vehicle Load Limits* ⇨ *182*.

(Continued)

Warning (Continued)

- Underinflated tires pose the same danger as overloaded tires. The resulting crash could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when the tires are cold.
- Overinflated tires are more likely to be cut, punctured, or broken by a sudden impact — such as when hitting a pothole. Keep tires at the recommended pressure.
- Worn or old tires can cause a crash. If the tread is badly worn, replace them.

(Continued)

Warning (Continued)

- Replace any tires that have been damaged by impacts with potholes, curbs, etc.
- Improperly repaired tires can cause a crash. Only the dealer or an authorized tire service center should repair, replace, dismount, and mount the tires.
- Do not spin the tires in excess of 56 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tires to explode.

See *Tire Pressure for High-Speed Operation* ⇨ *287* for inflation pressure adjustment for high-speed driving.

All-Season Tires

This vehicle may come with all-season tires. These tires are designed to provide good overall performance on most road surfaces and weather conditions. Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. Original equipment all-season tires can be identified by the last two characters of this TPC code, which will be "MS."

Consider installing winter tires on the vehicle if frequent driving on snow or ice-covered roads is expected. All-season tires provide adequate performance for most winter driving conditions, but they may not offer the same level of traction or performance as winter tires on snow or ice-covered roads. See *Winter Tires* ⇨ *279*.

Winter Tires

This vehicle was not originally equipped with winter tires. Winter tires are designed for increased traction on snow and ice-covered roads. Consider installing winter tires on the vehicle if frequent driving on ice or snow covered roads is expected. See your dealer for details regarding winter tire availability and proper tire selection. Also, see *Buying New Tires* ⇨ *293*.

With winter tires, there may be decreased dry road traction, increased road noise, and shorter tread life. After changing to winter tires, be alert for changes in vehicle handling and braking.

If using winter tires:

- Use tires of the same brand and tread type on all four wheel positions.
- Use only radial ply tires of the same size, load range, and speed rating as the original equipment tires.

Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y, and ZR speed rated tires. If winter

tires with a lower speed rating are chosen, never exceed the tire's maximum speed capability.

Summer Tires

This vehicle may come with high performance summer tires. These tires have a special tread and compound that are optimized for maximum dry and wet road performance. This special tread and compound will have decreased performance in cold climates, and on ice and snow. It is recommended that winter tires be installed on the vehicle if frequent driving at temperatures below approximately 5 °C (40 °F) or on ice or snow covered roads is expected. See *Winter Tires* ⇨ *279*.

Caution

High performance summer tires have rubber compounds that lose flexibility and may develop surface cracks in the tread area at temperatures below −7 °C

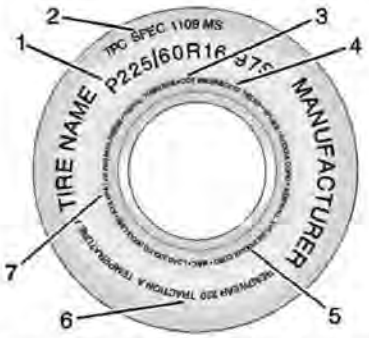
(Continued)

Caution (Continued)

(20 °F). Always store high performance summer tires indoors and at temperatures above −7 °C (20 °F) when not in use. If the tires have been subjected to −7 °C (20 °F) or less, let them warm up in a heated space to at least 5 °C (40 °F) for 24 hours or more before being installed or driving a vehicle on which they are installed. Do not apply heat or blow heated air directly on the tires. Always inspect tires before use. See *Tire Inspection* ⇨ *291*.

Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples show a typical passenger vehicle tire and a compact spare tire sidewall.



Passenger (P-Metric) Tire Example

(1) Tire Size : The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type, and service description. See the "Tire Size" illustration later in this section.

(2) TPC Spec (Tire Performance Criteria Specification) : Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall.

GM's TPC specifications meet or exceed all federal safety guidelines.

(3) DOT (Department of Transportation) : The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

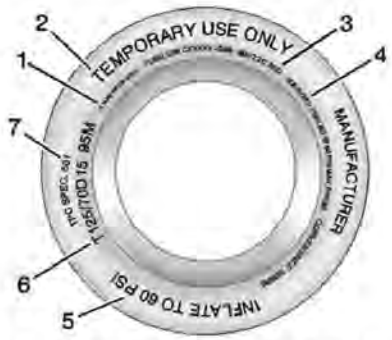
DOT Tire Date of Manufacture : The last four digits of the TIN indicate the tire manufactured date. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

(4) Tire Identification Number (TIN) : The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(5) Tire Ply Material : The type of cord and number of plies in the sidewall and under the tread.

(6) Uniform Tire Quality Grading (UTQG) : Tire manufacturers are required to grade tires based on three performance factors: treadwear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading ⇨ 295*.

(7) Maximum Cold Inflation Load Limit : Maximum load that can be carried and the maximum pressure needed to support that load.



Compact Spare Tire Example

(1) Tire Ply Material : The type of cord and number of plies in the sidewall and under the tread.

(2) Temporary Use Only : The compact spare tire or temporary use tire should not be driven at speeds over 80 km/h (50 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If the vehicle has a compact spare tire, see *Compact Spare Tire ⇨ 313* and *If a Tire Goes Flat ⇨ 298*.

(3) Tire Identification Number (TIN) : The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(4) Maximum Cold Inflation Load Limit : Maximum load that can be carried and the maximum pressure needed to support that load.

(5) Tire Inflation : The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure* ⇨ *285*.

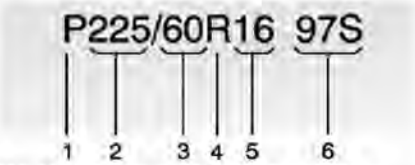
(6) Tire Size : A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(7) TPC Spec (Tire Performance Criteria Specification) : Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

Tire Designations

Tire Size

The following is an example of a typical passenger vehicle tire size.



(1) Passenger (P-Metric) Tire : The United States version of a metric tire sizing system. The letter P as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

(2) Tire Width : The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(3) Aspect Ratio : A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item 3 of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(4) Construction Code : A letter code is used to indicate the type of ply construction in the tire. The letter R means radial ply construction; the letter D means diagonal or bias ply construction; and the letter B means belted-bias ply construction.

(5) Rim Diameter : Diameter of the wheel in inches.

(6) Service Description : These characters represent the load index and speed rating of the tire. The load index represents the load carrying capacity a tire is certified to carry. The speed rating is the maximum speed a tire is certified to carry a load.

Tire Terminology and Definitions

Air Pressure : The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in kPa (kilopascal) or psi (pounds per square inch).

Accessory Weight : The combined weight of optional accessories. Some examples of optional accessories are automatic transmission, power windows, power seats, and air conditioning.

Aspect Ratio : The relationship of a tire's height to its width.

Belt : A rubber coated layer of cords between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead : The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire : A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure : The amount of air pressure in a tire, measured in kPa (kilopascal) or psi (pounds per square inch) before a tire has built up heat from driving. See *Tire Pressure* ⇨ *285*.

Curb Weight : The weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil, and coolant, but without passengers and cargo.

DOT Markings : A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation (DOT) Motor Vehicle Safety Standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand, and date of production.

GVWR : Gross Vehicle Weight Rating. See *Vehicle Load Limits* ⇨ *182*.

GAWR FRT : Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits* ⇨ *182*.

GAWR RR : Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits* ⇨ *182*.

Intended Outboard Sidewall : The side of an asymmetrical tire that must always face outward when mounted on a vehicle.

Kilopascal (kPa) : The metric unit for air pressure.

Light Truck (LT-Metric) Tire : A tire used on light duty trucks and some multipurpose passenger vehicles.

Load Index : An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

Maximum Inflation Pressure : The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.

Maximum Load Rating : The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum Loaded Vehicle Weight : The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Normal Occupant Weight : The number of occupants a vehicle is designed to seat multiplied by 68 kg (150 lb). See *Vehicle Load Limits* ⇨ *182*.

Occupant Distribution : Designated seating positions.

Outward Facing Sidewall : The side of an asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The side of the tire that contains a whitewall, bears white lettering, or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the other sidewall of the tire.

Passenger (P-Metric) Tire : A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

Recommended Inflation Pressure : Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Tire Pressure* ⇨ *285* and *Vehicle Load Limits* ⇨ *182*.

Radial Ply Tire : A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

Rim : A metal support for a tire and upon which the tire beads are seated.

Sidewall : The portion of a tire between the tread and the bead.

Speed Rating : An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

Traction : The friction between the tire and the road surface. The amount of grip provided.

Tread : The portion of a tire that comes into contact with the road.

Treadwear Indicators : Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1.6 mm (1/16 in) of tread remains. See *When It Is Time for New Tires* ⇨ *293*.

UTQGS (Uniform Tire Quality Grading Standards) : A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading* ⇨ *295*.

Vehicle Capacity Weight : The number of designated seating positions multiplied by 68 kg (150 lb) plus the rated cargo load. See *Vehicle Load Limits* ⇨ *182*.

Vehicle Maximum Load on the Tire : Load on an individual tire due to curb weight, accessory weight, occupant weight, and cargo weight.

Vehicle Placard : A label permanently attached to a vehicle showing the vehicle capacity weight and the original equipment tire size and recommended inflation pressure. See "Tire and Loading Information Label" under *Vehicle Load Limits* ⇨ *182*.

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

Caution

Neither tire underinflation nor overinflation is good. Underinflated tires, or tires that do not have enough air, can result in:

- Tire overloading and overheating which could lead to a blowout.
- Premature or irregular wear.
- Poor handling.
- Reduced fuel economy.

Overinflated tires, or tires that have too much air, can result in:

- Unusual wear.

(Continued)

Caution (Continued)

- Poor handling.
- Rough ride.
- Needless damage from road hazards.

The Tire and Loading Information label on the vehicle indicates the original equipment tires and the correct cold tire inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity. See *Vehicle Load Limits* ⇨ *182*.

How the vehicle is loaded affects vehicle handling and ride comfort. Never load the vehicle with more weight than it was designed to carry.

When to Check

Check the tires once a month or more. Do not forget the compact spare, if the vehicle has one. The cold compact spare tire pressure should be at 420 kPa (60 psi). See *Compact Spare Tire* ⇨ *313*.

How to Check

Use a good quality pocket-type gauge to check tire pressure. Proper tire inflation cannot be determined by looking at the tire. Check the tire inflation pressure when the tires are cold, meaning the vehicle has not been driven for at least three hours or no more than 1.6 km (1 mi).

Remove the valve cap from the tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement.

If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until the recommended pressure is reached. If the inflation pressure is high, press on the metal stem in the center of the tire valve to release air.

Recheck the tire pressure with the tire gauge.

Put the valve caps back on the valve stems to keep out dirt and moisture and prevent leaks. Use only valve caps designed for the vehicle by GM. TPMS sensors could be damaged and would not be covered by the vehicle warranty.

Tire Pressure for High-Speed Operation

⚠ Warning

Driving at high speeds, 160 km/h (100 mph) or higher, puts additional strain on tires. Sustained high-speed driving causes excessive heat buildup and can cause sudden tire failure. This could cause a crash, and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for high-speed operation. When speed limits and road conditions allow the vehicle to be driven at high speeds, make sure the tires are rated for high-speed operation, are in excellent condition, and are set to the correct cold tire inflation pressure for the vehicle load.

Vehicles with P235/65R18, P235/55R20, or 235/55R20 size tires require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold inflation pressure to the maximum inflation pressure shown on the tire sidewall, or 260 kPa (38 psi), whichever is lower. Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See *Vehicle Load Limits* ⇨ *182* and *Tire Pressure* ⇨ *285*.

The maximum load and inflation pressure is molded on the tire sidewall, in small letters, near the rim flange. It will read something like this: Maximum load 690 kg (1521 lbs) 300 kPa (44 psi) Max. Press.

Tire Pressure Monitor System

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS sensors monitor the air pressure in your tires and transmit tire pressure readings to a receiver located in the vehicle.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated.

Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can

lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

See *Tire Pressure Monitor Operation* ⇨ *288*.

See *Radio Frequency Statement* ⇨ *356*.

Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the tires and transmits the tire pressure readings to a receiver located in the vehicle.

When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits* ⇨ *182*.

A message to check the pressure in a specific tire displays in the Driver Information Center (DIC). The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure. Using the DIC, tire pressure levels can be viewed. For additional information and details

about the DIC operation and displays see *Driver Information Center (DIC)* ⇨ *134*.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tire and Loading Information label, attached to your vehicle, shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See *Vehicle Load Limits* ⇨ *182*, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure* ⇨ *285*.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection* ⇨ *291*, *Tire Rotation* ⇨ *292* and *Tires* ⇨ *278*.

Caution

Tire sealant materials are not all the same. A non-approved tire sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tire sealant is not covered by the vehicle warranty. Always use only the GM approved tire sealant available through your dealer or included in the vehicle.

Factory-installed Tire Inflator Kits use a GM approved liquid tire sealant. Using non-approved tire sealants could damage the TPMS sensors. See *Tire Sealant and Compressor Kit* ⇨ *300* for information regarding the inflator kit materials and instructions.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tire warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and DIC message should go off after the road tire is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.
- The TPMS sensor matching process was not done or not completed successfully after rotating the tires. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.

- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tires or wheels do not match the original equipment tires or wheels. Tires and wheels other than those recommended could prevent the TPMS from functioning properly. See *Buying New Tires* ⇨ *293*.
- Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning properly it cannot detect or signal a low tire condition. See your dealer for service if the TPMS malfunction light and DIC message comes on and stays on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the vehicle's tires or replacing one or more of the TPMS sensors. The TPMS sensor matching process should also be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message should go off at the next ignition cycle. The sensors are matched to the tire/wheel positions, using a TPMS relearn tool, in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear. See your dealer for service or to purchase a relearn tool. A TPMS relearn tool can also be purchased. See Tire Pressure Monitor Sensor Activation Tool at www.gmtoolsandequipment.com or call 1-800-GM TOOLS (1-800-468-6657).

There are two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is:

1. Set the parking brake.
2. Place the vehicle power mode in ON/RUN/START. See *Ignition Positions* ⇨ *187*.
3. Make sure the Tire Pressure info display option is turned on. The info displays on the DIC can be turned on and off through the Settings menu. See *Driver Information Center (DIC)* ⇨ *134*.
4. Use the five-way DIC control on the right side of the steering wheel to scroll to the Tire Pressure screen under the DIC info page. See *Driver Information Center (DIC)* ⇨ *134*.

5. Press and hold SEL in the center of the five-way DIC control.

   The horn sounds twice to signal the receiver is in relearn mode and the TIRE LEARNING ACTIVE message displays on the DIC screen.
6. Start with the driver side front tire.
7. Place the relearn tool against the tire sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tire and wheel position.
8. Proceed to the passenger side front tire, and repeat Step 7.
9. Proceed to the passenger side rear tire, and repeat Step 7.
10. Proceed to the driver side rear tire, and repeat Step 7. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
11. Shut the ignition off.
12. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

Tire Inspection

We recommend that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

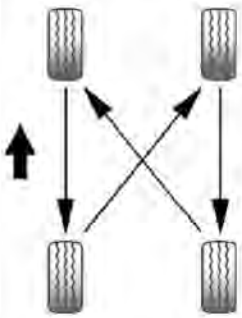
- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Tire Rotation

Tires should be rotated every 12 000 km (7,500 mi). See *Maintenance Schedule* ⇨ *332*.

Tires are rotated to achieve a more uniform wear for all tires. The first rotation is the most important.

Anytime unusual wear is noticed, rotate the tires as soon as possible, check for proper tire inflation pressure, and check for damaged tires or wheels. If the unusual wear continues after the rotation, check the wheel alignment. See *When It Is Time for New Tires* ⇨ *293* and *Wheel Replacement* ⇨ *297*.



Use this rotation pattern when rotating the tires.

Do not include the compact spare tire in the tire rotation.

Adjust the front and rear tires to the recommended inflation pressure on the Tire and Loading Information label after the tires have been rotated. See *Tire Pressure* ⇨ *285* and *Vehicle Load Limits* ⇨ *182*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation* ⇨ *288*.

Check that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications* ⇨ *344*.

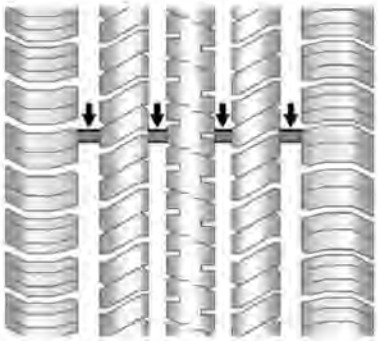
⚠ Warning

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

Lightly coat the center of the wheel hub with wheel bearing grease after a wheel change or tire rotation to prevent corrosion or rust build-up. Do not get grease on the flat wheel mounting surface or on the wheel nuts or bolts.

When It Is Time for New Tires

Factors such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tires.



Treadwear indicators are one way to tell when it is time for new tires. Treadwear indicators appear when the tires have only 1.6 mm (1/16 in) or less of tread remaining. See *Tire Inspection* ⇨ *291* and *Tire Rotation* ⇨ *292*.

The rubber in tires ages over time. This also applies to the spare tire, if the vehicle has one, even if it is never used. Multiple factors including temperatures, loading conditions, and inflation pressure maintenance affect how fast aging takes place. GM recommends that tires, including the spare if equipped, be replaced after six years, regardless of tread wear. The tire manufacture date is the last four digits of the DOT Tire Identification Number (TIN) which is molded into one side of the tire sidewall. The first two digits represent the week (01–52) and the last two digits, the year. For example, the third week of the year 2010 would have a four-digit DOT date of 0310.

Vehicle Storage

Tires age when stored normally mounted on a parked vehicle. Park a vehicle that will be stored for at least a month in a cool, dry, clean area away from direct sunlight to slow aging. This area should be free of grease, gasoline, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tires that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tires or raise the vehicle to reduce the weight from the tires.

Buying New Tires

GM has developed and matched specific tires for the vehicle. The original equipment tires installed were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. When replacement tires are needed, GM strongly recommends buying tires with the same TPC Spec rating.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of the

vehicle, including brake system performance, ride and handling, traction control, and tire pressure monitoring performance. GM's TPC Spec number is molded onto the tire's sidewall near the tire size. If the tires have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow. See *Tire Sidewall Labeling* ⇨ *280*.

GM recommends replacing worn tires in complete sets of four. Uniform tread depth on all tires will help to maintain the performance of the vehicle. Braking and handling performance may be adversely affected if all the tires are not replaced at the same time. If proper rotation and maintenance have been done, all four tires should wear out at about the same time. See *Tire Rotation* ⇨ *292*. However, if it is necessary to replace only one axle set of worn tires, place the new tires on the rear axle.

Winter tires with the same speed rating as the original equipment tires may not be available for H, V, W, Y and ZR speed rated tires. Never exceed the winter tires' maximum speed capability when using winter tires with a lower speed rating.

⚠ Warning

Tires could explode during improper service. Attempting to mount or dismount a tire could cause injury or death. Only your dealer or authorized tire service center should mount or dismount the tires.

⚠ Warning

Mixing tires of different sizes, brands, or types may cause loss of control of the vehicle, resulting in a crash or other vehicle damage. Use the correct size, brand, and type of tires on all wheels.

⚠ Warning

Using bias-ply tires on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tire and/or wheel could fail suddenly and cause a crash. Use only radial-ply tires with the wheels on the vehicle.

If the vehicle tires must be replaced with a tire that does not have a TPC Spec number, make sure they are the same size,

load range, speed rating, and construction (radial) as the original tires.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed. See *Tire Pressure Monitor System* ⇨ *287*.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See *Vehicle Load Limits* ⇨ *182*.

Different Size Tires and Wheels

If wheels or tires are installed that are a different size than the original equipment wheels and tires, vehicle performance, including its braking, ride and handling characteristics, stability, and resistance to rollover may be affected. If the vehicle has electronic systems such as antilock brakes, rollover airbags, traction control, electronic stability control, or All-Wheel Drive, the performance of these systems can also be affected.

⚠ Warning

If different sized wheels are used, there may not be an acceptable level of performance and safety if tires not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tire systems developed for the vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires* ⇨ *293* and *Accessories and Modifications* ⇨ *240*.

Uniform Tire Quality Grading

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter tires, compact spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

Traction

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

Wheel Alignment and Tire Balance

The tires and wheels were aligned and balanced at the factory to provide the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing are not necessary on a regular basis. Consider an alignment check if there is unusual tire wear or the vehicle is significantly pulling to one side or the other. Some slight pull to the left or right, depending on the crown of the road and/or other road surface variations such as troughs or ruts, is normal. If the vehicle is vibrating when driving on a smooth road, the tires and wheels may need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it.

Some aluminum wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

⚠ Warning

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tires can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

Caution

The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tire or tire chain clearance to the body and chassis.

Used Replacement Wheels

⚠ Warning

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

Tire Chains

⚠ Warning

Do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes, suspension, or other vehicle parts. The area damaged by the tire chains could cause loss of control and a crash.

Use another type of traction device only if its manufacturer recommends it for the vehicle's tire size combination and road conditions. Follow that manufacturer's instructions. To avoid vehicle damage, drive slow and readjust or remove the traction device if it contacts the vehicle. Do not spin the wheels. If traction devices are used, install them on the front tires.

If a Tire Goes Flat

It is unusual for a tire to blow out while driving, especially if the tires are maintained properly. See *Tires* ⇨ *278*. If air goes out of a tire, it is much more likely to leak out slowly. But if there is ever a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

⚠ Warning

Driving on a flat tire will cause permanent damage to the tire. Re-inflating a tire after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tire that has been driven on while severely underinflated or flat. Have your dealer or an authorized tire service center repair or replace the flat tire as soon as possible.

⚠ Warning

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could

(Continued)

Warning (Continued)

be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Warning Flashers* ⇨ *161*.

⚠ Warning

Changing a tire can be dangerous. The vehicle can slip off the jack and roll over or fall causing injury or death. Find a level place to change the tire. To help prevent the vehicle from moving:

1. Set the parking brake firmly.

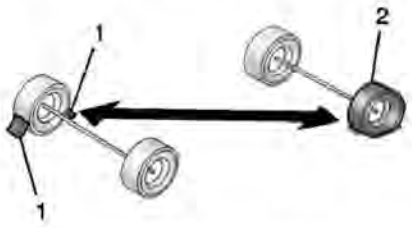
(Continued)

Warning (Continued)

2. Put an automatic transmission in P (Park) or a manual transmission in 1 (First) or R (Reverse).
3. Turn off the engine and do not restart while the vehicle is raised.
4. Do not allow passengers to remain in the vehicle.
5. Place wheel blocks, if equipped, on both sides of the tire at the opposite corner of the tire being changed.

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. To use the jacking equipment to change a spare tire safely, follow the instructions below. Then see *Tire Changing* ⇨ *307*. To use the tire sealant and compressor kit, see *Tire Sealant and Compressor Kit* ⇨ *300*.

When the vehicle has a flat tire (2), use the following example as a guide to assist you in the placement of wheel blocks (1), if equipped.



1. Wheel Block (If Equipped)
2. Flat Tire

The following information explains how to repair or change a tire.

Tire Sealant and Compressor Kit

⚠ Warning

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust* ⇨ *193*.

⚠ Warning

Overinflating a tire could cause the tire to rupture and you or others could be injured. Be sure to read and follow the tire sealant and compressor kit instructions and inflate the tire to its recommended pressure. Do not exceed the recommended pressure.

⚠ Warning

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

If this vehicle has a tire sealant and compressor kit, there may not be a spare tire or tire changing equipment, and on some vehicles there may not be a place to store a tire.

The tire sealant and compressor can be used to temporarily seal punctures up to 6 mm (0.25 in) in the tread area of the tire. It can also be used to inflate an underinflated tire.

If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Service* ⇨ *349*.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

Tire Sealant

Read and follow the safe handling instructions on the label adhered to the sealant canister.

Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date.

Replacement sealant canisters are available at your local dealer. See "Removal and Installation of the Sealant Canister" following.

There is only enough sealant to seal one tire. After usage, the sealant canister and sealant/air hose assembly must be replaced. See "Removal and Installation of the Sealant Canister" following.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.

1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

When using the tire sealant and compressor kit during cold temperatures, warm the kit in a heated environment for five minutes. This will help to inflate the tire faster.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers* ⇨ *161*.

See *If a Tire Goes Flat* ⇨ *298* for other important safety warnings.

Do not remove any objects that have penetrated the tire.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit* ⇨ *307*.
2. Unwrap the sealant/air hose (6) and the power plug (8).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the sealant/air hose (6) onto the tire valve stem. Turn it clockwise until it is tight.
6. Plug the power plug (8) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets* ⇨ *116*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.

8. Press and turn the selector switch (1) counterclockwise to the Sealant + Air position.
9. Press the on/off button (2) to turn the tire sealant and compressor kit on.

   The compressor will inject sealant and air into the tire.

   The pressure gauge (3) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.
10. Inflate the tire to the recommended inflation pressure using the pressure gauge (3). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure* ⇨ *285*.

    The pressure gauge (3) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

Caution

If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tire is too severely damaged and the tire sealant and compressor kit cannot inflate the tire. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Service* ⇨ *349*.

11. Press the on/off button (2) to turn the tire sealant and compressor kit off.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire, therefore, Steps 12–18 must be done immediately after Step 11.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.
12. Unplug the power plug (8) from the accessory power outlet in the vehicle.
13. Turn the sealant/air hose (6) counterclockwise to remove it from the tire valve stem.
14. Replace the tire valve stem cap.
15. Replace the sealant/air hose (6), and the power plug (8) back in their original location.

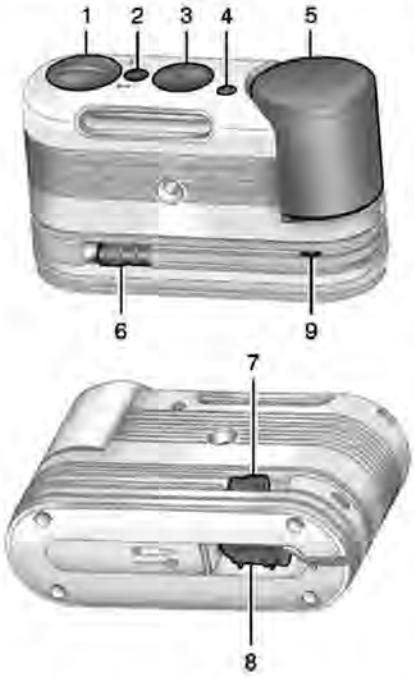
16. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (5) and place it in a highly visible location. Do not exceed the speed on this label until the damaged tire is repaired or replaced.
17. Return the equipment to its original storage location in the vehicle.
18. Immediately drive the vehicle 8 km (5 mi) to distribute the sealant in the tire.
19. Stop at a safe location and check the tire pressure. Refer to Steps 1–11 under "Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)."

    If the tire pressure has fallen more than 68 kPa (10 psi) below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant cannot seal the tire. See *Roadside Service* ⇨ *349*.

    If the tire pressure has not dropped more than 68 kPa (10 psi) from the recommended inflation pressure, inflate the tire to the recommended inflation pressure.
20. Wipe off any sealant from the wheel, tire, and vehicle.
21. Dispose of the used sealant canister (5) and sealant/air hose (6) assembly at a local dealer or in accordance with local state codes and practices.
22. Replace with a new canister assembly available from your dealer.
23. After temporarily sealing the tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within 161 km (100 mi) of driving to have the tire repaired or replaced.

Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:



1. Selector Switch (Sealant/Air or Air Only)
2. On/Off Button
3. Pressure Gauge
4. Pressure Deflation Button
5. Tire Sealant Canister
6. Sealant/Air Hose (Clear)
7. Air Only Hose (Black)
8. Power Plug
9. Canister Release Button (Under Sealant/Air Hose)

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers* ⇨ *161*.

See *If a Tire Goes Flat* ⇨ *298* for other important safety warnings.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit* ⇨ *307*.
2. Unwrap the air only hose (7) and the power plug (8).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the tire valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the air only hose (7) onto the tire valve stem by turning it clockwise until it is tight.
6. Plug the power plug (8) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets* ⇨ *116*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Press and turn the selector switch (1) clockwise to the Air Only position.

9. Press the on/off button (2) to turn the compressor on.

   The compressor will inflate the tire with air only.

10. Inflate the tire to the recommended inflation pressure using the pressure gauge (3). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure* ⇨ *285*.

    The pressure gauge (3) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on/off until the correct pressure is reached.

    If you inflate the tire higher than the recommended pressure you can adjust the excess pressure by pressing the pressure deflation button (4) until the proper pressure reading is reached.

    This option is only functional when using the air only hose (7).

11. Press the on/off button (2) to turn the tire sealant and compressor kit off.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (8) from the accessory power outlet in the vehicle.

13. Disconnect the air only hose (7) from the tire valve stem, by turning it counterclockwise, and replace the tire valve stem cap.

14. Replace the air only hose (7) and the power plug (8) and cord back in its original location.

15. Place the equipment in the original storage location in the vehicle.

The tire sealant and compressor kit has an accessory adapter located in a compartment on the bottom of its housing that may be used to inflate air mattresses, balls, etc.

Removal and Installation of the Sealant Canister

To remove the sealant canister:

1. Unwrap the sealant hose.
2. Press the canister release button (9).
3. Pull up and remove the canister.

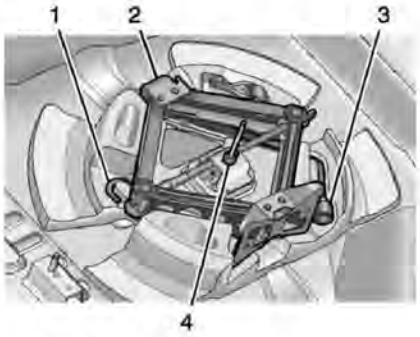
4. Replace with a new canister which is available from your dealer.
5. Push the new canister into place.

Storing the Tire Sealant and Compressor Kit

This vehicle may have a tire sealant and compressor kit in place of a jack or spare tire. It is located in a foam container in the rear compartment storage area. If the vehicle has a cargo cover, see *Cargo Management System* ⇨ *104* for instructions on how to access the tire sealant and compressor kit.

Tire Changing

Removing the Spare Tire and Tools



1. Extension
2. Jack
3. Wheel Wrench
4. Wing Nut

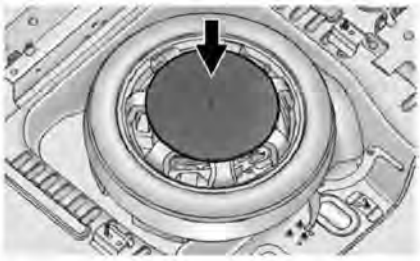
To access the spare tire and tools:

1. Open the liftgate. See *Liftgate* ⇨ *37*.

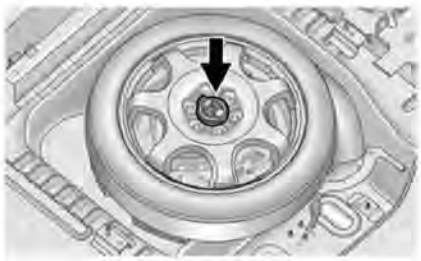
2. Press on the bottom of the handle assembly to unlatch it and lift up on the handle.

   The prop rod locks into place when open.

3. Remove the spare tire cover.



4. Remove the rubber cover.



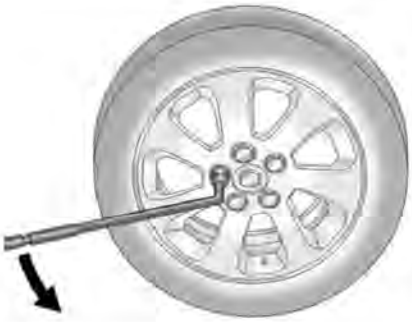
5. Remove the nut retaining the spare tire.
6. Remove the spare tire and place it next to the tire being changed.
7. Remove the wing nut.
8. Remove the extension, jack, and wheel wrench and place them near the tire being changed.

Removing the Flat Tire and Installing the Spare Tire

Take off the wheel cover or center cap, if the vehicle has one, to reach the wheel bolts.

1. Do a safety check before proceeding. See *If a Tire Goes Flat* ⇨ *298* for more information.
2. Turn the wheel wrench counterclockwise to loosen and remove the wheel nut caps.

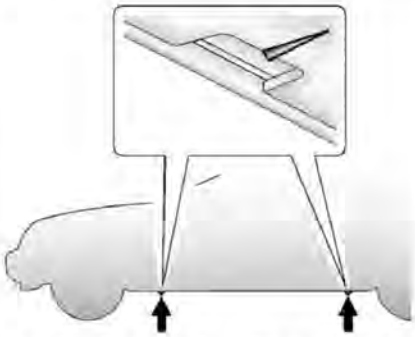
   Do not try to remove plastic caps from the cover or center cap.
3. Pull the cover or center cap away from the wheel. Store the wheel cover in the cargo area until you have the flat tire repaired or replaced.



4. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
5. Place the jack near the flat tire.

Caution

Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.



6. Position the jack lift head at the jack location nearest the flat tire.

   The jacking location is indicated by a V-shaped notch in the plastic molding. The jack must not be used in any other position.

7. Insert the hooked end of the extension handle through the jack and the flat end through the wheel wrench.

⚠ Warning

Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

⚠ Warning

Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

⚠ Warning

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

8. Turn the extension with the wheel wrench clockwise to raise the jack lift head until the jack just fits under the vehicle.

9. Raise the vehicle by turning the wheel wrench clockwise until the slots in the jack head fit into the metal flange located behind the triangle on the plastic moulding.

Caution

Using a jack to raise the vehicle without positioning it correctly could damage your vehicle. When raising your vehicle on a jack, be sure to position it correctly under the frame and avoid contact with the plastic molding.

10. Put the compact spare tire near you.

Remove all of the wheel nuts.

11. Remove the flat tire.

⚠ Warning

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

12. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
13. Place the compact spare tire on the wheel-mounting surface.

⚠ Warning

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

14. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
15. Lower the vehicle by turning the jack handle counterclockwise.

⚠ Warning

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should

(Continued)

Warning (Continued)

be tightened with a torque wrench to the proper torque specification after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications* ⇨ *344* for original equipment wheel nut torque specifications.

Caution

Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications* ⇨ *344* for the wheel nut torque specification.

16. Tighten the wheel nuts firmly in a crisscross sequence, as shown.
17. Lower the jack all the way and remove the jack from under the vehicle.
18. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or center cap on the full-size tire, tighten all six plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

Caution

Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.

Storing a Flat or Spare Tire and Tools

⚠ Warning

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

To store the flat or spare tire and tools:

1. Open the liftgate. See *Liftgate* ⇨ *37* for more information.
2. Put back all tools as they were stored in the rear storage compartment and put the compartment cover back on.
3. Install the cargo cover. For more information, see *Cargo Management System* ⇨ *104*.
4. Place the tire, lying flat, in the rear storage compartment.

5. Attach the strap to the cargo tie-down in the rear of the vehicle.

6. Route the strap through the wheel, as shown.
7. Attach the strap to the other cargo tie-down in the rear of the vehicle.
8. Tighten the strap.
9. Replace the rubber cover.

The compact spare is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can.

Compact Spare Tire

⚠ Warning

Driving with more than one compact spare tire at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tire at a time.

If this vehicle has a compact spare tire, it was fully inflated when new; however, it can lose air over time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

Stop as soon as possible and check that the spare tire is correctly inflated after being installed on the vehicle. The compact spare tire is designed for temporary use only. The vehicle will perform differently with the spare tire installed and it is recommended that the vehicle speed be limited to 80 km/h (50 mph). To conserve the tread of the spare tire, have the standard tire repaired or replaced as soon as convenient and return the spare tire to the storage area.

When using a compact spare tire, the AWD (if equipped), ABS, and Traction Control systems may engage until the spare tire is recognized by the vehicle, especially on slippery roads. Adjust driving to reduce possible wheel slip.

Caution

When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tire, wheel, and other parts of the vehicle.

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

Caution

Tire chains will not fit the compact spare. Using them can damage the vehicle and the chains. Do not use tire chains on the compact spare.

Jump Starting

Jump Starting - North America

For more information about the vehicle battery, see *Battery - North America* ⇨ *259*.

If the vehicle battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠ Warning

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. **WASH HANDS AFTER HANDLING.** See *California Proposition 65 Warning* ⇨ *239*.

⚠ Warning

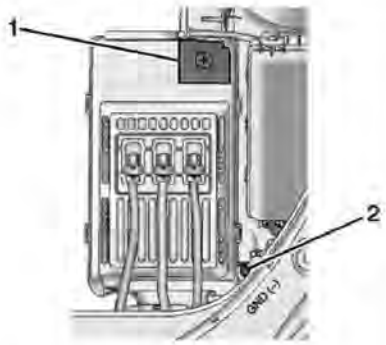
Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

Caution

Ignoring these steps could result in costly damage to the vehicle that would not be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.



1. Remote Positive (+) Terminal
2. Remote Negative (−) Terminal

Your vehicle is equipped with a remote positive (+) terminal (1) and a remote negative (−) terminal (2). The remote positive (+) terminal is located in the engine compartment on the driver side of the vehicle, above the rear of the battery. The remote negative (−) terminal is a stud located in the engine compartment on the driver side of the vehicle, on the front tie bar. See *Engine Compartment Overview* ⇨ *242*.

To uncover the remote positive (+) terminal, lift open the access panel on the battery cover indicated by the (+) sign.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

Caution

If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be damaged. Only use a vehicle that has a 12-volt system with a negative ground for jump starting.

2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start your vehicle, and the bad grounding could damage the electrical systems.

To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the transmission in P (Park) before setting the parking brake.

Caution

If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs would not be covered by the vehicle warranty. Whenever possible, turn off or unplug all accessories on either vehicle when jump starting.

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or the accessory power outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks, helping save both batteries and the radio.

4. Open the hood on the other vehicle and locate the positive (+) and negative (−) terminal locations on that vehicle.

   Open the hood on your vehicle and find the remote positive (+) and remote negative (−) jump starting terminals.

⚠ Warning

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing, and tools away from any underhood electric fan.

⚠ Warning

Using a match near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.

(Continued)

Warning (Continued)

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

⚠ Warning

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could also be damaged.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the vehicle has one. Negative (−) will go to a heavy, unpainted metal engine part or to a remote negative (−) terminal if the vehicle has one.

   Do not connect positive (+) to negative (−) or you will get a short that would damage the battery and maybe other parts. Do not connect the negative (−) cable to the negative (−) terminal on the dead battery because this can cause sparks.

6. Connect the red positive (+) cable to the positive (+) terminal on the vehicle with the dead battery. Use a remote positive (+) terminal if the vehicle has one.
7. Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.
8. Now connect the black negative (−) cable to the negative (−) terminal of the good battery. Use a remote negative (−) terminal if the vehicle has one.

Do not let the other end touch anything until the next step. The other end of the negative (−) cable does not go to the dead battery. It goes to a heavy, unpainted metal engine part or to a remote negative (−) terminal on the vehicle with the dead battery.

9. Connect the other end of the negative (−) cable away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, and the chance of sparks getting back to the battery is much less.

   Your vehicle has a remote (−) terminal for this purpose.

10. Now start the vehicle with the good battery and run the engine for a while.
11. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

Caution
If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.

Jumper Cable Removal

Reverse the sequence exactly when removing the jumper cables.

After starting the disabled vehicle and removing the jumper cables, allow it to idle for several minutes.

Towing the Vehicle

Caution
Incorrectly towing a disabled vehicle may cause damage. The damage would not be covered by the vehicle warranty. Do not lash or hook to suspension components. Use the proper straps around the tires to secure the vehicle.

Have the vehicle towed on a flatbed car carrier. A wheel lift tow truck could damage the vehicle.

Consult your dealer or a professional towing service if the disabled vehicle must be towed.

Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle, such as behind a motor home. The two most common types of recreational vehicle towing are

known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

- The towing capacity of the towing vehicle. Be sure to read the tow vehicle manufacturer's recommendations.
- How far the vehicle will be towed. Some vehicles have restrictions on how far and how long they can tow.
- The proper towing equipment. See your dealer or trailering professional for additional advice and equipment recommendations.
- If the vehicle is ready to be towed. Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

Caution

Use of a shield mounted in front of the vehicle grille could restrict airflow and cause damage to the transmission. The repairs would not be covered by the vehicle warranty. If using a shield, only use one that attaches to the towing vehicle.

Dinghy Towing

Front-wheel-drive and all-wheel-drive vehicles may be dinghy towed from the front. These vehicles can also be towed by placing them on a platform trailer with all four wheels off of the ground. For other towing options, see the information on dolly towing that follows.

Caution

If 105 km/h (65 mph) is exceeded while towing the vehicle, it could be damaged. Never exceed 105 km/h (65 mph) while towing the vehicle.

For vehicles being dinghy towed, the vehicle should be run at the beginning of each day and at each RV fuel stop for about five minutes. This will ensure proper lubrication of transmission components.

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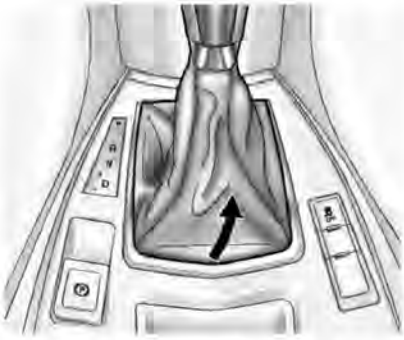
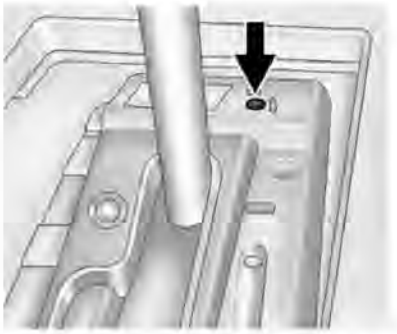
To tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle that will be towed and secure it to the towing vehicle.



2. Remove the shift lever boot by pulling up on the rear of the trim plate.



3. Use a small screwdriver or tool to press and hold the manual release button on the front right.
4. Put the vehicle in N (Neutral).

Caution

If the vehicle is towed without performing each of the steps listed under "Dinghy Towing," the automatic transmission could be damaged. Be sure to follow all steps of the dinghy towing procedure prior to and after towing the vehicle.

Once the destination has been reached:

1. Shift the vehicle to P (Park).
2. Reinstall the shift lever boot by inserting the front edge and pressing the rear of the trim plate until it snaps into place.
3. Start the engine and let it idle for more than three minutes before driving the vehicle.

Caution

Too much or too little fluid can damage the transmission. Be sure that the transmission fluid is at the proper level before towing with all four wheels on the ground.

Caution

Do not tow a vehicle with the front drive wheels on the ground if one of the front tires is a compact spare tire. Towing with two

(Continued)

Caution (Continued)
different tire sizes on the front of the vehicle can cause severe damage to the transmission.

Dolly Towing (All-Wheel-Drive Vehicles)

All-wheel-drive vehicles should not be towed with two wheels on the ground. To properly tow these vehicles, they should be placed on a platform trailer with all four wheels off of the ground or dinghy towed from the front. See "Dinghy Towing" earlier in this section.

Dolly Towing (Front-Wheel-Drive Vehicles)

To tow the vehicle from the front with the rear wheels on the ground:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park). See *Shifting Into Park* ⇨ *191*.
3. Set the parking brake.
4. Secure the vehicle to the dolly.
5. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.
6. Release the parking brake.

Towing the Vehicle from the Rear

Caution

Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.

Appearance Care

Exterior Care

Locks

Locks are lubricated at the factory. Use a de-icing agent only when absolutely necessary, and have the locks greased after using. See *Recommended Fluids and Lubricants* ⇨ *340*.

Washing the Vehicle

To preserve the vehicle's finish, wash it often and out of direct sunlight.

Caution

Do not use petroleum-based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle warranty. Approved cleaning products can be obtained from

(Continued)

Caution (Continued)

your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

Caution

Avoid using high-pressure washes closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.

The symbol is on any underhood compartment electrical center that should not be power washed. This could cause damage that would not be covered by the vehicle warranty.

If using an automatic car wash, follow the car wash instructions. The windshield wiper and rear window wiper, if equipped, must be off. Remove any accessories that may be damaged or interfere with the car wash equipment.

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

Finish Care

Application of aftermarket clearcoat sealant/wax materials is not recommended. If painted surfaces are damaged, see your dealer to have the damage assessed and repaired. Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Occasional hand waxing or mild polishing should be done to remove residue from the paint finish. See your dealer for approved cleaning products.

Do not apply waxes or polishes to uncoated plastic, vinyl, rubber, decals, simulated wood, or flat paint as damage can occur.

Caution
Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/clearcoat paint finish on the vehicle.

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Moldings

Caution
Failure to clean and protect the bright metal moldings can result in a hazy white finish or pitting. This damage would not be covered by the vehicle warranty.

The bright metal moldings on the vehicle are aluminum, chrome or stainless steel. To prevent damage always follow these cleaning instructions:

- Be sure the molding is cool to the touch before applying any cleaning solution.
- Use only approved cleaning solutions for aluminum, chrome or stainless steel. Some cleaners are highly acidic or contain alkaline substances and can damage the moldings.
- Always dilute a concentrated cleaner according to the manufacturer's instructions.

- Do not use cleaners that are not intended for automotive use.
- Use a nonabrasive wax on the vehicle after washing to protect and extend the molding finish.

Cleaning Exterior Lamps/ Lenses, Emblems, Decals, and Stripes

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps, lenses, emblems, decals, and stripes. Follow instructions under "Washing the Vehicle" previously in this section.

Lamp covers are made of plastic, and some have a UV protective coating. Do not clean or wipe them when dry.

Do not use any of the following on lamp covers:

- Abrasive or caustic agents.
- Washer fluids and other cleaning agents in higher concentrations than suggested by the manufacturer.
- Solvents, alcohols, fuels, or other harsh cleaners.
- Ice scrapers or other hard items.
- Aftermarket appearance caps or covers while the lamps are illuminated, due to excessive heat generated.

Caution
Failure to clean lamps properly can cause damage to the lamp cover that would not be covered by the vehicle warranty.

Caution
Using wax on low gloss black finish stripes can increase the gloss level and create a non-uniform finish. Clean low gloss stripes with soap and water only.

Air Intakes

Clear debris from the air intakes, between the hood and windshield when washing the vehicle.

Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean rubber blades using a lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking.

Replace the wiper blades if they are worn or damaged. Damage can be caused by extreme dusty conditions, sand, salt, heat, sun, snow, and ice.

Weatherstrips

Apply Dielectric silicone grease on weatherstrips to make them last longer, seal better, and not stick or squeak. Lubricate weatherstrips at least once a year. Hot, dry climates

may require more frequent application. Black marks from rubber material on painted surfaces can be removed by rubbing with a clean cloth. See *Recommended Fluids and Lubricants* ⇨ *340*.

Tires

Use a stiff brush with tire cleaner to clean the tires.

Caution

Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on the vehicle.

Wheels and Trim — Aluminum or Chrome

Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

Caution

Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium, or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.

Caution

To avoid surface damage, do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels. Use only approved cleaners. Also, never drive a vehicle with aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning

(Continued)

Caution (Continued)

brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.

Brake System

Visually inspect brake lines and hoses for proper hook-up, binding, leaks, cracks, chafing, etc. Inspect disc brake pads for wear and rotors for surface condition. Inspect drum brake linings/shoes for wear or cracks. Inspect other brake parts, including drums, wheel cylinders, calipers, parking brake, master cylinder, brake fluid reservoir, vacuum pipes, electric vacuum pump including bracket, and vent hose, if equipped.

Steering, Suspension, and Chassis Components

Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear at least once a year.

Inspect power steering for proper hook-up, binding, leaks, cracks, chafing, etc.

Visually check constant velocity joint boots and axle seals for leaks.

Body Component Lubrication

Lubricate all key lock cylinders, hood hinges, liftgate hinges, and the steel fuel door hinges, unless the components are plastic. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

Underbody Maintenance

At least twice a year, spring and fall, use plain water to flush any corrosive materials from the underbody. Take care to thoroughly clean any areas where mud and other debris can collect.

Do not directly power wash the transfer case and/or front/rear axle output seals. High pressure water can overcome the seals and contaminate the fluid. Contaminated fluid will decrease the life of the transfer case and/or axles and should be replaced.

Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

Finish Damage

Quickly repair minor chips and scratches with touch-up materials available from your dealer to avoid corrosion. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

Chemical Paint Spotting

Airborne pollutants can fall upon and attack painted vehicle surfaces causing blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface. See "Finish Care" previously in this section.

Interior Care

To prevent dirt particle abrasions, regularly clean the vehicle's interior. Immediately remove any soils. Newspapers or dark garments can transfer color to the vehicle's interior.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. Using a mild soap solution, immediately remove hand lotions, sunscreen, and insect repellent from all interior surfaces or permanent damage may result.

Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage. Apply all cleaners directly to the cleaning cloth. Do not spray cleaners on any switches or controls. Remove cleaners quickly.

Before using cleaners, read and follow all safety instructions on the label. While cleaning the interior, open the doors and windows to get proper ventilation.

To prevent damage, do not clean the interior using the following cleaners or techniques:

- Never use a razor or any other sharp object to remove soil from any interior surface.
- Never use a brush with stiff bristles.
- Never rub any surface aggressively or with too much pressure.
- Do not use laundry detergents or dishwashing soaps with degreasers. For liquid cleaners, use approximately 20 drops per 3.8 L (1 gal) of water. A concentrated soap solution will create streaks and attract dirt. Do not use solutions that contain strong or caustic soap.
- Do not heavily saturate the upholstery when cleaning.
- Do not use solvents or cleaners containing solvents.

Interior Glass

To clean, use a terry cloth fabric dampened with water. Wipe droplets left behind with a clean dry cloth. If necessary, use a commercial glass cleaner after cleaning with plain water.

Caution
To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window defogger.

Cleaning the windshield with water during the first three to six months of ownership will reduce tendency to fog.

Speaker Covers

Vacuum around a speaker cover gently, so that the speaker will not be damaged. Clean spots with water and mild soap.

Coated Moldings

Coated moldings should be cleaned.

- When lightly soiled, wipe with a sponge or soft, lint-free cloth dampened with water.
- When heavily soiled, use warm soapy water.

Fabric/Carpet/Suede

Start by vacuuming the surface using a soft brush attachment. If a rotating vacuum brush attachment is being used, only use it on the floor carpet. Before cleaning, gently remove as much of the soil as possible:

- Gently blot liquids with a paper towel. Continue blotting until no more soil can be removed.
- For solid soils, remove as much as possible prior to vacuuming.

To clean:

1. Saturate a clean, lint-free colorfast cloth with water. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.

2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.
3. Start on the outside edge of the soil and gently rub toward the center. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
4. Continue gently rubbing the soiled area until there is no longer any color transfer from the soil to the cleaning cloth.
5. If the soil is not completely removed, use a mild soap solution followed only by plain water.

If the soil is not completely removed, it may be necessary to use a commercial upholstery cleaner or spot lifter. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If ring formation occurs, clean the entire fabric or carpet.

After cleaning, use a paper towel to blot excess moisture.

Cleaning High Gloss Surfaces and Vehicle Information and Radio Displays

Use a microfiber cloth on high gloss surfaces or vehicle displays. First, use a soft bristle brush to remove dirt that can scratch the surface. Then gently clean by rubbing with a microfiber cloth. Never use window cleaners or solvents. Periodically hand wash the microfiber cloth separately, using mild soap. Do not use bleach or fabric softener. Rinse thoroughly and air dry before next use.

Caution
Do not attach a device with a suction cup to the display. This may cause damage and would not be covered by the vehicle warranty.

Instrument Panel, Leather, Vinyl, Other Plastic Surfaces, Low Gloss Paint Surfaces, and Natural Open Pore Wood Surfaces

Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfiber cloth dampened with a mild soap solution.

Caution
Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to dry naturally. Never use heat, steam, or spot removers. Do not use cleaners that contain silicone or wax-based products. Cleaners containing these solvents can permanently change (Continued)

Caution (Continued)

the appearance and feel of leather or soft trim, and are not recommended.

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windshield under certain conditions.

Caution

Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.

Cargo Cover and Convenience Net

Wash with warm water and mild detergent. Do not use chlorine bleach. Rinse with cold water, and then dry completely.

Care of Safety Belts

Keep belts clean and dry.

⚠ Warning

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Floor Mats

⚠ Warning

If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can

(Continued)

Warning (Continued)

cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

Use the following guidelines for proper floor mat usage.

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that certified floor mats be purchased. Non-certified floor mats may not fit properly and may interfere with the pedals. Always check that the floor mats do not interfere with the pedals.
- Do not use a floor mat if the vehicle is not equipped with a floor mat retainer on the driver side floor.
- Use the floor mat with the correct side up. Do not turn it over.

- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

Removing and Replacing the Floor Mats

The driver side floor mat is held in place by two button-type retainers. The passenger side floor mat is held in place by one button-type retainer.

1. Pull up on the rear of the floor mat to unlock each retainer and remove.
2. Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.
3. Make sure the floor mat is properly secured in place. Verify the floor mat does not interfere with the pedals.

Service and Maintenance

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General Information

Your vehicle is an important investment. This section describes the required maintenance for the vehicle. Follow this schedule to help protect against major repair expenses resulting from neglect or inadequate maintenance. It may also help to maintain the value of the vehicle if it is sold. It is the responsibility of the owner to have all required maintenance performed.

Your dealer has trained technicians who can perform required maintenance using genuine replacement parts. They have up-to-date tools and equipment for fast and accurate diagnostics. Many dealers have extended evening and Saturday hours, courtesy transportation, and online scheduling to assist with service needs.

Your dealer recognizes the importance of providing competitively priced maintenance and repair services. With trained technicians, the dealer is the place for routine maintenance such as oil

changes and tire rotations and additional maintenance items like tires, brakes, batteries, and wiper blades.

Caution

Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.

The Tire Rotation and Required Services are the responsibility of the vehicle owner. It is recommended to have your dealer perform these services every 12 000 km/7,500 mi. Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions.

Because of the way people use vehicles, maintenance needs vary. There may need to be more frequent checks and services. The Additional Required Services - Normal are for vehicles that:

- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See *Vehicle Load Limits* ⇨ *182*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Fuel* ⇨ *226*.

Refer to the information in the Maintenance Schedule Additional Required Services - Normal chart.

The Additional Required Services - Severe are for vehicles that are:

- Mainly driven in heavy city traffic in hot weather.
- Mainly driven in hilly or mountainous terrain.
- Frequently towing a trailer.
- Used for high speed or competitive driving.
- Used for taxi, police, or delivery service.

Refer to the information in the Maintenance Schedule Additional Required Services - Severe chart.

⚠ Warning

Performing maintenance work can be dangerous and can cause serious injury. Perform maintenance work only if the required information, proper tools, and equipment are available. If they are not, see your dealer to have a trained technician do the work. See *Doing Your Own Service Work* ⇨ *240*.

Cadillac Premium Care Maintenance

Your vehicle comes with the Cadillac Premium Care Maintenance. It is a maintenance program that covers select maintenance services during the first 4 years or 80 000 km (50,000 mi), whichever comes first.

Cadillac Premium Care Maintenance covers routine maintenance services, when scheduled in accordance with the owner manual, including:

- Oil changes based on the vehicle's oil life monitor system.
- Tire rotation every 12 000 km (7,500 mi).
- Engine air cleaner filter replacement.
- Passenger compartment air filter replacement.
- Multi-point vehicle inspection (MPVI) performed by a qualified technician.

Cadillac requires that all Cadillac Premium Care Maintenance services be performed by a Cadillac authorized service dealer.

Maintenance Schedule

Owner Checks and Services

At Each Fuel Stop

- Check the engine oil level. See *Engine Oil* ⇨ *243*.

Once a Month

- Check the tire inflation pressures. See *Tire Pressure* ⇨ *285*.
- Inspect the tires for wear. See *Tire Inspection* ⇨ *291*.
- Check the windshield washer fluid level. See *Washer Fluid* ⇨ *256*.

Engine Oil Change

When the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km/600 mi. If driven under the best conditions, the engine oil life system may not indicate the need for vehicle service for up to a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your trained dealer technician can perform this work. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 mi since the last service. Reset the oil life system when the oil is changed. See *Engine Oil Life System* ⇨ *246*.

Tire Rotation and Required Services Every 12 000 km/ 7,500 mi

Rotate the tires, if recommended for the vehicle, and perform the following services. See *Tire Rotation* ⇨ *292*.

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. See *Engine Oil* ⇨ *243* and *Engine Oil Life System* ⇨ *246*.
- Check engine coolant level. See *Engine Coolant* ⇨ *249*.
- Check windshield washer fluid level. See *Washer Fluid* ⇨ *256*.
- Visually inspect windshield wiper blades for wear, cracking, or contamination. See *Exterior Care* ⇨ *321*. Replace worn or damaged wiper blades. See *Wiper Blade Replacement* ⇨ *261*.
- Check tire inflation pressures. See *Tire Pressure* ⇨ *285*.
- Inspect tire wear. See *Tire Inspection* ⇨ *291*.
- Visually check for fluid leaks.
- Inspect engine air cleaner filter. See *Engine Air Cleaner/Filter* ⇨ *247*.
- Inspect brake system. See *Exterior Care* ⇨ *321*.

- Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear. See *Exterior Care* ⇨ *321*.
- Check restraint system components. See *Safety System Check* ⇨ *68*.
- Visually inspect fuel system for damage or leaks.
- Visually inspect exhaust system and nearby heat shields for loose or damaged parts.
- Lubricate body components. See *Exterior Care* ⇨ *321*.
- Check starter switch. See *Starter Switch Check* ⇨ *260*.
- Check automatic transmission shift lock control function. See *Automatic Transmission Shift Lock Control Function Check* ⇨ *260*.
- Check parking brake and automatic transmission park mechanism. See *Park Brake and P (Park) Mechanism Check* ⇨ *260*.
- Check accelerator pedal for damage, high effort, or binding. Replace if needed.
- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. See your dealer if service is required.
- Check tire sealant expiration date, if equipped. See *Tire Sealant and Compressor Kit* ⇨ *300*.
- Inspect sunroof track and seal, if equipped. See *Sunroof* ⇨ *49*.

Maintenance Schedule Additional Required Services - Normal	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter. (1)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (2)						✓						✓						✓		
Replace engine air cleaner filter. (3)						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Drain and fill engine cooling system. (4)																				✓
Visually inspect accessory drive belts. (5)																				✓
Replace brake fluid. (6)																				

Footnotes — Maintenance Schedule Additional Required Services - Normal

(1) Or every two years, whichever comes first. More frequent passenger compartment air filter replacement may be needed if driving in areas with heavy traffic, poor air quality, high dust levels, or environmental allergens. Passenger compartment air filter replacement may also be needed if there is reduced airflow, window fogging, or odors. Your GM dealer can help determine when to replace the filter.

(2) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition.

(3) Or every four years, whichever comes first. If driving in dusty conditions, inspect the filter at each oil change or more often as needed.

(4) Or every five years, whichever comes first. See *Cooling System* ⇨ *249*.

(5) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

(6) Replace brake fluid every five years. See *Brake Fluid* ⇨ *258*.

Maintenance Schedule Additional Required Services - Severe	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter. (1)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (2)						✓						✓						✓		
Replace engine air cleaner filter. (3)						✓						✓						✓		
Change automatic transmission fluid.						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Drain and fill engine cooling system. (4)																				✓
Visually inspect accessory drive belts. (5)																				✓
Replace brake fluid. (6)																				

Footnotes — Maintenance Schedule Additional Required Services - Severe

(1) Or every two years, whichever comes first. More frequent passenger compartment air filter replacement may be needed if driving in areas with heavy traffic, poor air quality, high dust levels, or environmental allergens. Passenger compartment air filter replacement may also be needed if there is reduced airflow, window fogging, or odors. Your GM dealer can help determine when to replace the filter.

(2) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition.

(3) Or every four years, whichever comes first. If driving in dusty conditions, inspect the filter at each oil change or more often as needed.

(4) Or every five years, whichever comes first. See *Cooling System* ⇨ *249*.

(5) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

(6) Replace brake fluid every five years. See *Brake Fluid* ⇨ *258*.

Special Application Services

- Severe Commercial Use Vehicles Only: Lubricate chassis components every 5 000 km/ 3,000 mi.
- Have underbody flushing service performed. See "Underbody Maintenance" in *Exterior Care* ⇨ *321*.

Additional Maintenance and Care

Your vehicle is an important investment and caring for it properly may help to avoid future costly repairs. To maintain vehicle performance, additional maintenance services may be required.

It is recommended that your dealer perform these services — their trained dealer technicians know your vehicle best. Your dealer can also perform a thorough assessment with a multi-point inspection to recommend when your vehicle may need attention.

The following list is intended to explain the services and conditions to look for that may indicate services are required.

Battery

The 12-volt battery supplies power to start the engine and operate any additional electrical accessories.

- To avoid break-down or failure to start the vehicle, maintain a battery with full cranking power.
- Trained dealer technicians have the diagnostic equipment to test the battery and ensure that the connections and cables are corrosion-free.

Belts

- Belts may need replacing if they squeak or show signs of cracking or splitting.
- Trained dealer technicians have access to tools and equipment to inspect the belts and recommend adjustment or replacement when necessary.

Brakes

Brakes stop the vehicle and are crucial to safe driving.

- Signs of brake wear may include chirping, grinding, or squealing noises, or difficulty stopping.
- Trained dealer technicians have access to tools and equipment to inspect the brakes and recommend quality parts engineered for the vehicle.

Fluids

Proper fluid levels and approved fluids protect the vehicle's systems and components. See *Recommended Fluids and Lubricants* ⇨ *340* for GM approved fluids.

- Engine oil and windshield washer fluid levels should be checked at every fuel fill.
- Instrument cluster lights may come on to indicate that fluids may be low and need to be filled.

Hoses

Hoses transport fluids and should be regularly inspected to ensure that there are no cracks or leaks. With a multi-point inspection, your dealer can inspect the hoses and advise if replacement is needed.

Lamps

Properly working headlamps, taillamps, and brake lamps are important to see and be seen on the road.

- Signs that the headlamps need attention include dimming, failure to light, cracking, or damage. The brake lamps need to be checked periodically to ensure that they light when braking.
- With a multi-point inspection, your dealer can check the lamps and note any concerns.

Shocks and Struts

Shocks and struts help aid in control for a smoother ride.

- Signs of wear may include steering wheel vibration, bounce/sway while braking, longer stopping distance, or uneven tire wear.
- As part of the multi-point inspection, trained dealer technicians can visually inspect the shocks and struts for signs of leaking, blown seals, or damage, and can advise when service is needed.

Tires

Tires need to be properly inflated, rotated, and balanced. Maintaining the tires can save money and fuel, and can reduce the risk of tire failure.

- Signs that the tires need to be replaced include three or more visible treadwear indicators; cord or fabric showing through the rubber; cracks or cuts in the tread or sidewall; or a bulge or split in the tire.
- Trained dealer technicians can inspect and recommend the right tires. Your dealer can also provide tire/wheel balancing services to ensure smooth vehicle operation at all speeds. Your dealer sells and services name brand tires.

Vehicle Care

To help keep the vehicle looking like new, vehicle care products are available from your dealer. For information on how to clean and protect the vehicle's interior and exterior, see *Interior Care* ⇨ *325* and *Exterior Care* ⇨ *321*.

Wheel Alignment

Wheel alignment is critical for ensuring that the tires deliver optimal wear and performance.

- Signs that the alignment may need to be adjusted include pulling, improper vehicle handling, or unusual tire wear.
- Your dealer has the required equipment to ensure proper wheel alignment.

Windshield

For safety, appearance, and the best viewing, keep the windshield clean and clear.

- Signs of damage include scratches, cracks, and chips.
- Trained dealer technicians can inspect the windshield and recommend proper replacement if needed.

Wiper Blades

Wiper blades need to be cleaned and kept in good condition to provide a clear view.

- Signs of wear include streaking, skipping across the windshield, and worn or split rubber.
- Trained dealer technicians can check the wiper blades and replace them when needed.

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Usage	Fluid/Lubricant
Engine Oil	Engine oil meeting the dexos1™ specification of the proper SAE viscosity grade. ACDelco dexos1 Synthetic Blend is recommended. See *Engine Oil* ⇨ *243*.
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL® Coolant. See *Engine Coolant* ⇨ *249*.
Fuel Additive	Fuel System Treatment PLUS (Part No. 88861013).
Hydraulic Brake System	DOT 3 Hydraulic Brake Fluid (GM Part No. 19299818, in Canada 19299819).
Windshield Washer	Automotive windshield washer fluid that meets regional freeze protection requirements.
Hydraulic Power Steering System	DEXRON®-VI Automatic Transmission Fluid.
Automatic Transmission	DEXRON®-VI Automatic Transmission Fluid.
Transfer Case (All-Wheel Drive)	Transfer Case Fluid (GM Part No. 19256084, in Canada 19256085).
Chassis Lubrication	Chassis Lubricant (GM Part No. 12377985, in Canada 88901242) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Key Lock Cylinders, Hood, and Door Hinges	Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).

Usage	Fluid/Lubricant
Power Liftgate Actuator Ball Joint, Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl	Lubriplate Lubricant Aerosol (GM Part No. 89021668, in Canada 89021674) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Weatherstrip Conditioning	Weatherstrip Lubricant (GM Part No. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. 12345579, in Canada 10953481).

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

Part	GM Part Number	ACDelco Part Number
Engine Air Cleaner/Filter	20897358	A3147C
Engine Oil Filter	19330000	PF63E
Passenger Compartment Air Filter Element	13356914	CF184
Spark Plugs	12622561	41–109
Wiper Blades		
Driver Side – 65.0 cm (25.6 in)	22870539	—
Passenger Side – 42.5 cm (16.7 in)	22870540	—
Rear – 30.0 cm (11.8 in)	20825882	—

Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Technical Data

Vehicle Identification
Vehicle Identification Number (VIN) 343
Service Parts Identification Label 343

Vehicle Data
Capacities and Specifications 344
Engine Drive Belt Routing 345

Vehicle Identification

Vehicle Identification Number (VIN)

This legal identifier is in the front corner of the instrument panel, on the left side of the vehicle. It can be seen through the windshield from outside. The VIN also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under *Capacities and Specifications* ⇨ *344* for the vehicle's engine code.

Service Parts Identification Label

This label, on the inside of the rear side cargo management cover, has the following information:

- Vehicle Identification Number (VIN).
- Model designation.
- Paint information.
- Production options and special equipment.

Do not remove this label from the vehicle.

Vehicle Data

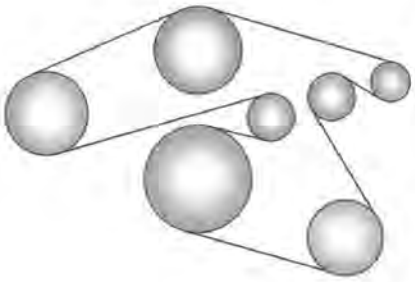
Capacities and Specifications

Application	Capacities	
	Metric	English
Air Conditioning Refrigerant	For the air conditioning system refrigerant type, and charge amount, see the refrigerant label located under the hood. See your dealer for more information.	
Engine Cooling System		
3.6L V6 Engine	12.8 L	13.5 qt
Engine Oil with Filter	5.7 L	6.0 qt
Fuel Tank	79.5 L	21.0 gal
Transfer Case Fluid	0.65 L	0.69 qt
Wheel Nut Torque	190 N•m	140 lb ft
All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.		

Engine Specifications

Engine	VIN Code	Transmission	Spark Plug Gap
3.6L V6 (LFX)	3	Automatic	0.95–1.10 mm (0.037–0.043 in)

Engine Drive Belt Routing



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Customer Information

Customer Satisfaction Procedure

Your satisfaction and goodwill are important to your dealer and to Cadillac. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by your dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

STEP ONE : Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service or parts manager, contact the owner of your dealership or the general manager.

STEP TWO : If after contacting a member of dealership management, it appears your concern cannot be resolved by your dealership without further help, in the U.S., call the Cadillac Customer Assistance Center at 1-800–458–8006. In Canada, call the Canadian Cadillac Customer Care Centre at 1-888-446-2000.

We encourage you to call the toll-free number in order to give your inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Cadillac, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

STEP THREE — U.S. Owners : Both General Motors and your dealer are committed to making sure you are completely satisfied with the new vehicle. However, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you can file with the Better Business Bureau (BBB) Auto Line® Program to enforce your rights.

The BBB Auto Line Program is an out-of-court program administered by the Council of Better Business Bureaus to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you.

You may contact the BBB Auto Line Program using the toll-free telephone number or write them at the following address:

BBB Auto Line Program
Council of Better Business Bureaus, Inc.
3033 Wilson Boulevard
Suite 600
Arlington, VA 22201

Telephone: 1-800-955-5100
http://www.bbb.org/council/programs-services/dispute-handling-and-resolution/bbb-auto-line

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage, and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

STEP THREE — Canadian Owners: In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps One and Two, General Motors of Canada Limited wants you to be aware of its participation in a no-charge mediation/arbitration program. General Motors of Canada Limited has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in approximately 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call the Cadillac Customer Care Centre, 1-888-446-2000, or write to:

General Motors Cadillac Customer Care Centre
General Motors of Canada Limited
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

The inquiry should be accompanied by the Vehicle Identification Number (VIN).

Customer Assistance Offices

Cadillac encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Cadillac, the letter should be addressed to:

United States and Puerto Rico

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169
www.Cadillac.com

1-800-458-8006
1-800-833-2622 (For Text Telephone devices (TTYs))
Roadside Service: 1-800-224-1400

From U.S. Virgin Islands:

1-800-496-9994

Canada

General Motors of Canada Limited
Cadillac Customer Care Centre,
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
www.gm.ca

1-888-446-2000 (English/French)
Cadillac Roadside Service:
1-800-882-1112

Overseas

Contact the local General Motors Business Unit.

Customer Assistance for Text Telephone (TTY) Users

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Cadillac has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Cadillac by dialing: 1-800-833-2622. TTY users in Canada can dial 1-800-263-3830.

Online Owner Center

Online Owner Experience (U.S.) my.cadillac.com

The Cadillac online owner experience allows interaction with Cadillac and keeps important vehicle-specific information in one place.

Membership Benefits

(Vehicle Information) : Download owner manuals and view vehicle-specific how-to videos.

(Maintenance Information) : View maintenance schedules, alerts, and OnStar onboard vehicle diagnostic information. Schedule service appointments.

(Service History) : View printable dealer-recorded service records and self-recorded service records.

(Preferred Dealer Information) : Select a dealer and view locations, maps, phone numbers, and hours.

(Warranty Tracking Information) : Track your vehicle's warranty information.

(Recall Information) : View active recalls or search by Vehicle Identification Number (VIN). See *Vehicle Identification Number (VIN)* ⇨ *343*.

(Other Account Information) : View GM Card, SiriusXM Satellite radio (if equipped), and OnStar account information.

(Live Chat Support) : Chat with online help representatives.

See my.cadillac.com to register your vehicle.

Cadillac Owner Centre (Canada) cadillacowner.ca

Visit the Cadillac Owner Centre:

- Chat live with online help representatives.
- Locate owner resources such as lease-end, financing, and warranty information.
- Retrieve favorite articles, quizzes, tips, and multimedia galleries organized into the Featured Articles and Auto Care Sections.
- Download owner manuals.
- Find Cadillac-recommended maintenance services.

Roadside Service

U.S./Canada: 1-800-882-1112.

Text Telephone (TTY) Users (U.S. Only): 1-888-889-2438.

Service is available 24 hours a day, 365 days a year.

Calling for Service

When calling Roadside Service, have the following information ready:

- Your name, home address, and home telephone number.
- Telephone number of your location.
- Location of the vehicle.
- Model, year, color, and license plate number of the vehicle.
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle.
- Description of the problem.

Coverage

Services are provided for the duration of the vehicle's powertrain warranty.

In the U.S., anyone driving the vehicle is covered. In Canada, a person driving the vehicle without permission from the owner is not covered.

Roadside Service is not a part of the New Vehicle Limited Warranty. General Motors North America and Cadillac reserve the right to make any changes or discontinue the Roadside Service program at any time without notification.

General Motors North America and Cadillac reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

Cadillac Owner Privileges™

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.
- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.
- **Emergency Tow from a Public Road or Highway:** Tow to the nearest Cadillac dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is not given when the vehicle is stuck in the sand, mud, or snow.
- **Flat Tire Change:** Service to change a flat tire with a spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is your responsibility for the repair or replacement of the tire if it is not covered by the warranty.
- **Battery Jump Start:** Service to jump start a dead battery.
- **Trip Interruption Benefits and Service:** If your trip is interrupted due to a warranty failure, incidental expenses may be reimbursed during the Powertrain warranty period. Items considered are hotel, meals, and rental car or a vehicle being delivered back to the customer, up to 805 km (500 mi).

Cadillac Technician Roadside Service (U.S. Only)

Cadillac's exceptional Roadside Service is more than an auto club or towing service. It provides every Cadillac owner in the United States with the advantage of contacting a Cadillac advisor and, where available, a Cadillac trained dealer technician who can provide on-site service.

A dealer technician will travel to your location within a 30-mile radius of a participating Cadillac dealership. If beyond this radius, we will arrange to have your car towed to the nearest Cadillac dealership. Each technician travels with a specially equipped service vehicle complete with the necessary Cadillac parts and tools required to handle most roadside repairs.

Services Not Included in Roadside Service

- Impound towing caused by violation of any laws.
- Legal fines.
- Mounting, dismounting, or changing of snow tires, chains, or other traction devices.

Service is not provided if a vehicle is in an area that is not accessible to the service vehicle or is not a regularly traveled or maintained public road, which includes ice and winter roads. Off-road use is not covered.

Services Specific to Canadian-Purchased Vehicles

- **Fuel delivery:** Reimbursement is up to 7 liters. Diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.
- **Lock-Out Service:** Vehicle registration is required.
- **Trip Interruption Benefits and Service:** Pre-authorization, original detailed receipts, and a copy of the repair orders are required. Once authorization has been received, the Roadside Service advisor will help you make arrangements and explain how to receive payment.
- **Alternative Service:** If assistance cannot be provided right away, the Roadside Service advisor may give you permission to get local emergency road service. You will receive payment, up to $100, after sending the original receipt to Roadside Service. Mechanical failures may be covered, however any cost for parts and labor for repairs not covered by the warranty are the owner responsibility.

Scheduling Service Appointments

When the vehicle requires warranty service, contact your dealer and request an appointment. By scheduling a service appointment and advising the service consultant of your transportation needs, your dealer can help minimize your inconvenience.

If the vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service,

unless, of course, the problem is safety related. If it is, please call your dealership, let them know this, and ask for instructions.

If your dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for same-day repair.

Courtesy Transportation Program

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper-to-Bumper (Base Warranty Coverage period in Canada), extended powertrain, and/or hybrid-specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled "Limited Warranty and Owner Assistance Information" furnished with each new vehicle provides detailed warranty coverage information.

Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to do so, your dealer may offer the following transportation options:

Shuttle Service

This includes one-way or round-trip shuttle service within reasonable time and distance parameters of your dealer's area.

Public Transportation or Fuel Reimbursement

If overnight warranty repairs are needed, and public transportation is used, the expense must be supported by original receipts and within the maximum amount allowed by GM for shuttle service. If U.S. customers arrange their own transportation, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information.

Courtesy Rental Vehicle

For an overnight warranty repair, the dealer may provide an available courtesy rental vehicle or provide for reimbursement of a rental vehicle. Reimbursement is limited and must be supported by original receipts as well as a signed and completed rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. Additional fees such as fuel usage charges, taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair are also your responsibility.

It may not be possible to provide a like vehicle as a courtesy rental.

Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Contact your dealer for specific availability.

General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

Collision Damage Repair

If the vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish the vehicle resale value, and safety performance can be compromised in subsequent collisions.

Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine GM Collision parts are the best choice to ensure that the vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain the GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain the vehicle's originally designed appearance and safety performance; however, the history of these parts is not known. Such parts are not covered by the GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for the vehicle. As a result, these parts may fit poorly, exhibit premature durability/ corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by the GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

Repair Facility

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

Insuring the Vehicle

Protect your investment in the GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to the GM vehicle by limiting compensation for damage repairs by using aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you ensure that the vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If the vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read the lease carefully, as you may be charged at the end of the lease for poor quality repairs.

If a Crash Occurs

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see *Roadside Service* ⇨ *349*.

Gather the following information:

- Driver name, address, and telephone number.
- Driver license number.
- Owner name, address, and telephone number.
- Vehicle license plate number.
- Vehicle make, model, and model year.
- Vehicle Identification Number (VIN).
- Insurance company and policy number.
- General description of the damage to the other vehicle.

Choose a reputable repair facility that uses quality replacement parts. See "Collision Parts" earlier in this section.

If the airbag has inflated, see *What Will You See after an Airbag Inflates?* ⇨ *73*.

Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take the vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by the GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with the repair professional, and insist on Genuine GM parts. Remember, if the vehicle is leased, you may be obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

Service Publications Ordering Information

(U.S. and Canada Only)

Service Manuals

Service Manuals have the diagnosis and repair information on the engines, transmission, axle, suspension, brakes, electrical, steering, body, etc.

Service Bulletins

Service Bulletins give additional technical service information needed to knowledgeably service General Motors cars and trucks. Each bulletin contains instructions to assist in the diagnosis and service of the vehicle.

Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The Owner Manual includes the Maintenance Schedule for all models.

In-Portfolio: Includes a Portfolio, Owner Manual, and Warranty Manual.

RETAIL SELL PRICE: $35.00 – $40.00 (U.S.) plus handling and shipping fees.

Without Pouch: Owner Manual only.

RETAIL SELL PRICE: $25.00 (U.S.) plus handling and shipping fees.

Current and Past Models

Technical Service Bulletins and Manuals are available for current and past model GM vehicles.

ORDER TOLL FREE:
1-800-551-4123 Monday – Friday
8:00 AM – 6:00 PM Eastern Time

For Credit Card Orders Only (VISA-MasterCard-Discover), see Helm, Inc. at: www.helminc.com.

Or write to:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

All listed prices are quoted in U.S. funds. Make checks payable in U.S. funds.

Radio Frequency Statement

This vehicle has systems that operate on a radio frequency that complies with Part 15/Part 18 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-GEN/210/216/220/251/310, ICES-001.

Operation is subject to the following two conditions:

1. The device may not cause harmful interference.
2. The device must accept any interference received, including interference that may cause undesired operation of the device.

Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

Reporting Safety Defects

Reporting Safety Defects to the United States Government

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to *http://www.safercar.gov;* or write to:

Administrator, NHTSA
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from *http://www.safercar.gov.*

Reporting Safety Defects to the Canadian Government

If you live in Canada, and you believe that the vehicle has a safety defect, notify Transport Canada immediately, and notify General Motors of Canada Limited. Call Transport Canada at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
80 rue Noel
Gatineau, QC J8Z 0A1

Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify General Motors.

Call 1-800-458-8006, or write:

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169

In Canada, call 1-888-446-2000, or write:

Canadian Cadillac Customer Care Centre, Mail Code: CA1-163-005
General Motors of Canada Limited
1908 Colonel Sam Drive
Oshawa, Onatario L1H 8P7

Vehicle Data Recording and Privacy

The vehicle has a number of computers that record information about the vehicle's performance and how it is driven. For example, the vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy them in a crash, and, if equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help the dealer technician service the vehicle. Some modules may also store data about how the vehicle is operated, such as rate of fuel consumption or average speed. These modules may retain personal preferences, such as radio presets, seat positions, and temperature settings.

Event Data Recorders

This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur.

Note

EDR data are recorded by your vehicle only if a non-trivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access these data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request by police or similar government office; as part of GM's defense of litigation through the discovery process; or, as required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

OnStar®

If the vehicle is equipped with OnStar® and has an active subscription, additional data may be collected through the OnStar system. This includes information about the vehicle's operation; collisions involving the vehicle; the use of the vehicle and its features; and, in certain situations, the location and approximate GPS speed of the vehicle. Refer to the

OnStar Terms and Conditions and Privacy Statement on the OnStar website.

See *OnStar Additional Information* ⇨ *364*.

Infotainment System

If the vehicle is equipped with a navigation system as part of the infotainment system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. See the infotainment manual for information on stored data and for deletion instructions.

OnStar

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OnStar Overview

Voice Command Button

Blue OnStar Button

Red Emergency Button

This vehicle may be equipped with a comprehensive, in-vehicle system that can connect to an OnStar Advisor for Emergency, Security, Navigation, Connections, and Diagnostics Services. OnStar services may require a paid subscription and data plan. OnStar requires the vehicle battery and electrical system, cellular service, and GPS satellite signals to be available and operating. OnStar acts as a link to existing emergency service providers. OnStar may collect information about you and your vehicle, including location information. See OnStar's Terms & Conditions and Privacy Statement for more details including system limitations at www.onstar.com (U.S.) or www.onstar.ca (Canada).

The OnStar system status light is next to the OnStar buttons. If the status light is:

- Solid Green: System is ready.
- Flashing Green: On a call.
- Red: Indicates a problem.
- Off: System is off. Press twice to speak with an OnStar Advisor.

Press or call 1-888-4ONSTAR (1-888-466-7827) to speak to an Advisor.

Press to:

- Make a call, end a call, or answer an incoming call.
- Give OnStar Hands-Free Calling voice commands.
- Give OnStar Turn-by-Turn Navigation voice commands.

- Obtain the Wi-Fi® hotspot name or SSID and password, if equipped.

Press On to connect to an Advisor to:

- Verify account information or update contact information.
- Get driving directions.
- Receive a Diagnostic check of the vehicle's key operating systems.
- Receive Roadside Assistance.
- Manage Wi-Fi Settings, if equipped.

Press SOS to get a priority connection to an OnStar Advisor available 24/7 to:

- Get help for an emergency.
- Be a Good Samaritan or respond to an AMBER Alert.
- Get assistance in severe weather or other crisis situations and find evacuation routes.

OnStar Services

Emergency

Emergency Services require an active, OnStar subscription plan (excludes Basic Plan). With Automatic Crash Response, built-in sensors can automatically alert a specially trained OnStar Advisor who is immediately connected in to the vehicle to help.

Press SOS for a priority connection to an OnStar Advisor who can contact emergency service providers, direct them to your exact location, and relay important information.

With OnStar Crisis Assist, specially trained Advisors are available 24 hours a day, 7 days a week, to provide a central point of contact, assistance, and information during a crisis.

With Roadside Assistance, Advisors can locate a nearby service provider to help with a flat tire, a battery jump, or an empty gas tank.

Security

If equipped, OnStar provides these services:

- With Stolen Vehicle Assistance, OnStar Advisors can use GPS to pinpoint the vehicle and help authorities quickly recover it.
- With Remote Ignition Block, if equipped, OnStar can block the engine from being restarted.
- With Stolen Vehicle Slowdown, if equipped, OnStar can work with law enforcement to gradually slow the vehicle down.

Navigation

OnStar navigation requires a specific OnStar subscription plan.

Press On to receive Turn-by-Turn directions or have them sent to the vehicle's navigation screen, if equipped.

Turn-by-Turn Navigation

1. Press On to connect to an Advisor.

2. Request directions to be downloaded to the vehicle.
3. Follow the voice-guided commands.

Using Voice Commands During a Planned Route

Cancel Route

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Cancel route." System responds: "Do you want to cancel directions?"
3. Say "Yes." System responds: "OK, request completed, thank you, goodbye."

Route Preview

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Route preview." System responds with the next three maneuvers.

Repeat

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Repeat." System responds with the last direction given, then responds with "OnStar ready," then a tone.

Get My Destination

1. Press . System responds: "OnStar ready," then a tone.
2. Say "Get my destination." System responds with the address and distance to the destination, then responds with "OnStar ready," then a tone.

Destination Download

Subscribers can have directions sent to the vehicle's navigation screen, if equipped.

Press , then ask the Advisor to download directions to the vehicle's navigation system, if equipped. After the call ends, the navigation screen will provide prompts to begin driving directions. Routes that are sent to the navigation screen can only be canceled through the navigation system.

See www.onstar.com (U.S.) or www.onstar.ca (Canada).

Connections

The following OnStar services help with staying connected.

For coverage maps, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

OnStar Wi-Fi® Hotspot (If Equipped)

The vehicle may have a built-in Wi-Fi hotspot that provides access to the Internet and web content at 4G LTE speed. Up to seven mobile devices can be connected. A data plan is required. Use the in-vehicle controls only when it is safe to do so.

1. To retrieve Wi-Fi hotspot information, press , wait for the prompt, then say "Wi-Fi settings." On some vehicles, touch Wi-Fi Settings on the screen.
2. The Wi-Fi settings will display the Wi-Fi hotspot name (SSID), password, and on some vehicles, the connection type

(no Internet connection, 3G, 4G, 4G LTE), and signal quality (poor, good, excellent).

3. To change the SSID or password, press or call 1-888-4ONSTAR to connect with an Advisor.

OnStar RemoteLink® Mobile App (If Equipped)

Download the OnStar RemoteLink mobile app to select Apple® iOS, Android™, BlackBerry®, or Windows® mobile devices. OnStar Subscribers can access the following services from a mobile device:

- Remotely start/stop the vehicle, if factory-equipped.
- Lock/unlock doors, if equipped with automatic locks.
- Activate the horn and lamps.
- Check the vehicle's fuel level, oil life, or tire pressure, if factory-equipped with the Tire Pressure Monitor System.
- Send directions to the vehicle.
- Locate the vehicle on a map (U.S. market only).
- Turn the vehicle's Wi-Fi hotspot on/off, manage settings, and monitor data consumption, if equipped.

For OnStar RemoteLink information and compatibility, see www.onstar.com (U.S.) or www.onstar.ca (Canada).

Remote Services

Contact an OnStar Advisor to unlock the doors or sound the horn and flash the lamps.

OnStar AtYourService

OnStar Advisors can provide special offers from restaurants and retailers on your route, help locate hotels, or book a room.

OnStar Hands-Free Calling

Make and receive calls with the built-in wireless calling service, which requires available minutes.

Make a Call

1. Press . System responds: "OnStar ready."
2. Say "Call." System responds: "Call. Please say the name or number to call."
3. Say the entire number without pausing, including a "1" and the area code. System responds: "OK, calling."

Calling 911 Emergency

1. Press . System responds: "OnStar ready."
2. Say "Call." System responds: "Call. Please say the name or number to call."
3. Say "911" without pausing. System responds: "911."
4. Say "Call." System responds: "OK, dialing 911."

Retrieve My Number

1. Press . System responds: "OnStar ready."
2. Say "My number." System responds: "Your OnStar Hands-Free Calling number is," then says the number.

End a Call

Press . System responds: "Call ended."

Verify Minutes and Expiration

Press and say "Minutes" then "Verify" to check how many minutes remain and their expiration date.

Diagnostics

Advanced Diagnostics provides a status of the vehicle's key systems with a monthly e-mail, or by pressing . Real-time Diagnostic Alerts can be sent by e-mail or text. The Proactive Alerts feature (if available) can help predict and alert of potential upcoming maintenance issues with select components on the vehicle, before they become a problem.

OnStar can also monitor and report tire pressure, if the vehicle is equipped with a Tire Pressure Monitoring System.

OnStar Additional Information

In-Vehicle Audio Messages

Audio messages may play important information at the following times:

- Prior to vehicle purchase. Press to set up an account.
- With the OnStar Basic Plan, every 60 days.
- After change in ownership and at 90 days.

Transferring Service

Press to request account transfer eligibility information. The Advisor can cancel or change account information.

Selling/Transferring the Vehicle

Call 1-888-4ONSTAR (1-888-466-7827) immediately to terminate your OnStar services if the vehicle is disposed of, sold, transferred, or if the lease ends.

Reactivation for Subsequent Owners

Press ⓞ and follow the prompts to speak to an Advisor as soon as possible. The Advisor will update vehicle records and explain OnStar service options.

How OnStar Service Works

Automatic Crash Response, Emergency Services, Crisis Assist, Stolen Vehicle Assistance, Advanced Diagnostics, Remote Services, Roadside Assistance, Turn-by-Turn Navigation, and Hands-Free Calling are available on most vehicles. Not all OnStar services are available everywhere or on all vehicles. For more information, a full description of OnStar services, system limitations, and OnStar terms and conditions:

- Call 1-888-4ONSTAR (1-888-466-7827).
- See www.onstar.com (U.S.).
- See www.onstar.ca (Canada).
- Call TTY 1-877-248-2080.
- Press ⓞ to speak with an Advisor.

OnStar services cannot work unless the vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area. The wireless service provider must also have coverage, network capacity, reception, and technology compatible with OnStar services. Service involving location information about the vehicle cannot work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. OnStar services may not work if the OnStar equipment is not properly installed or it has not been properly maintained. If equipment or software is added, connected, or modified, OnStar services may not work. Other problems beyond the control of OnStar — such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage to the vehicle in a crash, or wireless phone network congestion or jamming — may prevent service.

See *Radio Frequency Statement* ⇨ *356*.

Services for People with Disabilities

Advisors provide services to help Subscribers with physical disabilities and medical conditions.

Press ⓞ to help:

- Locate a gas station with an attendant to pump gas.
- Find a hotel, restaurant, etc., that meets accessibility needs.
- Provide directions to the closest hospital or pharmacy in urgent situations.

TTY Users

OnStar has the ability to communicate to deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available dealer-installed TTY system can provide in-vehicle access to all OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

OnStar Personal Identification Number (PIN)

A PIN is needed to access some OnStar services. The PIN will need to be changed the first time when speaking with an Advisor. To change the OnStar PIN, contact an OnStar Advisor by pressing or calling 1-888-4ONSTAR.

Warranty

OnStar equipment may be warranted as part of the vehicle warranty.

Languages

The vehicle can be programmed to respond in multiple languages. Press and ask for an Advisor. Advisors are available in English, Spanish, and French. Available languages may vary by country.

Potential Issues

OnStar cannot perform Remote Door Unlock or Stolen Vehicle Assistance after the vehicle has been off continuously for five days without an ignition cycle. If the vehicle has not been started for five days, OnStar can contact Roadside Assistance or a locksmith to help gain access to the vehicle.

Global Positioning System (GPS)

- Obstruction of the GPS can occur in a large city with tall buildings; in parking garages; around airports; in tunnels and underpasses; or in an area with very dense trees. If GPS signals are not available, the OnStar system should still operate to call OnStar. However, OnStar could have difficulty identifying the exact location.
- In emergency situations, OnStar can use the last stored GPS location to send to emergency responders.

A temporary loss of GPS can cause loss of the ability to send a Turn-by-Turn Navigation route. The Advisor may give a verbal route or may ask for a call back after the vehicle is driven into an open area.

Cellular and GPS Antennas

Cellular reception is required for OnStar to send remote signals to the vehicle. Do not place items over or near the antenna to prevent blocking cellular and GPS signal reception.

Unable to Connect to OnStar Message

If there is limited cellular coverage or the cellular network has reached maximum capacity, this message may come on. Press to try the call again or try again after driving a few miles into another cellular area.

Vehicle and Power Issues

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

Add-on Electrical Equipment

The OnStar system is integrated into the electrical architecture of the vehicle. Do not add any electrical equipment. See *Add-On Electrical Equipment* ⇨ *237*. Added electrical equipment may interfere with the operation of the OnStar system and cause it to not operate.

Vehicle Software Updates

OnStar or GM may remotely deliver software updates or changes to the vehicle without further notice or consent. These updates or changes may enhance or maintain safety, security, or the operation of the vehicle or the vehicle systems. Software updates or changes may affect or erase data or settings that are stored in the vehicle, such as OnStar Hands-Free Calling name tags, saved navigation destinations, or pre-set radio stations. Neither OnStar nor GM is responsible for any affected or erased data or settings. These updates or changes may also collect personal information. Such collection is described in the OnStar privacy statement or separately disclosed at the time of installation. These updates or changes may also cause a system to automatically communicate with GM servers to collect information about vehicle system status, identify whether updates or changes are available, or deliver updates or changes. An active OnStar agreement constitutes consent to these software updates or changes and agreement that either OnStar or GM may remotely deliver them to the vehicle.

Privacy

The complete OnStar Privacy Statement may be found at www.onstar.com (U.S.), or www.onstar.ca (Canada). We recommend that you review it. If you have any questions, call 1-888-4ONSTAR (1-888-466-7827) or press to speak with an Advisor. Users of wireless communications are cautioned that the privacy of any information sent via wireless cellular communications cannot be assured. Third parties may unlawfully intercept or access transmissions and private communications without consent.

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This manual describes features that may or may not be on your specific vehicle either because they are options that you did not purchase or due to changes subsequent to the printing of this owner manual.

Please refer to the purchase documentation relating to your specific vehicle to confirm each of the features found on your vehicle. For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Cadillac Motor Car Division wherever it appears in this manual.

Canadian Vehicle Owners

Propriétaires Canadiens

A French language copy of this manual can be obtained from your dealer or from:

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire ou à l'adresse suivante:

Helm, Incorporated
P.O. Box 07130
Detroit, MI 48207

1-800-551-4123
Numéro de poste 6438 de langue française
www.helminc.com

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Using this Manual

To quickly locate information about the vehicle use the Index in the back of the manual. It is an alphabetical list of what is in the manual and the page number where it can be found.

Danger, Warnings, and Cautions

Warning messages found on vehicle labels and in this manual describe hazards and what to do to avoid or reduce them.

Danger indicates a hazard with a high level of risk which will result in serious injury or death.

Warning or **Caution** indicates a hazard that could result in injury or death.

⚠ WARNING

These mean there is something that could hurt you or other people.

Notice: **This means there is something that could result in property or vehicle damage. This would not be covered by the vehicle's warranty.**

A circle with a slash through it is a safety symbol which means "Do Not," "Do not do this," or "Do not let this happen."

Symbols

The vehicle has components and labels that use symbols instead of text. Symbols are shown along with the text describing the operation or information relating to a specific component, control, message, gauge, or indicator.

: This symbol is shown when you need to see your owner manual for additional instructions or information.

: This symbol is shown when you need to see a service manual for additional instructions or information.

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. For more information on the symbol, refer to the Index.

: Adjustable Pedals

: Airbag Readiness Light

: Air Conditioning

: Antilock Brake System (ABS)

: Audio Steering Wheel Controls or OnStar®

: Brake System Warning Light

: Charging System

: Cruise Control

: Engine Coolant Temperature

: Exterior Lamps

: Fog Lamps

: Fuel Gauge

: Fuses

: Headlamp High/Low-Beam Changer

: LATCH System Child Restraints

: Malfunction Indicator Lamp

: Oil Pressure

: Outside Power Foldaway Mirrors

: Power

: Remote Vehicle Start

: Safety Belt Reminders

: Tire Pressure Monitor

: Traction Control/StabiliTrak

: Windshield Washer Fluid

✍ NOTES

Keys, Doors and Windows

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Keys and Locks

Keys

⚠ WARNING

Leaving children in a vehicle with the keyless access transmitter is dangerous for many reasons, children or others could be badly injured or even killed. They could operate the power windows or other controls or even make the vehicle move. The windows will function with the keyless access transmitter in the vehicle and they could be seriously injured or killed if caught in the path of a closing window. Do not leave the keyless access transmitter in a vehicle with children.

This key, located inside the Remote Keyless Entry (RKE) transmitter, is used for the driver door and glove box.

To remove the key, press the button near the bottom of the transmitter, and pull the key out. Never pull the key out without pressing the button.

See your dealer if a new key is needed.

Notice: **If the keys get locked in the vehicle, it may have to be damaged to get them out. Always carry a spare key.**

Contact Roadside Service if you are locked out of the vehicle. See *Roadside Service on page 12-6*.

Remote Keyless Entry (RKE) System

See *Radio Frequency Statement on page 12-17* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

If there is a decrease in the RKE operating range:

- Check the distance. The transmitter may be too far from the vehicle.
- Check the location. Other vehicles or objects may be blocking the signal.
- Check the transmitter's battery. See "Battery Replacement" later in this section.
- If the transmitter is still not working correctly, see your dealer or a qualified technician for service.

Remote Keyless Entry (RKE) System Operation

The Remote Keyless Entry (RKE) transmitter functions will work up to 60 m (195 feet) away from the vehicle.

Keep in mind that other conditions, such as those previously stated, can impact the performance of the transmitter.

With Remote Start and Power Liftgate Shown, Without Similar

(Lock): Press to lock all doors. The turn signal indicators may flash and/or the horn may sound to indicate locking, see "Locking Feedback" under *Vehicle Personalization on page 4-41*.

If the driver door is open when is pressed, all doors lock except the driver door, if enabled through the vehicle personalization. If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the theft-deterrent system. See *Anti-Theft Alarm System on page 1-17*.

(Unlock): Press to unlock the driver door or all doors, see "Door Unlock Options" under *Vehicle Personalization on page 4-41*. When remotely unlocking the vehicle at night the fog lamps and reverse lamps will come on for about 20 seconds to light your approach to the vehicle. The turn signal indicators may flash and/or the horn may sound to indicate unlocking. See "Unlock Feedback" under *Vehicle Personalization on page 4-41*.

Memory seat positions may be recalled when unlocking the vehicle. See "Memory Remote Recall" under *Vehicle Personalization on page 4-41* for more information.

On some models, pressing and holding will open all of the vehicle's windows. See *Power Windows on page 1-24*.

Pressing will disarm the theft-deterrent system. See *Anti-Theft Alarm System on page 1-17*.

(Remote Start): For vehicles with this feature, press and then press and hold within three seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 1-9* for additional information.

(Vehicle Locator/Panic Alarm): Press and release one time to locate the vehicle. The exterior lamps flash and the horn chirps. Press and hold for three seconds to sound the panic alarm. The horn sounds and the turn signal lamps flash for 30 seconds, or until is pressed again or the vehicle is started.

(Remote Liftgate Release): Press until the liftgate begins to move to open or close the power liftgate.

Keyless Access Operation

Some vehicles have the keyless access system that lets you lock and unlock the doors and access the liftgate without removing the remote transmitter from your pocket, purse, briefcase, etc. The keyless entry transmitter must be within 1 m (3 feet) of the door being opened. If the vehicle has this feature, there will be a body colored touch pad on the outside front door handles.

Keyless Unlocking

With the transmitter within 1 m (3 feet), approach the front door and pull the handle. If the transmitter is recognized, the door will unlock and open.

Entering any door other than the driver door will always cause all of the doors to unlock. This is not customizable.

To customize which doors unlock when the driver's door is opened, see "Passive Unlock" under *Vehicle Personalization on page 4-41*.

Keyless Locking

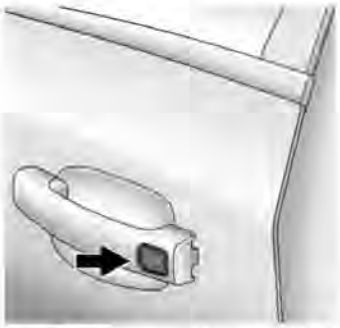
If the vehicle has the keyless access system, this feature allows you to select whether the doors automatically lock during normal vehicle exit. When the vehicle is turned off and all doors become closed, the vehicle will determine how many keyless access transmitters remain in the vehicle interior. If at least one keyless access transmitter has been removed from the interior of the vehicle, the doors will lock after several seconds.

If there are two keyless access transmitters in the vehicle and one is removed, the other will be locked in. A person approaching the outside of the locked vehicle without an authorized keyless access transmitter will not be able to open the door, even with the transmitter in the vehicle.

You may temporarily disable the keyless locking feature by pressing and holding the power door unlock button on the instrument panel for several seconds with a door open. Keyless locking will then remain disabled until the door lock switch is pressed, or until the vehicle is turned on.

To customize whether the doors automatically lock when you exit the vehicle, see "Passive Locking" under *Vehicle Personalization on page 4-41*.

Lock Sensor



When all doors are closed and the ignition is off, the vehicle can be locked by pressing this area on the door handle. This feature will be available for several minutes after the vehicle has been turned off.

Keyless Liftgate Opening

Press the touch pad on the liftgate handle to open the liftgate if the keyless entry transmitter is within range.

Programming Transmitters to the Vehicle

Only keyless entry transmitters programmed to the vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen transmitters no longer work. Each vehicle can have up to eight transmitters matched to it.

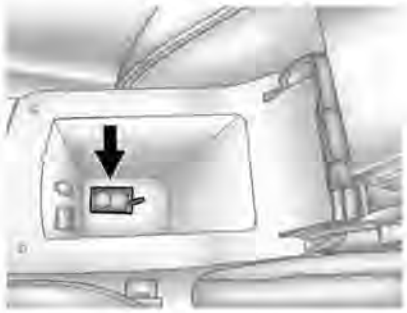
Programming with a Recognized Transmitter (Keyless Access Vehicles Only)

A new transmitter can be programmed to the vehicle when there is one recognized transmitter.

To program, the vehicle must be off and all of the transmitters, both currently recognized and new, must be with you.

1. Place the recognized transmitter(s) in the cupholder.
2. Insert the vehicle key of the new transmitter into the key lock cylinder located on the outside of the driver door and turn the key to the unlock position five times within ten seconds.

   The Driver Information Center (DIC) displays READY TO LEARN ELECTRONIC KEY #2, 3, 4, ETC.



3. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.

4. Press the ignition. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
5. Remove the transmitter from the transmitter pocket and press on the transmitter.

   To program additional transmitters, repeat Steps 3 through 5.

   When all additional transmitters are programmed, press and hold the ignition for 5 seconds to exit programming mode.

Programming without a Recognized Transmitter (Keyless Access Vehicles Only)

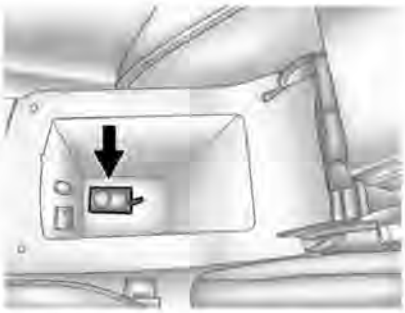
If there are no currently recognized transmitters available, follow this procedure to program up to eight transmitters. This feature is not available in Canada. This procedure will take approximately 30 minutes to complete. The vehicle must be off and all of the transmitters you wish to program must be with you.

1. Insert the vehicle key of the transmitter into the key lock cylinder located on the outside of the driver door and turn the key to the unlock position five times within ten seconds.

   The Driver Information Center (DIC) displays REMOTE LEARN PENDING, PLEASE WAIT.
2. Wait for ten minutes until the DIC displays PRESS ENGINE START BUTTON TO LEARN and then press the ignition.

   The DIC displays will again show REMOTE LEARN PENDING, PLEASE WAIT.
3. Repeat Step 2 two additional times. After the third time all previously known transmitters will no longer work with the vehicle. Remaining transmitters can be relearned during the next steps.

   The DIC display should now show READY FOR REMOTE # 1.



4. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
5. Press the ignition. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
6. Remove the transmitter from the transmitter pocket and press on the transmitter.

   To program additional transmitters, repeat Steps 4 through 6.

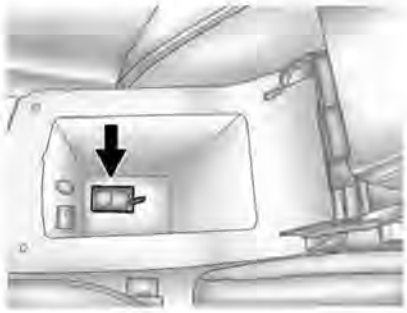
   When all additional transmitters are programmed, press and hold the ignition for 5 seconds to exit programming mode.

Starting the Vehicle with a Low Transmitter Battery

If the transmitter battery is weak, the DIC may display "No Remote Detected" when you try to start the vehicle. The REPLACE BATTERY IN REMOTE KEY message may also be displayed at this time.

To start the vehicle:

1. Open the center console storage area and the storage tray.



2. Place the transmitter in the transmitter pocket.
3. With the vehicle in P (Park) or N (Neutral), press the brake pedal and the START button.

   Replace the transmitter battery as soon as possible.

Battery Replacement

***Notice:* When replacing the battery, do not touch any of the circuitry on the transmitter. Static from your body could damage the transmitter.**

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC.

1. Press the button near the bottom of the transmitter and pull the key out.

2. Use the key blade to separate the two halves of the transmitter.
3. Remove the old battery. Do not use a metal object.
4. Insert the new battery, positive side facing down. Replace with a CR2032 or equivalent battery.
5. Snap the transmitter back together.

Remote Vehicle Start

If available, this feature allows you to start the engine from outside the vehicle.

(Remote Vehicle Start): This button will be on the RKE transmitter if the vehicle has remote start.

Vehicles with an automatic climate control system will automatically change to a heating or cooling mode depending on the outside temperature during a remote start. When the ON/RUN/START ignition mode is selected , the climate control system will return to its setting from when the vehicle was last turned off.

Laws in some local communities may restrict the use of remote starters. For example, some laws may require a person using remote start to have the vehicle in view. Check local regulations for any requirements.

There are other conditions which can affect the performance of the transmitter, see *Remote Keyless Entry (RKE) System on page 1-3* for additional information.

Starting the Engine Using Remote Start

To start the engine using the remote start feature:

1. Press on the RKE transmitter.
2. Within three seconds, press and hold until the turn signal lamps flash. This confirms the request to remote start the vehicle has been received. If the vehicle' s lamps are not visible, press and hold for at least two seconds.

   During the remote start the vehicle's doors will be locked and the parking lamps will remain on as long as the engine is running.
3. Press the brake pedal and select the ON/RUN/START ignition mode to drive the vehicle.

   The engine will shut off after 10 minutes unless a time extension is done or the ignition is put in ON/RUN/START.

Extending Engine Run Time

For a 10 minute extension, repeat Steps 1 and 2 while the engine is still running. The remote start can only be extended once.

When the remote start is extended, the second 10 minute period will start immediately.

For example, if the vehicle has been running for five minutes, and 10 minutes are added, the engine will run for a total of 15 minutes.

A maximum of two remote starts or remote start attempts are allowed between ignition cycles.

The vehicle's ignition must be changed to ON/RUN/START and then back to OFF before the remote start procedure can be used again.

Shutting the Engine Off After a Remote Start

To cancel a remote start:

- Press until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the ignition on and then back off.

Conditions in Which Remote Start Will Not Work

The remote start will not operate if:

- The ignition is in any mode other than OFF.
- The transmitter is in the vehicle.
- The hood is not closed.

- The hazard warning flashers are on.
- There is an emission control system malfunction.
- The engine coolant temperature is too high.
- The oil pressure is low.
- Two remote vehicle starts have already been used.
- The vehicle is not in P (Park).

Door Locks

⚠ WARNING

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked.

(Continued)

WARNING (Continued)

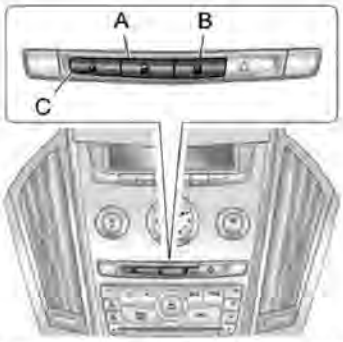
So, all passengers should wear safety belts properly and the doors should be locked whenever the vehicle is driven.

- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.
- Outsiders can easily enter through an unlocked door when you slow down or stop your vehicle. Locking your doors can help prevent this from happening.

To lock or unlock a door, use the Remote Keyless Entry (RKE) transmitter from the outside.

From inside the vehicle with the doors locked, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks



The power door lock switches are located on the instrument panel.

(Unlock): Press (A) to unlock the doors.

(Lock): Press (B) to lock the doors.

Lockout Deterrent

Lockout deterrent decreases the chances that the keys may be accidentally locked in the vehicle.

When door locking is requested by pressing on the instrument panel or on the keyless access transmitter and the driver door is open, all doors will lock and the driver door will immediately unlock. The driver door must be closed when is pressed for all doors to remain locked.

This feature can be programmed to provide the lockout deterrent feature only when the ignition mode is ACC/ACCESSORY, or ON/RUN/START. See "Power Door Locks" in *Vehicle Personalization on page 4-41*.

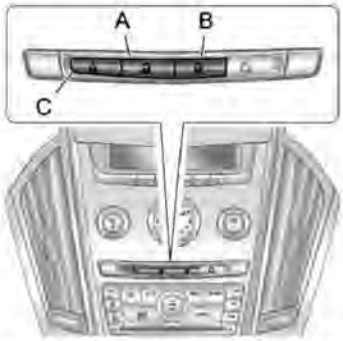
Delayed Locking

When this feature is enabled and the doors are locked with the power lock switch on the instrument panel, three chimes sound to signal that the delayed locking feature is in use. All doors lock five seconds after the last door is closed.

When the delayed locking feature is in use, pressing on the instrument panel or on the keyless access transmitter will override the feature and lock all doors immediately.

This feature can be programmed by using the Driver Information Center (DIC). See "Delayed Door Lock" in *Vehicle Personalization on page 4-41*. The delayed locking feature is only available if "Unlocked Door Anti-Lockout" is disabled.

Safety Locks



Rear door security locks prevent passengers from opening the rear doors from the inside.

Press the button (C) to activate the safety locks. Once activated, the LED light in the switch illuminates.

Pressing the button again deactivates the safety locks.

See *Power Door Locks on page 1-11*.

Doors

Liftgate (Manual)

⚠ WARNING

Exhaust gases can enter the vehicle if it is driven with the liftgate, trunk/hatch open, or with any objects that pass through the seal between the body and the trunk/hatch or liftgate. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

(Continued)

WARNING (Continued)

If the vehicle must be driven with the liftgate, or trunk/hatch open:

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.
- Adjust the Climate Control system to a setting that brings in only outside air and set the fan speed to the highest setting. See Climate Control System in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

For more information about carbon monoxide, see *Engine Exhaust on page 8-24*.

Notice: **If you open the liftgate without checking for overhead obstructions such as a garage door, you could damage the liftgate or the liftgate glass. Always check to make sure the area above and behind the liftgate is clear before opening it.**

For vehicles without keyless access, unlock the vehicle before opening the liftgate.

Press the touchpad located in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touchpad while closing the liftgate. This will cause the liftgate to be unlatched.

Always close the liftgate before driving.

Liftgate (Power)

Power Liftgate Operation

⚠ WARNING

Exhaust gases can enter the vehicle if it is driven with the liftgate, trunk/hatch open, or with any objects that pass through the seal between the body and the trunk/hatch or liftgate. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle must be driven with the liftgate, or trunk/hatch open:

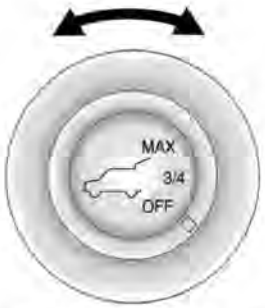
- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.

(Continued)

WARNING (Continued)

- Adjust the Climate Control system to a setting that brings in only outside air and set the fan speed to the highest setting. See Climate Control System in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

For more information about carbon monoxide, see *Engine Exhaust on page 8-24*.



On vehicles with a power liftgate the switch is located on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

⚠ WARNING

You or others could be injured if caught in the path of the power liftgate. Make sure there is no one in the way of the liftgate as it is opening and closing.

Notice: **If you open the liftgate without checking for overhead obstructions such as a garage door, you could damage the liftgate or the liftgate glass. Always check to make sure the area above and behind the liftgate is clear before opening it.**

Choose the power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position.

The three modes are:

MAX : The liftgate power opens to the full open height.

3/4 : The liftgate power opens to a reduced open height that can be set by the vehicle operator in a range of approximately 3/4 open to full open. Use this setting to prevent the liftgate from opening into overhead obstructions such as a garage door or roof mounted cargo during power operation. The liftgate can still be opened fully manually.

OFF: The liftgate only operates manually in this position.

Manual operation of a liftgate that also has power operation requires more effort than with a standard manual liftgate.

In either the MAX or the 3/4 mode, the liftgate can be power opened and closed by:

- Pressing on the Remote Keyless Entry (RKE) transmitter until the liftgate starts moving. See *Remote Keyless Entry (RKE) System Operation on page 1-3*.
- Pressing on the center of the mode switch on the driver door, with the driver door unlocked.
- Pressing the touchpad switch on the liftgate outside handle, with all doors unlocked, to open the liftgate.

Press and release on the liftgate adjacent to the latch to close the liftgate.

Pressing any liftgate button, or the touchpad switch while the liftgate is moving, stops it. Pressing the button or RKE switch again reverses the direction. There is a minimum distance that the power liftgate must already be open for the system to hold it open. If movement is stopped below that minimum, the liftgate closes.

Do not force the liftgate open or closed during a power cycle.

The power liftgate may be temporarily disabled under extreme temperatures or low battery conditions. If this occurs, the liftgate can still be operated manually.

If you shift the transmission out of P (Park) while the power function is in progress, the liftgate power function will continue to completion. If you shift the transmission out of P (Park) and accelerate before the power liftgate latch is closed, the liftgate may reverse to the open position. Cargo could fall out of the vehicle. Always make sure the power liftgate is closed and latched before you drive away.

If you power open the liftgate and the liftgate support struts have lost pressure, the turn signals flash and a chime sounds. The liftgate stays open temporarily, then slowly closes. See your dealer for service before using the liftgate.

Obstacle Detection Features

If the liftgate encounters an obstacle during a power open or close cycle, a warning chime will sound and the liftgate will automatically reverse direction to the full closed or open position. After removing the obstruction, the power liftgate operation can be used again. If the liftgate encounters multiple obstacles on the same power cycle, the power function will deactivate. The Power Liftgate Unavailable warning message in the Driver Information Center (DIC) will display. After removing the obstructions, the liftgate will resume normal power operation.

The vehicle has pinch sensors located on the side edges of the liftgate. If an object is caught between the liftgate and the body and presses against this sensor, the liftgate will reverse direction and open fully. The liftgate will remain open until it is activated again or closed manually.

Setting the Power Liftgate 3/4 Mode

To change the liftgate stop position:

1. Turn the liftgate switch to either the MAX, or the 3/4 mode position and power open the liftgate.
2. Stop the liftgate movement at the desired height by pressing any liftgate switch. Manually adjust the liftgate position if required.
3. Press and hold the button on the liftgate adjacent to the latch until the turn signals flash and a beep sounds to indicate that the new setting is recorded.

When power opened with the 3/4 mode selected, the liftgate stops at the new set position.

If you do not hear the audible and visual feedback when setting the intermediate stop position, you are attempting to set the height below the 3/4 open height minimum (approximately 5 feet). The liftgate cannot be set below that minimum and the new setting will not be recorded.

Manual Operation of Power Liftgate

To change the liftgate to manual operation, turn the mode switch to the OFF position.

With the power liftgate disabled and all of the doors unlocked, the liftgate can be manually opened and closed. Manual efforts of a vehicle equipped with a power liftgate will be higher than a standard non-power liftgate.

To open the liftgate, press the touchpad on the handle on the outside of the liftgate, and lift the gate open. To close the liftgate, use the pull cup to lower the liftgate and close. With the power liftgate disabled, the liftgate electric latch will still power latch once contact is made with the striker. Always close the liftgate before driving.

If the RKE button is pressed while power operation is disabled, the turn signals flash and the liftgate will not move.

The liftgate has an electric latch. If the battery is disconnected or has low voltage, the liftgate will not open. The liftgate will resume operation when the battery is reconnected and charged.

Vehicle Security

This vehicle has theft-deterrent features; however, they do not make it impossible to steal.

Anti-Theft Alarm System

This vehicle has an anti-theft alarm system.

The LED light, located on the instrument panel near the windshield, indicates the status of the system.

Arming the System

To arm the system,

1. Close all doors, liftgate and hood.
2. Lock the vehicle using the transmitter, or the power door lock button. The LED on the instrument panel should come on and stay on for about 30 seconds.

3. After 30 seconds, the alarm system will arm, and the LED will begin to slowly flash indicating the alarm is operating.

If a door, the hood, or liftgate is opened without first unlocking with the transmitter, the vehicle's turn signals will flash and the horn will sound for about 30 seconds. The alarm system will then re-arm to monitor for the next unauthorized event.

The theft-deterrent alarm system will not activate if the doors are locked with the vehicle's key. You can start the vehicle with a recognized transmitter in the vehicle if the alarm has been set off.

Disarming the System

To disarm the system, either unlock the doors using the transmitter, or start the vehicle with a recognized transmitter in the vehicle.

To avoid setting off the alarm by accident:

- Lock the vehicle with the transmitter after all occupants have left the vehicle and all doors are closed.
- Always unlock a door with the transmitter. Unlocking a door any other way will not disarm the alarm.

If you set off the alarm by accident, turn off the alarm by pressing the unlock button on the transmitter. The alarm will not stop if you try to unlock a door any other way.

How to Detect a Tamper Condition

If is pressed and the horn chirps three times, an attempted break-in has occurred while the system was armed.

If the alarm has been activated, the "Theft Attempted" message will appear on the DIC. See *Key and Lock Messages on page 4-37* for additional information.

Immobilizer

See *Radio Frequency Statement on page 12-17* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

Immobilizer Operation

This vehicle has a passive theft-deterrent system.

The system does not have to be manually armed or disarmed.

The vehicle is automatically immobilized when the vehicle is turned off.

The immobilization system is disarmed when the pushbutton start is activated to enter the ACC/ACCESSORY mode or the ON/RUN/START mode and a valid transmitter is present in the vehicle.

The security light, located in the instrument panel cluster, comes on if there is a problem with arming or disarming the theft-deterrent system.

The system has one or more keyless entry transmitters that are matched to an immobilizer control unit in your vehicle. Only a correctly matched keyless entry transmitter will start the vehicle. If the keyless entry transmitter is ever damaged, you may not be able to start your vehicle.

When trying to start the vehicle, the security light comes on briefly when the ignition is turned on.

If the engine does not start and the security light stays on there is a problem with the system. Turn the ignition off and try again.

If the vehicle will not change ignition modes (ACC/ACCESSORY, ON/RUN/START, OFF), and the keyless entry transmitter appears to be undamaged, try another keyless entry transmitter. Or, you may try placing the transmitter in the transmitter pocket located in the center console. See "No Remote Detected" under *Key and Lock Messages on page 4-37*.

If the ignition modes will not change with the other transmitter, your vehicle needs service. If the ignition does change modes, the first transmitter may be faulty. See your dealer who can service the theft-deterrent system and have a new keyless entry transmitter programmed to the vehicle.

It is possible for the immobilizer system to learn new or replacement keyless entry transmitters. Up to eight keyless entry transmitters can be programmed for the vehicle. To program additional transmitters, see "Programming Transmitters to the Vehicle" *Remote Keyless Entry (RKE) System Operation on page 1-3*.

Do not leave the key or device that disarms or deactivates the theft deterrent system in the vehicle.

Exterior Mirrors

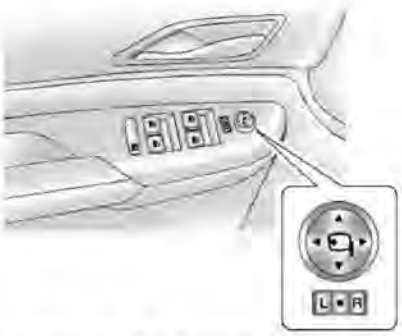
Convex Mirrors

⚠ WARNING

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on the right. Check the inside mirror or glance over your shoulder before changing lanes.

The passenger side mirror is convex shaped. A convex mirror's surface is curved so more can be seen from the driver seat.

Power Mirrors



Controls for the outside power mirrors are located on the driver door.

To adjust the mirror:

1. Move the selector switch to L (left) or R (right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror to the desired direction.
3. Return the selector switch to the center position.

Folding Mirrors

Manual Foldaway Mirrors

Vehicles with manual fold mirrors are folded inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

Power Foldaway Mirrors

Vehicles with power folding mirrors have controls located on the driver door.

To fold the mirrors:

1. With the selector switch in the O position, push the control pad down arrow. Both mirrors will automatically fold.
2. Press the control pad down arrow again to return the mirrors to their original position.

Resetting the Power Foldaway Mirrors

Reset the power foldaway mirrors if:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.
- The mirrors do not stay in the unfolded position.
- The mirrors vibrate at normal driving speeds.

Fold and unfold the mirrors one time using the mirror controls to reset them to their normal position.
A noise may be heard during the resetting of the power foldaway mirrors. This sound is normal after a manual folding operation.

Heated Mirrors

(Rear Window Defogger): Press to heat the mirrors.

See "Rear Window Defogger" under *Dual Automatic Climate Control System on page 7-1* for more information.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror automatically adjusts for the glare of headlamps behind you.

Park Tilt Mirrors

If the vehicle has the memory package, the outside mirrors have a park tilt feature. This feature automatically tilts the outside mirrors to a preselected position when the vehicle is in R (Reverse). This allows the driver to view the curb for parallel parking.

The passenger and driver mirrors return to their original position when the vehicle is shifted out of R (Reverse), or the ignition is turned off or to OFF/LOCK.

This feature can be turned on or off through the Driver Information Center (DIC). See *Vehicle Personalization on page 4-41*.

Interior Mirrors

Manual Rearview Mirror

Hold the inside rearview mirror in the center and move it for a clearer view behind the vehicle. Adjust the mirror to avoid glare from the headlamps behind you. Push the tab forward for daytime use and pull it for nighttime use.

Vehicles with OnStar® have three additional control buttons located at the bottom of the mirror. See your dealer for more information on the system and how to subscribe to OnStar. See the OnStar Owner's Guide for more information about the services OnStar provides.

Automatic Dimming Rearview Mirror

The vehicle may have an automatic dimming inside rearview mirror. Automatic dimming reduces the glare from the headlamps of the vehicle behind you. The dimming feature comes on and the indicator light illuminates each time the vehicle is started.

Vehicles with OnStar have three additional control buttons located at the bottom of the mirror. See your dealer for more information on the system and how to subscribe to OnStar. See the OnStar Owner's Guide for more information about the services OnStar provides.

Cleaning the Mirror

Do not spray glass cleaner directly on the mirror. Use a soft towel dampened with water.

Windows

⚠ WARNING

Leaving children, helpless adults, or pets in a vehicle with the windows closed is dangerous. They can be overcome by the extreme heat and suffer permanent injuries or even death from heat stroke. Never leave a child, a helpless adult, or a pet alone in a vehicle, especially with the windows closed in warm or hot weather.

Power Windows

⚠ WARNING

Leaving children in a vehicle with the keyless access transmitter is dangerous for many reasons, children or others could be badly injured or even killed. They could operate the power windows or other controls or even make the vehicle move. The windows will function with the keyless access transmitter in the vehicle and they could be seriously injured or killed if caught in the path of a closing window. Do not leave the keyless access transmitter in a vehicle with children.

When there are children in the rear seat use the window lockout button to prevent unintentional operation of the windows.

Driver side shown

The power window controls are located on each of the side doors.

The driver door also has switches that control the passenger and rear windows.

The power windows:

- Can be operated with the ignition in ACC/ACCESSORY or ON/RUN/START.
- Can be operated within 10 minutes of switching the ignition off. See *Retained Accessory Power (RAP) on page 8-20*.
- Will stop operation when any door is opened.

Operate the switch for the desired window by pressing to open and pulling to close.

Pushing or pulling the switch part of the way will open or close the window as long as the switch is operated.

Express-Down/Up Windows

Windows that have the express-down/up feature allow the windows to be lowered and raised fully without holding the window switch. Press the window switch fully and release it to activate the express-down feature. Pull the window switch fully up and release it to activate the express-up feature.The express mode can be canceled at any time by briefly pressing, or pulling the switch.

Programming the Power Windows

Programming the power windows may be necessary if the vehicle's battery has been disconnected or discharged

If the window will not express up after power has been restored and a message is displayed in the Driver Information Center:

1. Close all doors
2. Place the ignition in ACC/ACCESSORY or ON/RUN/START.
3. From any partial open position, close the window and continue to press the switch briefly after the window has fully closed.

Obstacle Detection Feature

The Obstacle Detection Feature is part of the express-up feature and is active:

1. In the middle and upper portions of the window opening.
2. During window up movements.
3. In ignition OFF during all window up movements and during express-up window movements in ignition ON/RUN/START.

If there is something blocking the window during automatic closing, the window will reverse direction for a short distance. Weather conditions such as extreme cold and/or ice may cause the window to auto-reverse. The window will return to normal operation once the object or condition is removed.

If conditions prevent the window from closing and the window continues to auto-reverse, it is possible to close the window with the ignition in ON/RUN/START by holding the window switch in the partially or fully pulled up position. Release of the switch from the partially pulled up position will cause the window to stop. Release of the switch from the fully pulled up position will activate the express-up and related obstacle detection features.

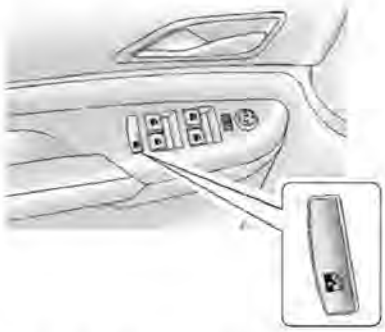
Overload

If the windows are repeatedly operated within a short time, the window operation is disabled for a short time.

Opening the Windows From Outside the Vehicle

The vehicle may have remote operating windows that can be opened from outside the vehicle by pressing and holding the unlock button on the Keyless Access Transmitter to open all the windows.

Window Lockout



(Window Lockout): The window lockout switch is located on the driver door. This feature prevents the rear passenger windows from operating, except from the driver position. Press the switch to turn the lockout feature on or off. An indicator light shows the feature is on.

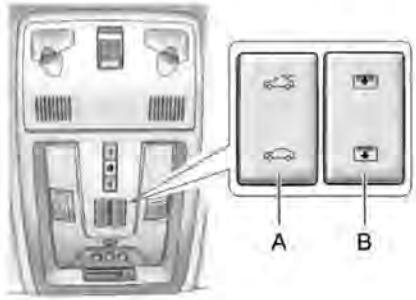
Sun Visors

Pull the sun visor down to block glare. Detach the sun visor from the center mount and slide it along the rod from side-to-side to cover the driver or passenger side of the front window. Swing the sun visor to the side to cover the side window. It can be moved along the rod from side-to-side in this position also.

Roof

Sunroof

On vehicles with a sunroof, the switches are located on the headliner above the rearview mirror. The ignition must be in ON/RUN/ START, ACC/ACCESSORY, or in Retained Accessory Power (RAP) to operate the sunroof. See *Ignition Positions on page 8-18* and *Retained Accessory Power (RAP) on page 8-20*.



A. Sunroof Switch

B. Sunshade Switch

Press the back of the sunroof switch (A) to open the sunroof. When the switch is pressed to the first stop the sunroof will open to the vent position. Press the switch to the second stop to express open the sunroof to an automatically adjusted comfort position.

Press the switch to the second stop again to open the glass further, up to the full open position. If more venting is needed when the sunroof is open, adjust the sunroof to the comfort position or open one of the windows slightly.

Press the front of the switch to close the sunroof. The first stop will close the sunroof at a desired position at normal speed, and the second stop will express close the roof.

Do not keep the sunroof open for long periods of time while the vehicle is not in use. Excessive debris may collect in the tracks and possibly plug the water draining system.

Press the back of the sunshade switch (B) to open the sunshade. Press the front of the switch to the first stop to close the sunshade to a desired position at a normal speed. Press the switch forward to the second stop to express close the sunshade.

Fully close the glass before fully closing the sunshade.

Express-open/Express-close

Press and release the front or rear of the sunroof switch (A) to express-open or express-close the sunroof.

Anti-Pinch Feature

If an object is in the path of the sunroof when it is closing, the anti-pinch feature detects the object and stops the sunroof from closing at the point of the obstruction. The sunroof then returns to the full-open position.

Dirt and debris may collect on the sunroof seal or in the tracks that could cause an issue with sunroof operation, noise or plug the water drainage system. Periodically open the sunroof and remove any obstacles or loose debris. Wipe the sunroof seal and roof sealing area using a clean cloth, mild soap, and water. Do not remove grease from sunroof.

Seats and Restraints

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Head Restraints

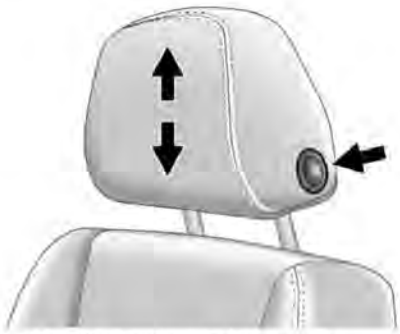
Front Seats

The vehicle's front seats have adjustable head restraints in all outboard seating positions.

⚠ WARNING

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.



1. To raise or lower the head restraint, press the release button while pulling up or pushing down on the head restraint.
2. Release the button then pull up or push down on the head restraint to make sure it is locked in place.

The front head restraints are designed not to be removed.

Rear Seats

The rear seats have adjustable head restraints in the outboard seating positions.

1. Pull the head restraint up to raise it.
2. To lower the head restraint, press the release button while pushing the head restraint down.
3. Release the button.
4. Push down on the head restraint to make sure it is locked in place.

The center seating position has an integrated headrest that can be adjusted the same way as the head restraints.

If you are installing a child restraint in the rear seat, see "Securing a Child Restraint Designed for the LATCH System" under *Lower Anchors and Tethers for Children (LATCH System) on page 2-52*.

Front Seats

Seat Adjustment

⚠ WARNING

You can lose control of the vehicle if you try to adjust a manual driver seat while the vehicle is moving.

(Continued)

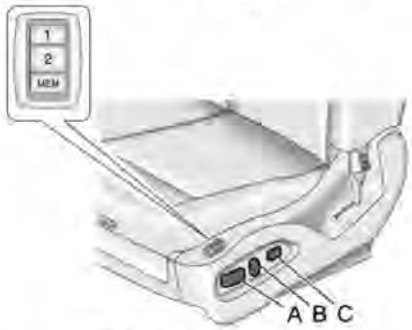
WARNING (Continued)

The sudden movement could startle and confuse you, or make you push a pedal when you do not want to. Adjust the driver seat only when the vehicle is not moving.

To adjust the seat:

1. Pull the handle located at the front of the seat.
2. Move the seat forward or backward to adjust the seat position.
3. Release the handle to stop the seat from moving.

Power Seat Adjustment



Driver Seat Shown

A. Power Seat Adjustment
B. Seatback Adjustment
C. Lumbar Adjustment

On vehicles with power seats, the controls are on the outboard side of the seats.

Adjust the power seat by moving the control (A) forward or rearward. The front or rear of the seat can be

adjusted up or down by moving the front or rear of the control up and down.

Adjust the seatback by moving the control (B) forward or rearward. See *Reclining Seatbacks on page 2-7* for more information.

Adjust the lumbar support by using the control (C). See *Lumbar Adjustment on page 2-6* for more information.

Memory Seats

On vehicles with the memory feature, the controls on the outboard side of the driver seat are used to save and recall memory settings for the driver seat, outside mirrors, and adjustable throttle and brake pedals, if the vehicle has this feature.

Storing Memory Positions

To save into memory:

1. Adjust the driver seat and seatback recliner, both outside mirrors, and pedals, if available.
2. Press and hold MEM (Memory).
3. While holding MEM, press "1" until a beep sounds.
4. Repeat for a second driver using "2."

To recall the memory positions, press and hold "1" or "2." The driver seat, outside mirrors, and adjustable pedals, if available, move to the stored positions. Releasing "1" or "2" before the stored position is reached stops the recall.

Memory Remote Recall

The memory feature can recall the driver seat, outside mirrors, and pedals, if available, to stored positions when entering the vehicle.

To activate memory remote recall, unlock the driver door with the Remote Keyless Entry (RKE) transmitter, and open the driver door. On vehicles equipped with Keyless Access, opening the driver door will activate the recall. If the driver door is already open, pressing the unlock button on the transmitter will activate the recall. The driver seat, outside mirrors, and pedals, if available, move to the memory position associated with the transmitter used to unlock the vehicle. Every time the ignition is placed in OFF, the positions of the driver seat, outside mirrors, and pedals, if available, are stored to the keyless entry transmitter used to start the vehicle.

The automatic recall feature can be turned on or off using the vehicle personalization menu. See "Remote Memory Recall" under *Vehicle Personalization on page 4-41* for more information.

To stop recall movement, press one of the memory, power mirror, or power seat controls, or the adjustable pedal switch, if available.

If something has blocked the driver seat and/or the adjustable pedals, if available, while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by pressing the appropriate memory button. If the memory position is still not recalling, see your dealer for service.

Easy Exit Driver Seat

The easy exit driver seat feature can move the seat rearward to allow extra room to exit the vehicle.

To activate the easy exit driver seat, place the ignition in OFF and open the driver door. If the driver door is already open, placing the ignition in OFF will activate the easy exit driver seat.

Easy exit driver seat can be turned on or off using the vehicle personalization menu. See "Easy Exit Driver Seat" under *Vehicle Personalization on page 4-41* for more information.

To stop recall movement, press one of the memory, power mirror, or power seat controls, or the adjustable pedal switch, if available.

If something has blocked the driver seat while recalling the exit position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the exit position again. If the exit position is still not recalling, see your dealer for service.

Lumbar Adjustment

Power Lumbar

Seats with power lumbar have controls located on the outboard side of the seats. See *Power Seat Adjustment on page 2-4* for more information.

Adjust lumbar support by using the rocker switch on the outboard side of the driver seat.

Release the switch when the seatback reaches the desired level of lumbar support.

Thigh Support Adjustment

On vehicles with this feature, adjust the manual leg extension by pulling up on the lever, pulling or pushing on the support to lengthen or shorten it. Release the lever to lock it in place.

Reclining Seatbacks

Manual Reclining Seatbacks

⚠ WARNING

You can lose control of the vehicle if you try to adjust a manual driver seat while the vehicle is moving. The sudden movement could startle and confuse you, or make you push a pedal when you do not want to. Adjust the driver seat only when the vehicle is not moving.

⚠ WARNING

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

Vehicles with manual reclining seatbacks have a lever on the outboard side of the seat. Lift the lever and move the seatback to the desired position, then release the lever. The seatback should not move when pushed or pulled.

Power Reclining Seatbacks

On vehicles with power reclining seatbacks, the switch is located on the outboard side of the seat. See *Power Seat Adjustment on page 2-4* for more information.

Move the switch forward or rearward to adjust the seatback.

⚠ WARNING

Sitting in a reclined position when the vehicle is in motion can be dangerous. Even when buckled up, the safety belts cannot do their job when reclined like this.

The shoulder belt cannot do its job because it will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

The lap belt cannot do its job either. In a crash, the belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.

(Continued)

WARNING (Continued)

For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the safety belt properly.

Do not have a seatback reclined if your vehicle is moving.

Heated Front Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures. To reduce the risk of burns, people with such a condition should use care when using the seat heater, especially for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket, cushion, cover or similar item. This may cause the seat heater to overheat. An overheated seat heater may cause a burn or may damage the seat.

On vehicles with heated front seats, the buttons are on the center console. To operate the heated seats the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat cushion and seatback.

Press the button once for the highest setting. With each press of the button, the heated seat will change to the next lower setting, and then to the off setting. The lights indicate three for the highest setting and one for the lowest.

The passenger seat may take longer to heat up.

Remote Start Heated Seats

When it is cold outside, the heated seats can be turned on automatically during a remote vehicle start. The heated seats will be canceled when the ignition is turned on. Press the button to use the heated seats after the vehicle is started.

The heated seat indicator lights on the button do not turn on during a remote start.

The heated seat temperature performance of an unoccupied seat may be reduced. This is normal.

The heated seats will not turn on during a remote start unless the heated seat feature is enabled in the vehicle personalization menu. See *Remote Vehicle Start on page 1-9* and "Remote Start Auto Heated Seats" under *Vehicle Personalization on page 4-41* for more information.

Heated and Ventilated Front Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures. See the Warning under *Heated Front Seats on page 2-8*.

On vehicles with the heated and ventilated seat feature, the controls are on the center console. To operate the heated and ventilated seats the ignition must be in ON/RUN/START.

Press to heat the seat or to cool the seat.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The lights indicate three for the highest setting and one for the lowest.

The passenger seat may take longer to heat up.

Remote Start Heated and Ventilated Seats

During a remote start, the heated or ventilated seats can be turned on automatically. They are canceled when the ignition is turned on. Press the button to use the heated or ventilated seats after the vehicle is started.

The heated or ventilated seat indicator lights on the button do not turn on during a remote start.

The heated seat temperature performance of an unoccupied seat may be reduced. This is normal.

The heated or ventilated seats will not turn on during a remote start unless they are enabled in the vehicle personalization menu. See *Remote Vehicle Start on page 1-9* and "Remote Start Auto Heated Seats" or "Remote Start Auto Seat Cool" under *Vehicle Personalization on page 4-41* for more information.

Rear Seats

Split Folding Seatbacks

With this feature, either side of the rear seatback can be folded down for more cargo space.

⚠ WARNING

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

⚠ WARNING

A safety belt that is improperly routed, not properly attached, or twisted will not provide the protection needed in a crash.

(Continued)

WARNING (Continued)

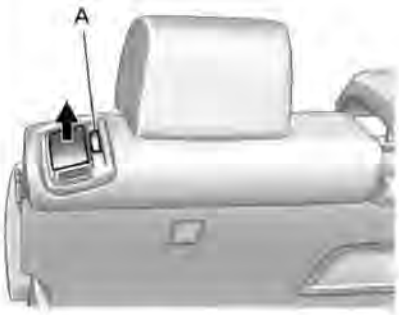
The person wearing the belt could be seriously injured. After raising the rear seatback, always check to be sure that the safety belts are properly routed and attached, and are not twisted.

Folding the Seatbacks

***Notice:* Folding a rear seat with the safety belts still fastened may cause damage to the seat or the safety belts. Always unbuckle the safety belts and return them to their normal stowed position before folding a rear seat.**

To fold the seatback:

1. The rear safety belts must be unbuckled and the front seatbacks are not reclined.
2. Make sure that there is nothing under, in front of, or on the seat.



3. Lift the lever located on the top of the seatback. The rear seat lock indicator (A) extends when the seatback is unlocked.
4. Fold the seatback forward. The rear seat lock indicator (A) retracts when the seatback is locked.

Keep the seat in the upright, locked position when not in use.

Raising the Seatbacks

To raise the seatback:

1. Lift the lever located on top of the seatback. Raise the seatback and release the lever. The rear seat lock indicator (A) extends when the seatback is unlocked.
2. Tilt the seatback rearward until it locks in the upright position. The rear seat lock indicator (A) retracts when the seatback is locked.

Reclining the Seatbacks

To recline the seatback:

1. Lift and hold the lever located on top of the seatback. The rear seat lock indicator (A) extends when the seatback is unlocked.
2. Tilt the seatback rearward, then release the lever when the seatback is in the desired position. The rear seat lock indicator (A) retracts when the seatback is locked.

Heated Rear Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures. See the Warning under *Heated Front Seats on page 2-8*.

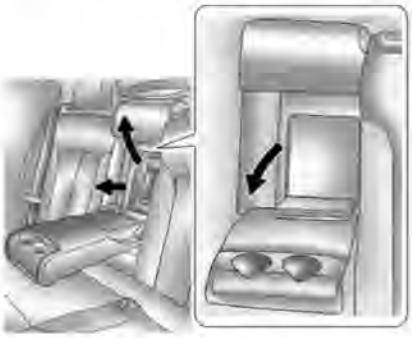
On vehicles with heated rear seats, the switches are located on the Rear Seat Audio (RSA) controls.

With the ignition in ON/RUN/START, press either button for the corresponding seat. The LED light illuminates when the feature is on.

Only the outboard seats are heated.

An indicator on the RSA screen turns on and the seat cushion and seatback heat up. With each press of the switch the heated seat changes to the next lower setting and then off. The bars indicate three for the highest setting and one for the lowest.

Rear Seat Pass-Through Door



The vehicle may have a rear seat pass-through door located in the center of the rear seatback. Fold down the center armrest and push down on the latch to open the door.

Safety Belts

This section of the manual describes how to use safety belts properly. It also describes some things not to do with safety belts.

⚠ WARNING

Do not let anyone ride where a safety belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing safety belts, the injuries can be much worse. You can hit things inside the vehicle harder or be ejected from the vehicle. You and your passenger(s) can be seriously injured or killed. In the same crash, you might not be, if you are buckled up. Always fasten your safety belt, and check that your passenger(s) are restrained properly too.

⚠ WARNING

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in your vehicle is in a seat and using a safety belt properly.

This vehicle has indicators as a reminder to buckle the safety belts. See *Safety Belt Reminders on page 4-17* for additional information.

In most states and in all Canadian provinces, the law requires wearing safety belts. Here is why:

You never know if you will be in a crash. If you do have a crash, you do not know if it will be a serious one.

A few crashes are mild, and some crashes can be so serious that even buckled up, a person would not survive. But most crashes are in between. In many of them, people who buckle up can survive and sometimes walk away. Without safety belts they could have been badly hurt or killed.

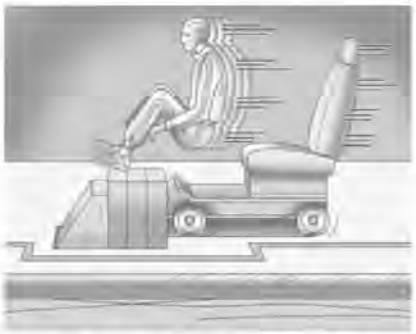
After more than 40 years of safety belts in vehicles, the facts are clear. In most crashes buckling up does matter ... a lot!

Why Safety Belts Work

When you ride in or on anything, you go as fast as it goes.

Take the simplest vehicle. Suppose it is just a seat on wheels.

Put someone on it.



Get it up to speed. Then stop the vehicle. The rider does not stop.

The person keeps going until stopped by something. In a real vehicle, it could be the windshield...

or the instrument panel...

or the safety belts!

With safety belts, you slow down as the vehicle does. You get more time to stop. You stop over more distance, and your strongest bones take the forces. That is why safety belts make such good sense.

Questions and Answers About Safety Belts

Q: Will I be trapped in the vehicle after a crash if I am wearing a safety belt?

A: You *could* be — whether you are wearing a safety belt or not. But your chance of being conscious during and after an accident, so you *can* unbuckle and get out, is *much* greater if you are belted. And you can unbuckle a safety belt, even if you are upside down.

Q: If my vehicle has airbags, why should I have to wear safety belts?

A: Airbags are supplemental systems only; so they work *with* safety belts — not instead of them. Whether or not an airbag is provided, all occupants still have to buckle up to get the most protection. That is true not only in frontal collisions, but especially in side and other collisions.

Q: If I am a good driver, and I never drive far from home, why should I wear safety belts?

A: You may be an excellent driver, but if you are in a crash — even one that is not your fault — you and your passenger(s) can be hurt. Being a good driver does not protect you from things beyond your control, such as bad drivers.

Most accidents occur within 40 km (25 miles) of home. And the greatest number of serious injuries and deaths occur at speeds of less than 65 km/h (40 mph).

Safety belts are for everyone.

How to Wear Safety Belts Properly

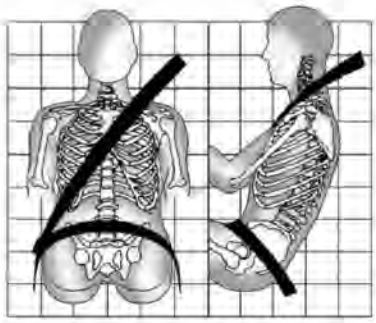
This section is only for people of adult size.

Be aware that there are special things to know about safety belts and children. And there are different rules for smaller children and infants. If a child will be riding in the vehicle, see *Older Children on page 2-43* or *Infants and Young Children on page 2-45*. Follow those rules for everyone's protection.

It is very important for all occupants to buckle up. Statistics show that unbelted people are hurt more often in crashes than those who are wearing safety belts.

Occupants who are not buckled up can be thrown out of the vehicle in a crash. And they can strike others in the vehicle who are wearing safety belts.

First, before you or your passenger(s) wear a safety belt, there is important information you should know.

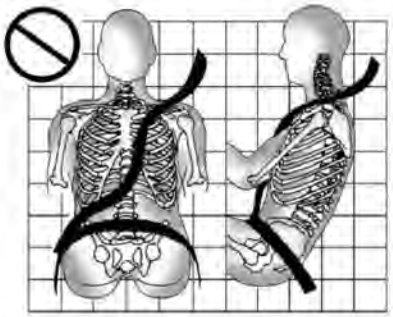


Sit up straight and always keep your feet on the floor in front of you. The lap part of the belt should be worn low and snug on the hips, just touching the thighs.

In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries. The shoulder belt should go over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces.

The shoulder belt locks if there is a sudden stop or crash.

Q: What is wrong with this?

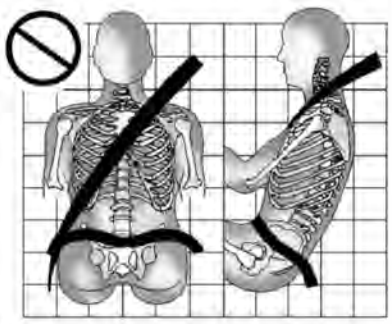


A: The shoulder belt is too loose. It will not give as much protection this way.

⚠ WARNING

You can be seriously hurt if your shoulder belt is too loose. In a crash, you would move forward too much, which could increase injury. The shoulder belt should fit snugly against your body.

Q: What is wrong with this?

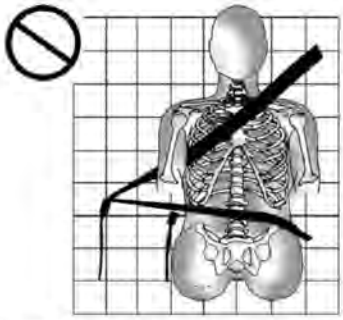


A: The lap belt is too loose. It will not give nearly as much protection this way.

⚠ WARNING

You can be seriously hurt if your lap belt is too loose. In a crash, you could slide under the lap belt and apply force on your abdomen. This could cause serious or even fatal injuries. The lap belt should be worn low and snug on the hips, just touching the thighs.

Q: What is wrong with this?

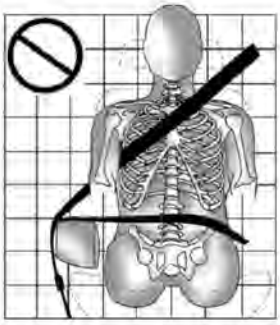


A: The belt is buckled in the wrong buckle.

⚠ WARNING

You can be seriously injured if your belt is buckled in the wrong place like this. In a crash, the belt would go up over your abdomen. The belt forces would be there, not on the pelvic bones. This could cause serious internal injuries. Always buckle your belt into the buckle nearest you.

Q: What is wrong with this?

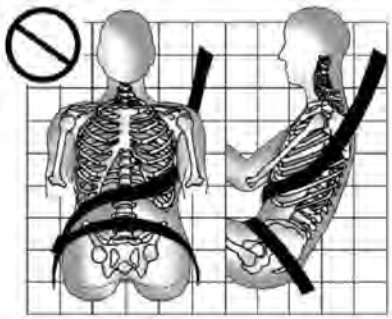


A: The belt is over an armrest.

⚠ WARNING

You can be seriously injured if your belt goes over an armrest like this. The belt would be much too high. In a crash, you can slide under the belt. The belt force would then be applied on the abdomen, not on the pelvic bones, and that could cause serious or fatal injuries. Be sure the belt goes under the armrests.

Q: What is wrong with this?

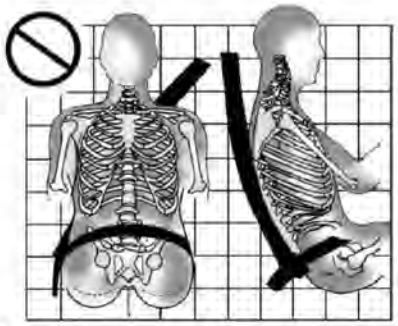


A: The shoulder belt is worn under the arm. It should be worn over the shoulder at all times.

⚠ WARNING

You can be seriously injured if you wear the shoulder belt under your arm. In a crash, your body would move too far forward, which would increase the chance of head and neck injury. Also, the belt would apply too much force to the ribs, which are not as strong as shoulder bones. You could also severely injure internal organs like your liver or spleen. The shoulder belt should go over the shoulder and across the chest.

Q: What is wrong with this?

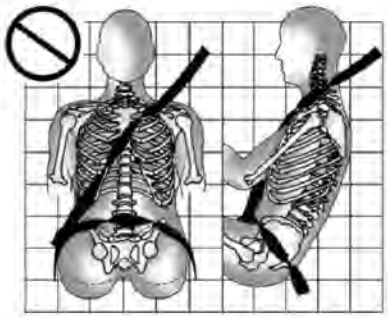


A: The belt is behind the body.

⚠ WARNING

You can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, you would not be restrained by the shoulder belt. Your body could move too far forward increasing the chance of head and neck injury. You might also slide under the lap belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Q: What is wrong with this?



A: The belt is twisted across the body.

⚠ WARNING

You can be seriously injured by a twisted belt. In a crash, you would not have the full width of the belt to spread impact forces. If a belt is twisted, make it straight so it can work properly, or ask your dealer to fix it.

Lap-Shoulder Belt

All seating positions in the vehicle have a lap-shoulder belt.

The following instructions explain how to wear a lap-shoulder belt properly.

1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see "Seats" in the Index.
2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

   The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

   If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. If this happens, let the belt go back all the way and start again.

3. Push the latch plate into the buckle until it clicks.

   Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Safety Belt Extender on page 2-26*.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.
4. If equipped with a shoulder belt height adjuster, move it to the height that is right for you. See "Shoulder Belt Height Adjustment" later in this section for instructions on use and important safety information.

5. To make the lap part tight, pull up on the shoulder belt.

   It may be necessary to pull stitching on the safety belt through the latch plate to fully tighten the lap belt on smaller occupants.

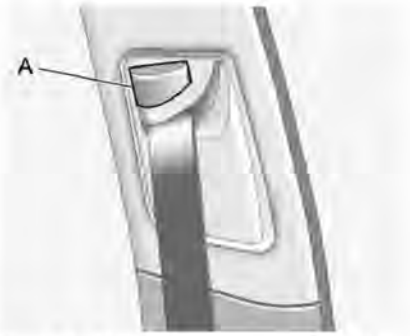
To unlatch the belt, just push the button on the buckle. For outboard seating positions, slide the latch plate up the safety belt webbing when the safety belt is not in use. The latch plate should rest on the stitching on the safety belt, near the guide loop.

Before a door is closed, be sure the safety belt is out of the way. If a door is slammed against a safety belt, damage can occur to both the safety belt and the vehicle.

Shoulder Belt Height Adjuster

The vehicle has a shoulder belt height adjuster for the driver and right front passenger seating positions.

Adjust the height so that the shoulder portion of the belt is centered on the shoulder. The belt should be away from the face and neck, but not falling off the shoulder. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash.



Move the height adjuster up to the desired position by pushing up on the height adjuster.

After the height adjuster is set to the desired position, try to move it up or down without pressing the release button (A) to make sure it has locked into position. Press the release button to lower the height adjuster.

Safety Belt Pretensioners

This vehicle has safety belt pretensioners for front outboard occupants. Although the safety belt pretensioners cannot be seen, they are part of the safety belt assembly. They can help tighten the safety belts during the early stages of a moderate to severe frontal and near frontal crash and will deploy in side, rear and rollover events if the threshold conditions for pretensioner activation are met.

Pretensioners work only once. If the pretensioners activate in a crash, they will need to be replaced, and probably other new parts for the vehicle's safety belt system. See *Replacing Safety Belt System Parts After a Crash on page 2-27*.

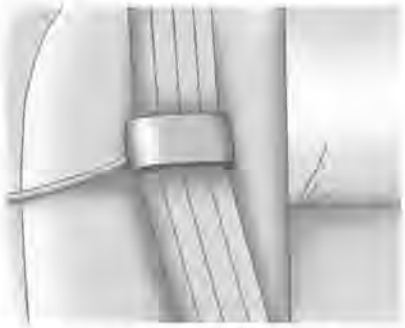
Rear Safety Belt Comfort Guides

This vehicle may have rear shoulder belt comfort guides for the outboard passenger positions in the rear seat. If not, they are available through your dealer. The guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, and properly adjusted, the comfort guide positions the belt away from the neck and head.

Here is how to install a comfort guide to the safety belt:

1. Remove the guide from its storage pocket on the side of the seat.

2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.



3. Be sure that the belt is not twisted and it lies flat. The elastic cord must be under the belt and the guide on top.

⚠ WARNING

A safety belt that is not properly worn may not provide the protection needed in a crash. The person wearing the belt could be seriously injured. The shoulder belt should go over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces.

4. Buckle, position, and release the safety belt as described previously in this section. Make sure that the shoulder belt crosses the shoulder.

To remove and store the comfort guide, squeeze the belt edges together so that the safety belt can be removed from the guide. Slide the guide back into its storage pocket located on the side of the seat.

Safety Belt Use During Pregnancy

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear safety belts.

A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

The best way to protect the fetus is to protect the mother. When a safety belt is worn properly, it is more likely that the fetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child seats. To wear it, attach it to the regular safety belt. For more information, see the instruction sheet that comes with the extender.

Safety System Check

Now and then, check that the safety belt reminder light, safety belts, buckles, latch plates, retractors, and anchorages are working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from doing its job. See your dealer to have it repaired. Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Make sure the safety belt reminder light is working. See *Safety Belt Reminders on page 4-17* for more information.

Keep safety belts clean and dry. See *Safety Belt Care on page 2-27*.

Safety Belt Care

Keep belts clean and dry.

⚠ WARNING

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Replacing Safety Belt System Parts After a Crash

⚠ WARNING

A crash can damage the safety belt system in the vehicle. A damaged safety belt system may not properly protect the person using it, resulting in serious injury or even death in a crash. To help make sure the safety belt systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

After a minor crash, replacement of safety belts may not be necessary. But the safety belt assemblies that were used during any crash may have been stressed or damaged. See your dealer to have the safety belt assemblies inspected or replaced.

New parts and repairs may be necessary even if the safety belt system was not being used at the time of the crash.

Have the safety belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light on page 4-18*.

Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver.
- A frontal airbag for the right front passenger.
- A seat-mounted side impact airbag for the driver.
- A seat-mounted side impact airbag for the right front passenger.
- A roof-rail airbag for the driver and the passenger seated directly behind the driver.
- A roof-rail airbag for the right front passenger and the passenger seated directly behind the right front passenger.

All of the airbags in the vehicle will have the word AIRBAG embossed in the trim or on an attached label near the deployment opening.

For frontal airbags, the word AIRBAG will appear on the middle part of the steering wheel for the driver and on the instrument panel for the right front passenger.

With seat-mounted side impact airbags, the word AIRBAG will appear on the side of the seatback closest to the door.

With roof-rail airbags, the word AIRBAG will appear along the trim.

Even if you do not have a right front passenger seat in the vehicle there is still an active frontal airbag in the right side of the instrument panel. Do not place cargo in front of this airbag.

⚠ WARNING

Be sure that cargo is not near an airbag. In a crash, an inflating airbag might force that object toward a person. This could cause severe injury or even death. Secure objects away from the area in which an airbag would inflate. For more information, see *Where Are the Airbags? on page 2-30* and *Vehicle Load Limits on page 8-11*.

Airbags are designed to supplement the protection provided by safety belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating bag, all airbags must inflate very quickly to do their job.

Here are the most important things to know about the airbag system:

⚠ WARNING

You can be severely injured or killed in a crash if you are not wearing your safety belt — even if you have airbags. Airbags are designed to work with safety belts, but do not replace them. Also, airbags are not designed to deploy in every crash. In some crashes safety belts are your only restraint. See *When Should an Airbag Inflate? on page 2-32.*

Wearing your safety belt during a crash helps reduce your chance of hitting things inside the vehicle or being ejected from it. Airbags are "supplemental restraints" to the safety belts. Everyone in your vehicle should wear a safety belt properly — whether or not there is an airbag for that person.

⚠ WARNING

Airbags inflate with great force, faster than the blink of an eye. Anyone who is up against, or very close to, any airbag when it inflates can be seriously injured or killed. Do not sit unnecessarily close to the airbag, as you would be if you were sitting on the edge of your seat or leaning forward. Safety belts help keep you in position before and during a crash. Always wear your safety belt, even with airbags. The driver should sit as far back as possible while still maintaining control of the vehicle.

Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

⚠ WARNING

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Young children and infants need the protection that a child restraint system can provide. Always secure children properly in your vehicle. To read how, see *Older Children on page 2-43* or *Infants and Young Children on page 2-45.*

There is an airbag readiness light on the instrument panel cluster, which shows the airbag symbol.

The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light on page 4-18* for more information.

Where Are the Airbags?

The driver frontal airbag is in the middle of the steering wheel.

The right front passenger frontal airbag is in the instrument panel on the passenger side.

Driver Side shown, Passenger Side similar

The seat-mounted side impact airbags for the driver and right front passenger are in the side of the seatbacks closest to the door.

Driver Side shown, Passenger Side similar

The roof-rail airbags for the driver, right front passenger, and second row outboard passengers are in the ceiling above the side windows.

⚠ WARNING

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury or even death. The path of an inflating airbag must be kept clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

Do not use seat accessories that block the inflation path of a seat-mounted side impact airbag.

Never secure anything to the roof of a vehicle with roof-rail airbags by routing a rope or tie down through any door or window opening. If you do, the path of an inflating roof-rail airbag will be blocked.

When Should an Airbag Inflate?

Frontal airbags are designed to inflate in moderate to severe frontal or near-frontal crashes to help reduce the potential for severe injuries mainly to the driver's or right front passenger's head and chest. However, they are only designed to inflate if the impact exceeds a predetermined deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants.

Whether the frontal airbags will or should deploy is not based on how fast your vehicle is traveling. It depends largely on what you hit, the direction of the impact, and how quickly your vehicle slows down.

Frontal airbags may inflate at different crash speeds. For example:

- If the vehicle hits a stationary object, the airbags could inflate at a different crash speed than if the vehicle hits a moving object.
- If the vehicle hits an object that deforms, the airbags could inflate at a different crash speed than if the vehicle hits an object that does not deform.
- If the vehicle hits a narrow object (like a pole), the airbags could inflate at a different crash speed than if the vehicle hits a wide object (like a wall).
- If the vehicle goes into an object at an angle, the airbags could inflate at a different crash speed than if the vehicle goes straight into the object.

Thresholds can also vary with specific vehicle design.

Frontal airbags are not intended to inflate during vehicle rollovers, rear impacts, or in many side impacts.

In addition, the vehicle has dual-stage frontal airbags. Dual-stage airbags adjust the restraint according to crash severity. The vehicle has electronic frontal sensors, which help the sensing system distinguish between a moderate frontal impact and a more severe frontal impact. For moderate frontal impacts, dual-stage airbags inflate at a level less than full deployment. For more severe frontal impacts, full deployment occurs.

The vehicle has seat-mounted side impact and roof-rail airbags. See *Airbag System on page 2-28*. Seat-mounted side impact and roof-rail airbags are intended to inflate in moderate to severe side crashes. In addition, these roof-rail airbags are intended to inflate during a rollover. Seat-mounted side impact and roof-rail airbags will

inflate if the crash severity is above the system's designed threshold level. The threshold level can vary with specific vehicle design.

Seat-mounted side impact airbags are not intended to inflate in frontal impacts, near-frontal impacts, rollovers, or rear impacts. Roof-rail airbags are not intended to inflate in rear impacts. A seat-mounted side impact airbag is intended to deploy on the side of the vehicle that is struck. Both roof-rail airbags will deploy when either side of the vehicle is struck, or if the sensing system predicts that the vehicle is about to roll over, or in a severe frontal impact.

If the vehicle does not have a right front passenger seat and a rear seat, only the driver frontal airbag will deploy in a frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the damage to a vehicle or because of what the repair costs were. For frontal airbags, inflation is determined by what the vehicle hits, the angle of the impact, and how quickly the vehicle slows down. For seat-mounted side impact and roof-rail airbags, deployment is determined by the location and severity of the side impact. In a rollover event, roof-rail airbag deployment is determined by the direction of the roll.

What Makes an Airbag Inflate?

In a deployment event, the sensing system sends an electrical signal triggering a release of gas from the inflator. Gas from the inflator fills the airbag causing the bag to break out of the cover and deploy. The inflator, the airbag, and related hardware are all part of the airbag module.

Frontal airbag modules are located inside the steering wheel and instrument panel. For vehicles with seat-mounted side impact airbags, there are airbag modules in the side of the front seatbacks closest to the door. For vehicles with roof-rail airbags, there are airbag modules in the ceiling of the vehicle, near the side windows that have occupant seating positions.

How Does an Airbag Restrain?

In moderate to severe frontal or near frontal collisions, even belted occupants can contact the steering wheel or the instrument panel. In moderate to severe side collisions, even belted occupants can contact the inside of the vehicle.

Airbags supplement the protection provided by safety belts. Frontal airbags distribute the force of the impact more evenly over the occupant's upper body, stopping the occupant more gradually. Seat-mounted side impact and roof-rail airbags distribute the force of the impact more evenly over the occupant's upper body.

Rollover capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the first and second rows. The rollover capable roof-rail airbags are designed to help reduce the risk of full or partial ejection in rollover events, although no system can prevent all such ejections.

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate? on page 2-32* for more information.

Airbags should never be regarded as anything more than a supplement to safety belts.

What Will You See After an Airbag Inflates?

After the frontal airbags and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realize an airbag inflated. Roof-rail airbags may still be at least partially inflated for some time after they deploy. Some components of the airbag module may be hot for several minutes. For location of the airbag modules, see *What Makes an Airbag Inflate? on page 2-33*.

The parts of the airbag that come into contact with you may be warm, but not too hot to touch. There may be some smoke and dust coming from the vents in the deflated airbags. Airbag inflation does not prevent the driver from seeing out of the windshield or being able to steer the vehicle, nor does it prevent people from leaving the vehicle.

⚠ WARNING

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone in the vehicle should get out as soon as it is safe to do so. If you have breathing problems but cannot get out of the vehicle after an airbag inflates, then get fresh air by opening a window or a door. If you experience breathing problems following an airbag deployment, you should seek medical attention.

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps and hazard warning flashers, and shut off the fuel system after the airbags inflate.

You can lock the doors, turn off the interior lamps and hazard warning flashers by using the controls for those features.

⚠ WARNING

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel system, brake and steering systems, etc. Even if the vehicle appears to be drivable after a moderate crash, there may be concealed damage that could make it difficult to safely operate the vehicle.

Use caution if you should attempt to restart the engine after a crash has occurred.

In many crashes severe enough to inflate the airbag, windshields are broken by vehicle deformation. Additional windshield breakage may also occur from the right front passenger airbag.

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for your vehicle covers the need to replace other parts.
- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy on page 12-15* and *Event Data Recorders on page 12-16*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

Passenger Sensing System

The vehicle has a passenger sensing system for the right front passenger position. The passenger airbag status indicator will be visible on the overhead console when the vehicle is started.

United States

Canada

The words ON and OFF, or the symbol for on and off, are visible during the system check. If you are using remote start, if equipped, to start the vehicle from a distance, you may not see the system check. When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator on page 4-19*.

The passenger sensing system turns off the right front passenger frontal airbag and seat-mounted side impact airbag under certain conditions. The driver airbags and the roof-rail airbags are not affected by the passenger sensing system.

The passenger sensing system works with sensors that are part of the right front passenger seat. The sensors are designed to detect the presence of a properly-seated occupant and determine if the right front passenger frontal airbag and seat-mounted side impact airbag should be enabled (may inflate) or not.

According to accident statistics, children are safer when properly secured in a rear seat in the correct child restraint for their weight and size.

We recommend that children be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

A label on the sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the right front passenger frontal airbag and seat-mounted side impact airbag (if equipped), no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though the airbag(s) are off.

(Continued)

WARNING (Continued)

Secure rear-facing child restraints in a rear seat, even if the airbag(s) are off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

The passenger sensing system is designed to turn off the right front passenger airbag and seat-mounted side impact airbag if:

- The right front passenger seat is unoccupied.
- The system determines that an infant is present in a rear-facing infant seat.
- The system determines that a small child is present in a child restraint.
- The system determines that a small child is present in a booster seat.
- A right front passenger takes his/her weight off of the seat for a period of time.
- The right front passenger seat is occupied by a smaller person, such as a child who has outgrown child restraints.
- Or, if there is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the right front passenger frontal airbag and seat-mounted side impact airbag, the off indicator will light and stay lit to remind you that the airbags are off. See *Passenger Airbag Status Indicator on page 4-19*.

The passenger sensing system is designed to turn on (may inflate) the right front passenger frontal airbag and seat-mounted side impact airbag anytime the system senses that a person of adult size is sitting properly in the right front passenger seat.

When the passenger sensing system has allowed the airbags to be enabled, the on indicator will light and stay lit to remind you that the airbags are active.

For some children who have outgrown child restraints and for very small adults, the passenger sensing system may or may not turn off the right front passenger frontal airbag and seat-mounted side impact airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a safety belt properly — whether or not there is an airbag for that person.

⚠ WARNING

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 4-18* for more information, including important safety information.

If the On Indicator is Lit for a Child Restraint

If a child restraint has been installed and the on indicator is lit:

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to "Securing a Child Restraint in the Right Front Seat Position " under *Securing Child Restraints (Rear Seat) on page 2-57* or *Securing Child Restraints (Front Passenger Seat) on page 2-59*.

5. If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion.

   Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints on page 2-2*.

6. Restart the vehicle.

   If the on indicator is still lit, secure the child restraint in a rear seat position in the vehicle, and check with your dealer.

If no rear seat is available, do not install a child restraint in this vehicle.

If the Off Indicator is Lit for an Adult-Size Occupant

If a person of adult-size is sitting in the right front passenger seat, but the off indicator is lit, it could be because that person is not sitting properly in the seat. If this happens, use the following steps to allow the system to detect that person and enable the right front passenger frontal airbag and seat-mounted side impact airbag:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat massagers.
3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. Restart the vehicle and have the person remain in this position for two to three minutes after the on indicator is lit.

Additional Factors Affecting System Operation

Safety belts help keep the passenger in position on the seat during vehicle maneuvers and braking, which helps the passenger sensing system maintain the passenger airbag status. See "Safety Belts" and "Child Restraints" in the Index for additional information about the importance of proper restraint use.

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment except when approved by GM for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle on page 2-41* for more information about modifications that can affect how the system operates.

⚠ WARNING

Stowing of articles under the passenger seat or between the passenger seat cushion and seatback may interfere with the proper operation of the passenger sensing system.

Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the service manual have information about servicing the vehicle and the airbag system. To purchase a service manual, see *Service Publications Ordering Information on page 12-13*.

⚠ WARNING

For up to 10 seconds after the ignition is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.

Adding Equipment to the Airbag-Equipped Vehicle

Q: Is there anything I might add to or change about the vehicle that could keep the airbags from working properly?

A: Yes. If you add things that change the vehicle's frame, bumper system, height, front end or side sheet metal, they may keep the airbag system from working properly. Changing or moving any parts of the front seats, safety belts, the airbag sensing and diagnostic module, steering wheel, instrument panel, roof-rail airbag modules, ceiling headliner or pillar garnish trim, overhead console, front sensors, side impact sensors, rollover sensor module, airbag wiring, or cargo restraint system and convenience net can affect the operation of the airbag system.

In addition, the vehicle has a passenger sensing system for the right front passenger position, which includes sensors that are part of the passenger seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery or trim, or with GM covers, upholstery or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See *Passenger Sensing System on page 2-36*.

If you have questions, call Customer Assistance. The phone numbers and addresses for Customer Assistance are in Step Two of the Customer Satisfaction Procedure in this manual. See *Customer Satisfaction Procedure on page 12-1*.

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels on page 9-70* for additional important information.

Q: Because I have a disability, I have to get my vehicle modified. How can I find out whether this will affect my airbag system?

A: If you have questions, call Customer Assistance. The phone numbers and addresses for Customer Assistance are in Step Two of the Customer Satisfaction Procedure in this manual. See *Customer Satisfaction Procedure on page 12-1*.

In addition, your dealer and the service manual have information about the location of the airbag sensors, sensing and diagnostic module and airbag wiring.

Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See *Airbag Readiness Light on page 4-18* for more information.

Notice: **If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag covers, have the airbag covering and/or airbag module replaced. For the location of the airbag modules, see *What Makes an Airbag Inflate? on page 2-33*. See your dealer for service.**

Replacing Airbag System Parts After a Crash

⚠ WARNING

A crash can damage the airbag systems in your vehicle. A damaged airbag system may not work properly and may not protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure your airbag systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See *Airbag Readiness Light on page 4-18* for more information.

Child Restraints

Older Children

Older children who have outgrown booster seats should wear the vehicle's safety belts.

The manufacturer's instructions that come with the booster seat state the weight and height limitations for that booster. Use a booster seat with a lap-shoulder belt until the child passes the fit test below:

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide. See "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 2-22* for more information. If the shoulder belt still does not rest on the shoulder, then return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.
- Can proper safety belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.

Q: What is the proper way to wear safety belts?

A: An older child should wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide. The shoulder belt should not cross the face or neck. The lap belt should fit snugly below the hips, just touching the top of the thighs. This applies belt force to the child's pelvic bones in a crash. It should never be worn over the abdomen, which could cause severe or even fatal internal injuries in a crash.

Also see "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 2-22*.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

In a crash, children who are not buckled up can strike other people who are buckled up, or can be thrown out of the vehicle. Older children need to use safety belts properly.

⚠ WARNING

Never do this.

Never allow two children to wear the same safety belt. The safety belt can not properly spread the impact forces. In a crash, the two children can be crushed together and seriously injured. A safety belt must be used by only one person at a time.

⚠ WARNING

Never do this.

Never allow a child to wear the safety belt with the shoulder belt behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt. The child could move too far forward increasing the chance of head and neck injury. The child might also slide under the lap belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance traveled nor the age and size of the traveler changes the need, for everyone, to use safety restraints. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

⚠ WARNING

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Never leave children unattended in a vehicle and never allow children to play with the safety belts.

Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints.

Children who are not restrained properly can strike other people, or can be thrown out of the vehicle.

⚠ WARNING

Never do this.

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash. For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's arms. An infant should be secured in an appropriate restraint.

⚠ WARNING

Never do this.

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Never put a rear-facing child restraint in the right front seat. Secure a rear-facing child

(Continued)

WARNING (Continued)

restraint in a rear seat. It is also better to secure a forward-facing child restraint in a rear seat. If you must secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go.

Q: What are the different types of add-on child restraints?

A: Add-on child restraints, which are purchased by the vehicle's owner, are available in four basic types. Selection of a particular restraint should take into consideration not only the child's weight, height, and age but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.

For most basic types of child restraints, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle. If it is, the restraint will have a label saying that it meets federal motor vehicle safety standards.

The restraint manufacturer's instructions that come with the restraint state the weight and height limitations for a particular child restraint. In addition, there are many kinds of restraints available for children with special needs.

⚠ WARNING

To reduce the risk of neck and head injury during a crash, infants need complete support. This is because an infant's neck is not fully developed and its head weighs so much compared with the rest of its body. In a crash, an infant in a rear-facing child restraint settles into the restraint, so the crash forces can be distributed across the strongest part of an infant's body, the back and shoulders. Infants should always be secured in rear-facing child restraints.

⚠ WARNING

A young child's hip bones are still so small that the vehicle's regular safety belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's abdomen. In a crash, the belt would apply force on a body area that is unprotected by any bony structure. This alone could cause serious or fatal injuries. To reduce the risk of serious or fatal injuries during a crash, young children should always be secured in appropriate child restraints.

Child Restraint Systems

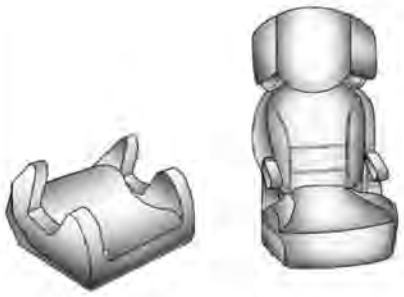
(A) Rear-Facing Infant Seat

A rear-facing infant seat (A) provides restraint with the seating surface against the back of the infant.

The harness system holds the infant in place and, in a crash, acts to keep the infant positioned in the restraint.

(B) Forward-Facing Child Seat

A forward-facing child seat (B) provides restraint for the child's body with the harness.



(C) Booster Seats

A booster seat (C) is a child restraint designed to improve the fit of the vehicle's safety belt system. A booster seat can also help a child to see out the window.

Securing an Add-On Child Restraint in the Vehicle

⚠ WARNING

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Secure the child restraint properly in the vehicle using the vehicle's safety belt or LATCH system, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the LATCH system. See *Lower Anchors and Tethers for Children (LATCH System) on page 2-52* for more information. Children can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, refer to the instructions that come with the restraint which may be on the restraint itself or in a booklet, or both, and to this manual. The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

Securing the Child Within the Child Restraint

⚠ WARNING

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Secure the child properly following the instructions that came with that child restraint.

Where to Put the Restraint

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

We recommend that children and child restraints be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

A label on your sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the right front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

(Continued)

WARNING (Continued)

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 2-36* for additional information.

When securing a child restraint in a rear seating position, study the instructions that came with your child restraint to make sure it is compatible with this vehicle.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, we recommend that rear-facing child restraints not be transported in the vehicle, even if the airbag is off.

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others. Always make sure the child restraint is properly secured.

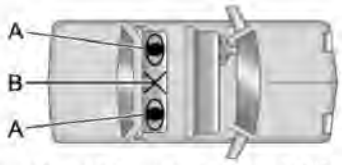
Depending on where you place the child restraint and the size of the child restraint, you may not be able to access adjacent safety belt assemblies or LATCH anchors for additional passengers or child restraints. Adjacent seating positions should not be used if the child restraint prevents access to or interferes with the routing of the safety belt.

Wherever you install a child restraint, be sure to secure the child restraint properly.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in your vehicle — even when no child is in it.

If you need to secure more than one child restraint in the rear seat, review the following illustrations.

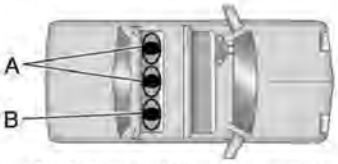
Configurations for Use of Child Restraints



A. Child restraint using LATCH
B. Occupant prohibited

A. Child restraint using LATCH
B. Occupant prohibited
C. Child restraint or occupant using safety belt

A. Child restraint or occupant using safety belt



A. Child restraint or occupant using safety belt
B. Child restraint using LATCH

Lower Anchors and Tethers for Children (LATCH System)

The LATCH system holds a child restraint during driving or in a crash. This system is designed to make installation of a child restraint easier. The LATCH system uses anchors in the vehicle and attachments on the child restraint that are made for use with the LATCH system.

Make sure that a LATCH-compatible child restraint is properly installed using the anchors, or use the vehicle's safety belts to secure the restraint, following the instructions that came with that restraint, and also the instructions in this manual. When installing a child restraint with a top tether, you must also use either the lower anchors or the safety belts to properly secure the child restraint. A child restraint must never be installed using only the top tether and anchor.

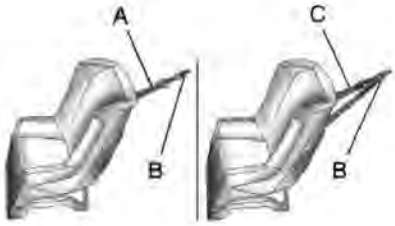
In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. The child restraint manufacturer will provide you with instructions on how to use the child restraint and its attachments. The following explains how to attach a child restraint with these attachments in your vehicle.

Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

Lower Anchors

Lower anchors (A) are metal bars built into the vehicle. There are two lower anchors for each LATCH seating position that will accommodate a child restraint with lower attachments (B).

Top Tether Anchor

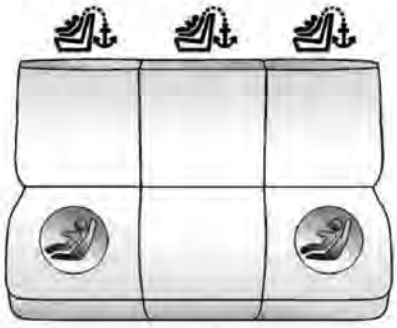


A top tether (A, C) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (B) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during driving or in a crash.

Your child restraint may have a single tether (A) or a dual tether (C). Either will have a single attachment (B) to secure the top tether to the anchor.

Some child restraints that have a top tether are designed for use with or without the top tether being attached. Others require the top tether always to be attached. In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached. Be sure to read and follow the instructions for your child restraint.

Lower Anchor and Top Tether Anchor Locations



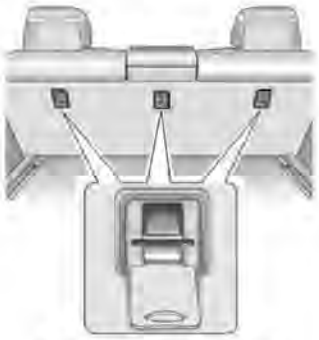
Rear Seat

(Top Tether Anchor): Seating positions with top tether anchors.

(Lower Anchor): Seating positions with two lower anchors.

To assist you in locating the lower anchors, each seating position with lower anchors has two labels, near the crease between the seatback and the seat cushion.

To assist you in locating the top tether anchors, the top tether anchor symbol is located on the cover.



Top Tether Anchors

The top tether anchors for each rear seating position are located under the covers, on the back of the rear seatback. Be sure to use an anchor located on the same side of the vehicle as the seating position where the child restraint will be placed.

Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether be attached, or if the instructions that come with the child restraint say that the top tether must be attached.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. See *Where to Put the Restraint on page 2-50* for additional information.

Securing a Child Restraint Designed for the LATCH System

⚠ WARNING

If a LATCH-type child restraint is not attached to anchors, the child restraint will not be able to protect the child correctly. In a crash, the child could be seriously injured or killed. Install a LATCH-type child restraint properly using the

(Continued)

WARNING (Continued)

anchors, or use the vehicle's safety belts to secure the restraint, following the instructions that came with the child restraint and the instructions in this manual.

⚠ WARNING

Do not attach more than one child restraint to a single anchor. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured. To reduce the risk of serious or fatal injuries during a crash, attach only one child restraint per anchor.

⚠ WARNING

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Buckle any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, if your vehicle has one, after the child restraint has been installed.

Notice: **Do not let the LATCH attachments rub against the vehicle's safety belts. This may damage these parts. If necessary, move buckled safety belts to avoid rubbing the LATCH attachments.**

Do not fold the empty rear seat with a safety belt buckled. This could damage the safety belt or the seat. Unbuckle and return the safety belt to its stowed position, before folding the seat.

Make sure to attach the child restraint at the proper anchor location.

This system is designed to make installation of child restraints easier. When using lower anchors, do not use the vehicle's safety belts. Instead use the vehicle's anchors and child restraint attachments to secure the restraints. Some restraints also use another vehicle anchor to secure a top tether.

1. Attach and tighten the lower attachments to the lower anchors. If the child restraint does not have lower attachments or the desired seating position does not have lower anchors, secure the child restraint with the top tether and the safety belts.

   Refer to your child restraint manufacturer instructions and the instructions in this manual.

   1.1. Find the lower anchors for the desired seating position.

   1.2. Put the child restraint on the seat.

   1.3. Attach and tighten the lower attachments on the child restraint to the lower anchors.

2. If the child restraint manufacturer recommends that the top tether be attached, attach and tighten the top tether to the top tether anchor, if equipped. Refer to the child restraint instructions and the following steps:

   2.1. Find the top tether anchor and open its cover to expose the anchor.

2.2. Route, attach and tighten the top tether according to your child restraint instructions and the following instructions:

If the rear outboard seating position you are using has an adjustable head restraint and you are using a dual tether, route the tether around the head restraint.

If the rear outboard seating position you are using has an adjustable head restraint and you are using a single tether, raise the head restraint and route the tether under the head restraint and in between the head restraint posts.

If the rear center seating position you are using has an adjustable headrest and you are using a dual tether, lower the headrest down to its stowed position and route the tether over the headrest.

If the rear center seating position you are using has an adjustable headrest and you are using a single tether, lower the headrest to its stowed position and route the tether over the headrest.

3. Push and pull the child restraint in different directions to be sure it is secure.

Replacing LATCH System Parts After a Crash

⚠ WARNING

A crash can damage the LATCH system in the vehicle. A damaged LATCH system may not properly secure the child restraint, resulting in serious injury or even death in a crash. To help make sure the LATCH system is working properly after a crash, see your dealer to have the system inspected and any necessary replacements made as soon as possible.

If the vehicle has the LATCH system and it was being used during a crash, new LATCH system parts may be needed.

New parts and repairs may be necessary even if the LATCH system was not being used at the time of the crash.

Securing Child Restraints (Rear Seat)

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 2-52* for how and where to install the child restraint using LATCH. If a child restraint is secured in the vehicle using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 2-52* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

If the child restraint does not have the LATCH system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint on page 2-50*.

1. Put the child restraint on the seat.
2. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

3. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. Pull the rest of the shoulder belt all the way out of the retractor to set the lock.

5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.
6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 2-52* for more information.
7. Push and pull the child restraint in different directions to be sure it is secure.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it.

Securing Child Restraints (Front Passenger Seat)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint on page 2-50*.

In addition, the vehicle has a passenger sensing system which is designed to turn off the right front passenger frontal airbag under certain conditions. See *Passenger Sensing System on page 2-36* and *Passenger Airbag Status Indicator on page 4-19* for more information, including important safety information.

A label on the sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

(Continued)

WARNING (Continued)

Even if the passenger sensing system has turned off the right front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 2-36* for additional information.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 2-52* for how and where to install the child restraint using LATCH. If a child restraint is secured using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 2-52* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

1. Move the seat as far back as it will go before securing the forward-facing child restraint.

   When the passenger sensing system has turned off the right front passenger frontal airbag and seat-mounted side impact airbag, the off indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator on page 4-19*.

2. Put the child restraint on the seat.

3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

4. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle, so that the safety belt could be quickly unbuckled if necessary.

5. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 5 and 6.

   If the vehicle does not have a rear seat and the child restraint has a top tether, follow the child restraint manufacturer's instructions regrading the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 2-52* for more information.

7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side-to-side and back-and-forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

   If the airbags are off, the off indicator in the passenger airbag status indicator will come on and stay on when the vehicle is started.

   If a child restraint has been installed and the on indicator is lit, see "If the On Indicator is Lit for a Child Restraint" under *Passenger Sensing System on page 2-36* for more information.

   To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position.

Storage

Storage Compartments
Glove Box 3-1
Cupholders 3-1
Front Storage 3-2
Armrest Storage 3-2
Center Console Storage 3-2

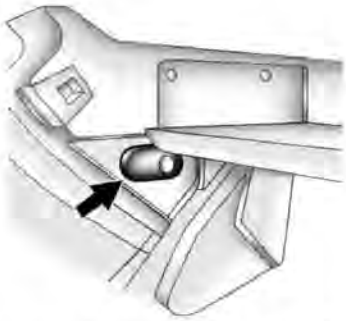
Additional Storage Features
Cargo Cover 3-3
Cargo Tie Downs 3-4
Cargo Management System 3-5
Cargo Net 3-8
Convenience Net 3-10

Roof Rack System
Roof Rack System 3-10

Storage Compartments

Glove Box

Lift the glove box handle up to open it. Use the key to lock and unlock the glove box.



The glove box is air conditioned and can be used to store items at a lower temperature. The vehicle air conditioning must be turned on for the maximum cool air to enter the glove box. Move the slide control across the small hole to turn the cool air flow off. Close the opening to keep cold air from entering the vehicle.

Cupholders

This vehicle has a cupholder equipped with a divider that can be adjusted to accommodate large containers or small containers.

For large containers, push the button to move aside the divider and make the cupholder deeper. For small containers, push down on the top edge of the divider to lock it back in place to make the cupholder shorter.

Front Storage

A storage area is located in front of the shift lever. Push upward on the top of the door and release. The door automatically opens.

There is an accessory power outlet. See *Power Outlets on page 4-11*.

Armrest Storage

For vehicles with a rear seat armrest, pull the rear seat armrest forward to access cupholders with removable liners and a storage area. Pull the lever to access the storage area.

Center Console Storage

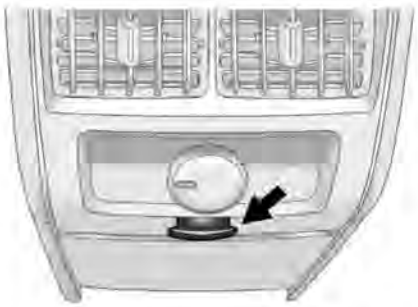
Vehicles have an armrest and an upper storage tray in the center console.

The armrest on top of the center console can be adjusted to a rearward, middle, and forward position. Slide the top of the armrest to adjust to the desired position.

To open the center console with armrest, move the armrest to the full rearward position to access the buttons.

For either center console, the storage area has a storage tray and a main storage. Push the driver side button to access the storage tray. Push the passenger side button to access the main storage.

There is an accessory power outlet and input jacks for auxiliary audio devices. See *Power Outlets on page 4-11* and *Auxiliary Devices (Radio with CD) on page 6-28* or *Auxiliary Devices (Radio with CD/DVD and MEM) on page 6-34*.



Push the button to open the storage area located at the rear of the center console.

Additional Storage Features

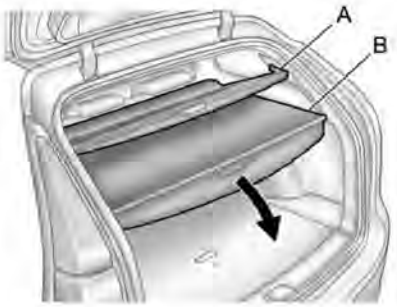
Cargo Cover

For vehicles with the dual position cargo cover, it can be used to cover items in the cargo area of the vehicle.

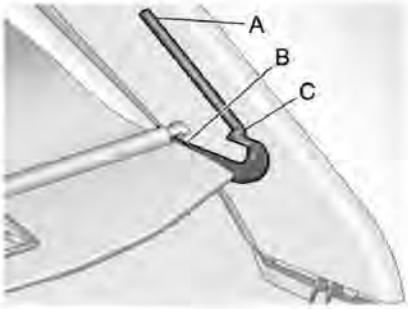
Install the cargo cover

1. Hold the cartridge so that the pull-out shade faces the rear of the vehicle.

2. Align the cartridge over the pins on the trim panels of the vehicle.
3. Push down on the cartridge to snap it into place.
4. Unroll the shade towards the rear of the vehicle.



5. The shade can be set in two positions. It can be set in a half way open (A) position for loading objects into the rear compartment.
6. Pull cargo cover down to lower (B) position to conceal objects in the rear compartment.
7. Align the pins with the channels on both sides.



8. Insert the shade's pin into the bent slot (B) and slide it to the first stop (C) to totally conceal the cargo area. The shade can also be positioned at second stop (A) to partially cover cargo.

Remove the cargo cover

1. Remove the cover from the channels and carefully roll it back up.

2. Slide the button on the top to release the cartridge.
3. Pull up to remove the cartridge from the pins.

⚠ WARNING

An improperly stored cargo cover could be thrown about the vehicle during a collision or sudden maneuver. Someone could be injured. If the cover is removed, always store it in the proper storage location. When it is replaced, always be sure that it is securely reattached.

Cargo Tie Downs

For vehicles equipped with cargo tie-downs, the four tie-downs are located in the rear compartment of the vehicle. Use the tie-downs to secure small loads.

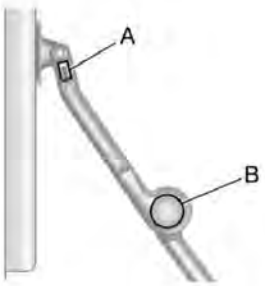
Cargo Management System

To open the cargo management system, press on the bottom of handle assembly to unlatch it and lift up on the handle.

A prop rod locks to hold the cover up when opened.

Four hooks are located on the inside cover and can be used or storing items.

There may be additional storage compartments on each side of the cargo management system. Lift the panel up to open.



Press the red push button (B) on the prop rod to close the cover.

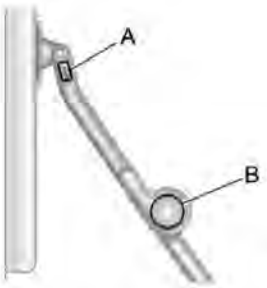
Storing the Cargo Management System Cover

Access the rear areas of the cargo management system:

⚠ WARNING

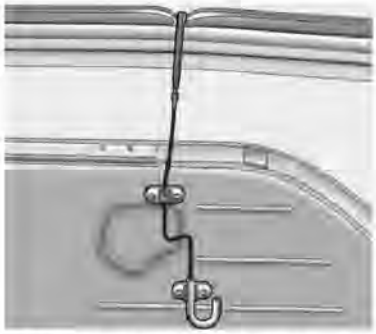
An improperly latched and closed cargo cover, or cargo cover left in the open position, could be thrown about the vehicle during a crash or sudden maneuver. Someone could be injured. Be sure to return the cover to the closed position and latch before driving. If the cover is removed, always store it outside of the vehicle. When it is replaced, always be sure that it is securely reattached.

1. Open the cover.



2. Release the prop rod from the inside cover by sliding downward on the red clip (A).

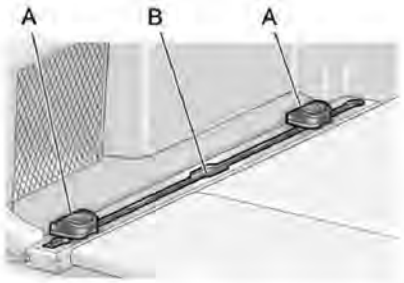
   Unhook the prop rod from the pin on the inside cover. Store the unhooked prop rod by folding it into the cargo management compartment.



3. Store the cargo management system cover by hooking it onto the weatherstrip.

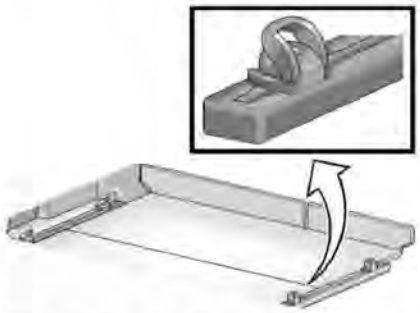
D-Ring Sliders

There are four D-Ring sliders that move along rails on both sides of the cargo management area. these can be used as tie-downs when storing cargo.



Installing D-Ring Sliders

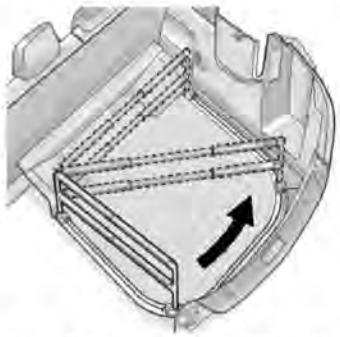
To install the D-Ring sliders (A), insert it into the channel (B) located in the middle of both rails.



The loop of the D-Ring slider must be facing inward towards the storage area and the ring must be in the up position for proper usage.

Push the button to move the D-Ring slider either towards the front or the rear of the vehicle. The rings can be locked into various positions along the rail.

U-Rail

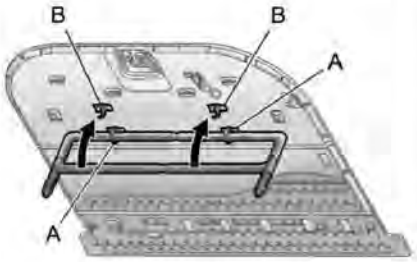


For vehicles with a U-Rail system, move the gate around the u-shaped track to store and secure cargo in place.

Storing the U-Rail Gate

Remove the gate from the U-Rail by pressing the button and lifting upward.

1. Lift the cargo management system cover.
2. Release the cover from the prop rod as described in previous steps.



3. Insert the top of the gate into the lower two clips (A).
4. Flip the bottom of the gate up and insert into the upper two clips (B).

Cargo Net

⚠ WARNING

Do not stack items higher than the upper end of the cargo net or hang anything from the net. Avoid items that have sharp edges or that apply excessive force to the net. If items are not properly stored, damage to the net could occur and items can be thrown about the vehicle. You or other could be injured. Always store items behind the net.

For vehicles equipped with a cargo net, it can be used to store light loads, keeping them from falling over or being thrown into the cabin during heavy braking.

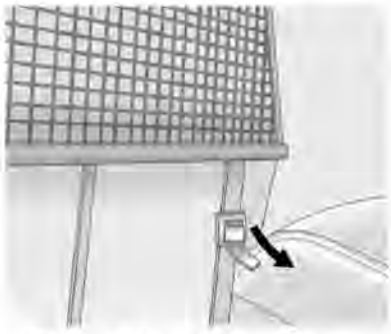
The net should not be overloaded or used to store heavy loads.

There are four openings in the headliner, two located behind the front seats and two behind the rear seats.

1. Insert the top corners of the cargo net into the large opening in the headliner and secure by sliding them into the small opening.
2. The rear seat backs should be folded down, when the net is installed in the headliner opening located behind the front seats.

3. Mount the cargo net to the rear seat tethers located on the back of the folded down rear seats and pull on the straps to tighten the net.
4. When the net is installed in the headliner opening located behind the rear seats, the rear seat backs should be upright.

5. Mount the cargo net to the cargo tie-downs located on the lower side panels.



6. Pull on the straps to tighten the net.

Cargo Net Storage

The cargo net can be removed from the vehicle and stored in the cargo management system.

1. Disconnect the net from the roof openings and the tethers.
2. Press the red button on the center of the net to fold it in half.
3. Roll up the cargo net, storing it into the attached vinyl bag.
4. Open the cargo management system lid.
5. For vehicles with an inflator kit, store the cargo net in the available space next to the kit.

Convenience Net

This vehicle may have a convenience net located in the rear of the vehicle. Attach it to the cargo tie-downs for storing small loads.

Do not use the net to store heavy loads.

Roof Rack System

⚠ WARNING

If something is carried on top of the vehicle that is longer or wider than the roof rack— like paneling, plywood, or a mattress— the wind can catch it while the vehicle is being driven. The item being carried could be violently torn off, and this could cause a collision, and damage the vehicle. Never carry something longer or wider than the roof rack on top of the vehicle unless using a GM Certified accessory carrier.

For vehicles with a roof rack, the rack can be used to load items. For roof racks that do not have cross rails included, GM Certified cross rails can be purchased as an accessory. See your dealer for additional information.

Notice: **Loading cargo on the roof rack that weighs more than 100 kg (220 lbs) or hangs over the rear or sides of the vehicle may damage the vehicle. Load cargo so that it rests evenly between the crossrails, making sure to fasten cargo securely.**

To prevent damage or loss of cargo when driving, check to make sure cross rails and cargo are securely fastened. Loading cargo on the roof rack will make the vehicle's center of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking or abrupt maneuvers, otherwise it may result in loss of control. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place. Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits on page 8-11*.

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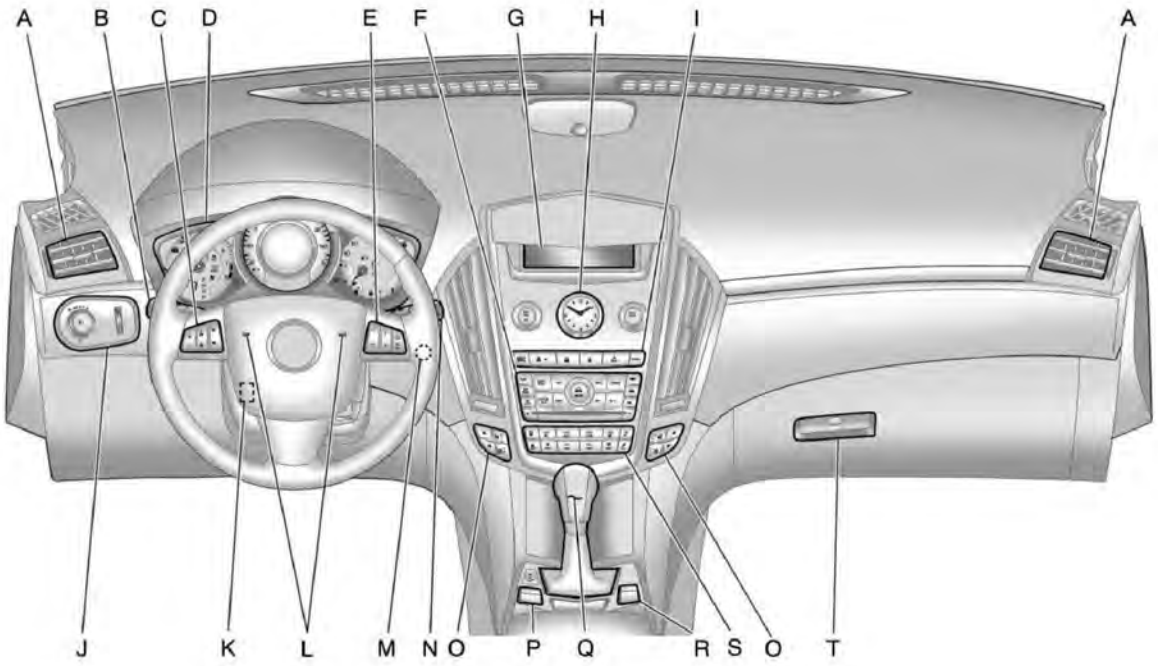
✍ NOTES

Instrument Panel Overview



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A. *Air Vents on page 7-6.*

B. Turn and Lane-Change Lever. See *Turn and Lane-Change Signals on page 5-5*. Driver Information Center (DIC) Controls. See *Driver Information Center (DIC) on page 4-29.*

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H. *Clock (Analog Clock) on page 4-10* or *Clock (Digital Clock) on page 4-10.*

I. *Safety Locks on page 1-12. Power Door Locks on page 1-11. Hazard Warning Flashers on page 5-5.*

J. *Exterior Lamp Controls on page 5-1. Front Fog Lamps on page 5-6* (If Equipped). *Instrument Panel Illumination Control on page 5-6.*

K. *Steering Wheel Adjustment on page 4-6.*

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M. Start/Stop Button. See *Starting the Gasoline Engine on page 8-20.*

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P. *Parking Brake on page 8-31.*

Q. Shift Lever. See *Shifting Into Park on page 8-22.*

R. *StabiliTrak® System on page 8-35. Ultrasonic Parking Assist on page 8-40* (If Equipped). Economy Mode (If Equipped). See *Fuel Economy Mode on page 8-29.*

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Controls

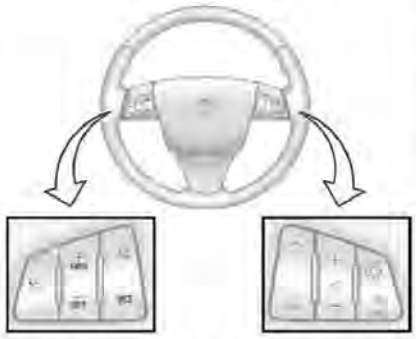
Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Steering Wheel Controls



For vehicles with audio steering wheel controls, some audio controls can be adjusted at the steering wheel.

∧ / ∨ : Press the ∧ button to select the next favorite radio station or next CD, DVD, if equipped, or MP3 track.

Press the ∨ button to select the previous favorite radio station or previous CD, DVD, if equipped, or MP3 track.

+ ◁ − (Volume): Press + to increase the volume, press − to decrease the volume.

(Push to Talk): For vehicles with an OnStar®, Bluetooth, or navigation system, press to interact with those systems. See *OnStar® System on page 4-46*, *Bluetooth (Overview) on page 6-47* or *Bluetooth (Infotainment Controls) on page 6-48* or *Bluetooth (Voice Recognition) on page 6-52* or *Bluetooth (Navigation) on page 6-63*, or the separate navigation manual for more information.

(End Call / Mute): Press to silence the vehicle speakers only. Press again to turn the sound on. For vehicles with OnStar® or Bluetooth systems, press to reject an incoming call, or end a current call.

SRCE: Press to select an audio source.

Horn

Press near the horn symbols or press on the steering wheel pad to sound the horn.

Windshield Wiper/Washer

The windshield wiper/washer lever is located on the right side of the steering column. With the ignition in ACC/ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

2: Fast wipes.

1: Slow wipes.

(Adjustable Interval Wipes): Turn the band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see following Rainsense™ information.

(Off): Turns the wipers off.

(Mist): Single wipe, briefly move the wiper lever down. Several wipes, hold the wiper lever down.

Clear snow and ice from the wiper blades before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement on page 9-29*.

Heavy snow or ice can overload the wiper motor.

Wipe Parking

If the ignition is turned LOCK/OFF while the wipers are on 1, 2 or ⛉, they will immediately stop.

If the windshield wiper lever is then moved to OFF before the driver door is opened or within 10 minutes, the wipers will restart and move to the base of the windshield.

If the ignition is turned to LOCK/OFF while the wipers are performing wipes due to windshield wash, the wipers continue to run until they reach the base of the windshield.

Rainsense™

For vehicles with Rainsense, a sensor located near the top center of the windshield detects the amount of water on the windshield and automatically controls the frequency of the windshield wiper.

Keep this area of the windshield clear of debris to allow for best system performance.

⛉ **(Rainsense Wipe Sensitivity Control):** Move the windshield wiper lever to ⛉. Turn the band on the wiper lever to adjust the sensitivity.

Turn the band up for more sensitivity to moisture.

Turn the band down for less sensitivity to moisture.

To deactivate Rainsense, move the windshield wiper lever out of ⛉ position.

Wiper Arm Assembly Protection

When using an automatic car wash, move the windshield wiper lever to the OFF position. This disables the automatic Rainsense windshield wipes and/or rear wipers.

With Rainsense, if the transmission is in N (Neutral) and the vehicle speed is very slow, the wipers will automatically stop at the base of the windshield.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Windshield Washer

Pull the lever toward you to spray washer fluid on the windshield. The spray continues until the lever is released. The wipers will run a few times. See *Washer Fluid on page 9-23* for information on filling the windshield washer fluid reservoir.

⚠ WARNING

In freezing weather, do not use your washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.

Press the upper or lower portion of the button to control the rear wiper and rear wiper delay.

The system turns off when the button is returned to the middle position.

(Rear Wiper): For continuous rear window wipes.

(Rear Wiper Delay): Sets a delay between wipes.

(Rear Washer): Push the windshield wiper lever forward to spray washer fluid on the rear window. The lever automatically returns to its original position when released.

Reverse Gear Wipes

If the rear wiper control is off, the rear wiper will automatically operate continuously when the shift lever is in R (Reverse) and the front windshield wiper is performing low or high speed wipes. If the rear wiper control is off, the shift lever is in R (Reverse) and the front windshield wiper is performing interval wipes, then the rear wiper automatically performs interval wipes.

The windshield washer reservoir is used for the windshield and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid on page 9-23*.

⚠ WARNING

In freezing weather, do not use your washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Headlamp Washer

For vehicles with headlamp washers, they are located to the side of the headlamps.

The headlamps must be on in order to use the headlamp washers. If the headlamps are not on, only the windshield will be washed.

Pull the wiper lever towards you and hold briefly to activate. The headlamp washers will spray once, pause, and spray again. The headlamp washer will spray again after five windshield wash cycles.

See *Washer Fluid on page 9-23* for information on filling the windshield washer fluid.

⚠ WARNING

In freezing weather, do not use your washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Compass

The vehicle may have a compass display on the Driver Information Center (DIC). The compass receives its heading and other information from Global Positioning System (GPS) antenna, StabiliTrak, and vehicle speed information.

Avoid covering the GPS antenna for long periods of time with objects that may interfere with the antenna's ability to receive a satellite signal.

See *Multi-Band Antenna on page 6-18* for the location of the vehicle's antennas. The compass system is designed to operate for a certain number of miles or degrees of turn before needing a signal from the GPS satellites. When the compass display shows CAL, drive the vehicle for a short distance in an open area where it can receive a GPS signal. The compass system will automatically determine when GPS signal is restored and provide a heading again. See *Compass Messages on page 4-34* for more information on the messages that may be displayed for the compass.

Clock (Analog Clock)

The analog clock is located on the instrument panel above the radio. The clock is not connected with any other vehicle system and runs by itself. To adjust the clock:

1. Locate the adjustment buttons directly below the clock face.
2. Push and hold either adjustment button to advance or reverse the clock hands. Holding the buttons down will cause the clock to advance faster. Release the buttons before reaching the desired time.
3. Push and release the buttons to increase the time by one minute increments until the desired time is reached.

Clock (Digital Clock)

The infotainment system controls are used to access the time and date settings through the menu system. See *Operation on page 6-7* for information about how to use the menu system. See the separate navigation system manual for instructions on how to operate the digital clock for the navigation system.

To turn the digital clock on or off:

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Clock Displayed.
4. Press MENU/SELECT to turn the clock on or off.

Setting the Time and Date

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Set Time or Set Date.
4. Turn the MENU/SELECT knob to adjust the highlighted value.
5. Press the MENU/SELECT knob to select the next value.
6. To save the time or date and return to the Time and Date Settings menu, press the ⇦ BACK button at any time or press the MENU/SELECT knob after adjusting the minutes or year.

Setting the 12/24 Hour Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight 12/24 Hour Format.
4. Press the MENU/SELECT knob to select the 12 hour or 24 hour display format.

Setting the Month & Day Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Month & Day Format.
4. Press the MENU/SELECT knob to select MM/DD (month/day) or DD/MM (day/month).

Setting the Auto Time Adjust

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Auto Time Adjust.
4. Press the MENU/SELECT knob to turn Auto Time Adjust on or off.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cellular telephone.

The vehicle has four accessory power outlets. The power outlets located below the climate control system inside the front storage bin, inside the center floor console, and on the rear of the center floor console are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

There is a small cap that must be removed to access the accessory power outlet. When not using the outlet be sure to cover it with the protective cap.

Notice: **Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the battery. Power is always supplied to the outlets. Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 ampere rating.**

Certain accessory power plugs may not be compatible to the accessory power outlet and could result in blown vehicle or adapter fuses. If you experience a problem, see your dealer for additional information on the accessory power outlets.

Notice: **Adding any electrical equipment to the vehicle can damage it or keep other components from working as they should. The repairs would not be covered by the vehicle warranty. Do not use equipment exceeding maximum amperage rating of 20 amperes. Check with your dealer before adding electrical equipment.**

Follow the proper installation instructions that are included with any electrical equipment you install.

Notice: **Improper use of the power outlet can cause damage not covered by the vehicle warranty. Do not hang any type of accessory or accessory bracket from the plug because the power outlets are designed for accessory power plugs only.**

Cigarette Lighter

There may be a cigarette lighter located under the climate control system, inside the front storage bin.

To activate the cigarette lighter, push it into the heating element and let go. The lighter pops out when it is ready to be used.

Notice: **Holding a cigarette lighter in while it is heating does not let the lighter back away from the heating element when it is hot. Damage from overheating can occur to the lighter or heating element, or a fuse could be blown. Do not hold a cigarette lighter in while it is heating.**

Ashtrays

There may be an ashtray located under the climate control system on the instrument panel. Press the door to release the ashtray.

To empty the ashtray, remove it from the instrument panel by holding the edges and pulling straight out. To reinstall, push the tray back into place.

There may also be ashtrays located on the center floor console behind the shift lever and in the rear doors.

Notice: **If papers, pins, or other flammable items are put in the ashtray, hot cigarettes or other smoking materials could ignite them and possibly damage the vehicle. Never put flammable items in the ashtray.**

Warning Lights, Gauges, and Indicators

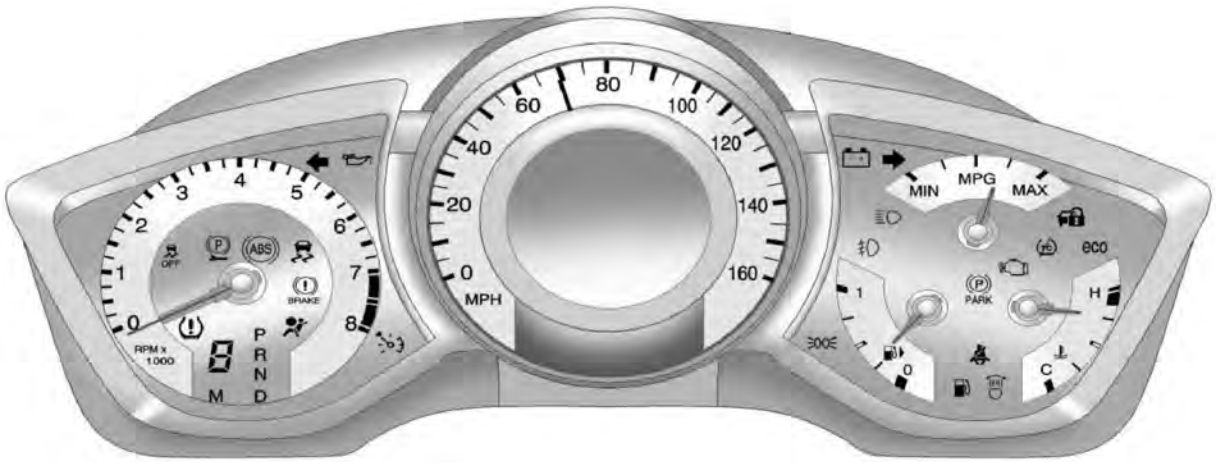
Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury.

Warning lights come on when there could be a problem with a vehicle function. Some warning lights come on briefly when the engine is started to indicate they are working.

Gauges can indicate when there could be a problem with a vehicle function. Often gauges and warning lights work together to indicate a problem with the vehicle.

When one of the warning lights comes on and stays on while driving, or when one of the gauges shows there may be a problem, check the section that explains what to do. Follow this manual's advice. Waiting to do repairs can be costly and even dangerous.

Instrument Cluster



United States version shown, Canada similar

Speedometer

The speedometer shows the vehicle's speed in either kilometers per hour (km/h) or miles per hour (mph).

Odometer

The odometer shows how far the vehicle has been driven, in either kilometers or miles.

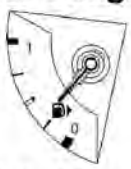
This vehicle has a tamper-resistant odometer. If the vehicle needs a new odometer installed, the new one is set to the mileage of the old odometer. If this is not possible, it is set at zero and a label is put on the driver's door to show the old mileage reading.

Tachometer

The tachometer displays the engine speed in revolutions per minute (rpm).

Notice: **If the engine is operated with the tachometer in the shaded warning area, the vehicle could be damaged, and the damages would not be covered by the vehicle warranty. Do not operate the engine with the tachometer in the shaded warning area.**

Fuel Gauge



United States

Canada

When the ignition is on, the fuel gauge indicates about how much fuel is left in the tank.

An arrow on the fuel gauge indicates the side of the vehicle the fuel door is on.

When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refueled soon.

Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

- At the service station, the fuel pump shuts off before the gauge reads full.
- It takes a little more or less fuel to fill up than the gauge indicated. For example, the gauge may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gauge moves a little while turning a corner or speeding up.
- The gauge takes a few seconds to stabilize after the ignition is turned on, and goes back to empty when the ignition is turned off.

Fuel Economy Gauge

US

For vehicles equipped with this gauge, it shows the fuel economy that the vehicle is currently achieving.

MIN: Is the minimum fuel economy. This least efficient fuel economy usually occurs during quick accelerations or when idling.

MAX: Is the maximum fuel economy. The best fuel economy usually occurs during coasting.

This gauge moves often as it is an instantaneous calculation based on current driving conditions.

Canada

The gauge shows the fuel usage that the vehicle is currently achieving in liters per 100 kilometers (l/100 km).

20: Is the minimum fuel economy. This least efficient fuel economy usually occurs during quick accelerations or when idling.

l/100: Is the maximum fuel economy. The best fuel economy usually occurs during coasting.

This gauge moves often as it is an instantaneous calculation based on current driving conditions.

Turbo Gauge (2.8L Only)

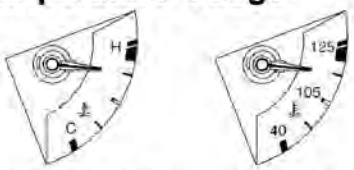
For vehicles with a turbo gauge, it indicates when the vehicle is using turbo power.

When the needle is in the white area, left of center of the gauge, turbo is not being used.

As the accelerator peddle is pressed the needle may move to the right of center indicating turbo power. Under normal conditions the needle will not display a reading in the red.

Once the driver eases off the accelerator pedal or the transmission shifts, the needle moves back to the left of center of the gauge.

Engine Coolant Temperature Gauge



United States **Canada**

This gauge measures the temperature of the vehicle's engine.

If the indicator needle moves into the shaded area, the engine is too hot. A temperature indicator light will turn on.

If the vehicle has been operating under normal driving conditions, and the temperature indicator light comes on, pull off the road, stop the vehicle and turn off the engine as soon as possible.

Safety Belt Reminders

Driver Safety Belt Reminder Light

There is a driver safety belt reminder light on the instrument panel cluster.

When the engine is started this light and a chime come on and stay on for several seconds to remind drivers to fasten their safety belts. The light also begins to flash.

This cycle repeats if the driver remains unbuckled and the vehicle is moving.

If the driver safety belt is already buckled, neither the light nor chime come on.

Passenger Safety Belt Reminder Light

When the engine is started this light and the chime come on and stay on for several seconds to remind the passenger to fasten their safety belt. The light also begins to flash.

This cycle repeats if the passenger remains unbuckled and the vehicle is moving.

If the passenger safety belt is buckled, neither the chime nor the light comes on.

The front passenger safety belt warning light and chime may turn on if an object is put on the seat such as a briefcase, handbag, grocery bag, laptop or other electronic device. To turn off the warning light and or chime, remove the object from the seat or buckle the safety belt

Second Row Passenger Belt Reminder Light

When the engine is started and the Trip/Fuel display is chosen, three gray seatbelt symbols come on and stay on for several seconds on the top of the Driver information Center (DIC) to remind passengers to fasten their safety belts.

If the Vehicle Information display is selected, a full page screen displays at start-up that has the three seatbelt symbols.

Once the passenger seatbelt is buckled, the corresponding seat belt symbol in the DIC turns green. There are no seat position sensors in the seat. If a seatbelt is not initially buckled, the cluster continues to show the gray seatbelt icon.

While the vehicle is moving, if a second row passenger that was previously buckled becomes unbuckled, a full screen warning displays with the corresponding seat belt indicator flashing red. A chime may sound.

Acknowledge warning messages by pressing any of the DIC switches.

Airbag Readiness Light

This light shows if there is an electrical problem. The system check includes the airbag sensor, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System on page 2-28*.

The airbag readiness light comes on and stays on for several seconds when the vehicle is started. Then the light goes out.

⚠ WARNING

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System on page 2-36* for important safety information. The overhead console has a passenger airbag status indicator.

United States

Canada

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. If you are using remote start, if equipped, to start the vehicle from a distance you may not see the system check.

Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol to let you know the status of the right front passenger frontal and seat-mounted side impact airbag.

If the word ON or the on symbol is lit on the passenger airbag status indicator, it means that the right front passenger frontal airbag and seat-mounted side impact airbag are enabled (may inflate).

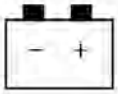
If the word OFF or the off symbol is lit on the passenger airbag status indicator, it means that the passenger sensing system has turned off the right front passenger frontal and seat-mounted side impact airbag.

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the passenger sensing system. See your dealer for service.

⚠ WARNING

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 4-18* for more information, including important safety information.

Charging System Light



The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. The light turns off when the engine is started. If it does not, have the vehicle serviced by your dealer.

If the light stays on, or comes on while driving, there may be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

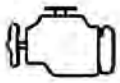
When this light comes on, the Driver Information Center (DIC) also displays a message.

See *Battery Voltage and Charging Messages on page 4-33.*

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

Malfunction Indicator Lamp

A computer system called OBD II (On-Board Diagnostics-Second Generation) monitors operation of the fuel, ignition, and emission control systems. It ensures that emissions are at acceptable levels for the life of the vehicle, helping to produce a cleaner environment.



This light comes on when the ignition is on, but the engine is not running, as a check to show it is working. If it does not, have the vehicle serviced by your dealer.

If the check engine light comes on and stays on, while the engine is running, this indicates that there is an OBD II problem and service is required.

Malfunctions often are indicated by the system before any problem is apparent. Being aware of the light can prevent more serious damage to the vehicle. This system assists the service technician in correctly diagnosing any malfunction.

Notice: **If the vehicle is continually driven with this light on, after a while, the emission controls might not work as well, the vehicle fuel economy might not be as good, and the engine might not run as smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.**

Notice: **Modifications made to the engine, transmission, exhaust, intake, or fuel system of the vehicle or the replacement of the original tires with other than those of the same Tire Performance Criteria (TPC) can affect the vehicle's emission controls and can cause this light to come on. Modifications to these systems could lead to costly repairs not covered by the vehicle warranty. This could also result in a failure to pass a required Emission Inspection/Maintenance test. See *Accessories and Modifications on page 9-3.***

This light comes on during a malfunction in one of two ways:

Light Flashing: A misfire condition has been detected. A misfire increases vehicle emissions and could damage the emission control system on the vehicle. Diagnosis and service might be required.

The following can prevent more serious damage to the vehicle:

- Reduce vehicle speed.
- Avoid hard accelerations.
- Avoid steep uphill grades.
- If towing a trailer, reduce the amount of cargo being hauled as soon as it is possible.

If the light continues to flash, when it is safe to do so, stop the vehicle. Find a safe place to park the vehicle. Turn the vehicle off, wait at least 10 seconds, and restart the engine. If the light is still flashing, follow the previous steps and see your dealer for service as soon as possible.

Light On Steady: An emission control system malfunction has been detected on the vehicle. Diagnosis and service might be required.

An emission system malfunction might be corrected.

- Make sure the fuel cap is fully installed. See *Filling the Tank on page 8-50*. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap allows fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn the light off.
- If the vehicle has been driven through a deep puddle of water, the vehicle's electrical system might be wet. The condition is usually corrected when the electrical system dries out. A few driving trips should turn the light off.
- Make sure to fuel the vehicle with quality fuel. Poor fuel quality causes the engine not to run as efficiently as designed and may cause: stalling after start-up, stalling when the vehicle is changed into gear, misfiring, hesitation on acceleration, or stumbling on acceleration. These conditions might go away once the engine is warmed up.

  If one or more of these conditions occurs, change the fuel brand used. It will require at least one full tank of the proper fuel to turn the light off.

  See *Gasoline Specifications on page 8-47*.

If none of the above have made the light turn off, your dealer can check the vehicle. The dealer has the proper test equipment and diagnostic tools to fix any mechanical or electrical problems that might have developed.

Emissions Inspection and Maintenance Programs

Some state/provincial and local governments have or might begin programs to inspect the emission control equipment on the vehicle. Failure to pass this inspection could prevent getting a vehicle registration.

Here are some things to know to help the vehicle pass an inspection:

- The vehicle will not pass this inspection if the check engine light is on with the engine running, or if the ignition is placed in ON/RUN and the light is not on.

- The vehicle will not pass this inspection if the OBD II (on-board diagnostic) system determines that critical emission control systems have not been completely diagnosed by the system. The vehicle would be considered not ready for inspection. This can happen if the battery has recently been replaced or if the battery has run down. The diagnostic system is designed to evaluate critical emission control systems during normal driving. This can take several days of routine driving. If this has been done and the vehicle still does not pass the inspection for lack of OBD II system readiness, your dealer can prepare the vehicle for inspection.

Brake System Warning Light

The vehicle brake system consists of two hydraulic circuits. If one circuit is not working, the remaining circuit can still work to stop the vehicle. For normal braking performance, both circuits need to be working

If the warning light comes on, there is a brake problem. Have the brake system inspected right away.

Metric

English

The brake indicator light should come on briefly as the engine is started. If it does not come on have the vehicle serviced by your dealer.

⚠ WARNING

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to a crash. If the light is still on after the vehicle has been pulled off the road and carefully stopped, have the vehicle towed for service.

If the light comes on while driving, a chime sounds. Pull off the road and stop. The pedal might be harder to push or go closer to the floor. It might also take longer to stop. If the light is still on, have the vehicle towed for service. See *Towing the Vehicle on page 9-105*.

Electric Parking Brake Light

Metric

English

For vehicles with the Electric Park Brake (EPB), this light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

The park brake status light comes on when the brake is applied. If the light continues flashing after the park brake is released, or while driving, there is a problem with the Electric Parking Brake system. A SERVICE PARKING BRAKE message may also display in the Driver Information Center (DIC). See *Brake System Messages on page 4-34* for more information.

If the light does not come on, or remains flashing, see your dealer.

For vehicles with the Electric Park Brake (EPB), the brake warning light should come on briefly when as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If this light comes on there is a problem with a system on the vehicle that is causing the park brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See *Parking Brake on page 8-31* for more information.

Antilock Brake System (ABS) Warning Light

This light comes on briefly when the engine is started.

If the light does not come on, have it fixed so it will be ready to warn if there is a problem.

If the ABS light comes on and stays on while driving, stop as soon as possible and turn the ignition off. Start the engine again to reset the system. If the light still stays on after driving at a speed of at least 20 km/h (13 mph), or comes on again while driving, see your dealer retailer for service. A chime may also sound when the light comes on steady.

If both ABS and brake warning lights are on, the vehicle's antilock brakes are not functioning and there is a problem with the regular brakes. See your dealer for service.

See *Brake System Warning Light on page 4-23*.

See *Brake System Messages on page 4-34* for all brake related DIC messages.

Traction Off Light

This light comes on when the Traction Control System (TCS) has been turned off by pressing and releasing the traction control button.

This light along with the StabiliTrak OFF light come on when StabiliTrak is turned off.

If the Traction Control System (TCS) is off wheelspin is not limited. Adjust driving accordingly.

See *Traction Control System (TCS) on page 8-34* and *StabiliTrak® System on page 8-35* for more information.

StabiliTrak® OFF Light

This light comes on when the StabiliTrak system is turned off by pressing the StabiliTrak/TCS button. If the Traction Control System (TCS) is off, wheel spin is not limited.

When the StabiliTrak system is off, the system does not assist in controlling the vehicle. Adjust driving accordingly.

Turn on the TCS and the StabiliTrak system and the warning light turns off.

See *Traction Control System (TCS) on page 8-34* and *StabiliTrak® System on page 8-35* for more information.

Traction Control System (TCS)/StabiliTrak® Light

The StabiliTrak system or the Traction Control System (TCS) indicator/warning light comes on briefly while starting the engine.

If it does not, have the vehicle serviced by your dealer. If the system is working normally the indicator light will then go off.

The indicator/warning light flashes while the StabiliTrak or TCS system is working to control the vehicle on a low traction surface.

If the TCS/StabiliTrak warning light comes on and stays on while driving, try to reset the system. Stop and turn off the engine for at least 15 seconds. Then start the engine again. If this light still comes on and stays on, the vehicle needs service.

The vehicle is safe to drive, but StabiliTrak is not active, adjust driving accordingly.

See *Traction Control System (TCS) on page 8-34* and *StabiliTrak® System on page 8-35* for more information.

Tire Pressure Light

For vehicles with a Tire Pressure Monitor System, this light comes on briefly when the engine is started. It provides information about tire pressures and the Tire Pressure Monitor System.

When the Light is On Steady

This indicates that one or more of the tires are significantly underinflated.

A tire pressure message can accompany the light. See *Tire Messages on page 4-40* for more information. Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information Label. See *Tire Pressure on page 9-59* for more information.

When the Light Flashes First and Then is On Steady

This indicates that there may be a problem with the Tire Pressure Monitor System. The light flashes for about a minute and stays on steady for the remainder of the ignition cycle. This sequence repeats with every ignition cycle. See *Tire Pressure Monitor Operation on page 9-62* for more information.

Engine Oil Pressure Light

⚠ WARNING

Do not keep driving if the oil pressure is low. The engine can become so hot that it catches fire. Someone could be burned. Check the oil as soon as possible and have the vehicle serviced.

Notice: **Lack of proper engine oil maintenance can damage the engine. The repairs would not be covered by the vehicle warranty. Always follow the maintenance schedule for changing engine oil.**

The oil pressure light should come on briefly as the engine is started. If it does not come on have the vehicle serviced by your dealer.

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

Fuel Economy Light

For vehicles with the fuel economy mode light, it comes on when the eco (economy) switch, located next to the shifter, is pressed. Press the switch again to turn off the light and exit the fuel saver mode. See *Driving for Better Fuel Economy on page 8-2* for more information.

Low Fuel Warning Light

This light is located near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

Security Light

This light flashes when the security system is activated.

For more information, see *Vehicle Security on page 1-17*.

High-Beam on Light

This light comes on when the high-beam headlamps are in use.

See *Headlamp High/Low-Beam Changer on page 5-2* for more information.

Adaptive Forward Lighting (AFL) Light

This light comes on solid when there is a problem with the Adaptive Forward Lighting system and flashes when the system is switching between lighting modes. See *Adaptive Forward Lighting (AFL) on page 5-3* for more information.

Front Fog Lamp Light

The fog lamp light comes on when the fog lamps are in use.

The light goes out when the fog lamps are turned off. See *Front Fog Lamps on page 5-6* for more information.

Lamps on Reminder

For vehicles with the lamps on reminder light, it comes on when the lights are in use.

Cruise Control Light

The cruise control light is white whenever the cruise control is set, and turns green when the cruise control is active.

The light turns off when the cruise control is turned off. See *Cruise Control on page 8-37* for more information.

Information Displays

Driver Information Center (DIC)

The vehicle may have a Driver Information Center (DIC). The DIC displays information about your vehicle. It also displays warning messages if a system problem is detected. See *Vehicle Messages on page 4-33* for more information. All messages appear in the DIC display located in the center of the instrument panel cluster.

The vehicle may also have features that can be customized through the controls on the radio. See *Vehicle Personalization on page 4-41* for more information.

DIC Operation and Displays

The DIC has different displays which can be accessed by using the DIC buttons located on the turn signal lever located on the left side of the steering wheel. The DIC displays trip, fuel, vehicle system information, and warning messages if a system problem is detected.

The bottom of the DIC display shows what position the shift lever is in and the odometer. The direction the vehicle is driving will be shown on the top of the display.

DIC Buttons

MENU: Press this button to get to the Trip/Fuel Menu and the Vehicle Information Menu.

△ ▽ **(Thumbwheel):** Use the thumbwheel to scroll through the items in each menu. A small marker will move up or down the side of the display as you scroll through the items. This shows where each item is in the menu.

SET (Set/Clear): Use this button to set or clear the menu item when it is displayed.

Trip/Fuel Menu Items

Press the MENU button on the turn signal lever until Trip/Fuel Information Menu is displayed. Use the thumbwheel to scroll through the following menu items:

- Trip
- Average Fuel Economy or Average Fuel Economy and Instantaneous Fuel Economy
- Fuel Range
- Fuel Used
- Average Vehicle Speed
- Elapsed Time
- Navigation Turn by Turn
- Speed and Curve Assist
- Digital Speedometer
- Blank

Trip

The Trip display shows the current distance traveled, in either kilometers (km) or miles (mi) , since the trip odometer was last reset. The trip odometer can be reset to zero by pressing the trip reset stem or the SET button while the trip odometer display is showing.

Average Fuel Economy or Average Fuel Economy and Instantaneous Fuel Economy

The Average Fuel Economy display shows the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset.

The Average Fuel Economy can be reset by pressing SET while the Average Fuel Economy display is showing.

The Instantaneous Fuel Economy display shows the current fuel economy in either liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the fuel economy that the vehicle has right now and changes frequently as driving conditions change. Unlike average economy, this display cannot be reset.

Fuel Range

The Fuel Range display shows the approximate distance the vehicle can be driven without refueling. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank. Fuel range cannot be reset.

Fuel Used

The Fuel Used display shows the approximate gallons (gal) or liters (L) of fuel that has been used since last reset. The fuel used can be reset by pressing the SET button while the Fuel Used display is showing.

Average Vehicle Speed

The Average Vehicle Speed display shows the average speed of the vehicle in miles per hour (mph) or kilometers per hour (km/h). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. The average speed can be reset by pressing the SET button while the Average Vehicle Speed display is showing.

Elapsed Time

This display can be used as a timer. To start the timer, press SET while Elapsed Time is displayed. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press SET briefly while Elapsed Time is displayed. To reset the timer to zero, press and hold SET.

Turn by Turn

This display is used for the OnStar or Navigation System Turn-by-Turn guidance. See *OnStar® System on page 4-46* or the Navigation manual, if the vehicle has navigation, for more information.

Speed and Curve Assist

This display will show the speed limit or the advised speed as determined by the information on the map disc in the navigation system. If there is no map disc in the navigation system, this display will not be available.

Digital Speedometer

The speedometer shows how fast the vehicle is moving in either miles per hour (mph) or kilometers per hour (km/h). The speedometer cannot be reset.

Blank Display

This display shows no information.

Vehicle Information Menu Items

Press the MENU button on the turn signal lever until Vehicle Information Menu is displayed. Use the thumbwheel to scroll through the following menu items:

- Unit
- Tire Pressure
- Remaining Oil Life
- Battery Voltage
- Blank

Unit

Move the thumbwheel up or down to switch between US or Metric when the Unit display is active. Press SET to confirm the setting. This will change the displays on the cluster and DIC to either English (US) or metric measurements.

Tire Pressure

The display will show a vehicle with the approximate pressures of all four tires. Tire pressure is displayed in either pounds per square inch (psi) or in kilopascal (kPa). See *Tire Pressure Monitor System on page 9-61* and *Tire Pressure Monitor Operation on page 9-62* for more information.

Remaining Oil Life

This display shows an estimate of the oil's remaining useful life. If Remaining Oil Life 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 4-36*. The oil should be changed as soon as possible. See *Engine Oil on page 9-10*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule in this manual. See *Scheduled Maintenance on page 10-2* for more information.

Remember, the Oil Life display must be reset after each oil change. It will not reset itself. Also, be careful not to reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system press the SET button while the Oil Life display is active. See *Engine Oil Life System on page 9-12*.

Battery Voltage

This display, available on some vehicles, shows the current battery voltage. If the voltage is in the normal range, the value will display. For example, the display may read Battery Voltage 15.0 Volts. The vehicle's charging system regulates voltage based on the state of the battery. The battery voltage can fluctuate while viewing this information on the DIC. This is normal. See *Charging System Light on page 4-20* for more information. If there is a problem with the battery charging system, the DIC will display a message. See *Battery Voltage and Charging Messages on page 4-33*.

Blank Display

This display shows no information.

Compass

The vehicle may have a compass display in the Driver Information Center (DIC). See *Compass on page 4-10*.

Vehicle Messages

Messages displayed on the DIC indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may display one after the other.

The messages that do not require immediate action can be acknowledged and cleared by pressing SET/CLR. The messages that require immediate action cannot be cleared until that action is performed. All messages should be taken seriously and clearing the messages does not correct the problem.

Battery Voltage and Charging Messages

BATTERY SAVER ACTIVE

This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing certain features of the vehicle that you may be able to notice. At the point that features are disabled, this message is displayed. It means that the vehicle is trying to save the charge in the battery. Turn off unnecessary accessories to allow the battery to recharge.

LOW BATTERY

This message is displayed when the battery voltage is low. See *Battery on page 9-27* for more information.

SERVICE BATTERY CHARGING SYSTEM

This message is displayed when there is a fault in the battery charging system. Take the vehicle to your dealer for service.

Brake System Messages

BRAKE FLUID LOW

This message is displayed when the brake fluid level is low. See *Brake Fluid on page 9-25.*

BRAKES OVERHEATED

This message is displayed when the brakes are becoming overheated. You may see this when driving on hills. Shift to a lower gear.

STEP ON BRAKE TO RELEASE PARK BRAKE

This message is displayed if you attempt to release the electric parking brake without the brake pedal applied. See *Parking Brake on page 8-31* for more information.

RELEASE PARKING BRAKE

This message is displayed if the electric parking brake is on while the vehicle is in motion. Release it before you attempt to drive. See *Parking Brake on page 8-31* for more information.

SERVICE BRAKE ASSIST

This message may be displayed when there is a problem with the brake boost assist system. When this message is displayed, the brake boost assist motor might be heard operating and you might notice pulsation in the brake pedal. This is normal under these conditions. Take the vehicle to your dealer for service.

SERVICE PARKING BRAKE

This message is displayed when there is a problem with the parking brake. Take the vehicle to your dealer for service.

Compass Messages

CAL

This message is displayed when the compass needs to be calibrated. See *Compass on page 4-10.*

– – –

Three dashes will be displayed if the compass needs service. See your dealer for service.

Cruise Control Messages

APPLY BRAKE BEFORE CRUISE

If this message displays when attempting to activate cruise control, apply the brake and then try again.

CRUISE SET TO XXX

This message will display when the cruise control is set and it will show the speed it was set to. See *Cruise Control on page 8-37* for more information.

Door Ajar Messages

DOOR OPEN

A door open symbol will be displayed on the DIC showing which door is open. If the vehicle has been shifted out of P (Park), a Door Open message will also be displayed. Close the door completely.

HOOD OPEN

This message will display along with a hood open symbol when the hood is open. Close the hood completely.

POWER LIFTGATE UNAVAILABLE

This message will display if the power liftgate encounters multiple obstacles on the same power cycle. After removing the obstructions, the liftgate will resume normal power operation.

REAR ACCESS OPEN

This message will display along with a symbol when the liftgate is open. Close the liftgate completely.

Engine Cooling System Messages

A/C OFF DUE TO HIGH ENGINE TEMP

This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. You can continue to drive the vehicle.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

COOLANT LEVEL LOW ADD COOLANT

This message will display if the coolant is low; see *Engine Coolant on page 9-17*.

ENGINE OVERHEATED — IDLE ENGINE

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OVERHEATED — STOP ENGINE

This message displays and a continuous chime sounds if the engine cooling system reaches unsafe temperatures for operation. Stop and turn off the vehicle as soon as it is safe to do so to avoid severe damage. This message clears when the engine has cooled to a safe operating temperature.

HIGH COOLANT TEMPERATURE

This message displays if the coolant temperature is hot; see *Engine Overheating on page 9-20*.

Engine Oil Messages

CHANGE ENGINE OIL SOON

This message displays when the engine oil needs to be changed. When you change the engine oil, be sure to reset the Oil Life System. See *Engine Oil Life System on page 9-12* and *Driver Information Center (DIC) on page 4-29* for information on how to reset the system. See *Engine Oil on page 9-10* and *Scheduled Maintenance on page 10-2* for more information.

ENGINE OIL HOT, IDLE ENGINE

This message displays when the engine oil temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OIL LOW — ADD OIL

This message displays when the engine oil level is too low. Check the oil level. See *Engine Oil on page 9-10*.

OIL PRESSURE LOW — STOP ENGINE

This message displays if low oil pressure levels occur. Stop the vehicle as soon as safely possible and do not operate it until the cause of the low oil pressure has been corrected. Check the oil as soon as possible and have the vehicle serviced by your dealer.

Engine Power Messages

ENGINE POWER IS REDUCED

This message displays when the vehicle's engine power is reduced. Reduced engine power can affect the vehicle's ability to accelerate. If this message is on, but there is no reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven at a reduced speed while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer for service as soon as possible.

Fuel System Messages

FUEL LEVEL LOW

This message displays when the vehicle is low on fuel. Refuel as soon as possible

TIGHTEN GAS CAP

This message displays when the fuel cap is not on tight. Tighten the fuel cap.

Key and Lock Messages

NO REMOTE DETECTED

This message displays when trying to start the vehicle if the keyless access system does not detect a RKE transmitter. The transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 1-3.*

NO REMOTE PRESS BRAKE TO RESTART

This message is displayed if the remote is no longer detected in the vehicle. Press the brake pedal to restart the vehicle.

NUMBER OF KEYS PROGRAMMED

This message displays when programming new keys to the vehicle.

REMOTE LEFT IN VEHICLE

This message displays when leaving the vehicle with the RKE transmitter still inside.

REPLACE BATTERY IN REMOTE KEY

This message displays when the battery in the RKE transmitter needs to be replaced.

Lamp Messages

AFL (ADAPTIVE FORWARD LIGHTING) LAMPS NEED SERVICE

This message displays when the Adaptive Forward Lighting (AFL) system is disabled and needs service. See your dealer. See *Adaptive Forward Lighting (AFL) on page 5-3* for more information.

AUTOMATIC LIGHT CONTROL ON

This message is displayed when the automatic light control has been turned on. See *Automatic Headlamp System on page 5-3.*

AUTOMATIC LIGHT CONTROL OFF

This message is displayed when the automatic light control has been turned off. See *Automatic Headlamp System on page 5-3.*

XXX TURN INDICATOR FAILURE

When one of the turn signals is out, this message displays to show which bulb needs to be replaced. See your dealer to have the front turn signal bulbs replaced. See *Turn Signal Lamps on page 9-40* and *Replacement Bulbs on page 9-43* for more information on the rear turn signal bulb replacement.

TURN SIGNAL ON

This message is displayed if the turn signal has been left on. Turn off the turn signal.

Object Detection System Messages

PARK ASSIST OFF

This message is displayed when the park assist system has been turned off. See *Ultrasonic Parking Assist on page 8-40*.

SERVICE PARK ASSIST

This message is displayed if there is a problem with the park assist system. Take the vehicle to your dealer for service.

Ride Control System Messages

SERVICE REAR AXLE

This message displays when there is a problem with the All-Wheel Drive (AWD) System. See your dealer for service.

SERVICE STABILITRAK

This message displays if there is a problem with the StabiliTrak® system. If this message appears, try to reset the system. Stop; turn off the engine for at least 15 seconds; then start the engine again. If this message still comes on, it means there is a problem. See your dealer for service. The vehicle is safe to drive, however, you do not have the benefit of StabiliTrak, so reduce your speed and drive accordingly.

SERVICE SUSPENSION SYSTEM

This message displays if there is a problem with the selective ride control. See *Selective Ride Control on page 8-37*.

SERVICE TRACTION CONTROL

This message displays when there is a problem with the Traction Control System (TCS). If this message appears, try to reset the system. Stop, turn off the engine for at least 15 seconds, and then try to start the engine again. If this message still comes on, it means there is a problem. When this message is displayed, the system will not limit wheel spin. Adjust your driving accordingly. See your dealer for service.

Airbag System Messages

SERVICE AIRBAG

This message is displayed if there is a problem with the airbag system. Take the vehicle to your dealer for service.

Safety Belt Messages

BUCKLE SEATBELT

This message displays as a reminder when the safety belt is not buckled.

Anti-Theft Alarm System Messages

THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

Service Vehicle Messages

SERVICE AC SYSTEM

This message is displayed if there is a problem with the air conditioning system. Take the vehicle to your dealer for service.

SERVICE POWER STEERING

This message is displayed if there is a problem with the power steering system. Take the vehicle to your dealer for service.

SERVICE VEHICLE SOON

This message is displayed if there is a problem with the vehicle. Take the vehicle to your dealer for service.

Starting the Vehicle Messages

PRESS BRAKE TO START VEHICLE

This message is displayed when attempting to start the vehicle without first pressing the brake pedal.

SERVICE KEYLESS START SYSTEM

This message is displayed if there is a problem with the keyless start system. Take the vehicle to your dealer for service.

Tire Messages

SERVICE TIRE MONITOR SYSTEM

This message displays if there is a problem with the Tire Pressure Monitor System (TPMS). See *Tire Pressure Monitor Operation on page 9-62* for more information.

TIRE LEARNING ACTIVE

This message displays when the system is learning new tires. See *Tire Pressure Monitor Operation on page 9-62* for more information.

TIRE LOW ADD AIR TO TIRE

On vehicles with the Tire Pressure Monitor System (TPMS), this message displays when the pressure in one or more of the vehicle tires is low.

This message also displays "Left Front", "Right Front", "Left Rear", or "Right Rear" to indicate the location of the low tire.

The low tire pressure warning light will also come on. See *Tire Pressure Light on page 4-26*.

If a tire pressure message appears on the DIC, stop as soon as you can. Inflate the tires by adding air until the tire pressure is equal to the values shown on the Tire Loading Information label. See *Tires on page 9-52*, *Vehicle Load Limits on page 8-11*, and *Tire Pressure on page 9-59*.

You can receive more than one tire pressure message at a time. To read the other messages that may have been sent at the same time, press the set/reset button. The DIC also shows the tire pressure values. See *Driver Information Center (DIC) on page 4-29*.

Transmission Messages

SERVICE TRANSMISSION

This message displays if there is a problem with the transmission. See your dealer.

SHIFT TO PARK

This message displays when the transmission needs to be shifted to P (Park). This may appear when attempting to remove the key if the vehicle is not in P (Park).

TRANSMISSION HOT — IDLE ENGINE

This message displays and a chime sounds if the transmission fluid in the vehicle gets hot. Driving with the transmission fluid temperature high can cause damage to the vehicle. Stop the vehicle and let it idle to allow the transmission to cool. This message clears when the fluid temperature reaches a safe level.

Vehicle Reminder Messages

ICE POSSIBLE DRIVE WITH CARE

This message is displayed when ice conditions are possible.

TURN WIPER CONTROL TO INTERMITTENT FIRST

This message is displayed when attempting to adjust the intermittent wiper speed without intermittent selected on the wiper control. See *Windshield Wiper/Washer on page 4-7*.

Washer Fluid Messages

WASHER FLUID LOW ADD FLUID

This message will be displayed when the washer fluid level is low. For information on filling the washer fluid, see *Washer Fluid on page 9-23*.

Vehicle Personalization

The audio system controls are used to access the personalization menus for customizing vehicle features. Not all features are available on every vehicle. Only the features available on a particular vehicle will be displayed on that vehicle.

CONFIG (Configuration): Press to access the Configuration Settings Menu.

MENU / SELECT Knob: Press the center of this knob to enter the menus and select menu items. Turn the knob to scroll through the menus.

⇦ **BACK:** Press to exit or move backwards in a menu.

Entering the Personalization Menus

1. Press CONFIG to access the Configuration Settings menu.
2. Turn the MENU / SELECT knob to highlight Vehicle Settings.
3. Press the center of the MENU / SELECT knob to select the Vehicle Settings menu.

The following list of menu items will be available:

- Climate and Air Quality
- Comfort and Convenience
- Language
- Lighting
- Power Door Locks
- Remote Locking, Unlocking, Starting
- Return to Factory Settings

Turn the MENU / SELECT knob to highlight the menu. Press the knob to select it. Each of the menus is detailed in the following information.

Climate and Air Quality

Select the Climate and Air Quality menu and the following will be displayed:

- Auto Fan Speed
- Air Quality Sensor
- Remote Start Auto Seat Cool
- Remote Start Auto Heated Seats
- Auto Defog
- Auto Rear Defog

Auto Fan Speed

This will allow you to select the automatic fan speed.

Press the MENU / SELECT knob when Auto Fan Speed is highlighted to open the menu. Turn the knob to highlight High, Medium, or Low. Press the knob to confirm the selection and move back to the last menu.

Air Quality Sensor

This will allow you to select whether the system will operate at high or low sensitivity. Only vehicles with the dual zone climate control will have this option.

Press the MENU / SELECT knob when Air Quality Sensor is highlighted to open the menu. Turn the knob to highlight High or Low Sensitivity. Press the knob to confirm the selection and move back to the last menu.

Remote Start Auto Seat Cool

When on, this feature will turn the vented seats on when using remote start on warm days.

Press the MENU / SELECT knob when Remote Start Auto Seat Cool is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Start Auto Heated Seats

When on, this feature will turn the heated seats on when using remote start on cold days.

Press the MENU / SELECT knob when Remote Start Auto Heated Seats is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Auto Defog

This will allow you to turn the auto defog on or off.

Press the MENU / SELECT knob when Auto Defog is highlighted to open the menu. Turn the knob to highlight On or Off. Press the knob to confirm the selection and move back to the last menu.

Auto Rear Defog

This will allow you to turn the auto rear defog on or off.

Press the MENU / SELECT knob when Auto Rear Defog is highlighted to open the menu. Turn the knob to highlight On or Off. Press the knob to confirm the selection and move back to the last menu.

Comfort and Convenience

Select the Comfort and Convenience menu and the following will be displayed:

- Easy Exit Driver Seat
- Chime Volume
- Reverse Tilt Mirror
- Auto Wipe in Reverse Gear

Easy Exit Driver Seat

This allows you to turn the easy exit driver seat feature on or off.

Press the MENU / SELECT knob when Easy Exit Driver Seat is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Chime Volume

This allows the selection of the chime volume level.

Press the MENU / SELECT knob when Chime Volume is highlighted. Turn the knob to select Normal or High. Press the knob to confirm and go back to the last menu.

Reverse Tilt Mirror

This allows you to turn the reverse tilt mirror feature on or off.

Press the MENU / SELECT knob when Reverse Tilt Mirror is highlighted. Turn the knob to select Driver & Passenger or Off. Press the knob to confirm and go back to the last menu.

Auto Wipe in Reverse Gear

When on, the rear window wiper will turn on automatically when the vehicle is shifted into R (Reverse).

Press the MENU / SELECT knob when Auto Wipe in Reverse Gear is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Language

Select the Language menu and the following will be displayed:

- English
- French
- Spanish

Turn the MENU / SELECT knob to select the language. Press the knob to confirm and go back to the last menu.

Lighting

Select the Lighting menu and the following will be displayed:

- Vehicle Locator Lights
- Exit Lighting

Vehicle Locator Lights

This allows the vehicle locator lights to be turned on or off.

Press the MENU / SELECT knob when Vehicle Locator Lights is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Exit Lighting

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Press the MENU / SELECT knob when Exit Lighting is highlighted. Turn the knob to select Off, 30 Seconds, 1 Minute, or 2 Minutes. Press the knob to confirm and go back to the last menu.

Power Door Locks

Select Power Door Locks and the following will be displayed:

- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock

Unlocked Door Anti Lock Out

When on, this feature will keep the driver door from locking when the door is open. If off is selected, the Delayed Door Lock menu will be available and the door will lock as programmed through this menu.

Press the MENU / SELECT knob when Auto Door Unlock is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Auto Door Unlock

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park).

Press the MENU / SELECT knob when Auto Door Unlock is highlighted. Turn the knob to select All Doors, Driver Door, or Off. Press the knob to confirm and go back to the last menu.

Delayed Door Lock

When on, this feature will delay the locking of the doors until five seconds after the last door is closed. You will hear three chimes to signal delayed locking is in use. Pressing either the power lock button or the lock button on the RKE transmitter twice will override the delayed locking feature and immediately lock all of the doors.

Press the MENU / SELECT knob when Delayed Door Lock is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Lock/Unlock/Start

Select Remote Lock/Unlock/Start and the following will be displayed:

- Unlock Feedback (Lights)
- Locking Feedback
- Door Unlock Options
- Passive Door Lock
- Passive Door Unlock
- Memory Remote Recall

Unlock Feedback (Lights)

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Press the MENU / SELECT knob when Unlock Feedback (Lights) is highlighted. Turn the knob to select Flash Lights or Off. Press the knob to confirm and go back to the last menu.

Locking Feedback

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Press the MENU / SELECT knob when Locking Feedback is highlighted. Turn the knob to select Lights and Horn, Lights Only, Horn Only, or Off. Press the knob to confirm and go back to the last menu.

Door Unlock Options

This allows selection of which doors will unlock when pressing the unlock button on the RKE transmitter.

Press the MENU / SELECT knob when Door Unlock Options is highlighted. Turn the knob to select All Doors or Driver Door Only. When set to Driver Door Only, the driver door will unlock the first time the unlock button is pressed and all doors will unlock when the button is pressed a second time. When set to All Doors, all of the doors will unlock at the first press of the unlock button. Press the knob to confirm and go back to the last menu.

Passive Door Lock

If the vehicle has the keyless access system, when enabled, this feature allows the doors to lock after several seconds if all doors are closed and at least one keyless access transmitter has been removed from the interior of the vehicle. It does not matter how far away that the transmitter is from the vehicle. This feature can also be configured to chirp the horn when the doors are passively locked.

Press the MENU/SELECT knob when Passive Door Lock is highlighted. Turn the knob to select On With Chirp, On, or Off. Press the knob to confirm and go back to the last menu.

Passive Door Unlock

If the vehicle has the keyless access system, this feature allows you to select which doors will automatically unlock when you open the driver's door with the keyless access transmitter present.

Press the MENU/SELECT knob when Passive Door Unlock is highlighted. Turn the knob to select All Doors or Driver Door. Press the knob to confirm and go back to the last menu.

Memory Remote Recall

This allows the Memory Remote Recall feature to be turned on or off.

Press the MENU / SELECT knob when Memory Remote Recall is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Return to Factory Settings

Select Return to Factory Settings to return all of the vehicle personalization to the default settings. Turn the knob to select Yes or No. Press the knob to confirm and go back to the last menu.

OnStar® System

OnStar® uses several innovative technologies and live advisors to provide a wide range of safety, security, navigation, diagnostics, and calling services.

Automatic Crash Response

In a crash, built in sensors can automatically alert an OnStar advisor who is immediately connected to the vehicle to see if you need help.

How OnStar Service Works

: This blue button connects you to a specially trained OnStar advisor to verify your account information and to answer questions.

: Push this red emergency button to get priority help from specially trained OnStar emergency advisors.

: Push this button for hands-free, voice-activated calling and to give voice commands for turn-by-turn navigation.

Crisis Assist, Stolen Vehicle Assistance, Vehicle Diagnostics, Remote Door Unlock, Roadside Assistance, Turn-by-Turn Navigation and Hands-Free Calling are available on most vehicles. Not all OnStar services are available on all vehicles.

For more information see the OnStar Owner's Guide or visit www.onstar.com (U.S.) or www.onstar.ca (Canada), contact OnStar at 1-888-4-ONSTAR (1-888-466-7827) or TTY 1-877-248-2080, or press to speak with an OnStar advisor 24 hours a day, 7 days a week.

For a full description of OnStar services and system limitations, see the OnStar Owner's Guide in the glove box.

OnStar service is subject to the OnStar terms and conditions included in the OnStar Subscriber Information.

OnStar service cannot work unless the vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area. OnStar service also cannot work unless the vehicle is in a place where the wireless service provider OnStar has hired for that area has coverage, network capacity and reception when the service is needed, and technology that is compatible with the OnStar service. Not all services are available everywhere, particularly in remote or enclosed areas, or at all times.

The OnStar system can record and transmit vehicle information. This information is automatically sent to an OnStar call center when is pressed, is pressed, or if the airbags or ACR system deploy. This information usually includes the vehicle's GPS location and, in the event of a crash, additional information regarding the crash that the vehicle was involved in (e.g. the direction from which the vehicle was hit). When the virtual advisor feature of OnStar hands-free calling is used, the vehicle also sends OnStar the vehicle's GPS location so they can provide services where it is located.

Location information about the vehicle is only available if the GPS satellite signals are unobstructed and available.

The vehicle must have a working electrical system, including adequate battery power, for the OnStar equipment to operate. There are other problems OnStar cannot control that may prevent OnStar from providing OnStar service at any particular time or place. Some examples are damage to important parts of the vehicle in a crash, hills, tall buildings, tunnels, weather or wireless phone network congestion.

OnStar Steering Wheel Controls

This vehicle may have a Talk/Mute button that can be used to interact with OnStar hands-free calling. See *Steering Wheel Controls on page 4-6* for more information.

On some vehicles, the mute button can be used to dial numbers into voice mail systems, or to dial phone extensions. See the OnStar Owner's Guide for more information.

Your Responsibility

Increase the volume of the radio if the OnStar advisor cannot be heard.

If the light next to the OnStar buttons is red, the system may not be functioning properly. Press and request a vehicle diagnostic. If the light appears clear (no light is appearing), your OnStar subscription has expired and all services have been deactivated. Press to confirm that the OnStar equipment is active.

Universal Remote System

See *Radio Frequency Statement on page 12-17* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

Universal Remote System Programming

If the vehicle has this feature, you will see these buttons with one LED indicator next to them in the headliner.

This system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Do not use the Universal Home Remote with any garage door opener that does not have the stop and reverse feature. This includes any garage door opener model manufactured before April 1, 1982.

Read the instructions completely before attempting to program the Universal Home Remote. Because of the steps involved, it may be helpful to have another person available to assist you with programming the Universal Home Remote.

Keep the original hand-held transmitter for use in other vehicles as well as for future Universal Home Remote programming. It is also recommended that upon the sale of the vehicle, the programmed Universal Home Remote buttons should be erased for security purposes. See "Erasing Universal Home Remote Buttons" later in this section.

When programming a garage door, park outside of the garage. Park directly in line with and facing the garage door opener motor-head or gate motor-head. Be sure that people and objects are clear of the garage door or gate that is being programmed.

It is recommended that a new battery be installed in your hand-held transmitter for quicker and more accurate transmission of the radio-frequency signal.

Programming the Universal Home Remote System

For questions or help programming the Universal Home Remote System, call 1-800-355-3515 or go to www.homelink.com.

Programming a garage door opener involves time-sensitive actions, so read the entire procedure before starting. Otherwise, the device will time out and the procedure will have to be repeated.

To program up to three devices:

1. Hold the end of your hand-held transmitter about 3 to 8 cm (1 to 3 inches) away from the Universal Home Remote buttons while keeping the indicator light in view. The hand-held transmitter was supplied by the manufacturer of your garage door opener receiver (motor-head unit).
2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Home Remote buttons to be used to operate the garage door. Do not release the Universal Home Remote button or the hand-held transmitter button until the indicator light changes from a slow to a rapidly flashing light. You now may release both buttons.

   Some entry gates and garage door openers may require substitution of Step 2 with the procedure noted in "Gate Operator and Canadian Programming" later in this section.
3. Press and hold for five seconds the newly-trained Universal Home Remote button (selected button from Step 2) while observing the indicator light and garage door activation.
   - If the indicator light stays on continuously or the garage door starts to move when the Universal Home Remote button is pressed and released, then the programming is complete. There is no need to continue programming Steps 4 through 6.
   - If the Universal Home Remote indicator light blinks rapidly for two seconds, then turns to a constant light and the garage door does not move, continue with the programming Steps 4 through 6.

     It may be helpful to have another person to assist with the remaining Steps 4 through 6.

"Learn" or "Smart" Buttons

4. After Steps 1 through 3 have been completed, locate the "Learn" or "Smart" button inside the garage on the garage door opener receiver (motor-head unit). The name and color of the button may vary by manufacturer.
5. Firmly press and release the "Learn" or "Smart" button. After you press this button, you will have 30 seconds to complete Step 6.
6. Immediately return to the vehicle. Firmly press and hold for two seconds the Universal Home Remote button, selected in Step 2 to control the garage door, and then release it. If the garage door does not move or the lamp on the garage door opener receiver (motor-head unit) does not flash, press and hold the same button a second time for two seconds, and then release it. Again, if the door does not move or the garage door lamp does not flash, press and hold the same button a third time for two seconds, and then release.

The Universal Home Remote should now activate the garage door.

To program the remaining two Universal Home Remote buttons, begin with Step 1 of "Programming the Universal Home Remote System".

Gate Operator and Canadian Programming

If you have questions or need help programming the Universal Home Remote System, call 1-800-355-3515 or go to www.homelink.com.

Canadian radio-frequency laws require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for Universal Home Remote to pick up the signal during programming. Similarly, some U.S. gate operators are manufactured to time out in the same manner.

If you live in Canada, or you are having difficulty programming a gate operator or garage door opener by using the "Programming Universal Home Remote" procedures, regardless of where you live, replace Step 2 under "Programming Universal Home Remote" with the following:

2. Continue to press and hold the Universal Home Remote button while you press and release every two seconds (cycle) the hand-held transmitter button until the frequency signal has been successfully accepted by the Universal Home Remote. The Universal Home Remote indicator light will flash slowly at first and then rapidly. Proceed with Step 3 under "Programming Universal Home Remote" to complete.

Universal Remote System Operation

Using Universal Home Remote

Press and hold the appropriate Universal Home Remote button for at least half of a second. The indicator light will come on while the signal is being transmitted.

Erasing Universal Home Remote Buttons

All programmed buttons should be erased when the vehicle is sold or the lease ends.

To erase all programmed buttons on the Universal Home Remote device:

1. Press and hold down the two outside buttons until the indicator light begins to flash, after 10 seconds.
2. Release both buttons.

Reprogramming a Single Universal Home Remote Button

To reprogram any of the three Universal Home Remote buttons:

1. Press and hold the desired Universal Home Remote button. Do not release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, proceed with Step 1 of the section "Programming Universal Home Remote".

If you have questions or need help programming the Universal Home Remote System, call 1-800-355-3515 or go to www.homelink.com. You may also call the customer assistance phone number under *Customer Assistance Offices on page 12-3*.

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Exterior Lighting

Exterior Lamp Controls

The exterior lamps control is located on the instrument panel to the outboard side of the steering column.

It controls the following systems:

- Headlamps
- Taillamps
- Parking Lamps
- License Plate Lamps
- Instrument Panel Lights
- Fog Lamps

The exterior lamps control has four positions:

⏻ **(Off):** Briefly turn to this position to turn the automatic light control off or on again.

AUTO (Automatic): Turns the headlamps on automatically at normal brightness, together with the following:

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Parking Lamps): Turns the parking lamps on together with the following:

- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Headlamps): Turns the headlamps on together with the following lamps listed below. A warning chime sounds if the driver's door is opened when the ignition switch is off and the headlamps are on.

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Front Fog Lamps): For vehicles with fog lamps, press to turn the lamps on or off.

See *Front Fog Lamps on page 5-6.*

Headlamp High/ Low-Beam Changer

Headlamp High/Low Beam Changer: Push the turn signal/lane change lever away from you to turn the high beams on.

Pull the lever toward you to return to low beams.

This indicator light turns on in the instrument panel cluster when the high beam headlamps are on.

Flash-to-Pass

The flash-to-pass feature works with the low beams or Daytime Running Lamps (DRL) on or off.

To flash the high beams, pull the turn signal/lane change lever all the way toward you, then release it.

Daytime Running Lamps (DRL)

Daytime Running Lamps (DRL) can make it easier for others to see the front of your vehicle during the day. Fully functional daytime running lamps are required on all vehicles first sold in Canada.

A light sensor on top of the instrument panel makes the DRL work, so be sure it is not covered.

The DRL system makes the low-beam headlamps come on at a reduced brightness or for vehicles with High Intensity Discharge (HID) headlamps, the DRL lights will come on when the following conditions are met:

- The ignition is in the ON/ RUN mode.
- The exterior lamps control is in AUTO.
- The engine is running.

When the DRL are on, only the low-beam headlamps, at a reduced level of brightness, will be on. The high-beam headlamps, taillamps, sidemarker, instrument panel and other lamps will not be on.

The headlamps automatically change from DRL to the regular headlamps depending on the darkness of the surroundings. The other lamps that come on with the headlamps will also come on.

When it is bright enough outside, the headlamps go off and the DRL come on.

To turn the DRL lamps off or on again, turn the exterior lamps control to the off position and then release. For vehicles first sold in Canada, the DRL lamps cannot be turned off.

Automatic Headlamp System

When it is dark enough outside and the exterior lamps control is in the automatic position, the headlamps come on automatically. See *Exterior Lamp Controls on page 5-1*.

The vehicle has a light sensor located on top of the instrument panel. Make sure it is not covered, or the headlamps will be on when they are not needed.

The system may also turn on the headlamps when driving through a parking garage or tunnel.

Adaptive Forward Lighting (AFL)

For vehicles with Xenon headlamps, the Adaptive Forward Lighting System (AFL) adjusts the headlamps to provide greater road illumination in various driving conditions.

To enable AFL, set the exterior lamp control to the AUTO position. Moving the control out of the AUTO position will deactivate the system. AFL will operate when the vehicle speed is greater than 3 km/h (2 mph). AFL will not operate when the transmission is in R (Reverse). AFL is not immediately operable after starting the vehicle; driving a short distance is required to calibrate the AFL. See *Exterior Lamp Controls on page 5-1*.

Curve Lighting

The Xenon light beam pivots based on the steering wheel position and vehicle speed of at least 10 km/h (6 mph). The headlamps shine at an angle of up to 15 degrees to the right or left of the direction of travel.

Motorway Lighting

If the vehicle is traveling straight continuously at high speeds, the light beam automatically raises slightly to increase the headlamp range.

City Lighting

If the vehicle speed is less than 50 km/h (31 mph), the headlamp range is automatically reduced.

Twilight Sentinel

This feature automatically turns the lamps on and off. A light sensor on top of the instrument panel makes the Twilight Sentinel® work, so be sure it is not covered.

With Twilight Sentinel® the following will happen:

- When it is dark enough outside, the Daytime Running Lamps (DRL) go off, and the headlamps and parking lamps come on. The other lamps that come on with the headlamps also come on.
- When it is bright enough outside, the headlamps go off, and the DRL come on, as long as the exterior lamp switch is in the AUTO position.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlamp system changes to the DRL. During that delay, the instrument panel cluster may not be as bright as usual. Make sure the instrument panel brightness control is in full bright position. See *Instrument Panel Illumination Control on page 5-6* for more information.

The vehicle can be idled with the lamps off, even when it is dark outside. After starting the vehicle, turn the exterior lamp control to off, then release it. The lamps will remain off until the control is turned to off again.

Twilight Sentinel® also provides exterior illumination as you leave the vehicle. If Twilight Sentinel® has turned on the lamps when the ignition is turned off, the lamps remain on until:

- The exterior lamp control is moved from ⏻ to the parking lamp position, or
- the delay time selected has elapsed.

See *Vehicle Personalization on page 4-41* to select the delay time. You can also select no delay time.

If the ignition is turned off with the exterior lamp control in the parking lamp or headlamp position, the Twilight Sentinel® delay will not occur. The lamps will turn off as soon as the control is turned off.

The regular headlamp system should be turned on when needed.

Hazard Warning Flashers

⚠ Hazard Warning Flasher: Press this button located on the instrument panel near the audio system, to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble. Press again to turn the flashers off.

Turn and Lane-Change Signals

An arrow on the instrument panel cluster will flash in the direction of the turn or lane change.

Move the lever all the way up or down to signal a turn.

Raise or lower the lever until the arrow starts to flash to signal a lane change. The turn signal flashes three times.

The lever returns to its starting position when it is released.

If after signaling a turn or lane change the arrow flashes rapidly or does not come on, a signal bulb may be burned-out.

Have the bulbs replaced. If the bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers on page 9-44* for more information.

Front Fog Lamps

For vehicles with front fog lamps, the button is located on the exterior lamp control, on the outboard side of the steering wheel.

The ignition and the low-beam headlamps must be on to turn on the fog lamps.

: Press to turn the fog lamps on or off. An indicator light on the instrument panel cluster comes on when the fog lamps are on.

The fog lamps come on together with the parking lamps.

If the high-beam headlamps are turned on, the fog lamps will turn off. If the high-beam headlamps are turned off, the fog lamps will turn back on again.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Interior Lighting

Instrument Panel Illumination Control

This feature controls the brightness of the instrument panel lights. The thumbwheel is located next to the exterior lamp control.

(Instrument Panel Brightness): Turn the thumbwheel up or down to brighten or dim the instrument panel lights.

Cargo Lamp

The cargo lamp is located over the rear compartment and is controlled by the dome lamp. See *Dome Lamps on page 5-6*.

Courtesy Lamps

The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.

Dome Lamps

To change the dome lamp settings, press the following:

(Dome Lamp Override): Turns the lamp off, even when a door is open.

(Door): The lamp comes on automatically when a door is opened.

(On): Turns the dome lamp on.

Reading Lamps

There are reading lamps located on the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

For the overhead console reading lamps, press the button next to each lamp.

For the rear passenger reading lamps, press the lamp lens.

Infotainment System

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Introduction

Read the following pages to become familiar with the audio system's features.

⚠ WARNING

Taking your eyes off the road for extended periods could cause a crash resulting in injury or death to you or others. Do not give extended attention to entertainment tasks while driving.

This system provides access to many audio and non-audio listings.

To minimize taking your eyes off the road while driving, do the following while the vehicle is parked:

- Become familiar with the operation and controls of the audio system.
- Set up the tone, speaker adjustments, and preset radio stations.

For more information, see *Defensive Driving on page 8-3.*

This vehicle's infotainment system may be equipped with a noise reduction system which can work improperly if the audio amplifier, engine calibrations, exhaust system, microphones, radio, or speakers are modified or replaced. This could result in more noticeable engine noise at certain speeds.

***Notice:* Contact your dealer before adding any equipment.**

Adding audio or communication equipment could interfere with the operation of the vehicle's engine, radio, or other systems, and could damage them. Follow federal rules covering mobile radio and telephone equipment.

The vehicle has Retained Accessory Power (RAP). With RAP, the audio system can be played even after the ignition is turned off. See *Retained Accessory Power (RAP) on page 8-20* for more information.

Navigation System

For vehicles with a navigation system, see the separate Navigation System Manual.

Theft-Deterrent Feature

The theft-deterrent feature works by learning a portion of the Vehicle Identification Number (VIN) to the infotainment system. The infotainment system does not operate if it is stolen or moved to a different vehicle.

Overview (Radio with CD)

A. VOL/ ⏻
- Turns the system on or off and adjusts the volume.

B. Buttons 1 to 6
- Radio: Saves and selects favorite stations.

C. TUNE
- Radio: Manually selects radio stations.
- CD: Selects tracks.

D. FAV
- Radio: Opens the favorites list.

E. ⏮ SEEK
- Radio: Seeks the previous station.
- CD: Selects the previous track or rewinds within a track.

F. ⏭ SEEK
- Radio: Seeks the next station.
- CD: Selects the next track or fast forwards within a track.

G. ⏏ CD Eject
- Removes a disc from the CD slot.

H. CD
- Selects the CD player when listening to a different audio source.

I. RADIO/BAND
- Changes the band while listening to the radio.
- Selects the radio when listening to a different audio source.

J. ⏵/⏸
- CD: Pauses the CD.

K. CD Slot
- Insert a CD.

L. MENU/SELECT
- Press: Selects menu items.
- Turn: Opens menus, highlights menu items, or sets numeric values while in a menu.

M. ⇦ BACK
- Menu: Moves one level back.
- Character Input: Deletes the last character.

N. CONFIG
- Open the settings menu.

O. PHONE
- Opens the phone main menu.
- Mutes the audio system.

P. TONE
- Opens the tone menu.

Q. AUX
- Selects a connected external audio source.

R. INFO
- Radio: Shows available information about the current station.
- CD: Shows available information about the current track.

Overview (Radio with CD/DVD and MEM)

A. VOL/ ⏻
   - Turns the system on or off and adjusts the volume.

B. Buttons 1 to 6
   - Radio: Saves and selects favorite stations.
   - MEM: Saves and selects favorite tracks and playlists.

C. TUNE/INFO
   - Radio: Manually selects radio stations and shows available information about the current station.
   - CD: Selects tracks and shows available information about the current track.
   - MEM: Selects tracks and shows available information about the current track.

D. FAV
- Radio: Opens the favorites list.
- MEM: Opens the favorites list.

E. ⏮ SEEK
- Radio: Seeks the previous station.
- CD/DVD: Selects the previous track or rewinds within a track.
- MEM: Selects the previous track or rewinds within a track.

F. ⏭ SEEK
- Radio: Seeks the next station.
- CD/DVD: Selects the next track or fast forwards within a track.
- MEM: Selects the next track or fast forwards within a track.

G. ⏏ CD Eject
- Removes a disc from the CD slot.

H. RADIO/BAND
- Changes the band while listening to the radio.
- Selects the radio when listening to a different audio source.

I. MEM/DVD/AUX
- Selects MEM, CD/DVD, USB, or a connected auxillary audio or auxillary audio/video source.

J. ⏵/⏸
- Radio: Pauses time shifted content.
- CD/DVD: Pauses CD/DVD-A and DVD-V playback. Stops DVD-V playback.
- MEM: Pauses MEM playback.

K. CD/DVD Slot
- Insert a disc.

L. MENU/SELECT
- Press: Selects menu items.
- Turn: Open menus, highlights menu items, or sets numeric values while in a menu.

M. TONE
- Opens the tone menu.

N. ⇦ BACK
- Menu: Moves one level back.
- Character Input: Deletes the last character.

O. CONFIG
- Open the settings menu.

P. DEL
- MEM: Delete the current track from MEM.

Q. ● REC
- CD/DVD: Records content from audio CDs and MP3/WMA CDs.
- AUX: Records content from USB mass storage devices.

R. PHONE
- Opens the phone main menu.
- Mutes the audio system.

Operation

Controls

The infotainment system is operated by using the pushbuttons, multifunction knobs, menus that are shown on the display, and steering wheel controls, if equipped.

Turning the System On or Off

VOL/ ⏻ (Volume/Power): Press to turn the system on and off.

Automatic Switch-Off

If the infotainment system has been turned on after the ignition is turned off, the system will turn off automatically after ten minutes.

Volume Control

VOL/ ⏻ (Volume/Power): Turn to adjust the volume.

PHONE: For vehicles with OnStar®, press and hold PHONE to mute the infotainment system. Press and hold PHONE again, or turn the VOL/ ⏻ knob to cancel mute.

For vehicles without OnStar®, press PHONE to mute the infotainment system. Press PHONE again, or turn the VOL/ ⏻ knob to cancel mute.

Menu System

Controls

The MENU/SELECT knob and the ⇦ BACK button are used to navigate the menu system.

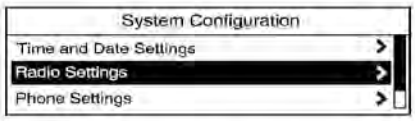
MENU/SELECT: Press to:
- Select or activate the highlighted menu option.
- Confirm a set value.
- Turn a system setting on or off.

Turn to:
- Enter the menu system.
- Highlight a menu option.
- Select a value.

⇦ **BACK:** Press to:

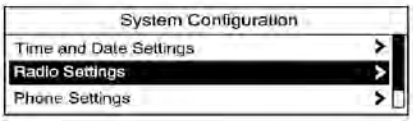
- Exit a menu.
- Return from a submenu screen to the previous menu screen.
- Delete the last character in a sequence.

Selecting a Menu Option



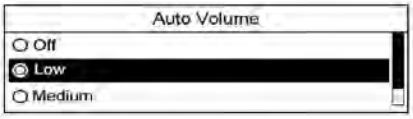
1. Turn the MENU/SELECT knob to move the highlighted bar.
2. Press the MENU/SELECT button to select the highlighted option.

Submenus



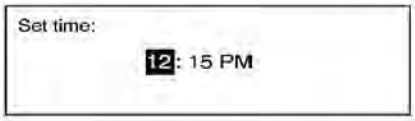
An arrow on the right-hand edge of the menu indicates that it has a submenu with other options.

Activating a Setting



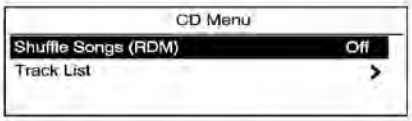
1. Turn the MENU/SELECT knob to highlight the setting.
2. Press the MENU/SELECT button to activate the setting.

Setting a Value



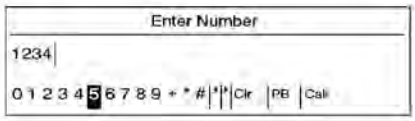
1. Turn the MENU/SELECT knob to change the current value of the setting.
2. Press the MENU/SELECT button to confirm the setting.

Turning a Function On or Off



1. Turn the MENU/SELECT knob to highlight the function.
2. Press the MENU/SELECT button to turn the function on or off.

Entering a Character Sequence



1. Turn the MENU/SELECT knob to highlight the character.
2. Press the MENU/SELECT button to select the character.

Press the ⇦ BACK button to delete the last character in the sequence or press and hold to delete the entire character sequence.

Audio Settings

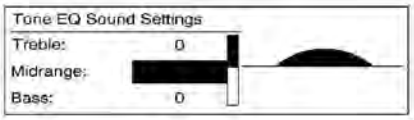
The audio settings can be set for each radio band and each audio player source.

To quickly reset an audio setting value to 0:

1. Press the TONE button.
2. Select the audio setting.
3. Press and hold the MENU/SELECT button until the value changes to 0.

Press the ⇦ BACK button to go back to the Tone Settings menu.

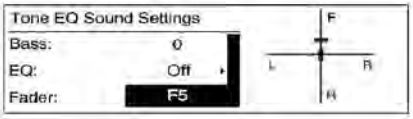
Adjusting the Treble, Midrange, and Bass



1. Press the TONE button.
2. Select Treble, Midrange, or Bass.
3. Select the value.

Press the ⇦ BACK button to go back to the Tone Settings menu.

Adjusting the Fader and Balance



1. Press the TONE button.
2. Select Fader or Balance.
3. Select the value.

Press the ⇦ BACK button to go back to the Tone Settings menu.

Adjusting the EQ (Equalizer)

For vehicles that have an equalizer:

1. Press the TONE button.
2. Select EQ.
3. Select the setting.

Press the ⇦ BACK button to go back to the Tone Settings menu.

DSP (Digital Signal Processing) Settings

For vehicles with DSP, it is used to provide a choice of different listening experiences.

- *2.0 Normal* - Select this setting to adjust the audio for normal mode. This provides the best sound quality for all seating positions.
- *Centerpoint* - Centerpoint® signal processing circuitry. This setting creates a surround sound listening experience from stereo CDs and satellite radio.

  For more information on Bose® Centerpoint® signal processing circuitry, please visit www. bose.com/centerpoint.
- *5.1 Surround* - The infotainment system used in conjunction with the Bose® 5.1 Cabin Surround® sound system for the vehicle includes digital 5.1 decoding. This technology unlocks the full benefit of digital 5.1 recordings, so digitally encoded music and movie soundtracks can be presented faithfully and accurately. If the video screens or Rear Seat Audio (RSA) is on, 5.1 Surround is not available.

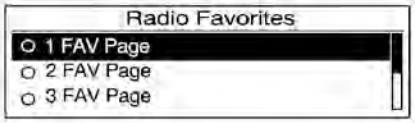
To adjust the DSP settings:

1. Press the TONE button.
2. Select DSP.
3. Select the setting.

Press the ⇦ BACK button to go back to the Tone Settings menu.

System Settings

Configuring the Number of Favorite Pages



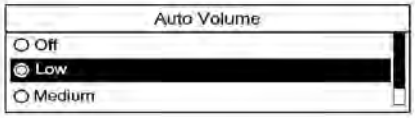
To configure the number of available favorite pages:

1. Press the CONFIG button.
2. Select Radio Settings.
3. Select Radio Favorites.
4. Select the number of available favorite pages.
5. Press the ⇦ BACK button to go back to the System Configuration menu.

Auto Volume

The auto volume feature automatically adjusts the radio volume to compensate for road and wind noise as the vehicle speeds up or slows down, so that the volume level is consistent.

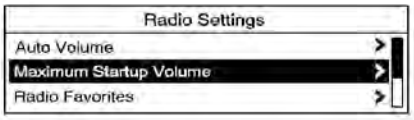
The level of volume compensation can be selected, or the auto volume feature can be turned off.



1. Press the CONFIG button.
2. Select Radio Settings.
3. Select Auto Volume.
4. Select the setting.
5. Press the ⇦ BACK button to go back to the System Configuration menu.

Maximum Startup Volume

The maximum volume played when the radio is first turned on can be set.



1. Press the CONFIG button.
2. Select Radio Settings.
3. Select Maximum Startup Volume.
4. Select the setting.
5. Press the ⇦ BACK button to go back to the System Configuration menu.

Radio

AM-FM Radio

Control Buttons

The buttons used to control the radio are:

RADIO/BAND: Press to turn the radio on and choose between AM, FM, and XM™, if equipped.

MENU/SELECT: Press and turn to navigate the available menus.

TUNE: Turn to search for stations.

INFO: Press to display additional information that may be available for the current song.

⏭ SEEK/ ⏮ SEEK: Press to search for stations.

FAV: Press to open the favorites list.

1 to 6: Press to select preset stations.

⏵/⏸ (Play/Pause): Press to pause time shifted content, if equipped.

RDS (Radio Data System)

The radio may have RDS. The RDS feature is available for use only on FM stations that broadcast RDS information. This feature only works when the information from the radio station is available. In rare cases, a radio station could broadcast incorrect information that causes the radio features to work improperly. If this happens, contact the radio station.

While the radio is tuned to an FM-RDS station, the station name or call letters display.

Radio Menus

Radio menus are available for AM and FM.

Turn the MENU/SELECT knob to open the main radio menu for that frequency.

Selecting a Band

Press the RADIO/BAND button to choose AM, FM, or XM™, if equipped. The last station that was playing starts playing again.

Selecting a Station

Seek Tuning (Radio with CD)

If the radio station is not known:

Briefly press ⏮ SEEK or ⏭ SEEK. To automatically search for the next available station. If a station is not found, the radio switches to a more sensitive search level. If a station still is not found, the frequency that was last active begins to play.

If the radio station is known:

Press and hold ⏮ SEEK or ⏭ SEEK until the station on the display is reached, then release the button.

Seek Tuning (Radio with CD/DVD and MEM)

Briefly press ⏮ SEEK or ⏭ SEEK, to automatically search for the next available station. If a station is not found, the radio switches to a more sensitive search level. If a station still is not found, the frequency that was last active begins to play.

Manual Tuning

Turn the TUNE knob to select the frequency on the display.

Favorites List

1. Turn the MENU/SELECT knob.
2. Select Favorites List.
3. Select the station.

Station Lists

1. Turn the MENU/SELECT knob.
2. Select AM or FM Station List. All receivable stations in the current reception area are displayed. If a station list has not been created, an automatic station search is done.
3. Select the station.

Category Lists

Most stations that broadcast an RDS program type code specify the type of programming transmitted. Some stations change the program type code depending on the content. The system stores the RDS stations sorted by program type in the FM category list.

To search for a programming type determined by station:

1. Turn the MENU/SELECT knob.
2. Select FM category list. A list of all programing types available displays.
3. Select the programming type. A list of stations that transmit programming of the selected type displays.
4. Select the station.

   The category lists are updated when the station lists are updated.

Updating Station & Category Lists

If stations stored in the station list can no longer be received.

1. Turn the MENU/SELECT knob.
2. Select Update AM or FM Station List, if the stations stored in the station list are no longer received. A station search will be completed and the first station in the updated list will play.

To cancel the station search, press the MENU/SELECT knob.

Storing a Station as a Favorite

Stations from all bands can be stored in any order in the favorite pages.

Up to six stations can be stored in each favorite page and the number of available favorite pages can be set.

Storing Stations

To store the station to a position in the list, press the corresponding button 1 to 6 until a beep is heard.

Retrieving Stations

Press the FAV button to open a favorite page or to switch to another favorite page. Briefly press one of the 1 to 6 buttons to retrieve the station.

Time Shifting (Radio with CD/DVD and MEM)

The radio with MEM time shift feature can rewind 20 minutes of FM/AM content. While listening to the radio, the content from the current station is always being buffered.

Press the ▶/II button to pause the radio. The radio displays the time shift status bar. The status bar shows the amount of content that is stored in the buffer and the current pause point.

To resume playback from the current pause point, press the ▶/II button again. The radio is no longer live, but played from the time shift buffer. A status bar displays below the station number.

Press and hold the ⏮ SEEK or ⏭ SEEK buttons to fast forward or rewind through the time shift buffer.

Hold ⏭ SEEK until the end of the recorded buffer resumes live playback.

Press and release the ⏮ SEEK or ⏭ SEEK buttons to jump forward or back 30 seconds in the time shift buffer.

When the radio station is changed, the buffer is cleared and automatically restarted for the current station. Content from a previously tuned station is no longer available.

The time shift feature is not available while recording or with other sources of playback.

Pausing AM/FM with the Vehicle Turned Off

If AM/FM is paused when the vehicle is turned off, the radio continues to buffer the current radio station for up to 20 minutes. If the vehicle is turned back on within 20 minutes, the radio resumes playback from the paused point.

Satellite Radio

Vehicles with an XM™ Satellite Radio tuner and a valid XM Satellite Radio subscription can receive XM programming.

XM Satellite Radio Service

XM is a satellite radio service that is based in the 48 contiguous United States and 10 Canadian provinces. XM Satellite Radio has a wide variety of programming and commercial-free music, coast-to-coast, and in digital-quality sound. A service fee is required to receive the XM service. For more information, contact XM at www.xmradio.com or call 1-800-929-2100 in the U.S. and www.xmradio.ca or call 1-877-438-9677 in Canada.

Control Buttons

The buttons used to control the XM radio are:

RADIO/BAND: Press to turn the radio on and choose between AM, FM, and XM™, if equipped.

⏮ SEEK / ⏭ SEEK: Press to go to the previous or next channel.

FAV: Press to open the favorites list.

1-6: Press to select a favorite.

TUNE: Turn to select channel.

INFO: Press to display additional information that may be available about the current song.

⏵/⏸ (Play/Pause): Press to pause time shifted content, if equipped.

Selecting the XM Band

Press the RADIO/BAND button to choose between the AM, FM and XM bands. The last channel played in that band begins to play when that band is selected.

XM Categories

XM channels are organized in categories.

Removing or Adding Categories

Channels in a category that have been removed can still be accessed by using the ⏮ SEEK or ⏭ SEEK buttons, or the TUNE knob.

To add or remove categories:

1. Press the CONFIG button.
2. Select Radio Settings.
3. Select XM Categories.
4. Turn the MENU/SELECT knob to highlight the category.
5. Press the MENU/SELECT knob to remove or add the category.

Selecting an XM Channel

XM channels can be selected by using ⏮ SEEK, ⏭ SEEK, the TUNE knob, or the menu system.

Selecting a Channel Using ⏮ SEEK or ⏭ SEEK (Radio with CD)

- Press and release ⏮ SEEK or ⏭ SEEK to go to the previous or next channel.
- Press and hold ⏮ SEEK or ⏭ SEEK to scroll through the previous or next channel until the channel is reached.

Selecting a Channel Using ⏮ SEEK or ⏭ SEEK (Radio with CD/DVD and MEM)

Press and release ⏮ SEEK or ⏭ SEEK to go to the previous or next channel.

Selecting a Channel Using the TUNE Knob

To select an XM channel using the TUNE knob:

Turn the TUNE knob to highlight an XM channel, the channel is selected after a short delay.

To select a channel using the menu:

1. Turn the menu knob and select Channel List.
2. Select the desired channel.

Selecting a Channel Using the Menu System

1. Turn the menu knob.
2. Select XM Category List.
3. Select the category.
4. Select the channel.

Storing an XM Channel as a Favorite

Channels from all bands can be stored in any order in the favorite pages.

Up to six channels can be stored in each favorite page and the number of available favorite pages can be set.

Storing a Channel as a Favorite

To store the channel to a position in the list, press and hold the corresponding 1 to 6 button until the channel can be heard again.

Retrieving Channels

Press the FAV button to open a favorite page or to change to another favorite page. Briefly press one of the 1 to 6 buttons to retrieve the channel.

Time Shifting (Radio with CD/DVD and MEM)

The radio with MEM time shift feature can rewind 20 minutes of XM content. While listening to the radio, the content from the current channel is always being buffered.

Press the ▶/II button to pause the radio. The radio displays the time shift status bar. The status bar shows the amount of content that is stored in the buffer and the current pause point.

To resume playback from the current pause point, press the ▶/II button again. The radio is no longer live, but played from the time shift buffer. A status bar displays below the channel number.

Press and hold the ⏮ SEEK or ⏭ SEEK buttons to fast forward or rewind through the time shift buffer.

Hold ⏭ SEEK until the end of the recorded buffer resumes live playback.

Press and release the ⏮ SEEK or ⏭ SEEK buttons to go to the next or previous song in the time shift buffer.

When the channel is changed, the buffer is cleared and automatically restarted for the current channel. Content from a previously tuned station is no longer available.

The time shift feature is not available while recording or with other sources of playback.

Pausing XM with the Vehicle Turned Off

If XM is paused when the vehicle is turned off, the radio continues to buffer the current radio station for up to 20 minutes. If the vehicle is turned back on within 20 minutes, the radio resumes playback from the paused point.

XM Messages

XL (Explicit Language Channels): These channels, or any others, can be blocked by request, by calling 1-800-852-XMXM (9696).

XM Updating: The encryption code in the receiver is being updated, no action is required. This process should take no longer than 30 seconds.

Loading XM: The audio system is acquiring and processing audio and text data, no action is needed. This message should disappear shortly.

Channel Off Air: This channel is not currently in service. Tune in to another channel.

Channel Unauth : This channel is blocked or cannot be received with your XM Subscription package.

Channel Unavailable: This previously assigned channel is no longer assigned. Tune to another station.

No Artist Info: The system is working properly. No artist information is available at this time on this channel.

No Title Info: The system is working properly. No song title information is available at this time on this channel.

No CAT Info: The system is working properly. No category information is available at this time on this channel.

No Information: The system is working properly. No text or informational messages are available at this time on this channel.

No XM Signal: The system is working properly. The vehicle may be in a location that where the XM signal is being blocked. When the vehicle is moved into an open area, the signal should return.

CAT Not Found: The system is working properly. There are no channels available for the selected category.

XM Radio ID: If tuned to channel 0, this message alternates with the XM Radio 8 digit radio ID label. This label is needed to activate the service.

Unknown: If this message is received when tuned to channel 0, there could be a receiver fault. Consult with your dealer.

Check Antenna: If this message does not clear within a short period of time, the receiver could have a fault. Consult with your dealer.

XM Not Available: If this message does not clear within a short period of time, the receiver could have a fault. Consult with your dealer.

Radio Reception

Frequency interference and static can occur during normal radio reception if items such as cell phone chargers, vehicle convenience accessories, and external electronic devices are plugged into the accessory power outlet. If there is interference or static, unplug the item from the accessory power outlet.

FM

FM signals only reach about 16 to 65 km (10 to 40 miles). Although the radio has a built-in electronic circuit that automatically works to reduce interference, some static can occur, especially around tall buildings or hills, causing the sound to fade in and out.

AM

The range for most AM stations is greater than for FM, especially at night. The longer range can cause station frequencies to interfere with each other. Static can occur when things like storms and power lines interfere with radio reception. When this happens, try reducing the treble on the radio.

XM™ Satellite Radio Service

XM Satellite Radio Service gives digital radio reception from coast-to-coast in the 48 contiguous United States, and in Canada. Just as with FM, tall buildings or hills can interfere with satellite radio signals, causing the sound to fade in and out. In addition, traveling or standing under heavy foliage, bridges, garages, or tunnels may cause loss of the XM signal for a period of time.

Cellular Phone Usage

Cellular phone usage can cause interference with the vehicle's radio.

Multi-Band Antenna

The multi-band antenna is located on the roof of the vehicle. The antenna is used for the AM/FM radio, OnStar, the XM Satellite Radio Service System, and GPS (Global Positioning System); if the vehicle has these features. Keep the antenna clear of obstructions for clear reception. If the vehicle has a sunroof and it is open, the performance of the AM/FM radio, OnStar, XM system, and GPS can be affected.

Audio Players

CD Player (Radio with CD)

The CD player can play audio CDs and MP3 CDs.

The CD player will not play 8 cm (3 in) CDs.

Care of CDs

Sound quality can be reduced due to disc quality, recording method, quality of the music recorded, and how the disc has been handled. Handle discs carefully and store them in their original cases or other protective cases away from direct sunlight and dust. If the bottom surface of a disc is damaged, the disc may not play properly or at all. Do not touch the bottom surface of a disc while handling it; this could damage the surface. Pick up discs by grasping the outer edges or the edge of the hole and the outer edge.

If the bottom surface of a disc is dirty, take a soft lint free cloth, or dampen a clean soft cloth in a mild neutral detergent solution mixed with water, and clean it. Wipe the disc from the center to the outer edge.

Care of the CD Player

Do not add a label to a disc, as it could get caught in the CD player. If a label is needed, label the top of the recorded disc with a marking pen.

Do not use disc lens cleaners because they could contaminate the lens of the disc optics and damage the CD player.

Notice: **If a label is added to a CD, or more than one CD is inserted into the slot at a time, or an attempt is made to play scratched or damaged CDs, the CD player could be damaged.**

While using the CD player, use only CDs in good condition without any label, load one CD at a time, and keep the CD player and the loading slot free of foreign materials, liquids, and debris.

Control Buttons

The buttons used to control the CD player are:

CD: Press to use the CD player.

⏭ **SEEK/**⏮ **SEEK :** Press to select tracks or to fast forward or rewind within a track.

INFO: Press to display additional information about the current track that may be available.

TUNE: Turn to select tracks.

MENU/SELECT: Turn to enter the menu, press to select an item.

⏏ **(Eject):** Press to eject the disc.

⏵/⏸ : Press to pause a CD or MP3 track, press again to resume playback.

Inserting a CD

With the printed side facing up, insert a disc into the CD slot until it is drawn in.

Removing a CD

Press the ⏏ button.

The disc is pushed out of the CD slot.

If the disc is not removed after it is ejected, it is pulled back in after a few seconds.

Playing a CD or MP3 CD

Press the CD button, if there is a disc in the player, it begins playing.

Information about the disc and current track is shown on the display depending on the data stored.

Selecting a CD Track

Using the control buttons:

- Press the ⏮ SEEK or ⏭ SEEK button to select the previous or next track.
- Turn the TUNE knob.

Using the CD Menu:

1. Turn the MENU/SELECT knob.
2. Select Tracks list.
3. Select the track.

Playing Tracks in Random Order

Turn the MENU/SELECT knob and then set Shuffle Songs to On.

Fast Forward and Rewind

Press and hold ⏭ SEEK or ⏮ SEEK to fast forward or rewind within the current track.

Selecting an MP3 Track

Using the control buttons:

- Press the ⏮ SEEK or ⏭ SEEK button to select the previous or next track.
- Turn the TUNE knob.

Using the CD Menu:

1. Turn the MENU/SELECT knob.
2. Select Playlists / Folders.
3. Select the playlist or folder.
4. Select the track.

Searching for MP3 Tracks

The search feature may take some time to display the information after reading the disc due to the amount of information stored on the disc. FM automatically plays while the disc is being read.

Tracks can be searched by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres
- Folder View

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Genres, or Folder View.
4. Select the track.

CD/DVD Player

The CD/DVD player can play CDs, DVD-As, MP3/WMA CDs, MP3/WMA DVDs, and DVD-Vs.

The CD/DVD player will not play 8 cm (3 in) discs.

Care of CDs and DVDs

Sound quality can be reduced due to disc quality, recording method, quality of the music recorded, and how the disc has been handled. Handle discs carefully and store them in their original cases or other protective cases away from direct sunlight and dust. If the bottom surface of a disc is damaged, the disc may not play properly or at all. Do not touch the bottom surface of a disc while handling it; this could damage the surface. Pick up discs by grasping the outer edges or the edge of the hole and the outer edge.

If the bottom surface of a disc is dirty, take a soft lint free cloth, or dampen a clean soft cloth in a mild neutral detergent solution mixed with water, and clean it. Wipe the disc from the center to the outer edge.

Care of the CD/DVD Player

Do not add a label to a disc, as it could get caught in the CD/DVD player. If a label is needed, label the top of the recorded disc with a marking pen.

Do not use disc lens cleaners because they could contaminate the lens of the disc optics and damage the CD/DVD player.

Notice: **If a label is added to a CD, or more than one CD is inserted into the slot at a time, or an attempt is made to play scratched or damaged CDs, the CD player could be damaged. While using the CD player, use only CDs in good condition without any label, load one CD at a time, and keep the CD player and the loading slot free of foreign materials, liquids, and debris.**

Control Buttons

The buttons used to control the CD/DVD player are:

MEM/DVD/AUX: Press to choose between the MEM, CD/DVD, and AUX.

⏭ SEEK/ ⏮ SEEK : Press to select tracks or to fast forward or rewind within a track.

INFO: Press to display additional information about the disc that may be available.

TUNE: Turn to select tracks.

MENU/SELECT: Turn to enter the menu and press to select an item.

⏏ (Eject): Press to eject the disc.

⏵/⏸: Press to pause a CD, DVD-A, or DVD-V, press again to resume playback. Press and hold to stop a DVD-V disc.

Inserting a CD or DVD

With the printed side facing up, insert a disc into the slot until it is drawn in.

Removing a CD or DVD

Press the ⏏ button.

The disc is pushed out of the CD/DVD slot.

If the disc is not removed after it is ejected, it is pulled back in after a few seconds.

Playing a CD or DVD-A Disc

Press the MEM/DVD/AUX button if there is a disc in the player, it begins playing.

Information about the disc and current track is shown on the display depending on the data stored.

Selecting CD or DVD-A Tracks

Using the control buttons:

- Press the ⏮ SEEK or ⏭ SEEK button to select the previous or next track.
- Turn the TUNE knob.

Using the menu:

1. Turn the MENU/SELECT knob.
2. Select Tracks List.
3. Select the track.

Pausing a CD or DVD-A Track

Press the ⏵/⏸ button to pause a CD or DVD-A track. Press the ⏵/⏸ button again to continue playing the track.

Playing CD or DVD-A Tracks in Random Order

Turn the MENU/SELECT knob and then set Shuffle Songs to On.

Fast Forward and Rewind

Press and hold ⏭ SEEK or ⏮ SEEK to fast forward or rewind within the current track.

Playing an MP3 CD or DVD

Files that are not stored in folders are displayed in the root directory (disc).

The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Selecting an MP3 Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob.

Using the CD or DVD Menu:

1. Turn the MENU/SELECT knob.
2. Select Folder List.
3. Select the folder.
4. Select the track.

Searching for MP3s on a CD or DVD

It is normal for the search feature to take some time to display the information after reading the disc due to the amount of information stored on the disc. The infotainment system automatically switches to FM while the disc is being read.

Files that do not have any meta data stored in the ID3 tag display as Unknown.

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, or Genres.
4. Select the track. The search rate increases if the menu knob is continuously turned while searching in a list.

Playing MP3 Tracks in Random Order

Turn the MENU/SELECT knob and then set Shuffle Songs to On.

Recording an Audio or MP3 CD to MEM

See *Mass Storage Media (MEM) on page 6-25* for more information.

Playing a DVD-V

See *Rear Seat Entertainment (RSE) System on page 6-36* for information about how to control a Video DVD using the wireless remote control.

Selecting a Chapter

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next chapter.
- Turn the TUNE knob.

Using DVD Menu:

1. Turn the MENU/SELECT knob.
2. Select Chapter List.
3. Select the chapter.

Selecting a Title

1. Turn the MENU/SELECT knob.
2. Select Title List.
3. Select the title.

Changing the Audio Stream

1. Turn the MENU/SELECT knob.
2. Select Audio Stream.
3. Select Change Audio Stream.
4. Press MENU/SELECT to change the selection.

Select Cancel to exit the menu.

Pausing a DVD

1. Turn the MENU/SELECT knob.
2. Select Pause, to pause the disc. Select unpause to start playback.

Navigating the DVD-V Disc Menu

Use the following actions to navigate the title menu on a DVD-V Disc.

- Select / Enter
- Cursor UP
- Cursor DOWN
- Cursor RIGHT
- Cursor LEFT
- Up Menu

Use the following actions to navigate the menu on a DVD-V Disc while playing chapters.

- Pause (Play)
- Chapter List
- Title List
- DVD/DVD — DVD on both video screens
- DVD/AUX — Left video screen / Right AUX input
- AUX/DVD — Left AUX input / Right video screen
- AUX/AUX — AUX input on both video screens

To navigate the menu:

1. Turn the MENU/SELECT knob.
2. Select the action.

Mass Storage Media (MEM)

Infotainment systems with MEM storage are able to record up to 1.1 GB (gigabyte) of music from Audio CDs, MP3/WMA/AAC discs, and USB storage devices. The MEM player can also time shift audio from AM, FM, and XM™ radio.

Music or content that is stored in MEM that you did not create, or have the right to distribute, must be deleted before the sale or end of the lease of the vehicle.

Control Buttons

The buttons used to control the MEM player are:

MEM/DVD/AUX: Press to select the MEM player.

⏭ **SEEK/** ⏮ **SEEK :** Press to select tracks or to fast forward or rewind within a track.

INFO: Press to display additional information about the MEM track that may be available. Turn to select tracks.

⏵/⏸ : Press to pause the track currently playing, press again to resume playback.

● **REC:** Press to record music from a CD or USB drive.

DEL: Press to delete the current track from MEM.

FAV (Favorites): Press to display MEM favorites.

1 to 6: Press to select a track or playlist stored in that numeric position.

Recording From Audio CDs

The infotainment system can record the current song playing or all songs from an audio CD to MEM. A status bar appears on the top of the display when the recording process starts and disappears when the process has ended. Copy protected CDs cannot be recorded to MEM.

Recording to MEM

Press ● REC, then select "Record Current Song" or "Record All Songs on Disc". If the track has started playing, the system will restart the track and begin recording from the beginning of the track. When the song recording is completed, the message "Song Recorded to MEM" displays, and there may be a slight pause.

Songs recorded to MEM are stored as the current date, disc and track number.

Re-recording a Previously Recorded Disc

If the disc or track has already been recorded to MEM, the message "The Song(s) is Already Recorded" displays.

Stopping the Recording

Press the ● REC button while recording from an audio CD to display the stop recording option. Select "Stop Recording Song to MEM".

Renaming Recorded Discs

Discs that have been recorded to MEM can be renamed.

1. Turn the MENU/SELECT knob.
2. Select Rename Recorded Discs.
3. Select the disc.
4. Select Album or Artist to rename either one.
5. Use the menu knob to enter the character sequence. See *Operation on page 6-7* for more information.

Recording From MP3/WMA Discs or USB Storage Devices

USB Host Support

The USB connector uses the USB standards, 1.1 and 2.0.

USB Supported Devices

- USB Flash Drives
- Portable USB Hard Drives

Recording to MEM

Press ● REC, then select "Record Current Song" or " Record All Songs on Disc".

The information stored by MEM is titled according to the ID3 tag associated with it.

Re-recording a Previously Recorded Disc

If the disc or track has already been recorded to MEM the message "The Song(s) is Already Recorded" displays.

Stopping the Recording

Press the ● REC button while recording from an MP3/WMA CD or USB storage device to display the stop recording option. Select "Stop Recording Song to MEM"

Deleting Tracks From MEM

Individual tracks and all tracks can be deleted from MEM.

To delete individual tracks, press and release the DEL button while the track is playing.

To delete all tracks from MEM, press and hold the DEL button while a track is playing.

Playing From MEM

Playing Back a Previously Recorded CD

Turn the TUNE knob to select a track if MEM is already playing from the previously recorded disc.

1. Select Recorded Disc List.
2. Select the disc.
3. Select the track.

Searching For a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, or Genres.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Shuffle Songs

Select the Shuffle Songs option from the MEM menu to randomly play back tracks stored in MEM.

Configuring MEM Favorites

During MEM playback, press the FAV button to change between favorite categories. The favorite categories are:

- Playlists
- Artists
- Albums
- Genres

To remove MEM favorites categories:

1. Press the CONFIG button.
2. Select Radio Settings.
3. Select MEM Favorites.
4. Remove the check mark from the box to remove that MEM favorites category.

Replace the check mark to re-add the removed category.

Saving MEM Tracks as Favorites

Favorites can be saved by pressing and holding one of the 1 to 6 buttons. Favorites can be stored according to the following list:

Playlist: Adds currently playing track to the playlist selected.

Artist: Saves the artist associated with the currently playing track in the indicated favorites position.

Album: Saves the album associated with the currently playing track in the indicated favorites position.

Genre: Saves the genre associated with the currently playing track in the indicated favorites position.

Creating Playlists

To create a playlist using tracks stored in MEM:

1. Select Playlist from the MEM favorites.
2. Select the track to be stored in the playlist.
3. Press and hold one of the 1 to 6 buttons until the track can be heard again to store the track.
4. Repeat steps 1 though 3 to store additional tracks in the playlist.

Auxiliary Devices (Radio with CD)

The optional AUX input allows portable devices to connect to the vehicle using the 3.5 mm (1/8 in) input jack, the USB port or Bluetooth® wireless technology, if equipped.

Portable devices are controlled by using the menu system described in *Operation on page 6-7*.

The AUX input is located in the center console.

3.5 mm Auxiliary Input Jack

Connect a 3.5 mm (1/8 in) cable to the 3.5 mm auxiliary input jack to use a portable audio player.

Playback of an audio device that is connected to the 3.5 mm auxiliary input jack can only be controlled using the controls on the device.

Adjusting the Volume

Turn the VOL/ ⏻ knob to adjust the volume of the infotainment system after the volume level has been set on the portable audio device.

USB Port

For vehicles with a USB port, the following devices may be connected and controlled by the infotainment system.

- iPods
- PlaysForSure Devices (PFD)
- USB Drives
- Zunes

Not all iPods, PFDs, USB Drives, and Zunes are compatible with the infotainment system.

Connecting and Controlling an iPod™

Not all iPod's can be controlled by the infotainment system.

Connecting an iPod

Connect the iPod to the USB port.

Searching For a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Podcasts
- Genres
- Audiobooks
- Composers

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Podcasts, Genres, Audiobooks, or Composers.
4. Select the track.

Shuffle

Turn the MENU/SELECT knob and set Shuffle Songs (Random) to On or Off, then press the ⇦ BACK button to return the main screen.

On: Plays tracks in the current folder in random order.

Off: Plays tracks in the current folder in sequential order.

Repeat

Turn the MENU/SELECT knob and set Repeat to On or Off, then press the ⇦ BACK button to return the main screen.

On: Repeats the current track.

Off: Playback starts from the beginning of the current track after the last track finishes.

Connecting and Controlling a PlaysForSure Device (PFD) or Zune™

Connecting a PFD or Zune

Connect the PFD or Zune to the USB port.

Searching For a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Podcasts
- Genres

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Podcasts, or Genres.
4. Select the track.

Shuffle Functionality

Turn the MENU/SELECT knob and set Shuffle Songs (Random) to On or Off.

On: Plays current tracks in random order.

Off: Plays current tracks in sequential order.

Repeat Functionality

Turn the MENU/SELECT knob and set Repeat to On or Off.

Repeat On: Repeats the current track.

Repeat Off: Playback starts from the beginning of the current track after the last track finishes.

Connecting and Controlling a USB Drive

The infotainment system can only play back .mp3 and .wma files from a USB drive.

Only the first 2,500 songs are recognized on the device.

When a device is not supported, the message "No supported data found. You can safely disconnect the device" appears.

Connecting a USB Drive

Connect the USB drive to the USB port.

Searching For a Track

It is normal for the search feature to take some time to display the information after reading the device due to the amount of information stored.

Files that do not have any meta data stored in the ID3 tag display as Unknown.

Tracks can be searched for by:

- Playlists*
- Artists
- Albums
- Song Titles
- Genres
- Folder View

*This only displays if a playlist is found on the device.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Genres, or Folder View.
4. Select the track.

Shuffle Functionality

Turn the MENU/SELECT knob and set Shuffle Songs (Random) to On or Off.

On: Plays current tracks in random order.

Off: Plays current tracks in sequential order.

Repeat Functionality

Turn the MENU/SELECT knob and set Repeat to On or Off.

Repeat On: Repeats the current track.

Repeat Off: Playback starts from the beginning of the current track after the last track finishes.

Connecting a Bluetooth® Device

Before a Bluetooth device can be connected to the infotainment system, it must first be paired to the system. Not all Bluetooth devices can be paired to the infotainment system. Before pairing the Bluetooth device, become familiar with its user guide for Bluetooth functions. The system only connects to Bluetooth devices that support A2DP (Advanced Audio Distribution Profile) version 1.2.

A Bluetooth phone with MP3 capability can not be paired to the vehicle as a phone and an MP3 player at the same time.

Pairing Information:

- Up to five devices can be paired to the system.
- The pairing process is disabled when the vehicle is moving.
- The infotainment system automatically links with the first available paired device in the order the device was paired.
- Only one paired device can be connected to the infotainment system at a time.
- Pairing should only need to be completed once, unless changes to the pairing information have been made or the device is deleted.

Bluetooth Setup Menu

The Bluetooth Setup menu can be accessed with or without a device attached to the USB port.

To select the Bluetooth Setup menu when a device is attached to the USB port and active:

1. Turn the MENU/SELECT knob while in the iPod, Zune, PFD, or USB device main menu.
2. Select Bluetooth Music Setup.

To select the Bluetooth Music Setup menu when a device is not attached to the USB port, or when a device is attached to the USB port but not active:

1. Press the AUX button until AUX is the active source.
2. Turn the MENU/SELECT knob.
3. Select Bluetooth Music Setup.

To select the Bluetooth Music Setup menu when a Bluetooth device is connected and active:

1. Turn the MENU/SELECT knob.
2. Select Bluetooth Music Setup.

Pairing a Device

1. Select Connect To New Device from the Bluetooth Music Setup menu.
2. The system asks a series of Yes/No questions to determine what type of device is being paired.
3. After the system determines what type of Bluetooth device is being paired, the Bluetooth device will need to be put into discovery mode.

4. Some devices may require a PIN number in order to complete the pairing process. Locate the device named "GMusicConnect" in the list on the Bluetooth device and follow the instructions on the device to enter the four digit PIN number provided by the infotainment system.

Connecting to a Device

Once a device is paired to the infotainment system, it can be connected to the infotainment system.

To connect a paired device when no other device is connected to the infotainment system:

1. Select the Select Device option from the Bluetooth Music Setup menu.
2. Select the new device.

To connect a paired device when another device is connected to the infotainment system:

1. Select the Select Device option from the Bluetooth Music Setup menu.
2. Select the new device.
3. The active device is disconnected from the system and the new device is connected.

Removing a Device

1. Select Remove Device from the Bluetooth Music Setup menu.
2. Select the device.
3. The device is removed from the system.

Before connecting to the removed device again, it will need to paired to the infotainment system.

Changing the Default PIN

To change the default PIN:

1. Select Change Default PIN from the Bluetooth Music Setup menu.
2. Select one of the pre-defined PIN numbers, or select Other to create a PIN.

To create a PIN:

1. Select the length of the PIN number.
2. Enter the character sequence.

Messages

The following messages may appear on the infotainment screen.

Poor Bluetooth Signal Quality: This message displays when the Bluetooth signal strength is low.

This Feature is Unavailable While Vehicle is Moving: This message displays when an action is not allowed while the vehicle is moving.

Controlling a Bluetooth® Device

Bluetooth devices that support AVRCP (Audio/Video Remote Control Profile) version 1.0 may be able to be controlled by the infotainment system.

Press and release ⏮ SEEK / ⏭ SEEK to skip tracks.

Other Information

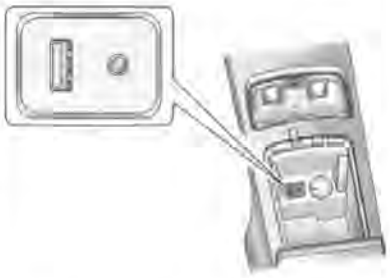
The Bluetooth® word mark and logos are owned by the Bluetooth® SIG, Inc. and any use of such marks by General Motors is under license. Other trademarks and trade names are those of their respective owners.

See *Radio Frequency Statement on page 12-17* for FCC information.

Auxiliary Devices (Radio with CD/DVD and MEM)

The optional AUX input allows portable devices to be connected using the 3.5 mm (1/8 in) input jack or the USB port.

Portable devices are controlled by using the menu system described in *Operation on page 6-7*.



The AUX input is located in the center console.

3.5 mm Auxiliary Input Jack

Connect a 3.5 mm (1/8 in) cable to the 3.5 mm auxiliary input jack to use a portable audio player.

Playback of an audio device that is connected to the 3.5 mm auxiliary input jack can only be controlled using the controls on the device.

Adjusting the Volume

Turn the VOL/ ⏻ knob to adjust the volume of the infotainment system after the volume level has been set on the portable audio device.

USB Port

The following devices may be connected to the USB port and controlled by the infotainment system.

- iPods
- USB Mass Storage Devices

Not all iPods or USB Mass Storage Devices are compatible with the infotainment system.

Connecting and Controlling an iPod™

Not all iPod's can be controlled by the infotainment system.

Connecting an iPod

Connect the iPod to the USB port.

Selecting a Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob to select a track in the current sub menu. The track will start to play.

Playing Tracks in Random Order

Turn the MENU/SELECT knob and set Shuffle Songs to On or Off.

Shuffle On: Plays current tracks in random order.

Shuffle Off: Plays current tracks in sequential order.

Searching For a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres
- Composers
- Audiobooks

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Genres, Composers, or Audiobooks.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Connecting and Controlling a USB Drive

Files that are not stored in folders are displayed in the root directory (USB).

Connecting a USB Drive

Connect the USB drive to the USB port.

Disconnecting a USB Drive

A USB drive should be ejected from the USB port before disconnecting it. To eject a USB drive:

1. Turn the MENU/SELECT knob.
2. Select USB Eject.

Playing Tracks in Random Order

Turn the MENU/SELECT knob and then set Shuffle Songs to On.

Selecting a Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob to select a track in the current sub menu. The track will start to play.

Selecting a track in a different folder:

1. Turn the MENU/SELECT knob.
2. Select Folder List.
3. Select the folder.
4. Select the track.

Searching for Tracks

It is normal for the search feature to take some time to display the information after reading the device due to the amount of information stored.

Files that do not have any meta data stored in the ID3 tag display as Unknown.

Tracks can be searched by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, or Genres.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Recording Tracks to MEM

See *Mass Storage Media (MEM) on page 6-25* for more information.

Rear Seat Infotainment

Rear Seat Entertainment (RSE) System

The vehicle may have a DVD Rear Seat Entertainment (RSE) system. The RSE system works with the vehicle's infotainment system. The DVD player is part of the front radio. The RSE system includes a radio with a DVD player, two rear seat video display screens, audio/video jacks, two wireless headphones, and a remote control. See *CD/DVD Player on page 6-21* or the separate navigation system manual for more information on the vehicle's DVD system.

Before Driving

The RSE is for rear seat passengers only. The driver cannot safely view the video screen while driving.

In severe or extreme weather conditions the RSE system may not work until the temperature is within the operating range. The operating range is above −20°C (−4°F) and below 60°C (140°F). If the temperature is outside of this range, heat or cool the vehicle until it is within the operating range.

Global Off

Depending on the infotainment system, the RSE system may have a Global Off feature. The Global Off feature disables all RSE system features. Press and hold the radio power button for more than three seconds for Global Off to disable the RSE features.

A padlock icon may display on the infotainment screen when the Global Off feature is on. On some infotainment systems, the Global Off feature can be turned off by performing one of the following:

- Press and hold the radio power button for more than three seconds.
- Insert or eject any disc.
- Insert a DVD video disc.
- Press the Remote Control power button.
- Press the MEM/DVD/AUX button or the ▶/II button when a DVD video disc is in the player.
- Press the SRC button on the steering wheel when a DVD video disc is in the player.
- Cycle the ignition.

Headphones

RSE includes two 2-channel wireless headphones. Channel 1 is dedicated to the DVD player, and Channel 2 is dedicated to RSA selections. The headphones are used to listen to various multi-media. If the vehicle is not equipped with RSA, then channel 2 is dedicated to any external auxiliary device connected to the rear A/V jacks. The wireless headphones have an On/Off button, channel 1/2 switch, and a volume control. Turn the headphones off when not in use.

Push the On/Off button to turn on the headphones. A light on the headphones comes on. If the light does not come on, check the batteries. Intermittent sound or static can also indicate weak batteries. See "Battery Replacement" later in this section for more information.

Infrared transmitters are on the top of the left seatback video screen. The headphones shut off automatically to save the battery power if the RSE system and RSA are shut off or if the headphones are out of range of the transmitters for more than three minutes. Moving too far forward or stepping out of the vehicle, can cause the headphones to lose the signal or have static.

The headphones may automatically turn off after four hours of continuous use.

To adjust the volume on the headphones, use the volume control.

For best audio performance, the headphones must be worn correctly, with the headband over the top of the head. L (Left) and R (Right) are above the ear pads and are indicators as to how the headphones should be placed on the head.

Notice: **Do not store the headphones in heat or direct sunlight. This could damage the headphones and repairs will not be covered by the warranty. Storage in extreme cold can weaken the batteries. Keep the headphones stored in a cool, dry place.**

If the foam ear pads become worn or damaged, they can be replaced separately from the headphones. See your dealer for more information.

Battery Replacement

To change the batteries:

1. Loosen the screw to the battery door located on the left side of the headphones.
2. Slide the battery door open.
3. Replace the two AAA batteries.
4. Replace the battery door and tighten the screw.

Remove the batteries if the headphones are not going to be used for a long period of time.

Audio/Video (A/V) Jacks

The A/V jacks may be located on the rear of the floor console. They allow audio or video cables to be connected from an auxiliary device such as a camcorder or a video game system.

The A/V jacks are color coded:

- Yellow for video input.
- White for left audio input.
- Red for right audio input.

Power for auxiliary devices is not supplied by the radio system.

To use the auxiliary inputs of the RSE system:

1. Connect the auxiliary device cables to the A/V jacks.
2. Power on both the auxiliary device and the RSE video screen.

Changing the Source on the Video Display Screens

The image from the auxiliary device can be switched between the video display screens.

To change the display:

1. Press the AUX button on the remote control to change the source of both video screens from the DVD player to the auxiliary device.
2. Press the AUX button a second time to change the left video screen source to the DVD player and the right video screen to the auxiliary device.
3. Press the AUX button a third time to change the left video screen source to the auxiliary device and the right video screen to the DVD player.
4. Press the AUX button a fourth time to change the source of both video screens to the DVD player.

How to Change the RSE Video Screen Settings

The screen display mode, brightness, and language can be changed from the setup menu using the remote control. To change a setting:

1. Press ☐.
2. Use ▲, ▼, ◄, ► and ◄┘ select the settings.
3. Press ☐ again to exit the setup menu.

Audio Output

Audio from the DVD player or auxiliary inputs can be heard through the following:

- Wireless Headphones
- Vehicle Speakers
- Vehicle wired headphone jacks on the rear seat audio system, if the vehicle has this feature.

The RSE system transmits the audio signal to the wireless headphones if an audio signal is available. See "Headphones" earlier in this section for more information.

Audio can be heard from the wired headphone jacks on the RSA system by selecting the desired source from the RSA system, if the vehicle has this feature.

The front seat passengers are able to listen to playback from the A/V jacks through the vehicle speakers by selecting Rear A/V as the source on the radio.

Video Screens

The video screens are located in the back of the driver and front passenger seats.

To use the video screen:

1. Push the release button located on the seatback console.
2. Move the screen to the desired viewing position.

Push the video screen down into its locked position when it is not in use. The screen turns off automatically.

Only the left RSE seatback console contains the infrared transmitters for the wireless headphones, they may be visible as eight illuminated LEDs. These LEDs are not on the right video screen. Both seatback consoles contain an infrared receiver for the remote control. They are located at the top of each console.

Notice: **Avoid directly touching the video screen, as damage may occur. See "Cleaning the Video Screen" later in this section for more information.**

Video Screen Input Jack

Each video screen is equipped with a video input jack to allow video cables to be connected from an auxiliary device such as a camcorder or a video game system. This signal will override any video provided by the RSE system; either the DVD or Auxiliary A/V jack source. The RSE system must be on for this input to operate.

Remote Control

To use the remote control, aim it at the transmitter window at either seatback console and press the button. Direct sunlight or very bright light could affect the ability of the RSE transmitter to receive signals from the remote control. Check the batteries if the remote control does not seem to be working. See "Battery Replacement" later in this section. Objects blocking the line of sight could also affect the function of the remote control.

If a CD, DVD, or MP3 disc is in the Radio DVD slot, the remote control ⏻ button can be used to turn on the video screen display and start the disc. The infotainment system can also turn on the video screen display. See *CD/DVD Player on page 6-21* or the separate navigation system manual for more information.

Notice: **Storing the remote control in a hot area or in direct sunlight can damage it, and the repairs will not be covered by the warranty. Storage in extreme cold can weaken the batteries. Keep the remote control stored in a cool, dry place.**

Remote Control Buttons

⏻ **(Power):** Press to turn the video screens on and off.

☼ **(Illumination):** Press to turn the remote control backlight on. The backlight times out after several seconds if no other button is pressed.

(Title): Press to return to the main menu of the DVD. This function could vary for each disc.

(Main Menu): Press to access the DVD menu. The DVD menu is different on every DVD. Use the navigation arrows to move the cursor. After making a selection press the enter button. This button only operates when using a DVD.

▲, ▼, ◀, ▶ **(Menu Navigation Arrows):** Use the arrow buttons to navigate through a menu.

↵ **(Enter):** Press to select the highlighted choice in any menu.

(Display Menu): Press to adjust the brightness, screen display mode, and display the language menu.

(Return): Press to exit the current active menu and return to the previous menu. This button operates only when the display menu or a DVD menu is active.

■ **(Stop):** Press to stop playing, rewinding, or fast forwarding a DVD. Press twice to return to the beginning of the DVD.

▶ ‖ **(Play/Pause):** Press to start playing a DVD. Press to pause a DVD while it is playing. Press again to continue playing.

Depending on the infotainment system in the vehicle, DVD playback may be slowed down by pressing ▶ ‖ then ⏩. Reverse slow play by pressing ▶ ‖ then ⏪. Press ▶ ‖ again to cancel slow play.

⏮ **(Previous Track/Chapter):** Press to go to the start of the current track or chapter. Press again to go to the previous track or chapter. This button may not work when the DVD is playing the copyright information or the previews.

⏭ **(Next Track/Chapter):** Press to go to the beginning of the next chapter or track. This button might not work when the DVD is playing the copyright information or the previews.

⏪ **(Fast Reverse):** Press to quickly reverse the DVD or CD. To stop fast reversing a DVD video, press ▶ ‖. To stop fast reversing a DVD audio or CD, release ⏪. This button might not work when the DVD is playing the copyright information or the previews.

⏩ **(Fast Forward):** Press to fast forward the DVD or CD. To stop fast forwarding a DVD video, press ▶ ‖. To stop fast forwarding a DVD audio or CD, release ⏩. This button might not work when the DVD is playing the copyright information or the previews.

♪ **(Audio):** Press to change audio tracks on DVDs that have this feature when the DVD is playing.

▭ **(Subtitles):** Press to turn ON/OFF subtitles and to move through subtitle options when a DVD is playing.

AUX (Auxiliary): Press to switch the video displays between the DVD player and an auxiliary source.

(Camera): Press to change the camera angle on DVDs that have this feature when the DVD is playing.

⊗ **(Clear) (If Available):** Press this button within three seconds after inputting a numeric selection, to clear all numeric inputs.

≧ **10 (Double Digit Entries) (If Available):** Press this button to select chapter or track numbers greater than 9. Press this button before inputting the number.

1 through 0 (Numeric Keypad): The numbered keypad provides the capability of direct chapter or track number selection.

Replacing the Remote Control

If the remote control becomes lost or damaged, a new universal remote control can be purchased. Use a Toshiba® code set for replacement universal remote controls.

Battery Replacement

To change the remote control batteries:

1. Slide back the rear cover on the remote control.
2. Replace the two batteries in the compartment.
3. Replace the battery cover.

Remove the batteries from the remote control if unused for an extended period of time.

Tips and Troubleshooting Chart

Problem	Recommended Action
No power.	The ignition might not be turned ON/RUN or in ACC/ACCESSORY.
The picture does not fill the screen. There are black borders on the top and bottom or on both sides or it looks stretched out.	Check the display mode settings in the setup menu by pressing the display menu button on the remote control.
In auxiliary mode, the picture moves or scrolls.	Check the auxiliary input connections at both devices.
The remote control does not work.	Check to make sure there is no obstruction between the remote control and the transmitter window. Check the batteries to make sure they are not dead or installed incorrectly.
After stopping the player, I push Play but sometimes the DVD starts where I left off and sometimes at the beginning.	If the stop button was pressed one time, the DVD player resumes playing where the DVD was stopped. If the stop button was pressed two times the DVD player begins to play from the beginning of the DVD.

Tips and Troubleshooting Chart (cont'd)

Problem	Recommended Action
The auxiliary source is running but there is no picture or sound.	Check that the RSE video screen is in the auxiliary source mode by pressing the AUX button on the remote control. Check the auxiliary input connections at both devices.
Sometimes the wireless headphone audio cuts out or buzzes.	Check for obstructions, low batteries, reception range, and interference from cellular telephone towers or by using a cellular telephone in the vehicle. Check that the headphones are on correctly using the L (left) and R (right) on the headphones. Check that the headphones are positioned properly with the headband across the top of the head.
I lost the remote and/or the headphones.	See your dealer for assistance.
The DVD is playing, but there is no picture or sound.	Check that the RSE video screen is sourced to the DVD player by pressing the AUX button on the remote control.

DVD Display Error Messages

The DVD display error message depends on which radio the vehicle has. The video screen may display one of the following:

Disc Load/Eject Error or Mechanical Error: There are disc load or eject problems.

Disc Format Error or Unknown Format: The disc is inserted with the disc label wrong side up, or if the disc is damaged.

Disc Region Error or Disc Error: The disc is not from a correct region.

No Disc Inserted: No disc is present when the ⏏ EJECT or MEM/DVD/AUX button is pressed on the radio.

DVD Distortion

Video distortion can occur when operating cellular phones, scanners, CB radios, Global Position Systems (GPS)*, two-way radios, mobile fax, or walkie talkies.

It might be necessary to turn off the DVD player when operating one of these devices in or near the vehicle.

*Excludes the OnStar® System.

Cleaning the RSE Seatback Console

Use only a clean cloth dampened with clean water to clean the RSE seatback console surface.

Cleaning the Video Screens

Use only a clean cloth dampened with clean water. Use care when touching or cleaning the screens as damage could result.

Rear Seat Audio (RSA) System

Vehicles with this feature allow the rear seat passengers to listen to and control any of the music sources: radio, CDs, DVDs, or other auxiliary sources. RSA can only control music sources that the front seat passengers are listening to, except on radios where dual control is allowed.

RSA can function when the front radio is off. displays on the infotainment system when RSA is on.

Audio can be heard through wired headphones (not included) plugged into the jacks on the RSA. If the vehicle has a Rear Seat Entertainment system with wireless headphones, audio can also be heard on Channel 2 of the wireless headphones.

To listen to a portable audio device through the RSA, attach the portable audio device to the auxiliary input, if available. Turn the device on, then choose the front auxiliary input with the RSA SRCE button.

⏻ **(Power):** Press to turn the RSA on or off.

Volume: Turn to increase or decrease the volume of the wired headphones. The left knob controls the left headphones and the right knob controls the right. Use the volume control on headphones for wireless headphones.

SRCE (Source): Press to select between the radio, CD, and if these features are available: DVD, front or rear auxiliary, HDD, USB. The front radio may override the rear selection as required.

⏮ ⏭ **(Seek):** While listening to the radio, press to go to the previous or to the next station and stay there. If the front seat passengers are listening to the radio, this function may be inactive on some radios.

Press and hold ⏮ or ⏭ until "Tune" displays. Continue to press ⏮ or ⏭ to tune to an individual station. Tune stays active until ⏮ or ⏭ has not been pressed for several seconds. If the front seat passengers are listening to the radio, this function may be inactive on some radios.

While listening to a disc, press ⏭ to go to the next track or chapter on the disc. Press ⏮ to go back to the start of the current track or chapter if more than ten seconds have played. If the front seat passengers are listening to a disc, this function may be inactive on some radios. Press and hold ⏮ or ⏭ to fast reverse or fast forward.

When a DVD video menu is being displayed, press ⏮ or ⏭ to cursor up or down on the menu. Hold ⏮ or ⏭ to cursor left or right on the menu.

PROG (Program): Press to go to the next preset radio station or channel set on the main radio. If the front seat passengers are listening to the radio, this function may be inactive on some radios.

When a CD or DVD audio disc is playing, press PROG to go to the beginning of the disc or display disc info. If the front seat passengers are listening to a disc, this function may be inactive on some radios.

When a disc is playing in the CD or DVD changer, press and hold PROG to select the next disc, if multiple discs are loaded. If the front seat passengers are listening to a disc, this function may be inactive on some radios.

The PROG button may be used to access the menu of an MP3. Once in the menu, use ⏮ or ⏭ to make selections.

When a DVD video menu is displayed, press PROG, or press and hold PROG to perform the menu function, ENTER.

Phone

Bluetooth (Overview)

Vehicles with a Bluetooth system can use a Bluetooth capable cell phone with a Hands Free Profile to make and receive phone calls. The infotainment system and voice recognition are used to control the system. The system can be used while in ON/RUN or ACC/ACCESSORY. The range of the Bluetooth system can be up to 9.1 m (30 ft). Not all phones support all functions and not all phones work with the Bluetooth system. See www.gm.com/bluetooth for more information about compatible phones.

Bluetooth Controls

Use the buttons located on the infotainment system and the steering wheel to operate the Bluetooth system.

Steering Wheel Controls

(Push To Talk) : Press to answer incoming calls, to confirm system information, and to start voice recognition.

(End Call / Mute): Press to end a call, reject a call, or to cancel an operation.

Infotainment System Controls

For information about how to navigate the menu system using the infotainment controls, see *Operation on page 6-7*.

PHONE: Press to enter the Phone main menu.

Voice Recognition

The voice recognition system uses commands to control the system and dial phone numbers.

Noise: The system may not recognize voice commands if there is too much background noise.

When to Speak: A tone sounds to indicate that the system is ready for a voice command. Wait for the tone and then speak.

How to Speak: Speak clearly in a calm and natural voice.

Audio System

When using the Bluetooth system, sound comes through the vehicle's front audio system speakers and overrides the audio system. Use the VOL/ ⏻ knob during a call to change the volume level. The adjusted volume level remains in memory for later calls. The system maintains a minimum volume level.

Other Information

The Bluetooth® word mark and logos are owned by the Bluetooth® SIG, Inc. and any use of such marks by General Motors is under license. Other trademarks and trade names are those of their respective owners.

See *Radio Frequency Statement on page 12-17* for Federal Communications Commission and Industry Canada Standards information.

Bluetooth (Infotainment Controls)

For information about how to navigate the menu system using the infotainment controls, see *Operation on page 6-7*.

Pairing

A Bluetooth enabled cell phone must be paired to the Bluetooth system first and then connected to the vehicle before it can be used.

See the cell phone manufacturer user guide for Bluetooth functions before pairing the cell phone. If a Bluetooth phone is not connected, calls will be made using OnStar® Hands-Free Calling, if available. Refer to the OnStar Owner's Guide for more information.

A Bluetooth phone with MP3 capability can not be connected to the vehicle as a phone and an MP3 player at the same time.

The pairing process can be started by using the voice recognition system or the controls on the infotainment system.

Pairing Information:

- Up to five cell phones can be paired to the Bluetooth system.
- The pairing process is disabled when the vehicle is moving.
- The Bluetooth system links with the first available paired cell phone based on the order shown in the device list.

- Only one paired cell phone can be connected to the Bluetooth system at a time.
- Pairing should only need to be completed once, unless changes to the pairing information have been made or the phone is deleted.

To link to a different paired phone, see "Linking to a Different Phone" later in this section.

Pairing a Phone

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Pair Device (Phone). A four digit PIN number appears on the display.

   If the "Add new GPS device" option is selected, the system will start a search for Bluetooth "Handsfree" profile devices just like if "Add new Phone" was selected . The additional GPS location feature which would provide the vehicle's GPS location through the Bluetooth Serial Port Profile is not available.
5. Start the Pairing process on the cell phone that will be paired to the vehicle. Reference the cell phone manufacturers user guide for information on this process.

   Locate the device named "General Motors" in the list on the cellular phone and follow the instructions on the cell phone to enter the four digit PIN number provided by the system.
6. The system prompts for a name for the phone and confirms the name provided. This name is used to indicate which phone is connected.
7. The system responds with "<Phone name> has been successfully paired" after the pairing process is complete.
8. Repeat Steps 1 through 7 to pair additional phones.

Listing All Paired and Connected Phones

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Device List.

Deleting a Paired Phone

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Device List.
5. Select the phone to delete and follow the on screen prompts.

Linking to a Different Phone

In order to link to a different phone, the new phone must be in the vehicle and available to be connected to the bluetooth system before the process is started.

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Device List.
5. Select the new phone to link to and follow the on screen prompts.

   If delete is selected, the highlighted phone will be deleted.

Making a Call

Radio with CD

1. Press the PHONE button twice.
2. Enter the character sequence. See "Entering a Character Sequence" in *Operation on page 6-7* for more information.
3. Select Call to start dialing the number.

Radio with CD/DVD/MEM

1. Press the PHONE button.
2. Select Enter number.
3. Enter the character sequence. See "Entering a Character Sequence" in *Operation on page 6-7* for more information.
4. Select Call to start dialing the number.

Accepting or Declining a Call

When an incoming call is received, the infotainment system mutes and a ring tone is heard in the vehicle.

Accepting a Call

Turn the MENU/SELECT knob to "Answer" and press the MENU/SELECT knob to accept the call.

Declining a Call

Turn the MENU/SELECT knob to "Decline" and press the MENU/SELECT knob to decline the call.

Call Waiting

Call waiting must be supported on the bluetooth phone and enabled by the wireless service carrier to work.

Accepting a Call

Turn the MENU/SELECT knob to "Answer" and press the MENU/SELECT knob to accept the call.

Declining a Call

Turn the MENU/SELECT knob to "Decline" and press the MENU/SELECT knob to decline the call.

Switching Between Calls (Call Waiting Calls Only)

To switch between calls:

1. Turn or press the MENU/SELECT knob.
2. Select Switch Call from the menu.

Conference Calling

Conference calling and three way calling must be supported on the bluetooth phone and enabled by the wireless service carrier to work.

To start a conference while in a current call:

1. Turn or press the MENU/SELECT knob.
2. Select Enter Number.
3. Enter the character sequence then select call. See "Entering a Character Sequence" in *Operation on page 6-7* for more information.
4. After the call has been placed, turn or press the MENU/SELECT knob and choose Merge Calls.
5. To add more callers to the conference call, repeat steps 1 through 4. The amount of callers that can be added are limited by your wireless service carrier.

Ending a Call

Turn or press the MENU/SELECT knob and select Hang Up.

Muting a Call

To Mute a Call

Turn or press the MENU/SELECT knob and select Mute Call.

To Cancel Mute

Turn or press the MENU/SELECT knob and select Mute Call.

Dual Tone Multi-Frequency (DTMF) Tones

The in-vehicle Bluetooth system can send numbers during a call. This is used when calling a menu driven phone system.

1. Turn or press the MENU/SELECT knob and select Enter Number.
2. Enter the character sequence, see "Entering a Character Sequence" in *Operation on page 6-7* for more information.

Bluetooth (Voice Recognition)

Pairing

A Bluetooth cell phone must be paired to the Bluetooth system and then connected to the vehicle before it can be used. See the cell phone manufacturers user guide for Bluetooth functions before pairing the cell phone. If a Bluetooth phone is not connected, calls will be made using OnStar® Hands-Free Calling, if available. Refer to the OnStar Owner's Guide for more information.

The pairing process can be started by using the voice recognition system or the controls on the infotainment system.

A Bluetooth phone with MP3 capability can not be paired to the vehicle as a phone and an MP3 player at the same time.

Pairing Information:

- Up to five cell phones can be paired to the Bluetooth system.
- The pairing process is disabled when the vehicle is moving.
- The Bluetooth system links with the first available paired cell phone based on the order shown in the device list.
- Only one paired cell phone can be connected to the Bluetooth system at a time.
- Pairing only needs to be completed once, unless the pairing information changes or the phone is deleted.

To link to a different paired phone, see Linking to a Different Phone later in this section.

Pairing a Phone

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Bluetooth". The system responds "Bluetooth ready" followed by a tone.
3. Say "Pair". The system responds with instructions and a four-digit PIN number. The PIN number will be used in Step 4.

4. Start the Pairing process on the cell phone that will be paired to the vehicle. Reference the cell phone manufacturers user guide for information on this process.

   Locate the device named "General Motors" in the list on the cell phone and follow the instructions on the cell phone to enter the four-digit PIN number that was provided in Step 3.
5. The system prompts for a name for the phone. This name will be used to indicate which phone is connected. The system confirms the name.
6. The system responds with "<Phone name> has been successfully paired" after the pairing process is complete.
7. Repeat Steps 1 through 7 for additional phones to be paired.

Listing All Paired and Connected Phones

1. Press ☎ / ⏮. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Bluetooth". The system responds "Bluetooth ready" followed by a tone.
3. Say "List". The system lists all the paired Bluetooth devices. The system will respond "is connected" if a phone is connected to the vehicle.

Deleting a Paired Phone

1. Press ☎ / ⏮. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Bluetooth". The system responds "Bluetooth ready" followed by a tone.
3. Say "Delete". The system asks which phone to delete followed by a tone.
4. Say the name of the phone to be deleted. If the phone name is unknown, use the "List" command for a list of all paired phones. The system responds "Would you like to delete <phone name>? Yes or No" followed by a tone.
5. Say "Yes" to delete the phone. The system responds "OK, deleting <phone name>".

Linking to a Different Phone

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Bluetooth". The system responds "Bluetooth ready" followed by a tone.
3. Say "Change phone". The system responds "Please wait while I search for other phones".
   - If another phone is found, the response will be "<Phone name> is now connected".
   - If another phone is not found, the original phone remains connected.

Storing Name Tags

The system can store up to thirty phone numbers as name tags that are shared between the Bluetooth and OnStar systems.

The system uses the following commands to store and retrieve phone numbers:

- Store
- Digit Store
- Directory

Using the Store Command

The store command allows a phone number to be stored without entering the digits individually.

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Store". The system responds "Store, number please" followed by a tone.

3. Say the complete phone number to be stored at once with no pauses.
   - If the system recognizes the number the response is "OK, Storing".
   - If the system does not recognize the phone number, the response is "Store <Phone number>". "Please say yes or no". If the number is correct, say "Yes". If the number is not correct, say "No". The system will ask for the number again.
4. After the system stores the phone number, it responds "Please say the name tag" followed by a tone.
5. Say a name tag for the phone number. The name tag is recorded and the system responds "About to store <name tag>. Does that sound OK?".
   - If the name tag does not sound correct, say "No" and repeat Step 5.
   - If the name tag sounds correct, say "Yes" and the name tag is stored. After the number is stored the system returns to the main menu.

Using the Digit Store Command

The digit store command allows a phone number to be stored by entering the digits individually.

1. Press ✆ / ✱. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Digit Store". The system responds with "Please say the first digit to store" followed by a tone.
3. Say the first digit to be stored. The system will repeat back the digit it heard followed by a tone. Continue entering digits until the number to be stored is complete.
   - If an unwanted number is recognized by the system, say "Clear" at any time to clear the last number.
   - To hear all of the numbers recognized by the system, say "Verify" at any time.
4. After the complete number has been entered, say "Store". The system responds "Please say the name tag" followed by a tone.

5. Say a name tag for the phone number. The name tag is recorded and the system responds "About to store <name tag>. Does that sound OK?".
   - If the name tag does not sound correct, say "No" and repeat Step 5.
   - If the name tag sounds correct, say "Yes" and the name tag is stored. After the number is stored the system returns to the main menu.

Using the Directory Command

The directory command lists all of the name tags stored by the system. To use the directory command:

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Directory". The system responds "Directory" and lists all stored name tags. The system returns to the main menu when the list is complete.

Deleting Name Tags

The system uses the following commands to delete name tags:

- Delete
- Delete all name tags

Using the Delete Command

The delete command is used to delete specific name tags.

To delete name tags:

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Delete". The system responds "Delete, please say the name tag" followed by a tone.
3. Say the name tag to be deleted. The system responds "Would you like to delete, <name tag>? Please say yes or no".
   - If the name tag is correct, say "Yes" to delete the name tag. The system responds with "OK, deleting <name tag>, returning to the main menu."
   - If the name tag is incorrect, say "No". The system responds with "No. OK, let's try again, please say the name tag."

Using the Delete All Name Tags Command

The delete all name tags command deletes all stored phone book name tags and route name tags for OnStar if stored.

To delete all name tags:

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Delete all name tags". The system responds "You are about to delete all name tags stored in your phone directory and your route destination directory. Are you sure you want to do this? Please say yes or no."
   - Say "Yes" to delete all name tags.
   - Say "No" to cancel the function and return to the main menu.

Making a Call

Calls can be made using the following commands:

- Dial
- Digit Dial
- Call
- Re-dial

Using the Dial Command

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Dial". The system responds "Dial using <phone name>. "Number please" followed by a tone.
3. Say the entire number without pausing.
   - If the system recognizes the number, it responds with "OK, Dialing" and dials the number.
   - If the system does not recognize the number, it confirms the numbers followed by a tone. If the number is correct, say "Yes". The system responds "OK, Dialing" and dials the number. If the number is not correct, say "No". The system will ask for the number again.

Using the Digit Dial Command

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Digit Dial". The system responds "Digit dial using <phone name>, please say the first digit to dial" followed by a tone.
3. Say the digits to be dialed one at a time. The system repeats back the digit it heard followed by a tone.
4. Continue entering digits until the number to be dialed is complete. After the whole number has been entered, say "Dial". The system responds "OK, Dialing" and dials the number.
   - If an unwanted number is recognized by the system, say "Clear" at any time to clear the last number.
   - To hear all of the numbers recognized by the system, say "Verify" at any time.

Using the Call Command

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Call". The system responds "Call using <phone name>. Please say the name tag" followed by a tone.
3. Say the name tag of the person to call.
   - If the system recognizes the name tag it responds "OK, calling, <name tag>" and dials the number.
   - If the system does not recognize the name tag, it confirms the name tag followed by a tone. If the name tag is correct, say "Yes". The system responds with "OK, calling, <name tag>" and dials the number. If the name tag is not correct, say "No". The system will ask for the name tag again.

Once connected, the person called will be heard through the audio speakers.

Using the Re-dial Command

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds with "Ready" followed by a tone.
2. After the tone, say "Re-dial". The system responds "Re-dial using <phone name>" and dials the last number called from the connected Bluetooth phone.

Once connected, the person called will be heard through the audio speakers.

Receiving a Call

When an incoming call is received, the audio system mutes and a ring tone is heard in the vehicle.

- Press ✆ 🎤 to answer the call.
- Press ☎ / ✆ to ignore a call.

Call Waiting

Call waiting must be supported on the Bluetooth phone and enabled by the wireless service carrier.

- Press ✆ 🎤 to answer an incoming call when another call is active. The original call is placed on hold.
- Press ✆ 🎤 again to return to the original call.
- To ignore the incoming call, no action is required.
- Press ☎ / ✆ to disconnect the current call and switch to the call on hold.

Three-Way Calling

Three-Way Calling must be supported on the Bluetooth phone and enabled by the wireless service carrier.

1. While on a call press ✆ 🎤. The system responds with "Ready" followed by a tone.
2. Say "Three-way call". The system responds with "Three-way call, please say dial or call".
3. Use the dial or call command to dial the number of the third party to be called.
4. Once the call is connected, press ✆ 🎤 to link all the callers together.

Ending a Call

Press ☎ / ✆ to end a call.

Muting a Call

During a call, all sounds from inside the vehicle can be muted so that the person on the other end of the call cannot hear them.

To Mute a call

1. Press . The system responds "Ready" followed by a tone.
2. Say "Mute Call". The system responds "Call muted".

To Cancel Mute

1. Press . The system responds "Ready" followed by a tone.
2. After the tone, say "Mute Call". The system responds "Resuming call".

Transferring a Call

Audio can be transferred between the in-vehicle Bluetooth system and the cell phone.

To Transfer Audio to the Cell Phone

During a call with the audio in the vehicle:

1. Press . The system responds "Ready" followed by a tone.
2. Say "Transfer Call." The system responds "Transferring call" and the audio transfers to the cell phone.

To Transfer Audio to the In-Vehicle Bluetooth System

The cell phone must be paired and connected with the Bluetooth system before a call can be transferred. The connection process can take up to two minutes after the key is turned to ON/RUN or ACC/ACCESSORY.

Press during a call with the audio on the cell phone. If the audio does not transfer to the vehicle, use the audio transfer feature on the cell phone. See the cell phone manufacturer's guide for more information.

Voice Pass-Thru

Voice Pass-Thru allows access to the voice recognition commands on the cell phone. See the cell phone manufacturers user guide to see if the cell phone supports this feature.

To access contacts stored in the cell phone:

1. Press ✆ / 🎤. The system responds with a tone. After the tone say "Hands Free". The system responds "Ready" followed by a tone.
2. Say "Bluetooth". The system responds "Bluetooth ready" followed by a tone.
3. Say "Voice". The system responds "OK, accessing <phone name>".
   - The cell phone's normal prompt messages will go through its cycle according to the phone's operating instructions.

Dual Tone Multi-Frequency (DTMF) Tones

The in-vehicle Bluetooth system can send numbers and the numbers stored as name tags during a call. Use this feature when calling a menu driven phone system. Account numbers can also be stored for use.

Sending a Number During a Call

1. Press ✆ 🎤. The system responds "Ready" followed by a tone.
2. Say "Dial". The system responds "Say a number to send tones" followed by a tone.
3. Say the number to send.
   - If the system recognizes the number it responds "OK, Sending Number" and the dial tones are sent and the call continues.
   - If the system does not recognize the number it responds "Dial Number, please say yes or no?" followed by a tone. If the number is correct, say "Yes". The system responds "OK, Sending Number" and the dial tones are sent and the call continues.

Sending a Stored Name Tag During a Call

1. Press . The system responds "Ready" followed by a tone.
2. Say "Send name tag." The system responds "Say a name tag to send tones" followed by a tone.
3. Say the name tag to send.
   - If the system recognizes the number it responds "OK, Sending <name tag>" and the dial tones are sent and the call continues.
   - If the system does not recognize the name tag it responds "Dial <name tag>, please say yes or no?" followed by a tone. If the name tag is correct, say "Yes". The system responds with "OK, Sending <name tag>" and the dial tones are sent and the call continues.

Clearing the System

Unless information is deleted out of the in-vehicle Bluetooth system, it will be retained indefinitely. This includes all saved name tags in the phone book and phone pairing information. For information on how to delete this information, see the previous sections on Deleting a Paired Phone and Deleting Name Tags.

Bluetooth (Navigation)

For information about how to navigate the menu system using the infotainment controls, see "Overview" under Introduction, in the Navigation supplement.

Bluetooth Pairing

To make calls with a Bluetooth cell phone through your vehicle, it must be paired to the vehicle's Bluetooth system first and then connected to the vehicle before it can be used. Refer to the cell phone manufacturer's user guide for Bluetooth pairing instructions. If a Bluetooth phone is off or not connected, calls will automatically be made using the OnStar® Hands-Free Calling feature, if available. Refer to the OnStar owner's guide for more information about OnStar Hands-Free Calling.

A Bluetooth phone with MP3 capability cannot be connected to the vehicle as a phone and an MP3 player at the same time.

The pairing process can be started by using the voice recognition system or the controls on the infotainment system.

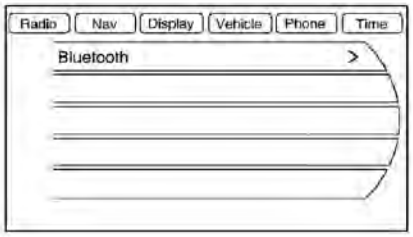
Pairing Information:

- Up to five cell phones can be paired to the Bluetooth system.
- The pairing process is disabled when the vehicle is moving.
- The Bluetooth system links with the first available paired cell phone based on the order shown in the device list.
- Only one paired cell phone can be connected to the vehicle's Bluetooth system at a time.
- Pairing should only need to be completed once, unless changes to the pairing information have been made or the phone is deleted.

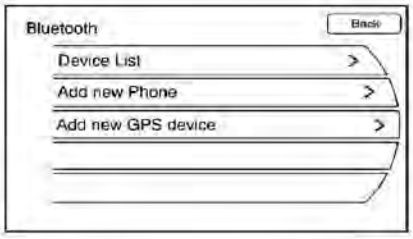
To link to a different paired phone, see "Linking to a Different Phone" later in this section.

Pairing a Phone

1. Press the CONFIG control button repeatedly until the Phone menu is shown or press the Phone tab on the screen.



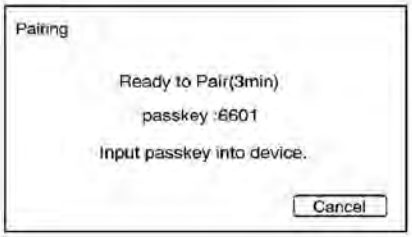
2. Select the Bluetooth submenu.



3. Select "Add New Phone", the pairing process will begin searching for Bluetooth devices on your cellular phone. See the cell phone manufacturer's user guide for information on this process.

   If the "Add new GPS device" option is selected, the system will start a search for Bluetooth "Handsfree" profile devices just like if you had selected "Add new Phone".

The additional GPS location feature provides the vehicle's GPS location through the Bluetooth Serial Port Profile is not available.



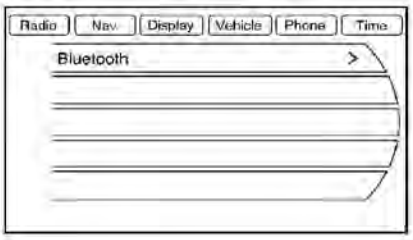
On the cell phone, locate the device name, such as "Your Vehicle". If in another country, the device's name may have a GM acronym for that country.

Follow the instructions given on the cell phone or follow the voice prompts, to enter the four digit PIN number that has been provided.

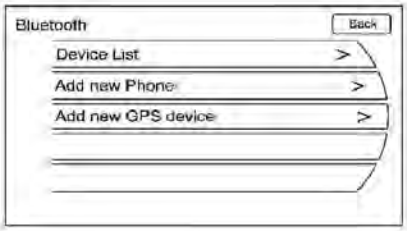
4. The system voice prompt requests that you say the name you want used for the phone that is being paired. Use a name that best describes the phone. The system voice prompt then repeats the name you provided for confirmation, say "Yes".
5. The system responds with "phone name has been successfully paired" after the pairing process is complete.

Listing All Paired and Connected Phones

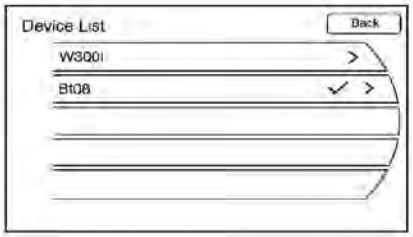
1. Press the CONFIG control button repeatedly until the Phone menu is shown or press the Phone tab displayed on the screen.



2. Select the Bluetooth submenu.



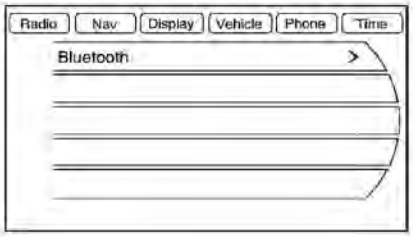
3. Select the Device List submenu.



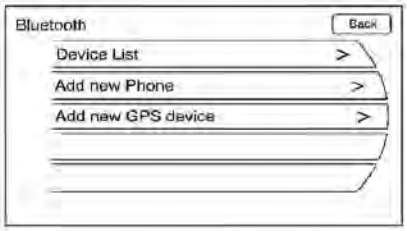
A list of all previously paired phones will be displayed. If there is a currently connected phone, a check mark will appear on the right side of the Phone name.

Deleting a Paired Phone

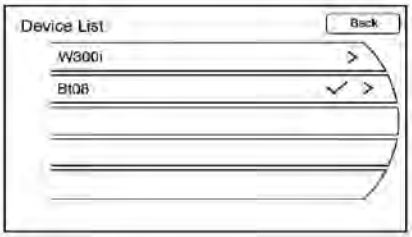
1. Press the CONFIG control button repeatedly until the Phone menu is shown or press the Phone tab on the screen.



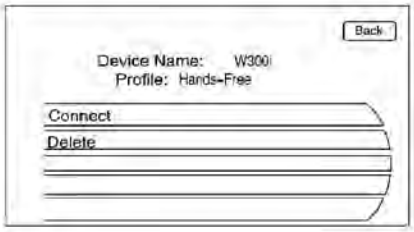
2. Select the Bluetooth submenu.



3. Select the Device List submenu.



4. Select the phone to be deleted and then follow the on screen prompts to delete the device from the system.

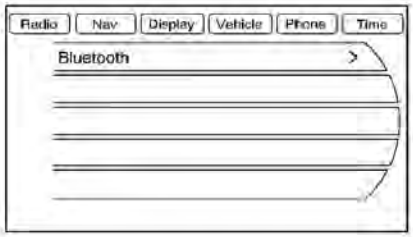


5. Once a phone has been deleted, the only way to connect back to that phone is to pair the phone again. See "Bluetooth Pairing" earlier before the process is started.

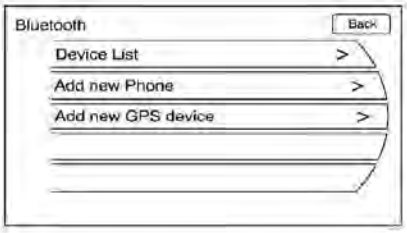
Linking to a Different Phone

In order to link to a different phone, the new phone must be in the vehicle and available to be connected to the Bluetooth system before the process is started.

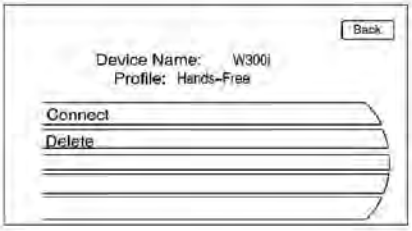
1. Press the CONFIG control button repeatedly until the Phone menu is shown or press the Phone tab on the screen.



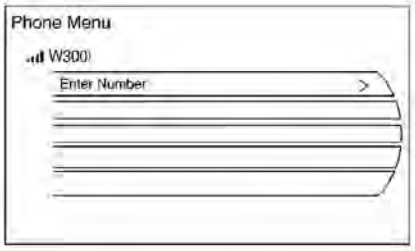
2. Select the Bluetooth submenu.



3. Select the Device List submenu.



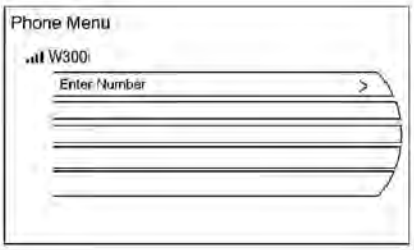
4. Select the phone to be linked and then follow the on screen prompts.



5. The Phone menu will be displayed with the name of the phone linked.

Making a Call

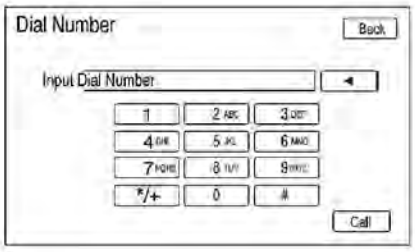
Press located on the faceplate of the infotainment system, to access the phone menu.



Enter Number

Use this option to enter a phone number and make a call. To do this:

1. Press the Enter Number selection. A dial pad displays on the Navigation screen.



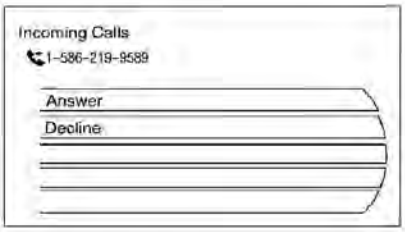
2. Enter the desired number by touching the appropriate buttons on the screen or using the rotary knob.
3. Press the CALL button to make the call.

Accepting or Declining an Incoming Call

When an incoming call is received, the infotainment system mutes any audio being played and sounds a ring tone.

Accepting a Call

Press on the steering wheel control to answer the incoming call or press the Answer option to answer the call.



Declining a Call

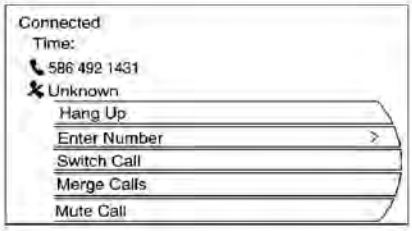
Press / on the steering wheel controls or select the Decline option to decline the call.

Call Waiting

Call waiting must be supported on the Bluetooth phone and enabled by the wireless service carrier to work.

Switching Calls (Only Available with Call Waiting)

This feature allows you to switch between calls, making one call active and placing the other on hold.



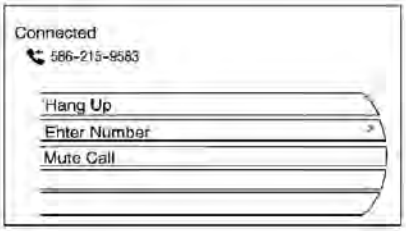
Switch Call: Turn or press the menu select knob to "Switch Call" and press Enter or press the "Switch Call" option.

Conference Calling

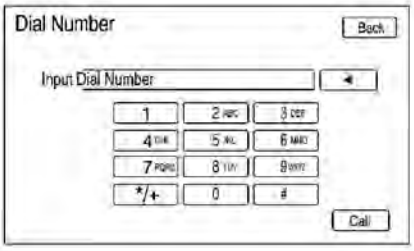
Conference and three-way calling must be supported on the Bluetooth phone and enabled by the wireless service carrier to work.

To start a conference while in a current call:

1. Press on the faceplate until the Phone main screen is shown with the current active call.

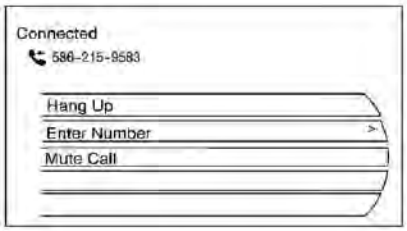


2. Select the "Enter Number" option.



3. Make another call. The first call will be placed on hold while the second call is dialing and connected.
4. To make a conference call, select the "Merge Calls" option which will merge both calls into one conference call.
5. To add more callers to the conference call, repeat Steps 2 through 4. The amount of callers that can be added are limited by your wireless service carrier.

Ending a Call



1. Press the control button.
2. Select Hang Up.

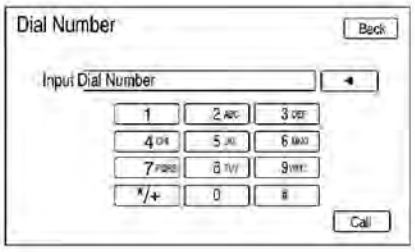
Mute or UnMute a Call

1. Press the control button.
2. Select the Mute call option to mute the call.
3. Select the Mute call option again to unmute the call.

Dual Tone Multi-Frequency (DTMF) Tones

The in-vehicle Bluetooth system can send numbers during a call, this is used when calling a menu driven phone system.

1. Press the control button.



2. Select "Enter Number" option and enter the number sequence.

The DTMF Tones will be generated on the network as you enter each number.

✍ NOTES

Climate Controls

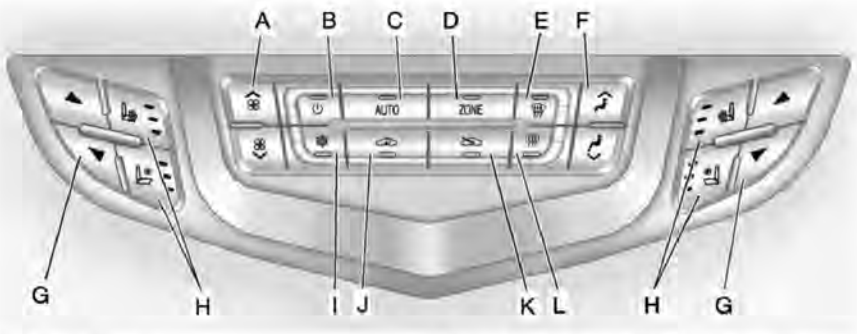
Climate Control Systems
Dual Automatic Climate Control System 7-1
Rear Climate Control System 7-5

Air Vents
Air Vents 7-6

Climate Control Systems

Dual Automatic Climate Control System

The heating, cooling, and ventilation for the vehicle can be controlled with this system.



A. Fan Control
B. Power
C. AUTO
D. ZONE
E. Defrost
F. Air Delivery Mode Control
G. Driver and Passenger Temperature Control
H. Driver and Passenger Heated and Ventilated Seats
I. Air Conditioning

J. Recirculation

K. Outside Air

L. Rear Window Defogger

Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning and recirculation in order to heat or cool the vehicle to the desired temperature.

When the indicator light is on, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and displays will show the selected settings.

To place the system in automatic mode do the following:

1. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Then adjust the temperature as needed for best comfort.

English units can be changed to metric units through the Driver Information Center (DIC). See *Vehicle Personalization on page 4-41*.

▲ / ▼ **(Driver and Passenger Temperature Control):** The temperature can be adjusted separately for the driver and the passenger. Press to increase or decrease the temperature.

ZONE: Press to link all climate zone settings to the driver settings. The ZONE indicator light turns off. When the passenger settings are adjusted, the ZONE indicator light is on.

Manual Operation

⏻ **(Power):** Press to turn the climate control system on or off.

(Fan Control): Press to increase or decrease the fan speed. Pressing either button cancels automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

(Air Delivery Mode Control): Press to change the direction of the airflow. The current mode appears in the display screen. Changing the mode cancels the automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

To change the current mode, select one of the following:

(Vent): Air is directed to the instrument panel outlets.

(Bi-Level): Air is divided between the instrument panel outlets and the floor outlets.

(Tri-Level): Air is divided between the windshield, instrument panel, and floor outlets.

(Floor): Air is directed to the floor outlets.

(Defog): Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.

(Upper): Air is directed to the windshield outlets.

(Hi-Level): Air is divided between the windshield and instrument panel outlets.

(Defrost): Clears the windshield of fog or frost more quickly. Air is directed to the windshield.

(Air Conditioning): Press to turn the automatic air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed. When the indicator light is on, the air conditioner runs automatically to cool the air inside the vehicle or to dry the air needed to defog the windshield faster.

(Recirculation): Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or prevent outside air and odors from entering.

Automatic Air Recirculation: When the AUTO indicator light is on, the air is automatically recirculated as needed to help quickly cool the inside of the vehicle.

The climate control system may have a sensor to detect air pollution. In auto recirculation control, the Air Quality Control system may operate. To adjust the sensitivity of the Air Quality Control, see Climate and Air Quality under *Vehicle Personalization on page 4-41*.

Auto Defog: The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. If the climate control system does not detect possible window fogging, it returns to normal operation. To turn Auto Defog off or on, see Climate and Air Quality under *Vehicle Personalization on page 4-41*.

(Outside Air): Press to turn on outside air. An indicator light comes on. Outside air is circulated through the vehicle.

Rear Window Defogger

(Rear Window Defogger): Press to turn the rear window defogger on or off.

The rear window defogger turns off automatically after about 10 minutes. If turned on again it runs for about 5 minutes before turning off. At higher speeds, the rear window defogger may stay on continuously.

The rear window defogger can be set to automatic operation, see Climate and Air Quality under *Vehicle Personalization on page 4-41*. When auto rear defog is selected, the rear window defogger turns on automatically when the interior temperature is cold and the outside temperature is about 40°F and below. The auto rear defogger turns off automatically after about 10 minutes. At higher speeds, the rear window defogger may stay on continuously.

The heated outside rearview mirrors turn on when the rear window defogger button is on and helps to clear fog or frost from the surface of the mirror. See *Heated Mirrors on page 1-22*.

Notice: **Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect your radio's ability to pick up stations clearly. The repairs wouldn't be covered by your warranty.**

Heated and Ventilated Seats: Press to heat or ventilate the seat. See *Heated and Ventilated Front Seats on page 2-10*.

Remote Start Climate Control Operation: For vehicles with the remote vehicle start feature, the climate control system may run when the vehicle is started remotely. The system uses the driver's previous settings to heat or cool the inside of the vehicle. See *Remote Vehicle Start on page 1-9*.

The rear window defogger turns on if it is cold outside.

Sensors

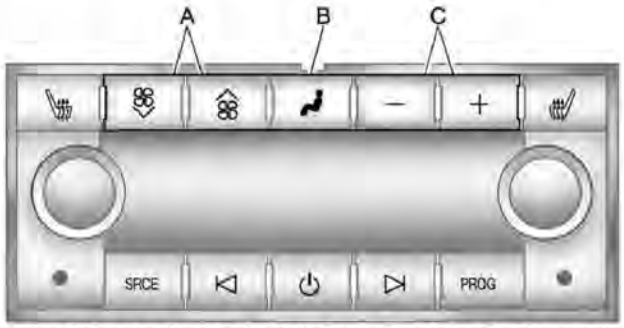
The solar sensor located on top of the instrument panel near the windshield, monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered the automatic climate control system may not work properly.

Rear Climate Control System

For vehicles with the rear heat and air conditioning controls, they are integrated with the rear seat audio controls located in the center console.



Rear Climate Control with Rear Seat Audio Controls

A. Fan Control
B. Air Delivery Mode Control
C. Temperature Control

ZONE: When the rear climate control is turned on from the rear, the ZONE indicator light will turn on. Press the ZONE button on the front climate control system to turn off the rear blower and match the rear settings to the front. The ZONE indicator light and rear climate control display will turn off.

The rear climate control can be turned off by pressing the button.

Independent Mode: This mode directs rear seating airflow according to the settings of the rear controls.

The front climate control system must be on for the rear climate control to work. To turn on the rear climate control from rear seating, press any rear climate control button.

The rear climate control will not work if the front climate control system is in defrost.

Automatic Operation

AUTO: Press ↗ until the AUTO setting is selected to control the rear temperature, air delivery, and fan speed automatically.

Manual Operation

(Fan Control): Press these buttons on the rear seat audio control panel to increase or decrease the airflow. Pressing the fan up button when the system is off will turn the system on. The air delivery mode remains in its previous setting.

+/− (Temperature Control): Press these buttons to adjust the temperature of the air flowing into the passenger area. Press the + button for warmer air and press the − button for cooler air.

(Air Delivery Mode Control): Press the mode button to change the direction of the airflow in the vehicle. Multiple presses will cycle through the delivery selections.

Air Vents

Move the sliding knob on the air outlets up and down or left and right to direct the airflow. Use the thumbwheels near the air outlets to open or close off the airflow.

Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windshield that could block the flow of air into the vehicle.
- Keep the path under the front seats clear of objects to help circulate the air inside of the vehicle more effectively.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.

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Driving Information

Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control, if equipped.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tires properly inflated.
- Combine several trips into a single trip.
- Replace the vehicle's tires with the same TPC Spec number molded into the tire's sidewall near the size.
- Follow recommended scheduled maintenance.

Defensive Driving

Defensive driving means "always expect the unexpected." The first step in driving defensively is to wear your safety belt, see *Safety Belts on page 2-13*.

⚠ WARNING

Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready. In addition:

- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

Driver distraction can cause collisions resulting in injury or possible death. These simple defensive driving techniques could save your life.

Drunk Driving

⚠ WARNING

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking. Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

Death and injury associated with drinking and driving is a global tragedy.

Alcohol affects four things that anyone needs to drive a vehicle: judgment, muscular coordination, vision, and attentiveness.

Police records show that almost 40 percent of all motor vehicle-related deaths involve alcohol. In most cases, these deaths are the result of someone who was drinking and driving. In recent years, more than 17,000 annual motor vehicle-related deaths have been associated with the use of alcohol, with about 250,000 people injured.

For persons under 21, it is against the law in every U.S. state to drink alcohol. There are good medical, psychological, and developmental reasons for these laws.

The obvious way to eliminate the leading highway safety problem is for people never to drink alcohol and then drive.

Medical research shows that alcohol in a person's system can make crash injuries worse, especially injuries to the brain, spinal cord, or heart.

This means that when anyone who has been drinking — driver or passenger — is in a crash, that person's chance of being killed or permanently disabled is higher than if the person had not been drinking.

Control of a Vehicle

The following three systems help to control the vehicle while driving — brakes, steering, and accelerator. At times, as when driving on snow or ice, it is easy to ask more of those control systems than the tires and road can provide. Meaning, you can lose control of the vehicle. See *Traction Control System (TCS) on page 8-34* and *StabiliTrak® System on page 8-35*.

Adding non-dealer/non-retailer accessories can affect vehicle performance. See *Accessories and Modifications on page 9-3*.

Braking

See *Brake System Warning Light on page 4-23*.

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average reaction time is about three-fourths of a second. But that is only an average. It might be less with one driver and as long as two or three seconds or more with another. Age, physical condition, alertness, coordination, and eyesight all play a part. So do alcohol, drugs, and frustration. But even in three-fourths of a second, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft). That could be a lot of distance in an emergency, so keeping enough space between the vehicle and others is important.

And, of course, actual stopping distances vary greatly with the surface of the road, whether it is pavement or gravel; the condition of the road, whether it is wet, dry, or icy; tire tread; the condition of the brakes; the weight of the vehicle; and the amount of brake force applied.

Avoid needless heavy braking. Some people drive in spurts — heavy acceleration followed by heavy braking — rather than keeping pace with traffic. This is a mistake. The brakes might not have time to cool between hard stops. The brakes will wear out much faster with a lot of heavy braking. Keeping pace with the traffic and allowing realistic following distances eliminates a lot of unnecessary braking. That means better braking and longer brake life.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. If the brakes are pumped, the pedal could get harder to push down. If the engine stops, there will still be some power brake assist but it will be used when the brake is

applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

Adding non-dealer accessories can affect vehicle performance. See *Accessories and Modifications on page 9-3*.

Steering

Power Steering

If power steering assist is lost because the engine stops or the power steering system is not functioning, the vehicle can be steered but it will take more effort.

Steering Tips

It is important to take curves at a reasonable speed.

Traction in a curve depends on the condition of the tires and the road surface, the angle at which the curve is banked, and vehicle speed. While in a curve, speed is the one factor that can be controlled.

If there is a need to reduce speed, do it before entering the curve, while the front wheels are straight.

Try to adjust the speed so you can drive through the curve. Maintain a reasonable, steady speed. Wait to accelerate until out of the curve, and then accelerate gently into the straightaway.

Steering in Emergencies

There are times when steering can be more effective than braking. For example, you come over a hill and find a truck stopped in your lane, or a car suddenly pulls out from nowhere, or a child darts out from between parked cars and stops right in front of you. These problems can be avoided by braking — if you can stop in time. But sometimes you cannot stop in time because there is no room. That is the time for evasive action — steering around the problem.

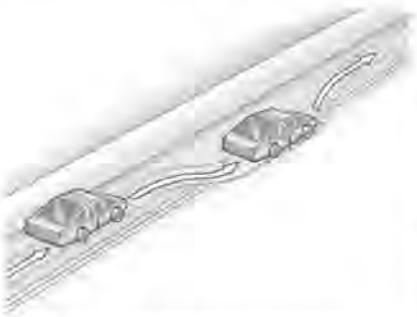
The vehicle can perform very well in emergencies like these. First apply the brakes. See *Braking on page 8-4*. It is better to remove as much speed as possible from a collision. Then steer around the problem, to the left or right depending on the space available.

An emergency like this requires close attention and a quick decision. If holding the steering wheel at the recommended 9 and 3 o'clock positions, it can be turned a full 180 degrees very quickly without removing either hand. But you have to act fast, steer quickly, and just as quickly straighten the wheel once you have avoided the object.

The fact that such emergency situations are always possible is a good reason to practice defensive driving at all times and wear safety belts properly.

Off-Road Recovery

The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving.



If the level of the shoulder is only slightly below the pavement, recovery should be fairly easy. Ease off the accelerator and then, if there is nothing in the way, steer so that the vehicle straddles the edge of the pavement. Turn the steering wheel 8 to 13 cm (3 to 5 inches), about one-eighth turn, until the right front tire contacts the pavement edge. Then turn the steering wheel to go straight down the roadway.

Loss of Control

Let us review what driving experts say about what happens when the three control systems — brakes, steering, and acceleration — do not have enough friction where the tires meet the road to do what the driver has asked.

In any emergency, do not give up. Keep trying to steer and constantly seek an escape route or area of less danger.

Skidding

In a skid, a driver can lose control of the vehicle. Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

The three types of skids correspond to the vehicle's three control systems. In the braking skid, the wheels are not rolling. In the steering or cornering skid, too much speed or steering in a curve causes tires to slip and lose cornering force. And in the acceleration skid, too much throttle causes the driving wheels to spin.

If the vehicle starts to slide, ease your foot off the accelerator pedal and quickly steer the way you want the vehicle to go. If you start steering quickly enough, the vehicle may straighten out. Always be ready for a second skid if it occurs.

Of course, traction is reduced when water, snow, ice, gravel, or other material is on the road. For safety, slow down and adjust your driving to these conditions. It is important to slow down on slippery surfaces because stopping distance is longer and vehicle control more limited.

While driving on a surface with reduced traction, try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide. You might not realize the surface is slippery until the vehicle is skidding. Learn to recognize warning clues — such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.

Remember: Antilock brakes help avoid only the braking skid.

Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

⚠ WARNING

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

(Continued)

WARNING (Continued)

Flowing or rushing water creates strong forces. Driving through flowing water could cause your vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

Hydroplaning

Hydroplaning is dangerous. Water can build up under your vehicle's tires so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When your vehicle is hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. The best advice is to slow down when the road is wet.

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires on page 9-52*.
- Turn off cruise control.

Highway Hypnosis

Always be alert and pay attention to your surroundings while driving. If you become tired or sleepy, find a safe place to park your vehicle and rest.

Other driving tips include:

- Keep the vehicle well ventilated.
- Keep interior temperature cool.
- Keep your eyes moving — scan the road ahead and to the sides.
- Check the rearview mirror and vehicle instruments often.

Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips for driving in these conditions include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

⚠ WARNING

If you do not shift down, the brakes could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Shift down to let the engine assist the brakes on a steep downhill slope.

⚠ WARNING

Coasting downhill in N (Neutral) or with the ignition off is dangerous. The brakes will have to do all the work of slowing down and they could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Always have the engine running and the vehicle in gear when going downhill.

- Stay in your own lane. Do not swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- Top of hills: Be alert — something could be in your lane (stalled car, accident).
- Pay attention to special road signs (falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Drive carefully when there is snow or ice between the tires and the road, creating less traction or grip. Wet ice can occur at about 0°C (32°F) when freezing rain begins to fall, resulting in even less traction. Avoid driving on wet ice or in freezing rain until roads can be treated with salt or sand.

Drive with caution, whatever the condition. Accelerate gently so traction is not lost. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick, so there is even less traction.

Try not to break the fragile traction. If you accelerate too fast, the drive wheels will spin and polish the surface under the tires even more.

The *Antilock Brake System (ABS) on page 8-30* improves vehicle stability during hard stops on slippery roads, but apply the brakes sooner than when on dry pavement.

Allow greater following distance on any slippery road and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.

Turn off cruise control, if equipped, on slippery surfaces.

Blizzard Conditions

Being stuck in snow can be a serious situation. Stay with the vehicle unless there is help nearby. If possible, use the *Roadside Service on page 12-6*. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to an outside mirror.

⚠ WARNING

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

(Continued)

WARNING (Continued)

If the vehicle is stuck in the snow:

- Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust pipe.
- Check again from time to time to be sure snow does not collect there.
- Open a window about 5 cm (2 in) on the side of the vehicle that is away from the wind to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that circulates the air inside the vehicle and set the fan speed to the highest setting. See Climate Control System in the Index.

(Continued)

WARNING (Continued)

For more information about carbon monoxide, see *Engine Exhaust on page 8-24*.

Snow can trap exhaust gases under your vehicle. This can cause deadly CO (Carbon Monoxide) gas to get inside. CO could overcome you and kill you. You cannot see it or smell it, so you might not know it is in your vehicle. Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust.

Run the engine for short periods only as needed to keep warm, but be careful.

To save fuel, run the engine for only short periods as needed to warm the vehicle and then shut the engine off and close the window most of the way to save heat.

Repeat this until help arrives but only when you feel really uncomfortable from the cold. Moving about to keep warm also helps.

If it takes some time for help to arrive, now and then when you run the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible to save fuel.

If the Vehicle is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method.

⚠ WARNING

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 55 km/h (35 mph) as shown on the speedometer.

For information about using tire chains on the vehicle, see *Tire Chains on page 9-74*.

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears.

Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see *Towing the Vehicle on page 9-105*.

Vehicle Load Limits

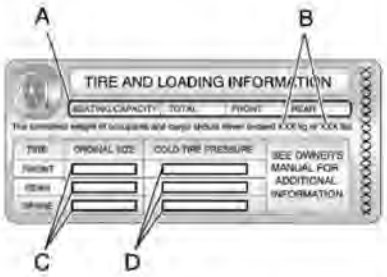
It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo and all nonfactory-installed options.

Two labels on the vehicle show how much weight it may properly carry, the Tire and Loading Information label and the Certification label.

⚠ WARNING

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). If you do, parts on the vehicle can break, and it can change the way the vehicle handles. These could cause you to lose control and crash. Also, overloading can shorten the life of the vehicle.

Tire and Loading Information Label



Label Example

A vehicle specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar). With the driver's door open, you will find the label attached near the door lock post. The Tire and Loading Information label shows the number of occupant seating positions (A), and the maximum vehicle capacity weight (B) in kilograms and pounds.

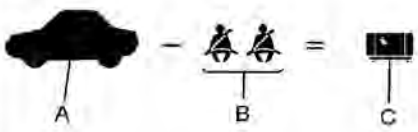
The Tire and Loading Information label also shows the tire size of the original equipment tires (C) and the recommended cold tire inflation pressures (D). For more information on tires and inflation see *Tires on page 9-52* and *Tire Pressure on page 9-59*.

There is also important loading information on the Certification label. It tells you the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification Label" later in this section.

Steps for Determining Correct Load Limit

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs" on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs (1400 − 750 (5 x 150) = 650 lbs).
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, the load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

See *Trailer Towing on page 8-56* for important information on towing a trailer, towing safety rules and trailering tips.

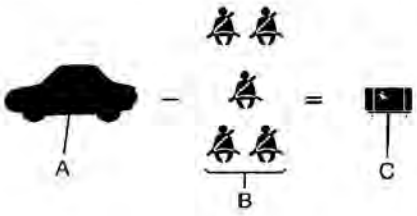


Example 1

A. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).

B. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).

C. Available Occupant and Cargo Weight = 317 kg (700 lbs).

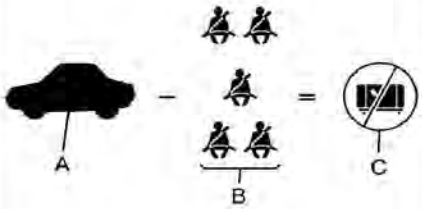


Example 2

A. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).

B. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).

C. Available Cargo Weight = 113 kg (250 lbs).



Example 3

A. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).

B. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).

C. Available Cargo Weight = 0 kg (0 lbs).

Refer to the vehicle's Tire and Loading Information label for specific information about the vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's capacity weight.

Certification Label

Label Example

A vehicle specific Certification/ Tire label is attached to the rear edge of the driver's door. The label shows the size of the vehicle's original tires and the

inflation pressures needed to obtain the gross weight capacity of the vehicle. This is called Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tire label also tells you the maximum weights for the front and rear axles, called Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, you need to go to a weigh station and weigh the vehicle.

Your dealer can help you with this. Be sure to spread out the load equally on both sides of the center line.

Never exceed the GVWR for the vehicle, or the GAWR for either the front or rear axle.

If the vehicle is carrying a heavy load, it should be spread out. See "Steps for Determining Correct Load Limit" earlier in this section.

⚠ WARNING

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). If you do, parts on the vehicle can break, and it can change the way the vehicle handles. These could cause you to lose control and crash. Also, overloading can shorten the life of the vehicle.

Your warranty does not cover parts or components that fail because of overloading.

The label will help you decide how much cargo and installed equipment your truck can carry.

Using heavier suspension components to get added durability might not change your weight ratings. Ask your dealer to help you load your vehicle the right way.

If you put things inside your vehicle – like suitcases, tools, packages, or anything else – they will go as fast as the vehicle goes. If you have to stop or turn quickly, or if there is a crash, they will keep going.

⚠ WARNING

Things you put inside the vehicle can strike and injure people in a sudden stop or turn, or in a crash.

- Put things in the cargo area of the vehicle. In the cargo area, put them as far forward as you can. Try to spread the weight evenly.
- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.

(Continued)

WARNING (Continued)

- Do not leave an unsecured child restraint in the vehicle.
- When you carry something inside the vehicle, secure it whenever you can.
- Do not leave a seat folded down unless you need to.

Starting and Operating

New Vehicle Break-In

Notice: The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:

- Do not drive at any one constant speed, fast or slow, for the first 805 km (500 miles). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.
- During the first 1 000 km (600 miles), avoid using more than moderate acceleration in lower gears and avoid vehicle speeds above 110 km/h (68 mph).
- Between the first 1 000 km (600 miles) and 5 000 km (3,000 miles), heavy acceleration in lower gears can be used. Vehicle speeds above 110 km/h (68 mph) should be limited to five minutes per use.
- Avoid making hard stops for the first 322 km (200 miles) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this breaking-in guideline every time you get new brake linings.
- Do not tow a trailer during break-in. See *Driving Characteristics and Towing Tips on page 8-52* for the trailer towing capabilities of your vehicle and more information.

Following break-in, engine speed and load can be gradually increased.

Adjustable Throttle and Brake Pedal

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.

The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

Adjust the throttle and brake pedals while the vehicle is in P (Park) without pressing on the pedals. The pedals cannot be adjusted while the vehicle is in R (Reverse) or when cruise control is engaged. The throttle and brake pedals can also be adjusted while driving.

Ignition Positions

The vehicle has an electronic keyless ignition with push-button start.

Pressing the button cycles it through three modes, ACC/ACCESSORY, ON/RUN/START and STOPPING THE ENGINE/OFF.

If the push-button start is not working, the vehicle may be near a strong radio antenna signal causing interference to the keyless entry system. See *Driver Information Center (DIC) on page 4-29* for more information.

To shift out of P (Park), the vehicle must be in ACC/ACCESSORY or ON/RUN mode and the brake pedal must be applied.

STOPPING THE ENGINE/OFF (No LED Lights): When the vehicle is stopped, press the engine START/STOP button once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn OFF, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 8-20* for more information.

If the vehicle is not in P (Park), the ignition will return to ACC/ ACCESSORY and display the message SHIFT TO PARK in the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 4-29* for more information. When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

In an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop, shift to P (Park), and turn the ignition to LOCK/OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the LOCK/OFF position.
4. Set the parking brake. See *Parking Brake on page 8-31*

ACC/ACCESSORY (Amber LED Light): This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied, will place the ignition system in ACC/ACCESSORY. The ignition will switch from ACC/ACCESSORY to OFF after five minutes to prevent battery run down.

ON/RUN/START (Green LED Light): This mode is for driving and starting. With the ignition off, and the brake pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Gasoline Engine on page 8-20* for more information. The ignition will then remain in ON/RUN.

Retained Accessory Power (RAP)

These vehicle accessories can be used for up to 10 minutes after the engine is turned off:

- Audio System
- Power Windows
- Sunroof (if equipped)
- Power outlets under the climate control system, inside the center floor console, and on the rear of the center floor console.

Power to the audio system will continue to operate for up to 10 minutes or until the driver door is opened.

Power to the power windows, sunroof and outlets under the climate control system, inside the center floor console, and on the rear of the center floor console will continue to operate for up to 10 minutes or until any door is opened.

All these features will work when the vehicle is in ON/RUN/START.

Starting the Gasoline Engine

Place the transmission in the proper gear by moving the shift lever to P (Park) or N (Neutral). To restart the engine when the vehicle is already moving, use N (Neutral).

Notice: **Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.**

The keyless access transmitter must be inside the vehicle for the ignition to work.

Cell phone chargers can interfere with the operation of the Keyless Access System. Battery chargers should not be plugged in when starting or turning off the engine.

To start the vehicle:

Starting Procedure

1. With the brake pedal applied, press the START button located on the instrument panel. See *Ignition Positions on page 8-18.*
2. When the engine begins cranking, let go of the button and the engine cranks automatically until it starts.

   If the transmitter is not in the vehicle or something is interfering with the transmitter, the Driver Information Center (DIC) will display No Remote Detected. See *Driver Information Center (DIC) on page 4-29* for more information.

   If the battery in the keyless access transmitter needs replacing, the DIC displays Replace Battery In Remote Key. The vehicle can still be driven. See *Remote Keyless Entry (RKE) System Operation on page 1-3* for more information.

3. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.
4. If the engine does not start and no DIC message is displayed, wait 15 seconds before trying again to let the cranking motor cool down.

   If the engine does not start after 5-10 seconds, especially in very cold weather (below −18°C or 0°F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor while cranking for up to 15 seconds.

Notice: **Cranking the engine for long periods of time, by pressing the START button immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to allow the cranking motor to cool down.**

When the engine starts, let go of the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine.

The vehicle has a Computer-Controlled Cranking System. This feature assists in starting the engine and protects components. Once cranking has been initiated, the engine continues cranking for a few seconds or until the vehicle starts. If the engine does not start, cranking automatically stops after 15 seconds to prevent cranking motor damage. To prevent gear damage, this system also prevents cranking if the engine is already running.

Notice: **The engine is designed to work with the electronics in the vehicle. If you add electrical parts or accessories, you could change the way the engine operates. Before adding electrical equipment, check with your dealer. If you do not, the engine might not perform properly. Any resulting damage would not be covered by the vehicle warranty.**

Engine Heater

The engine coolant heater, if available, can help in cold weather conditions at or below −18°C (0°F) for easier starting and better fuel economy during engine warm-up. Plug in the coolant heater at least four hours before starting the vehicle. An internal thermostat in the plug-end of the cord will prevent engine coolant heater operation at temperatures above −18°C (0°F).

To Use The Engine Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. The cord is located near the air cleaner.
3. Plug it into a normal, grounded 110-volt AC outlet.

⚠ WARNING

Plugging the cord into an ungrounded outlet could cause an electrical shock. Also, the wrong kind of extension cord could overheat and cause a fire. You could be seriously injured. Plug the cord into a properly grounded three-prong 110-volt AC outlet. If the cord will not reach, use a heavy-duty three-prong extension cord rated for at least 15 amps.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts. If you do not it could be damaged.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

Shifting Into Park

⚠ WARNING

It can be dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, use the steps that follow.

1. Hold the brake pedal down and set the parking brake.

   See *Parking Brake on page 8-31* for more information.
2. Move the shift lever into P (Park) by pushing the lever all the way toward the front of the vehicle.
3. Turn the ignition off.

Leaving the Vehicle With the Engine Running

⚠ WARNING

It can be dangerous to leave the vehicle with the engine running. The vehicle could move suddenly if the shift lever is not fully in P (Park) with the parking brake firmly set. And, if you leave the vehicle with the engine running, it could overheat and even catch fire. You or others could be injured. Do not leave the vehicle with the engine running.

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is firmly set before you leave it. After you have moved the shift lever into P (Park), hold down the regular brake pedal.

See if you can move the shift lever away from P (Park) without first pulling it toward you. If you can, it means that the shift lever was not fully locked into P (Park).

Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see "Shifting Into P (Park)" listed previously.

If torque lock does occur, your vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

Shifting Out of Park

This vehicle is equipped with an electronic shift lock release system. The shift lock release is designed to prevent movement of the shift lever out of P (Park), unless the ignition is in ON/RUN or ACC/ACCESSORY and the brake pedal is applied.

The shift lock release is always functional except in the case of an uncharged or low voltage (less than 9 volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting on page 9-101*.

To shift out of P (Park):

1. Apply the brake pedal.
2. Press the shift lever button.
3. Move the shift lever to the desired position.

If you still are unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.
3. Move the shift lever to the desired position.

If you still cannot move the shift lever from P (Park), consult your dealer or a professional towing service.

Parking Over Things That Burn

⚠ WARNING

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Engine Exhaust

⚠ WARNING

Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or tail pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.

(Continued)

WARNING (Continued)

- The vehicle's exhaust system has been modified, damaged or improperly repaired.
- There are holes or openings in the vehicle body from damage or after-market modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

Running the Vehicle While Parked

It is better not to park with the engine running. But if you ever have to, here are some things to know.

⚠ WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 8-24.*

⚠ WARNING

It can be dangerous to get out of the vehicle if the automatic transmission shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. Do not leave the vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park).

Follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park on page 8-22.*

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips on page 8-52.*

Automatic Transmission

The shift lever is located on the center console between the front seats.

There are several different positions for the shift lever.

P (Park): This position locks the front wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

⚠ WARNING

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 8-22*. If you are pulling a trailer, see *Driving Characteristics and Towing Tips on page 8-52*.

Make sure the shift lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. You must fully apply the regular brakes first and then press the shift lever button before you can shift from P (Park) when the ignition is in ON/RUN. If you cannot shift out of P (Park), ease pressure on the shift lever and push the shift lever all the way into P (Park) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See *Shifting Out of Park on page 8-23*.

Notice: **Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.**

R (Reverse): Use this gear to back up.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging your transmission. See *If the Vehicle is Stuck on page 8-11* for additional information.

N (Neutral): In this position, the engine does not connect with the wheels. To restart when the vehicle is already moving, use N (Neutral) only. You can also use N (Neutral) when the vehicle is being towed.

⚠ WARNING

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

Notice: **Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.**

D (Drive): This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Going less than 35 mph (55 km/h), push the accelerator pedal about halfway down.
- Going about 35 mph (55 km/h) or more, push the accelerator all the way down.

  The transmission will shift down to a lower gear and have more power.

Downshifting the transmission in slippery road conditions could result in skidding, see Skidding under *Loss of Control on page 8-6*.

Notice: **Spinning the tires or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. If you are stuck, do not spin the tires. When stopping on a hill, use the brakes to hold the vehicle in place.**

Manual Mode

Driver Shift Control (DSC)

Notice: **If you drive the vehicle at high RPMs without upshifting while using Driver Shift Control (DSC), you could damage the vehicle. Always upshift when necessary while using DSC.**

Driver Shift Control (DSC) allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).

   If you do not move the shift lever forward or rearward, the vehicle will be in Sport Mode. When you are in Sport Mode the vehicle will still shift automatically. The transmission may remain in a gear longer than it would in the normal driving mode based on braking, throttle input, and vehicle lateral acceleration.

   An S will be displayed in the DIC.

   Within Sport Mode there is a further performance feature called Performance Mode Lift Foot (PMLF) Mode. The feature is activated automatically when sports oriented driving is detected, based on cornering and on/off throttle application. PMLF allows the transmission to hold the current gear instead of upshifting when the throttle is lifted.

2. To enter M (Manual Mode), press the shift lever forward to upshift or rearward to downshift.

   An M will be displayed in the DIC.

The tachometer display on the instrument panel cluster will show which gear the vehicle is in. The number indicates the requested gear range when moving the shift lever forward or rearward. See *Tachometer on page 4-15* for more information.

While using the DSC feature, the vehicle will have firmer, quicker shifting. You can use this for sport driving or when climbing or descending hills, to stay in gear longer, or to down shift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine Revolutions Per Minute (RPM). The transmission will not automatically shift to the next lower gear if the engine RPM is too high, nor to the next higher gear when the maximum engine RPM is reached.

If shifting is prevented for any reason, the currently selected gear will flash multiple times, indicating that the transmission has not shifted gears.

While in the DSC mode, the transmission will automatically downshift when the vehicle comes to a stop. This will allow for more power during take-off.

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into second gear. A higher gear ratio allows you to gain more traction on slippery surfaces.

Fuel Economy Mode

The vehicle may have a fuel economy mode. When engaged, fuel economy mode can improve the vehicle's fuel economy.

Pressing the eco button by the shift lever will engage fuel economy mode. When activated, the eco light in the instrument cluster will come on. See *Fuel Economy Light on page 4-27*. Pressing the button a second time will turn fuel economy mode off.

When fuel economy mode is on:

- The transmission will upshift sooner, and downshift later.
- The torque converter will lock–up sooner, and stay on longer.
- The gas pedal will be less sensitive.
- The vehicle's computers will more aggressively shut off fuel to the engine under deceleration.

Drive Systems

All-Wheel Drive

Vehicles with this feature always send engine power to all four wheels. It is fully automatic, and adjusts itself as needed for road conditions.

When using a compact spare tire on an AWD vehicle, the system automatically detects the compact spare and disables AWD. To restore AWD operation and prevent excessive wear on the system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire on page 9-100* for more information.

Brakes

Antilock Brake System (ABS)

This vehicle has the Antilock Brake System (ABS), an advanced electronic braking system that helps prevent a braking skid.

When the engine is started and the vehicle begins to drive away, ABS checks itself. A momentary motor or clicking noise might be heard while this test is going on, and it might even be noticed that the brake pedal moves a little. This is normal.

If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light on page 4-24*.

If driving safely on a wet road and it becomes necessary to slam on the brakes and continue braking to avoid a sudden obstacle, a computer senses that the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help the driver steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You might hear the ABS pump or motor operating and feel the brake pedal pulsate, but this is normal.

Braking in Emergencies

ABS allows the driver to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

Parking Brake

The vehicle has an Electric Parking Brake (EPB). The switch for the EPB is in the center console. The EPB can always be activated, even if the ignition is OFF. To avoid draining the battery, do not cycle the EPB too often without the engine running. The EPB can be left applied while the vehicle is parked.

The system has a Park Brake Status light and a Park Brake Warning light. See *Brake System Warning Light on page 4-23*. There are also three Driver Information Center (DIC) messages. See *Driver Information Center (DIC) on page 4-29* for more information. In case of insufficient electrical power, the EPB cannot be applied or released.

Before leaving the vehicle, check the park brake status lamp to insure the park brake is applied.

EPB Apply

The EPB can be applied any time the vehicle is stopped. The EPB is applied by momentarily lifting up on the EPB switch. Once fully applied, the park brake status light will be on. While the brake is being applied, the status lamp will flash until full apply is reached. If the light does not come on, or remains flashing, you need to have the vehicle serviced. Do not drive the vehicle if the park brake status light is flashing. See your dealer. See *Brake System Warning Light on page 4-23* for more information.

If the EPB is applied while the vehicle is in motion, a chime will sound, and the DIC message "Release Park Brake" will be displayed. The vehicle will decelerate as long as the switch is held in the up position. Releasing the EPB switch during the deceleration will release the parking brake. If the switch is held in the up position until the vehicle comes to a stop, the EPB will remain applied.

If the park brake status light flashes continuously, the EPB is only partially applied or released, or there is a problem with the EPB. The DIC message "Service Parking Brake" will be displayed. If this light flashes continuously, release the EPB, and attempt to apply it again. If this light continues to flash, do not drive the vehicle. See your dealer.

If the park brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To apply the EPB when this light is on, lift up on the EPB switch and hold it in the up position. Full application of the parking brake by the EPB system may take a longer period of time than normal when this light is on. Continue to hold the switch until the park brake status light remains on. If the park brake warning light is on, see your dealer.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

EPB Release

To release the EPB, place the ignition in the ON/RUN position, apply and hold the brake pedal, and push down momentarily on the EPB switch. If you attempt to release the EPB without the brake pedal applied, a chime will sound, and the DIC message "Step On Brake to Release Park Brake" will be displayed. The EPB is released when the park brake status light is off.

If the park brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To release the EPB when this light is on, push down on the EPB switch and hold it in the down position.

EPB release may take a longer period of time than normal when this light is on. Continue to hold the switch until the park brake status light is off. If the light is on, see your dealer.

Notice: **Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.**

Automatic EPB Release

The EPB will automatically release if the vehicle is running, placed into gear and an attempt is made to drive away. Avoid rapid acceleration when the EPB is applied, to preserve park brake lining life.

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 8-52* for more information.

Brake Assist

This vehicle has a brake assist feature designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature uses the stability system hydraulic brake control module to supplement the power brake system under conditions where the driver has quickly and forcefully applied the brake pedal in an attempt to quickly stop or slow down the vehicle. The stability system hydraulic brake control module increases brake pressure at each corner of the vehicle until the ABS activates. Minor brake pedal pulsation or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates. The brake assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

Hill Start Assist (HSA)

This vehicle has a Hill Start Assist (HSA) feature, which may be useful when the vehicle is stopped on a grade. This feature is designed to prevent the vehicle from rolling, either forward or rearward, during vehicle drive off. After driver completely stops and holds the vehicle in a complete standstill on a grade, HSA will be automatically activated. During the transition period between when the driver releases the brake pedal and starts to accelerate to drive off on a grade, HSA holds the braking pressure to ensure that there is no rolling back. The brakes will automatically release when the accelerator pedal is applied within the two second window. It will not activate if the vehicle is in a drive gear and facing downhill or if the vehicle is facing uphill and in R (Reverse).

Ride Control Systems

Traction Control System (TCS)

The vehicle may have a Traction Control System (TCS) that limits wheel spin. On a front-wheel-drive vehicle, the system operates if it senses that one or both of the front wheels are spinning or beginning to lose traction. On an All-Wheel-Drive (AWD) vehicle, the system will operate if it senses that any of the wheels are spinning or beginning to lose traction. When this happens, the system brakes the spinning wheel(s) and/or reduces engine power to limit wheel spin.

The system may be heard or felt while it is working, but this is normal.

TCS automatically comes on whenever the vehicle is started. To limit wheel spin, especially in slippery road conditions, the system should always be left on. But, TCS can be turned off if needed.

TCS/StabiliTrak Light

flashes to indicate that the traction control system is active.

If there is a problem detected with TCS, "Service Traction Control" is displayed on the Driver Information Center (DIC). See *Ride Control System Messages on page 4-38*.

When this message is displayed and comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly.

If comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If still comes on and stays on, the vehicle needs service.

Notice: **Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle's driveline could be damaged.**

TCS/StabiliTrak Button

is located on the console.

TCS Off Light

TCS can be turned off by pressing and releasing . When TCS is turned off, comes on and the system will not limit wheel spin. Driving should be adjusted accordingly. Press and release again to turn the system back on.

When TCS is turned off on AWD vehicles, the system may still make noise. This is normal and necessary with AWD hardware.

It may be necessary to turn the system off if the vehicle gets stuck in sand, mud or snow and rocking the vehicle is required. See *If the Vehicle is Stuck on page 8-11* for more information. See also *Winter Driving on page 8-9* for information on using TCS when driving in snowy or icy conditions.

Adding non-GM accessories can affect the vehicle's performance. See *Accessories and Modifications on page 9-3* for more information.

StabiliTrak® System

The vehicle may have a vehicle stability enhancement system called StabiliTrak. It is an advanced computer controlled system that assists with directional control of the vehicle in difficult driving conditions.

StabiliTrak activates when the computer senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak selectively applies braking pressure at any one of the vehicle's brakes to help steer the vehicle in the intended direction.

StabiliTrak comes on automatically whenever the vehicle is started. To assist with directional control of the vehicle, the system should always be left on.

TCS/StabiliTrak Light

When the stability control system activates, flashes on the instrument panel. This also occurs when traction control is activated. A noise may be heard or vibration may be felt in the brake pedal. This is normal. Continue to steer the vehicle in the intended direction.

If there is a problem detected with StabiliTrak, "Service StabiliTrak" is displayed on the Driver Information Center (DIC). See *Ride Control System Messages on page 4-38*.

When this message is displayed and comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly.

If comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If still comes on and stays on, the vehicle needs service.

TCS/StabiliTrak Button

is located on the console.

StabiliTrak Off Light

TCS Off Light

StabiliTrak can be turned off if needed by pressing and holding until and come on the instrument panel. When StabiliTrak is turned off, the system will not assist with directional control of the vehicle or limit wheel spin. Driving should be adjusted accordingly. Press and release again to turn the system back on.

If cruise control is being used when StabiliTrak activates, cruise control will automatically disengage. Press the cruise control button to reengage when road conditions allow. See *Cruise Control on page 8-37* for more information.

Limited-Slip Rear Axle

Vehicles with a limited-slip rear axle can give more traction on snow, mud, ice, sand, or gravel. When traction is low, this feature allows the drive wheel with the most traction to move the vehicle. The limited-slip rear axle also gives the driver enhanced control when cornering hard or completing a maneuver, such as a lane change.

Selective Ride Control

The vehicle may have a ride control system called Selective Ride Control. The setting can be changed at any time. Based on road conditions, steering wheel angle and the vehicle speed, the system automatically adjusts to provide the best handling while providing a smooth ride. The Tour and Sport modes will feel similar on a smooth road.

To switch from TOUR to SPORT mode, move the shift lever to the left while the transmission is in D (Drive)

TOUR: Use for normal city and highway driving. This setting provides a smooth, soft ride.

SPORT: Use where road conditions or personal preference demand more control. This setting provides more "feel", or response to road conditions through increased steering effort and suspension control. Transmission shift points and shift firmness are also enhanced. See *Manual Mode on page 8-28* in Automatic Transmission.

If there is a problem detected with Selective Ride Control, "Service Suspension System" displays on the Driver Information Center (DIC). See *Ride Control System Messages on page 4-38*. Driving should be adjusted accordingly.

Cruise Control

⚠ WARNING

Cruise control can be dangerous where you cannot drive safely at a steady speed. So, do not use the cruise control on winding roads or in heavy traffic.

Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

With cruise control, a speed of about 40 km/h (25 mph) or more can be maintained without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

If the brakes are applied, the cruise control shuts off.

If the vehicle has the StabiliTrak® system and begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *StabiliTrak® System on page 8-35* or *Traction Control System (TCS) on page 8-34*. When road conditions allow the cruise control to be safely used, you can apply the cruise control again.

Cruise Control

The cruise control buttons are located on the left side of the steering wheel.

(On/Off): Press to turn the system on and off.

+ RES (Resume/Accelerate): Press briefly to make the vehicle resume to a previously set speed or press and hold to accelerate.

−SET (Set/Coast): Press to set the speed and activate cruise control or make the vehicle decelerate.

(Cancel): Press to disengage cruise control without erasing the set speed from memory.

Setting Cruise Control

If the cruise button is on when not in use, it could get bumped and go into cruise when not desired. Keep the cruise control switch off when cruise is not being used.

The cruise control light on the instrument panel cluster comes on after the cruise control has been set to the desired speed.

1. Press .
2. Get up to the desired speed.
3. Press and release the −SET button located on the steering wheel.
4. Take your foot off the accelerator.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle speed reaches about 40 km/h (25 mph) or more, press the +RES button on the steering wheel. The vehicle returns to the previous set speed and stays there.

Increasing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated,

- Press and hold the +RES button on the steering wheel until the desired speed is reached, then release it.
- To increase vehicle speed in small amounts, press the +RES button. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) faster.

Reducing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated,

- Press and hold the −SET button on the steering wheel until the desired lower speed is reached, then release it.
- To slow down in small amounts, press the −SET button on the steering wheel briefly. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) slower.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previous set cruise speed.

Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed. When going downhill, you might have to brake or shift to a lower gear to keep the vehicle speed down. If the brake is applied the cruise control disengages.

Ending Cruise Control

There are three ways to end cruise control:

- Step lightly on the brake pedal.
- Press the ⊗ button on the steering wheel.
- Press the button on the steering wheel.

Erasing Speed Memory

The cruise control set speed is erased from memory by pressing the button or if the ignition is turned off.

Object Detection Systems

Ultrasonic Parking Assist

For vehicles with the Ultrasonic Front and Rear Parking Assist (UFRPA) system, it assists the driver with parking and avoiding objects. UFRPA operates at speeds less than 8 km/h (5 mph), and the sensors on the front and rear bumper detect objects up to 1.2 m (4 ft) in front of the vehicle and 2.5 m (8 ft) behind the vehicle, and at least 25.4 cm (10 in) off the ground.

⚠ WARNING

The Ultrasonic Front and Rear Park Assist (UFRPA) system does not replace driver vision. It cannot detect:

- objects that are below the bumper, underneath the vehicle, or if they are too close or far from the vehicle
- children, pedestrians, bicyclists, or pets.

If you do not use proper care before moving forward and while backing; vehicle damage, injury, or death could occur. Even with UFRPA, always check in front of the vehicle before moving forward and behind the vehicle before backing up. While moving forward and backing, be sure to look for objects and check the vehicle's mirrors.

How the System Works

When the vehicle is shifted into R (Reverse) the front and rear sensors are automatically turned on, after the vehicle is shifted out of R (Reverse), the rear sensors are turned off and the front sensors stay on until the vehicle is above a certain speed. The front sensors may also be turned on by pressing the park assist button located next to the shift lever without shifting into R (Reverse) while the vehicle is traveling at a low speed. See "Turning the System On and Off" later in this section.

When the vehicle is in N (Neutral), the system may be active. If the vehicle is in a car wash, the sensors may detect objects in the car wash. See "Turning the System On and Off" later in this section to turn the system off.

High-toned beeps heard from the front speakers are for objects detected near the front bumper. Low-toned beeps heard from the rear speakers are for objects detected near the rear bumper.

When an object is detected, high or low-tone beeps are heard. As the vehicle gets closer to an object, the time between the beeps becomes shorter. When the distance is less than 30 cm (11.8 in), beeping is continuous. The distance may be less during warmer or humid weather.

PARK ASSIST OFF displays on the Driver Information Center (DIC) to indicate that UFRPA is off. The message disappears after a short period of time.

Front Display

The front display is located in the instrument panel in the center of the speedometer and has four bars to provide distance and system information.

The following describes how the UFRPA front display lights appear as the vehicle gets closer to a detected object:

Description	Metric	English
one amber bar	1.2 m	4 ft
two amber bars	1.0 m	40 in
three amber bars	0.6 m	23 in
three amber bars and one red bar	0.3 m	1 ft

Turning the System On and Off

The UFRPA system can be turned on and off by pressing the park assist button located next to the shift lever.

The park assist button lights up when the system is on and turns off when it has been disabled.

When the System Does Not Seem to Work Properly

If UFRPA does not turn on due to a temporary condition, the message PARK ASSIST OFF displays on the DIC, and the light on the park assist button turns off. This can occur under the following conditions:

- The ultrasonic sensors are not clean. Keep the vehicle's bumpers free of mud, dirt, snow, ice and slush. For cleaning instructions, see *Exterior Care on page 9-109*.
- A trailer was attached to the vehicle, or an object was hanging out of the liftgate during the last drive cycle. Once the attached object is removed, UFRPA will return to normal operation.
- If an object is attached to the front of the vehicle.
- A tow bar is attached to the vehicle.
- The vehicle's bumper is damaged. Take the vehicle to your dealer to repair the system.
- Other conditions may affect system performance, such as vibrations from a jackhammer or the compression of air brakes on a very large truck.

If the system is still disabled, after driving forward at least 25 km/h (15 mph), take the vehicle to your dealer.

Rear Vision Camera (RVC)

The vehicle may have a Rear Vision Camera system. Read this entire section before using it.

The rear vision camera system can assist the driver when backing up by displaying a view of the area behind the vehicle.

⚠ WARNING

The Rear Vision Camera (RVC) system does not replace driver vision. RVC does not:

- Detect objects that are outside the camera's field of view, below the bumper, or underneath the vehicle.
- Detect children, pedestrians, bicyclists, or pets.

(Continued)

WARNING (Continued)

Do not back the vehicle by only looking at the RVC screen, or use the screen during longer, higher speed backing maneuvers or where there could be cross-traffic. Your judged distances using the screen will differ from actual distances.

If you do not use proper care before backing up, you could hit a vehicle, child, pedestrian, bicyclist, or pet, resulting in vehicle damage, injury, or death. Even though the vehicle has the RVC system, always check carefully before backing up by checking behind and around the vehicle.

An image appears on the navigation screen with the message "Check Surroundings for Safety" when the vehicle is shifted into R (Reverse). The navigation screen goes to the previous screen after approximately 10 seconds once the vehicle is shifted out of R (Reverse).

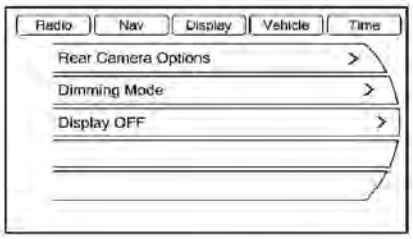
To cancel the delay, do one of the following:

- Press a hard key on the navigation system.
- Shift in to P (Park).
- Reach a vehicle speed of 8 km/h (5 mph).

Turning the Rear Vision Camera System On or Off

To turn the rear vision camera system on or off:

1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.



4. Select Camera. When a check mark appears next to the Camera option, then the RVC system is on.

Symbols

The navigation system may have a feature that lets the driver view symbols on the navigation screen while using the rear vision camera. The Ultrasonic Rear Park Assist (URPA) system must not be disabled to use the caution symbols. The error message "Rear Parking Assist Symbols Unavailable" may display if URPA has been disabled and the symbols have been turned on. See *Ultrasonic Parking Assist on page 8-40*.

The symbols appear and may cover an object when viewing the navigation screen when an object is detected by the URPA system.

To turn the symbols on or off:

1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.
4. Select Symbols. When a check mark appears next to the Symbols option, symbols will appear.

Guidelines

The RVC system has a guideline overlay that can help the driver align the vehicle when backing into a parking spot.

To turn the guidelines on or off:

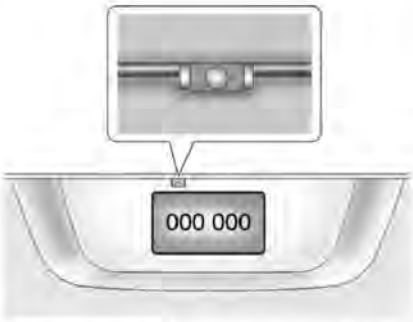
1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.
4. Select Guidelines. When a check mark appears next to the Guidelines option, guidelines will appear.

Rear Vision Camera Error Messages

SERVICE REAR VISION CAMERA SYSTEM: This message can display when the system is not receiving information it requires from other vehicle systems.

If any other problem occurs or if a problem persists, see your dealer.

Rear Vision Camera Location

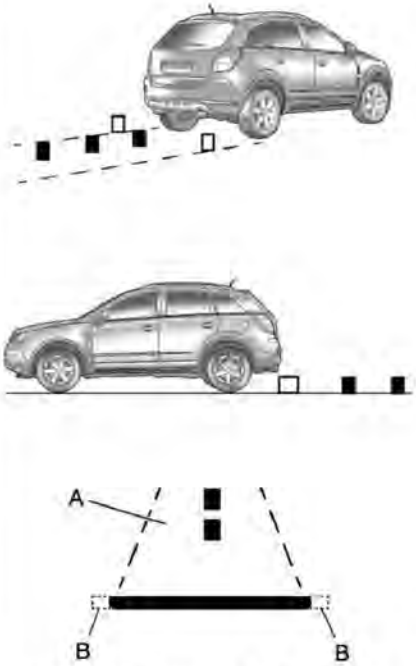


The camera is located above the license plate.

The area displayed by the camera is limited.

It does not display objects that are close to either corner or under the bumper and can vary depending on vehicle orientation or road conditions. The distance of the image that appears on the screen is different from the actual distance.

The following illustration shows the field of view that the camera provides.



A. View displayed by the camera.
B. Corner of the rear bumper.

When the System Does Not Seem To Work Properly

The rear vision camera system may not work properly or display a clear image if:

- The RVC is turned off. See "Turning the Rear Camera System On or Off" earlier in this section.
- It is dark.
- The sun or the beam of headlights is shining directly into the camera lens.
- Ice, snow, mud, or anything else builds up on the camera lens. Clean the lens, rinse it with water, and wipe it with a soft cloth.
- The back of the vehicle is in an accident, the position and mounting angle of the camera can change or the camera can be affected. Be sure to have the camera and its position and mounting angle checked at your dealer.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of this vehicle. To help keep the engine clean and maintain optimum vehicle performance, we recommend the use of gasoline advertised as TOP TIER Detergent Gasoline.

Look for the TOP TIER label on the fuel pump to ensure gasoline meets enhanced detergency standards developed by auto companies. A list of marketers providing TOP TIER Detergent Gasoline can be found at www.toptiergas.com.

The 8th digit of the Vehicle Identification Number (VIN) shows the code letter or number that identifies the vehicle's engine.

The VIN is at the top left of the instrument panel. See *Vehicle Identification Number (VIN) on page 11-1*.

Recommended Fuel

If the vehicle has the 3.0L V6 engine (VIN Code Y), use regular unleaded gasoline with a posted octane rating of 87 or higher. If the octane rating is less than 87, an audible knocking noise, commonly referred to as spark knock, might be heard when driving. If this occurs, use a gasoline rated at 87 octane or higher as soon as possible. If heavy knocking is heard when using gasoline rated at 87 octane or higher, the engine needs service.

If the vehicle has the 2.8L V6 engine (VIN Code 4), use premium unleaded gasoline with a posted octane rating of 91 or higher. For best performance, use premium unleaded gasoline with a posted octane rating of 93. In an emergency, you can use regular unleaded gasoline with an octane rating of 87 or higher. If 87 octane fuel is used, do not perform any aggressive driving maneuvers such as wide open throttle applications. You might also hear audible spark knock during acceleration. Refill the tank with premium fuel as soon as possible to avoid damaging the engine. If heavy knocking is heard when using gasoline rated at 91octane or higher, the engine needs service.

Gasoline Specifications

At a minimum, gasoline should meet ASTM specification D 4814 in the United States or CAN/CGSB-3.5 or 3.511 in Canada. Some gasolines contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). We recommend against the use of gasolines containing MMT. See *Fuel Additives on page 8-48* for additional information.

California Fuel Requirements

If the vehicle is certified to meet California Emissions Standards, it is designed to operate on fuels that meet California specifications. See the underhood emission control label. If this fuel is not available in states adopting California emissions standards, the vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system performance might be affected. The malfunction indicator lamp could turn on and the vehicle might fail a smog-check test. See *Malfunction Indicator Lamp on page 4-20*. If this occurs, return to your authorized dealer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs might not be covered by the vehicle warranty.

Fuels in Foreign Countries

If you plan on driving in another country outside the United States or Canada, the proper fuel might be hard to find. Never use leaded gasoline or any other fuel not recommended in the previous text on fuel. Costly repairs caused by use of improper fuel would not be covered by the vehicle warranty.

To check the fuel availability, ask an auto club, or contact a major oil company that does business in the country where you will be driving.

Fuel Additives

To provide cleaner air, all gasolines in the United States are now required to contain additives that help prevent engine and fuel system deposits from forming, allowing the emission control system to work properly. In most cases, nothing should have to be added to the fuel. However, some gasolines contain only the minimum amount of additive required to meet U.S. Environmental Protection Agency regulations. To help keep fuel injectors and intake valves clean, or if the vehicle experiences problems due to dirty injectors or valves, look for gasoline that is advertised as TOP TIER Detergent Gasoline. Look for the TOP TIER label on the fuel pump to ensure gasoline meets enhanced detergency standards developed by the auto companies. A list of marketers providing TOP TIER Detergent Gasoline can be found at www.toptiergas.com.

For customers who do not use TOP TIER Detergent Gasoline regularly, one bottle of GM Fuel System Treatment PLUS, added to the fuel tank at every engine oil change, can help clean deposits from fuel injectors and intake valves. GM Fuel System Treatment PLUS is the only gasoline additive recommended by General Motors. It is available at your dealer.

Gasolines containing oxygenates, such as ethers and ethanol, and reformulated gasolines might be available in your area. We recommend that you use these gasolines, if they comply with the specifications described earlier.

However, E85 (85% ethanol) and other fuels containing more than 10% ethanol must not be used in vehicles that were not designed for those fuels.

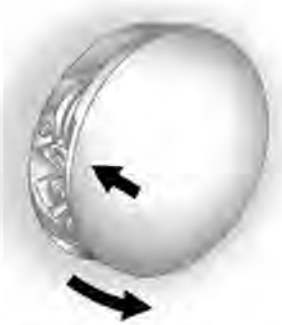
Notice: **This vehicle was not designed for fuel that contains methanol. Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.**

Some gasolines that are not reformulated for low emissions can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT); ask the attendant where you buy gasoline whether the fuel contains MMT. We recommend against the use of such gasolines. Fuels containing MMT can reduce the life of spark plugs and the performance of the emission control system could be affected. The malfunction indicator lamp might turn on. If this occurs, return to your dealer for service.

Filling the Tank

⚠ WARNING

Fuel vapor burns violently and a fuel fire can cause bad injuries. To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island. Turn off the engine when refueling. Do not smoke near fuel or when refueling the vehicle. Do not use cellular phones. Keep sparks, flames, and smoking materials away from fuel. Do not leave the fuel pump unattended when refueling the vehicle. This is against the law in some places. Do not re-enter the vehicle while pumping fuel. Keep children away from the fuel pump; never let children pump fuel.



The tethered fuel cap is located behind a hinged fuel door on the passenger side of the vehicle.

To open the fuel door, push the rearward center edge in and release and it will open.

To remove the fuel cap, turn it slowly counterclockwise.

While refueling, hang the tethered fuel cap from the hook on the fuel door.

When reinstalling the cap, turn it clockwise until it clicks once, otherwise the Malfunction Indicator Lamp could turn on. See *Malfunction Indicator Lamp on page 4-20*.

⚠ WARNING

Fuel can spray out on you if you open the fuel cap too quickly. If you spill fuel and then something ignites it, you could be badly burned. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop. Then unscrew the cap all the way.

Be careful not to spill fuel. Do not top off or overfill the tank and wait a few seconds after you have finished pumping before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care on page 9-109*.

When replacing the fuel cap, turn it clockwise until it clicks once. Make sure the cap is fully installed.

The diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See *Malfunction Indicator Lamp on page 4-20*.

⚠ WARNING

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

Notice: **If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type fuel cap might not fit properly, might cause the malfunction indicator lamp to light, and could damage the fuel tank and emissions system. See *Malfunction Indicator Lamp on page 4-20*.**

Filling a Portable Fuel Container

⚠ WARNING

Never fill a portable fuel container while it is in the vehicle. Static electricity discharge from the container can ignite the fuel vapor. You can be badly burned and the vehicle damaged if this occurs. To help avoid injury to you and others:

- Dispense fuel only into approved containers.
- Do not fill a container while it is inside a vehicle, in a vehicle's trunk, pickup bed, or on any surface other than the ground.

(Continued)

WARNING (Continued)

- Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Contact should be maintained until the filling is complete.
- Do not smoke while pumping fuel.
- Do not use a cellular phone while pumping fuel.

Towing

General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer.

See the following trailer towing information in this section:

- For information on driving while towing a trailer, see "Driving Characteristics and Towing Tips."
- For maximum vehicle and trailer weights, see "Trailer Towing."
- For information on equipment to tow a trailer, see "Towing Equipment."

For information on towing a disabled vehicle, see *Towing the Vehicle on page 9-105*. For information on towing the vehicle behind another vehicle such as a motorhome, see *Recreational Vehicle Towing on page 9-105*.

Driving Characteristics and Towing Tips

⚠ WARNING

The driver can lose control when pulling a trailer if the correct equipment is not used or the vehicle is not driven properly. For example, if the trailer is too heavy, the brakes may not work well — or even at all. The driver and passengers could be seriously injured. The vehicle may also be damaged; the resulting repairs would not be covered by the vehicle warranty. Pull a trailer only if all the steps in this section have been followed. Ask your dealer for advice and information about towing a trailer with the vehicle.

The vehicle can tow a trailer when equipped with the proper trailer towing equipment. For trailering capacity, see *Trailer Towing on page 8-56*. Trailering changes handling, acceleration, braking, durability and fuel economy. With the added weight, the engine, transmission, wheel assemblies and tires are forced to work harder and under greater loads. The trailer also adds wind resistance, increasing the pulling requirements. For safe trailering, correctly use the proper trailering equipment.

The following information has important trailering tips and rules for your safety and that of your passengers. Read this section carefully before pulling a trailer.

Pulling A Trailer

Here are some important points:

- There are many laws, including speed limit restrictions that apply to trailering. Check for legal requirements.

- Do not tow a trailer at all during the first 1 600 km (1,000 miles) the new vehicle is driven. The engine, axle or other parts could be damaged.
- During the first 800 km (500 miles) that a trailer is towed, do not drive over 80 km/h (50 mph) and do not make starts at full throttle. This reduces wear on the vehicle.
- The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.
- Do not use the Fuel Saver Mode when towing.
- Obey speed limit restrictions. Do not drive faster than the maximum posted speed for trailers, or no more than 90 km/h (55 mph), to reduce wear on the vehicle.

Driving with a Trailer

Towing a trailer requires experience. Get familiar with handling and braking with the added trailer weight. The vehicle is now longer and not as responsive as the vehicle is by itself.

Check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tires and mirror adjustments. If the trailer has electric brakes, start the vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working.

During the trip, check regularly to be sure that the load is secure, and the lamps and trailer brakes are working properly.

Towing with a Stability Control System

When towing, the sound of the stability control system might be heard. The system is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid situations that require heavy braking and sudden turns.

Passing

More passing distance is needed when towing a trailer. Because the rig is longer, it is necessary to go farther beyond the passed vehicle before returning to the lane.

Backing Up

Hold the bottom of the steering wheel with one hand. To move the trailer to the left, move that hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

Making Turns

Notice: **Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.**

When turning with a trailer, make wider turns than normal so the trailer will not strike soft shoulders, curbs, road signs, trees or other objects. Use the turn signal well in advance and avoid jerky or sudden maneuvers.

Turn Signals When Towing a Trailer

The turn signal indicators on the instrument panel flash whenever signaling a turn or lane change. Properly hooked up, the trailer lamps also flash, telling other drivers the vehicle is turning, changing lanes or stopping.

When towing a trailer, the arrows on the instrument panel flash for turns even if the bulbs on the trailer are burned out. Check occasionally to be sure the trailer bulbs are still working.

Driving On Grades

Reduce speed and shift to a lower gear before starting down a long or steep downgrade. If the transmission is not shifted down, the brakes might have to be used so much that they would get hot and no longer work well.

The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.

When towing at high altitude on steep uphill grades, engine coolant boils at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle could show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating on page 9-20*.

Parking on Hills

⚠ WARNING

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the brake pedal until the chocks absorb the load.
4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
5. Release the brake pedal.

Leaving After Parking on a Hill

1. Apply and hold the brake pedal while you:
   - Start the engine.
   - Shift into a gear.
   - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance When Trailer Towing

The vehicle needs service more often when pulling a trailer. See the Maintenance Schedule for more information. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system and brake system. Inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Engine Cooling When Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating on page 9-20*.

Trailer Towing

Before pulling a trailer, there are three important considerations that have to do with weight:

- The weight of the trailer
- The weight of the trailer tongue
- The total weight on the vehicle's tires

Weight of the Trailer

How heavy can a trailer safely be?

It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature and how much the vehicle is used to pull a trailer are all important. It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry. See "Weight of the Trailer Tongue" later in this section for more information.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Use the following chart to determine how much the vehicle can weigh, based upon the vehicle model and options.

Vehicle	Maximum Trailer Weight	GCWR*
2.8L Engine, AWD	1 588 kg (3,500 lbs)	3 725 kg (8,212 lbs)
3.0L Engine, FWD	1 134 kg (2,500 lbs)	3 187 kg (7,025 lbs)
3.0L Engine, FWD with Trailering Package	1 588 kg (3,500 lbs)	3 640 kg (8,025 lbs)
3.0L Engine, AWD	1 134 kg (2,500 lbs)	3 271 kg (7,212 lbs)
3.0L Engine, AWD with Trailering Package	1 588 kg (3,500 lbs)	3 725 kg (8,212 lbs)
*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversions. The GCWR for the vehicle should not be exceeded.		

Ask your dealer for trailering information or advice. See *Customer Assistance Offices on page 12-3* for more information.

Weight of the Trailer Tongue

The tongue load (A) of any trailer is an important weight to measure because it affects the total gross weight of the vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo carried in it, and the people who will be riding in the vehicle. If there are a lot of options, equipment, passengers or cargo in the vehicle, it will reduce the tongue weight the vehicle can carry, which will also reduce the trailer weight the vehicle can tow. If towing a trailer, the tongue load must be added to the GVW because the vehicle will be carrying that weight, too. See *Vehicle Load Limits on page 8-11* for more information about the vehicle's maximum load capacity.

A B

If a weight-carrying hitch or a weight-distributing hitch is being used, the trailer tongue (A) should weigh 10-15 percent of the total loaded trailer weight (B).

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

Trailering may be limited by the vehicle's ability to carry tongue weight. Tongue weight cannot cause the vehicle to exceed the GVWR (Gross Vehicle Weight Rating) or the RGAWR (Rear Gross Axle Weight Rating). The effect of additional weight may reduce the trailering capacity more than the total of the additional weight.

Consider the following example:

A vehicle model base weight is 2 495 kg (5,500 lbs); 1 270 kg (2,800 lbs) at the front axle and 1 225 kg (2,700 lbs) at the rear axle.

It has a GVWR of 3 266 kg (7,200 lbs), a RGAWR of 1 814 kg (4,000 lbs) and a GCWR (Gross Combination Weight Rating) of 6 350 kg (14,000 lbs). The trailer rating should be:

6350 kg	(14,000 lbs)	GCWR
2495 kg	(–5,500 lbs)	Vehicle Weight
3855 kg	(8,500 lbs)	Trailer Rating

Expect tongue weight to be at least 10 percent of trailer weight (386 kg (850 lbs)) and because the weight is applied well behind the rear axle, the effect on the rear axle is greater than just the weight itself, as much as 1.5 times as much. The weight at the rear axle could be 386 kg (850 lbs) X 1.5 = 578 kg (1,275 lbs).

Since the rear axle already weighs 1 225 kg (2,700 lbs), adding 578 kg (1,275 lbs) brings the total to 1 803 kg (3,975 lbs). This is very close to, but within the limit for RGAWR as well. The vehicle is set to trailer up to 3 856 kg (8,500 lbs).

If the vehicle has many options and there is a front seat passenger and two rear seat passengers with some luggage and gear in the vehicle as well. 136 kg (300 lbs) could be added to the front axle weight and 181 kg (400 lbs) to the rear axle weight. The vehicle now weighs:

1270 kg (2,800 lbs)	+	136 kg (300 lbs)	Front
1225 kg (2,700 lbs)	+	181 kg (400 lbs)	Rear
2812 kg (6,200 lbs)			Total

Weight is still below 3 266 kg (7,200 lbs) and you might think 318 additional kilograms (700 lbs) should be subtracted from the trailering capacity to stay within GCWR limits. The maximum trailer would only be 3 538 kg (7,800 lbs). You may go further and think the tongue weight should be limited to less than 454 kg (1,000 lbs) to avoid exceeding GVWR. But the effect on the rear axle must still be considered. Because the rear axle now weighs 1 406 kg (3,100 lbs), 408 kg (900 lbs) can be put on the rear axle without exceeding RGAWR. The effect of tongue weight is about 1.5 times the actual weight. Dividing the 408 kg (900 lbs) by 1.5 leaves only 272 kg (600 lbs) of tongue weight that can be handled. Since tongue weight is usually at least 10 percent of total loaded trailer weight, expect that the largest trailer the vehicle can properly handle is 2 722 kg (6,000 lbs).

It is important that the vehicle does not exceed any of its ratings — GCWR, GVWR, RGAWR, Maximum Trailer Rating or Tongue Weight. The only way to be sure it is not exceeding any of these ratings is to weigh the vehicle and trailer.

Total Weight on the Vehicle's Tires

Be sure the vehicle's tires are inflated to the upper limit for cold tires. These numbers can be found on the Certification label or see *Vehicle Load Limits on page 8-11* for more information. Make sure not to go over the GVW limit for the vehicle, or the GAWR, including the weight of the trailer tongue. If using a weight distributing hitch, make sure not to go over the rear axle limit before applying the weight distribution spring bars.

Towing Equipment

Hitches

It is important to have the correct hitch equipment. Crosswinds, large trucks going by and rough roads are a few reasons why the right hitch is needed.

- The rear bumper on the vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will any holes be made in the body of the vehicle when the trailer hitch is installed? If there are, then be sure to seal the holes later when the hitch is removed. If the holes are not sealed, dirt, water, and deadly carbon monoxide (CO) from the exhaust can get into the vehicle. See *Engine Exhaust on page 8-24*.

Hitch Cover

The vehicle may have a hitch cover. To remove the hitch cover:

1. Turn the fasteners on the lower tabs 90 degrees counterclockwise.
2. Lift the lower edge of the cover about 45 degrees.
3. Pull the cover downward to disengage the upper attachments.

To reinstall the hitch cover:

1. Hold the cover at a 45 degree angle to the vehicle and push the upper tabs in the hitch cover into the slots in the fascia.
2. Move the bottom of the cover forward until the lower tabs line up with the lower fascia slots.
3. Snap the hitch cover into place by pushing the upper corners forward.
4. Turn the fasteners on the lower tabs 90 degrees clockwise to lock the cover in place.

Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Always leave just enough slack so the rig can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

A loaded trailer that weighs more than 450 kg (1,000 lbs) needs to have its own brake system that is adequate for the weight of the trailer. Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted and maintained properly.

Because the vehicle has anti-lock brakes, do not tap into the vehicle's brake system. If you do, both brake systems will not work well, or at all.

Trailer Wiring Harness

All of the electrical circuits required for the trailer lighting system can be accessed at a connector mounted to the frame, behind the rear bumper cover.

Trailer Sway Control (TSC)

The vehicle has a Trailer Sway Control (TSC) feature as part of the StabiliTrak system. If TSC detects that the trailer is swaying, the vehicle's brakes are automatically applied.

When TSC is applying the brakes, the TCS/StabiliTrak indicator light flashes to notify the driver to reduce speed. See *Traction Control System (TCS)/StabiliTrak® Light on page 4-25*. If the trailer continues to sway, StabiliTrak will reduce engine torque to help slow the vehicle.

TSC will not function if StabiliTrak is turned off.

Conversions and Add-Ons

Add-On Electrical Equipment

Notice: **Do not add anything electrical to the vehicle unless you check with your dealer first. Some electrical equipment can damage the vehicle and the damage would not be covered by the vehicle's warranty. Some add-on electrical equipment can keep other components from working as they should.**

Add-on equipment can drain the vehicle 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see *Servicing the Airbag-Equipped Vehicle on page 2-40* and *Adding Equipment to the Airbag-Equipped Vehicle on page 2-41*.

✍ NOTES

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General Information

For service and parts needs, visit your dealer. You will receive genuine GM parts and GM-trained and supported service people.

Genuine GM parts have one of these marks:

ACDelco.

Genuine GM Parts

Goodwrench.

GM Accessories

California Proposition 65 Warning

Most motor vehicles, including this one, contain and/or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems, many fluids, and some component wear by-products contain and/or emit these chemicals.

California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, seat belt pretensioners, and lithium batteries contained in remote keyless transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.

Accessories and Modifications

Adding non-dealer accessories to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control, and stability control. Some of these accessories could even cause malfunction or damage not covered by the vehicle warranty.

Damage to vehicle components resulting from the installation or use of non-GM certified parts, including control module modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. Your GM dealer can accessorize the vehicle using genuine GM Accessories. When you go to your GM dealer and ask for GM Accessories, you will know that GM-trained and supported service technicians will perform the work using genuine GM Accessories.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle on page 2-41*.

Vehicle Checks

Doing Your Own Service Work

⚠ WARNING

You can be injured and the vehicle could be damaged if you try to do service work on a vehicle without knowing enough about it.

- Be sure you have sufficient knowledge, experience, the proper replacement parts, and tools before attempting any vehicle maintenance task.

(Continued)

WARNING (Continued)

- Be sure to use the proper nuts, bolts, and other fasteners. English and metric fasteners can be easily confused. If the wrong fasteners are used, parts can later break or fall off. You could be hurt.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can. To order the proper service manual, see *Service Publications Ordering Information on page 12-13.*

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle on page 2-40.*

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records on page 10-9.*

Hood

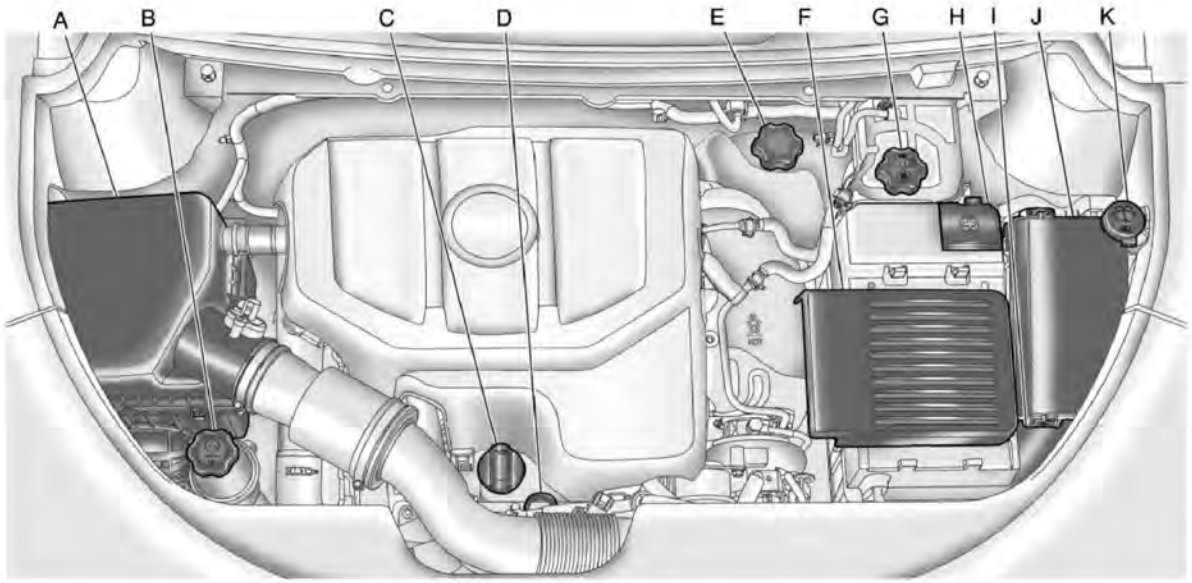
To open the hood:

1. Pull the release handle with the above symbol on it. It is located below the instrument panel to the left of the steering wheel.

2. Move the secondary hood release lever up to release the striker. The lever is located near the middle of the hood.
3. Lift the hood.

Before closing the hood, be sure all the filler caps are on properly.

Engine Compartment Overview



2.8 L V6 Engine

A. *Engine Air Cleaner/Filter on page 9-14.*

B. Power Steering Reservoir and Cap. See *Power Steering Fluid on page 9-22.*

C. Engine Oil Fill Cap. See *Engine Oil on page 9-10.*

D. Engine Oil Dipstick (Out of View). See *Engine Oil on page 9-10.*

E. Brake Master Cylinder Reservoir. See *Brakes on page 9-24.*

F. Battery (Out of View). See *Battery on page 9-27.*

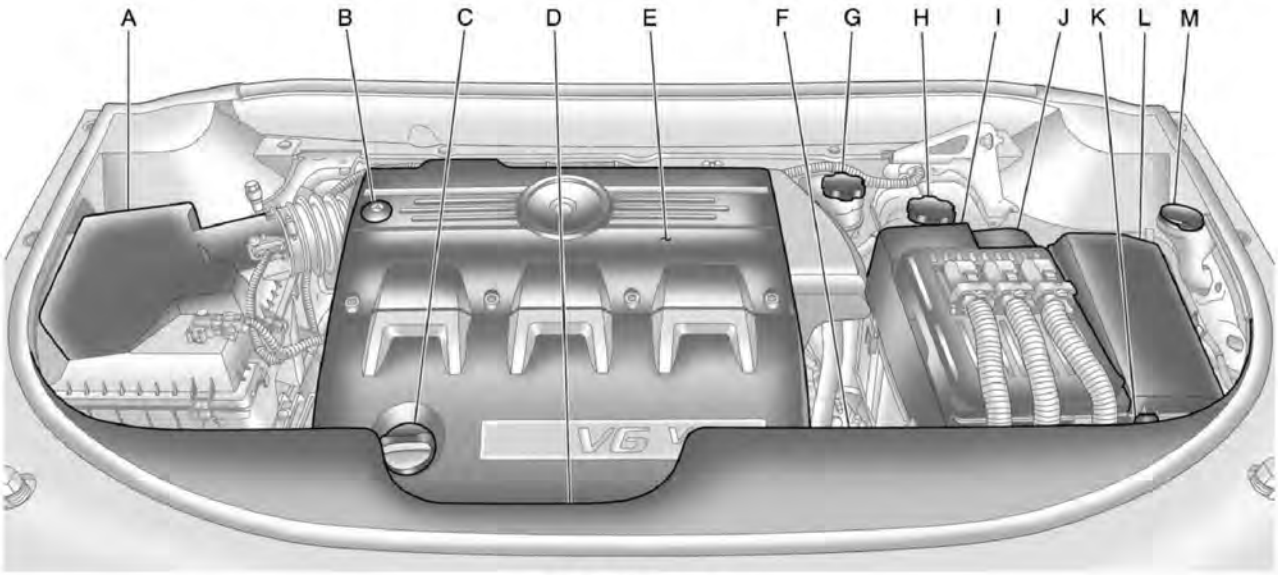
G. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 9-17.*

H. Remote Positive (+) Terminal. See *Jump Starting on page 9-101.*

I. Remote Negative (−) Terminal (Out of View). See *Jump Starting on page 9-101.*

J. *Engine Compartment Fuse Block on page 9-45.*

K. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 9-23.*



3.0 L V6 Engine

A. *Engine Air Cleaner/Filter on page 9-14.*

B. Power Steering Reservoir and Cap (Under engine cover). See *Power Steering Fluid on page 9-22.*

C. Engine Oil Fill Cap. See *Engine Oil on page 9-10.*

D. Engine Oil Dipstick (Out of View). See *Engine Oil on page 9-10.*

E. *Engine Cover on page 9-9.*

F. Transmission Fluid Cap and Dipstick. See *Automatic Transmission Fluid on page 9-13.*

G. Brake Master Cylinder Reservoir. See *Brakes on page 9-24.*

H. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 9-17.*

I. Battery (Out of View). See *Battery on page 9-27.*

J. Remote Positive (+) Terminal. See *Jump Starting on page 9-101.*

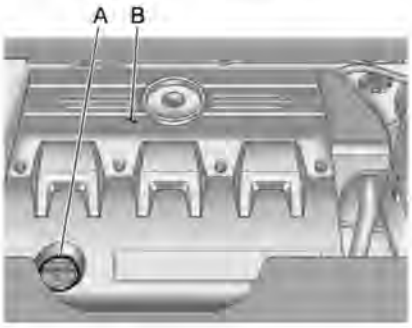
K. Remote Negative (−) Terminal (Out of View). See *Jump Starting on page 9-101.*

L. *Engine Compartment Fuse Block on page 9-45.*

M. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 9-23.*

Engine Cover

Engine Cover (3.0 L V6)



To remove:

1. Remove the oil fill cap (A).
2. Raise the engine cover (B) to release from the retainers.
3. Lift and remove the engine cover.
4. Reverse Steps 1 through 3 to reinstall engine cover.

Engine Oil

Checking Engine Oil

It is a good idea to check the engine oil level at each fuel fill. In order to get an accurate reading, the oil must be warm and the vehicle must be on level ground.

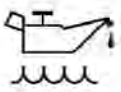
The engine oil dipstick handle is a yellow loop. See *Engine Compartment Overview on page 9-6* for the location of the engine oil dipstick.

1. Turn off the engine and give the oil several minutes to drain back into the oil pan. If this is not done, the oil dipstick might not show the actual level.
2. Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

When to Add Engine Oil

If the oil is below the cross-hatched area at the tip of the dipstick, add at least one liter/quart of the recommended oil. This section explains what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications on page 11-2*.

Notice: **Do not add too much oil. If the engine has so much oil that the oil level gets above the cross-hatched area that shows the proper operating range, the engine could be damaged.**



See *Engine Compartment Overview on page 9-6* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when through.

What Kind of Engine Oil to Use

Look for three things:

- GM4718M

  This vehicle's engine requires a special oil meeting GM Standard GM4718M. Oils meeting this standard may be identified as synthetic. However, not all synthetic oils will meet this GM standard. Use only an oil that meets GM Standard GM4718M.

Notice: **Using oils that do not have the GM4718M Standard designation can cause engine damage not covered by the vehicle warranty.**

- SAE 5W-30

  SAE 5W-30 is best for the vehicle. These numbers on an oil container show its viscosity, or thickness. Do not use other viscosity oils such as SAE 20W-50.

- American Petroleum Institute (API) starburst symbol

  Oils meeting these requirements should have the starburst symbol on the container. This symbol indicates that the oil has been certified by the American Petroleum Institute (API).

This vehicle's engine was filled at the factory with a Mobil 1® synthetic oil meeting all requirements for this vehicle.

Substitute Engine Oil: When adding oil to maintain engine oil level, oil meeting GM Standard GM4718M might not be available. You can add substitute oil designated SAE 5W-30 with the starburst symbol at all temperatures. Substitute oil not meeting GM Standard GM4718M should not be used for an oil change.

Engine Oil Additives / Engine Oil Flushes

Do not add anything to the oil. The recommended oils with the starburst symbol that meet GM standards are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

Engine Oil Life System

When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on engine revolutions and engine temperature, and not on mileage. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A "Change Engine Oil Soon" message comes on. See *Engine Oil Messages on page 4-36*. Change the oil as soon as possible within the next 1 000 km (600 miles). It is possible that, if driving under the best conditions, the oil life system might not indicate that an oil change is necessary for over a year. However, the engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer has trained service people who will perform this work using genuine parts and reset the system. It is also important to check the oil regularly and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 miles) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. To reset the system:

1. Using the DIC MENU button and thumbwheel on the turn signal lever, display "Oil Life Remaining" on the DIC. See *Driver Information Center (DIC) on page 4-29* and *Engine Oil Messages on page 4-36*.
2. Press the SET button to reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition to ON/RUN with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the "Change Engine Oil Soon" message is not on, the system is reset.

The system is reset when the "Change Engine Oil Soon" message is off.

What to Do with Used Oil

Used engine oil contains elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash, pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Automatic Transmission Fluid

How to Check Automatic Transmission Fluid

It is not necessary to check the transmission fluid level.
A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer service department and have it repaired as soon as possible.

There is a special procedure for checking and changing the transmission fluid. Because this procedure is difficult, you should have this done at your dealer service department. Contact your dealer for additional information or the procedure can be found in the service manual. To purchase a service manual, see *Service Publications Ordering Information on page 12-13*.

Change the fluid and filter at the intervals listed in *Scheduled Maintenance on page 10-2*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants on page 10-6*.

Engine Air Cleaner/Filter

See *Engine Compartment Overview on page 9-6* for the location of the engine air cleaner/filter.

When to Inspect the Engine Air Cleaner/Filter

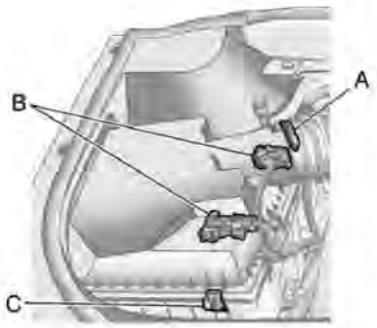
Inspect the air cleaner/filter at the Maintenance II intervals and replace it at the first oil change after each 80 000 km (50,000 mile) interval. See *Scheduled Maintenance on page 10-2* for more information. If driving in dusty/dirty conditions, inspect the filter at each engine oil change.

How to Inspect the Engine Air Cleaner/Filter

To inspect the air cleaner/filter, remove the filter from the vehicle and lightly shake the filter to release loose dust and dirt. If the filter remains caked with dirt, a new filter is required. Never use compressed air to clean the filter.

To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood on page 9-5*.
2. Locate the air filter housing on the front of the passenger side of the engine compartment. See *Engine Compartment Overview on page 9-6*.



3.0 L V6 Shown, 2.8 L V6 Similar

A. Air Duct Clamp
B. Electrical Connectors
C. Retaining Clips

3. Disconnect the outlet duct by loosening the air duct clamp (A).
4. Disconnect the electrical connectors (B).
5. Lift the retaining clips (C) on the air filter housing.

6. Turn and tilt cover slightly upwards and slide cover away from outside edge of vehicle. Remove the air filter.

A. Cover Cut Outs

B. Air Filter Tabs

7. To install the air filter, place filter inside box where the pleats fit in between the tabs located inside the lower box. Ensure that the cover cut outs (A) on both sides match the air filter tabs (B) on both sides.
8. Replace air cleaner cover by inserting tabs appropriately into slots. Lower cover to meet bottom of box. Place clips on retention features and clip closed.
9. Retighten the air duct clamp.
10. Reconnect the electrical connectors.

⚠ WARNING

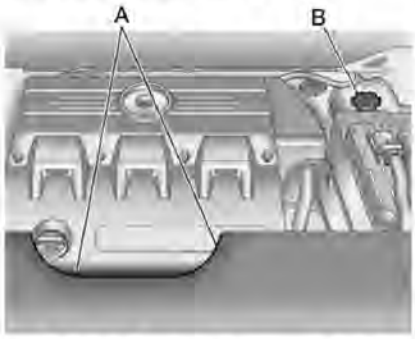
Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

Notice: **If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when you are driving.**

Notice: **Installing an air cleaner different than the one recommended in Maintenance Replacement Parts may cause engine damage not covered by the vehicle warranty.**

Cooling System

When it is safe to lift the hood:



3.0 L V6 Engine Shown, 2.8 L V6 Engine Similar

A. Engine Cooling Fans

B. Engine Coolant Surge Tank and Pressure Cap

⚠ WARNING

An electric engine cooling fan under the hood can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood electric fan.

If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. The vehicle should be parked on a level surface.

The coolant level should be between the MIN and MAX lines. If it is not, the vehicle may have a leak at the radiator hoses, heater hoses, radiator, water pump, or somewhere else in the cooling system.

⚠ WARNING

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.

If there seems to be no leak, with the engine on, check to see if the electric engine cooling fan is running. If the engine is overheating, the fan should be running. If it is not, the vehicle needs service. Turn off the engine.

Notice: **Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner, at 50 000 km (30,000 miles) or 24 months, whichever occurs first. Any repairs would not be covered by the vehicle warranty. Always use DEX-COOL (silicate-free) coolant in the vehicle.**

Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL® engine coolant. This coolant is designed to remain in the vehicle for five years or 240 000 km (150,000 miles), whichever occurs first.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating on page 9-20*

What to Use

⚠ WARNING

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The vehicle's coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL® coolant. If using this mixture, nothing else needs to be added. This mixture:

- Gives freezing protection down to −37°C (−34°F), outside temperature.
- Gives boiling protection up to 129°C (265°F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminum parts.
- Helps keep the proper engine temperature.

Notice: **If an improper coolant mixture is used, the engine could overheat and be badly damaged. The repair cost would not be covered by the vehicle warranty. Too much water in the mixture can freeze and crack the engine, radiator, heater core, and other parts.**

Checking Coolant

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. If coolant is visible but the coolant level is not at the indicated mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL® coolant at the coolant surge tank, but be sure the cooling system is cool before this is done. See *Engine Overheating on page 9-20* for more information.

The coolant surge tank is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview on page 9-6* for more information on location.

How to Add Coolant to the Coolant Surge Tank

Notice: **This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.**

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL® coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.

⚠ WARNING

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. They are under pressure, and if you turn the coolant surge tank pressure cap — even a little — they can come out at high speed. Never turn the cap when the cooling system, including the coolant surge tank pressure cap, is hot. Wait for the cooling system and coolant surge tank pressure cap to cool if you ever have to turn the pressure cap.

⚠ WARNING

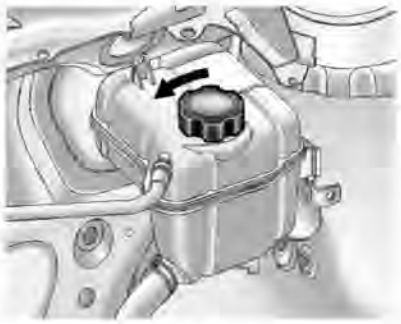
Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The vehicle's coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Notice: **In cold weather, water can freeze and crack the engine, radiator, heater core and other parts. Use the recommended coolant and the proper coolant mixture.**

⚠ WARNING

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.

2.8 L V6 Engine



3.0 L V6 Engine

1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This will allow any pressure still left to be vented out the discharge hose.

2. Then keep turning the pressure cap slowly and remove it.
3. Fill the coolant surge tank with the proper DEX-COOL® coolant mixture to the indicated level mark.
4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper DEX-COOL® coolant mixture to the coolant surge tank until the level reaches the indicated level mark.
5. Then replace the pressure cap. Be sure the pressure cap is hand-tight.

Check the level in the coolant surge tank when the cooling system has cooled down. If the coolant is not at the proper level, repeat Steps 1 through 3 and reinstall the pressure cap. If the coolant still is not at the proper level when the system cools down again, see your dealer.

Engine Overheating

The vehicle has an indicator to warn of engine overheating.

There is an engine coolant temperature warning light on the vehicle's instrument panel. See *Engine Coolant Temperature Gauge on page 4-17*.

You may decide not to lift the hood when this warning appears, but instead get service help right away. See *Roadside Service on page 12-6*.

If you do decide to lift the hood, make sure the vehicle is parked on a level surface.

Then check to see if the engine cooling fans are running. If the engine is overheating, both fans should be running. If they are not, do not continue to run the engine and have the vehicle serviced.

Notice: **Engine damage from running the engine without coolant is not covered by the warranty.**

Notice: **If the engine catches fire because of being driven with no coolant, your vehicle can be badly damaged. The costly repairs would not be covered by the vehicle warranty.**

If Steam Is Coming From The Engine Compartment

⚠ WARNING

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down. Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when your engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop your engine if it overheats, and get out of the vehicle until the engine is cool.

If No Steam Is Coming From The Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbing a long hill on a hot day.
- Stopping after high-speed driving.
- Idling for long periods in traffic.
- Towing a trailer.

If the overheat warning displays with no sign of steam:

1. Turn the air off.
2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
3. In heavy traffic, let the engine idle in N (Neutral) while stopped. If it is safe to do so, pull off the road, shift to P (Park) or N (Neutral) and let the engine idle.

If the temperature overheat gauge is no longer in the overheat zone or an overheat warning no longer displays, the vehicle can be driven. Continue to drive the vehicle slow for about 10 minutes. Keep a safe vehicle distance from the car in front of you. If the warning does not come back on, continue to drive normally.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

Power Steering Fluid

See *Engine Compartment Overview on page 9-6* for reservoir location.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless a leak is suspected in the system or unusual noise is heard. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

To check the power steering fluid:

1. Turn the key off and let the engine compartment cool down.
2. Remove the engine cover, if required. See *Engine Cover on page 9-9*.
3. Wipe the cap and the top of the reservoir clean.
4. Unscrew the cap and wipe the dipstick with a clean rag.
5. Replace the cap and completely tighten it.
6. Remove the cap again and look at the fluid level on the dipstick.

The level should be within the HOT mark. If necessary, add only enough fluid to bring the level within the mark.

What to Use

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants on page 10-6*. Always use the proper fluid.

Washer Fluid

What to Use

When windshield washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid

The WASHER FLUID LOW ADD FLUID message appears on the Driver Information Center (DIC) when the fluid level is low.

Open the cap with the washer symbol on it. Add washer fluid up to the fill mark. See *Engine Compartment Overview on page 9-6* for reservoir location.

Notice:

- **When using concentrated washer fluid, follow the manufacturer's instructions for adding water.**
- **Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system. Also, water does not clean as well as washer fluid.**
- **Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.**
- **Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.**

Brakes

This vehicle has disc brakes. Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or be heard all the time the vehicle is moving, except when applying the brake pedal firmly.

⚠ WARNING

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

Notice: **Continuing to drive with worn-out brake pads could result in costly brake repair.**

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications in *Capacities and Specifications on page 11-2*.

Brake linings should always be replaced as complete axle sets.

Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service might be required.

Brake Adjustment

Every time the brakes are applied, with or without the vehicle moving, the brakes adjust for wear.

Replacing Brake System Parts

The braking system on a vehicle is complex. Its many parts have to be of top quality and work well together if the vehicle is to have really good braking. The vehicle was designed and tested with top-quality brake parts. When parts of the braking system are replaced, be sure to get new, approved replacement parts. If this is not done, the brakes might not work properly. For example, installing disc brake pads that are wrong for the vehicle, can change the balance between the front and rear brakes — for the worse. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed.

Brake Fluid

The brake master cylinder reservoir is filled with DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview on page 9-6* for the location of the reservoir.

There are only two reasons why the brake fluid level in the reservoir might go down:

- The brake fluid level goes down because of normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake hydraulic system can also cause a low fluid level. Have the brake hydraulic system fixed, since a leak means that sooner or later the brakes will not work well.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove brake fluid, as necessary, only when work is done on the brake hydraulic system.

⚠ WARNING

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light on page 4-23.*

What to Add

Use only new DOT 3 brake fluid from a sealed container. See *Recommended Fluids and Lubricants on page 10-6.*

Always clean the brake fluid reservoir cap and the area around the cap before removing it. This helps keep dirt from entering the reservoir.

⚠ WARNING

With the wrong kind of fluid in the brake hydraulic system, the brakes might not work well. This could cause a crash. Always use the proper brake fluid.

Notice:

- **Using the wrong fluid can badly damage brake hydraulic system parts. For example, just a few drops of mineral-based oil, such as engine oil, in the brake hydraulic system can damage brake hydraulic system parts so badly that they will have to be replaced. Do not let someone put in the wrong kind of fluid.**
- **If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on the vehicle. If you do, wash it off immediately.**

Battery

Refer to the replacement number shown on the original battery label when a new battery is needed. See *Engine Compartment Overview on page 9-6* for battery location.

⚠ DANGER

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Vehicle Storage

⚠ WARNING

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. See *Jump Starting on page 9-101* for tips on working around a battery without getting hurt.

Infrequent Usage: Remove the black, negative (−) cable from the battery to keep the battery from running down.

Extended Storage: Remove the black, negative (−) cable from the battery or use a battery trickle charger.

All-Wheel Drive

Transfer Case

When to Check and Change Lubricant

The transfer case is filled with oil during manufacture, which then does not require changing. It is not necessary to regularly check the transfer case fluid unless there is a leak suspected or an unusual noise is heard. A fluid loss could indicate a problem. It is recommended to have the transfer case serviced at your dealer by trained service technicians.

Starter Switch Check

⚠ WARNING

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.
2. Firmly apply both the parking brake and the regular brake. See *Parking Brake on page 8-31*.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

Park Brake and P (Park) Mechanism Check

⚠ WARNING

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

Wiper Blade Replacement

Windshield wiper blades should be inspected for wear or cracking. See *Scheduled Maintenance on page 10-2* for more information.

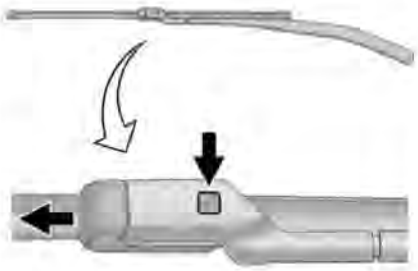
It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn. For proper windshield wiper blade length and type, see *Maintenance Replacement Parts on page 10-8*.

Notice: **Allowing the wiper blade arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that occurs would not be covered by your warranty. Do not allow the wiper blade arm to touch the windshield.**

Front Wiper Blade Replacement

To replace the wiper blade assembly:

1. Pull the windshield wiper assembly away from the windshield.



2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
3. Remove the wiper blade.
4. Reverse steps 1 through 3 for wiper blade replacement.

Rear Wiper Blade Replacement

The rear wiper blade and wiper arm have a cover for protection. The cover must be removed before the wiper blade can be replaced.

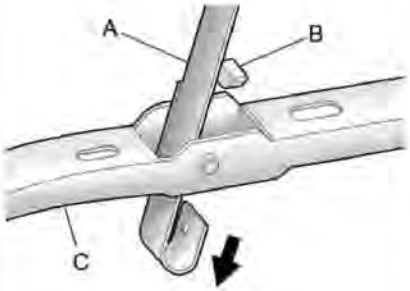
To remove the cover:

1. Slide a plastic tool under cover and push upward to unsnap.

2. Slide cover towards wiper blade tip to unhook from blade assembly.
3. Remove the cover.
4. After wiper blade replacement, ensure that cover hook slides into slot in blade assembly.
5. Snap cover down to secure.

To remove the wiper blade:

1. Lift the wiper arm away from the windshield.



A. Wiper Arm
B. Release Lever
C. Blade Assembly

2. Push the release lever (B) to disengage the hook and push the wiper arm (A) out of the blade assembly (C).
3. Push the new blade assembly securely on the wiper arm until the release lever clicks into place.
4. Replace wiper cover.

Headlamp Aiming

The headlamp aiming system has been preset at the factory.

If the vehicle is damaged in an accident, the aim of the headlamps can be affected and adjustment could be necessary.

It is recommended that a dealer adjust the headlamps. To re-aim the headlamps yourself, use the following procedure.

The vehicle should be properly prepared as follows:

- The vehicle should be placed so the headlamps are 7.6 m (25 ft) from a light-colored wall.
- The vehicle must have all four tires on a level surface which is level all the way to the wall.
- The vehicle should be placed so it is perpendicular to the wall.
- The vehicle should not have any snow, ice, or mud on it.
- The vehicle should be fully assembled and all other work stopped while headlamp aiming is being performed.
- The vehicle should be normally loaded with a full tank of fuel and one person or 75 kg (160 lbs) sitting on the driver seat.
- Tires should be properly inflated.

Headlamp aiming is done with the vehicle's low-beam headlamps. The high-beam headlamps will be correctly aimed if the low-beam headlamps are aimed properly.

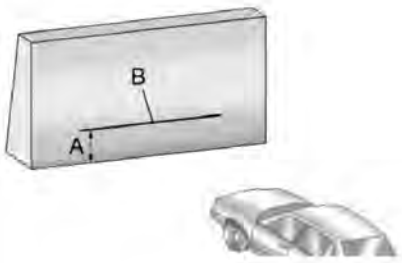
To adjust the vertical aim:

1. Open the hood. See *Hood on page 9-5* for more information.

Base Vehicle

Up-level Vehicle

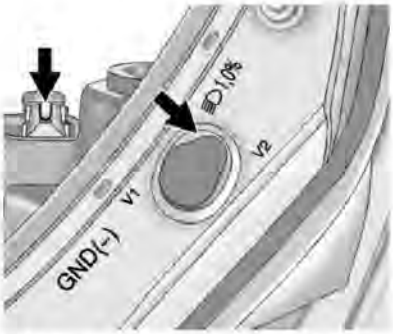
2. Locate the aim point at the center inner projector condensing lens of the low-beam headlamp, not the outer lens.
3. Measure the distance from the ground to the aim dot on the low-beam headlamp. Record the distance.



4. At the wall, measure from the ground upward (A) to the recorded distance from Step 3 and mark it.
5. Draw or tape a horizontal line (B) on the wall the width of the vehicle at the height of the mark in Step 4.

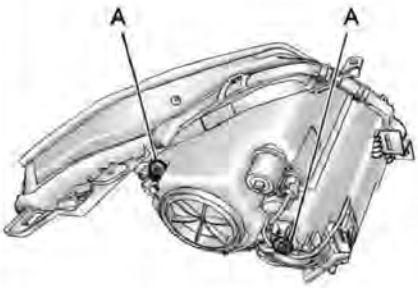
Notice: **Do not cover a headlamp to improve beam cut-off when aiming. Covering a headlamp may cause excessive heat build-up which may cause damage to the headlamp.**

6. Turn on the low-beam headlamps and place a piece of cardboard or equivalent in front of the headlamp not being adjusted. This allows only the beam of light from the headlamp being adjusted to be seen on the flat surface.



7. Locate the vertical headlamp adjusters, which are under the hood near each headlamp assembly.

   For the vehicle equipped with a base level lamp (halogen bulb), there will be one vertical headlamp adjuster (V1).

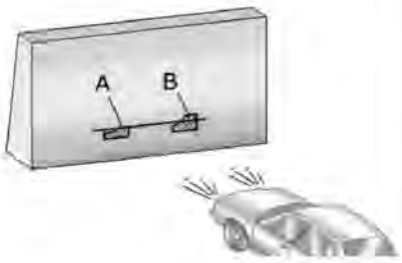


   For the vehicle equipped with an up-level headlamp (HID), there will be two vertical headlamp adjusters (V1 and V2).

   Some vehicles have funnel-shaped caps on the adjusters for easier access of a Number 2 Phillips screwdriver to turn the adjusters.

8. For the base vehicle, turn the vertical adjuster (V1) until the headlamp beam is aimed to the horizontal tape line. Turn it clockwise or counterclockwise to raise or lower the angle of the beam.

   For the up-level vehicle, turn the vertical adjusters (V1 and V2) simultaneously until the headlamp beam is aimed to the horizontal tape line. Turn them clockwise or counterclockwise to raise or lower the angle of the beam.



9. Make sure that the light from the headlamp is positioned at the bottom edge of the horizontal tape line. The lamp on the left (A) shows the correct headlamp aim. The lamp on the right (B) shows the incorrect headlamp aim.
10. Repeat Steps 7 through 9 for the opposite headlamp.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs on page 9-43*.

For any bulb changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

⚠ WARNING

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

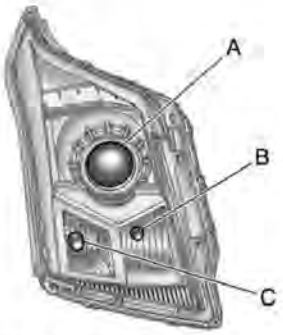
High Intensity Discharge (HID) Lighting

⚠ WARNING

The low beam high intensity discharge lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.

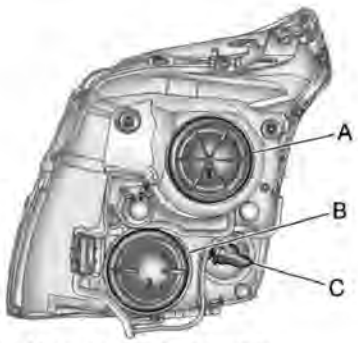
The up-level vehicle has HID headlamps. After an HID headlamp bulb has been replaced, the beam might be a slightly different shade than it was originally. This is normal.

Headlamps



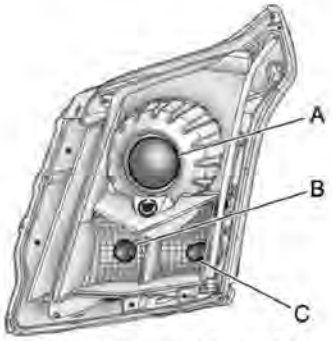
Base Headlamp Assembly (Front View Passenger Side)

A. Low-Beam Headlamp/Daytime Running Lamp (DRL)
B. High-Beam Headlamp
C. Turn Signal Lamp



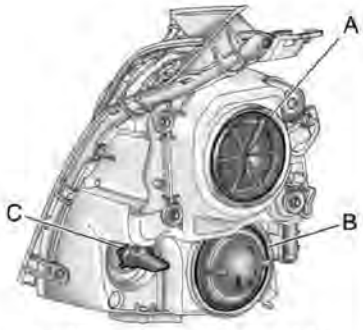
Base Headlamp Assembly (Rear View Passenger Side)

A. Low-Beam Headlamp/Daytime Running Lamp (DRL)
B. High-Beam Headlamp
C. Turn Signal Lamp



Up–Level Headlamp Assembly (Front View Driver Side)

A. High/Low-Beam Headlamp (To be replaced at dealer only)
B. Daytime Running Lamp (DRL)
C. Turn Signal Lamp



Up–Level Headlamp Assembly (Rear View Driver Side)

A. High/Low-Beam Headlamp (To be replaced at dealer only)
B. Daytime Running Lamp (DRL)
C. Turn Signal Lamp

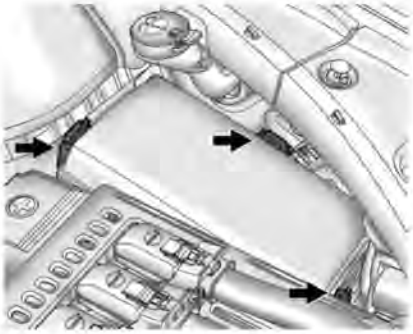
Driver Side

The removal of the underhood electrical center is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 9-5*.

⚠ WARNING

Liquids from environment or spillage and/or tools placed on top of or used in the underhood electrical center while the cover is removed can pose a risk of electrical shock/burn to anyone in the vicinity. These conditions can also cause damage to electrical components on the vehicle. Keep liquids and tools away from the underhood electrical center when the cover is removed.



2. Unlatch three clips and lift up the underhood electrical center cover to remove.

Passenger Side

The removal of the air filter/cleaner assembly and base is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 9-5.*

A. Air Duct Clamp
B. Connector Lock
C. Sensor Connectors
D. Retaining Clips

2. Disconnect the outlet duct by loosening the air duct clamp (A).
3. Remove the connector lock (B) located at the bottom of the sensor connector (C).
4. Press on the top and bottom of the sensor connectors (C) and remove.
5. Lift the three retaining clips (D) on the air filter housing.
6. Turn and tilt cover slightly upwards and slide cover away from outside edge of vehicle. Lift the cover away from base.

7. Lift the air cleaner/filter base to disengage from three pins.

Low-Beam Headlamps/Daytime Running Lamps (DRL), High-Beam Headlamps (Base)

1. Remove the top cap for the low-beam headlamp/DRL bulb replacement from the back of the headlamp assembly.

2. Remove the bottom cap for the high-beam headlamp bulb replacement from the back of the headlamp assembly.
3. Disconnect electrical connector.
4. Remove the bulb socket from the headlamp assembly.
5. Replace the bulb in the bulb socket.
6. Install the bulb socket in the headlamp assembly.
7. Connect the electrical connector.
8. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
9. For driver side, reinstall the underhood electrical center cover by latching three clips.
10. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

High/Low-Beam Headlamps (Up-Level)

The high/low beam headlamps on the up-level are High Intensity Discharge (HID) and should be replaced at the dealer.

Daytime Running Lamp (DRL) (Up-Level)

To replace the Front Turn Signal Lamp:

1. Remove the bottom cap for the DRL bulb replacement from the back of the headlamp assembly.
2. Disconnect electrical connector.
3. Remove the DRL bulb socket from the headlamp assembly.
4. Replace the bulb in the bulb socket.
5. Install the bulb socket in the headlamp assembly.
6. Connect the electrical connector.
7. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
8. For driver side, reinstall the underhood electrical center cover by latching three clips.
9. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

Front Turn Signal Lamp (Base and Up-Level)

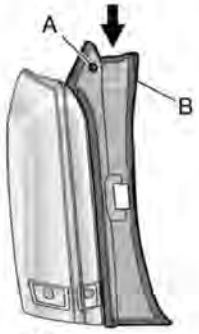
To replace the Front Turn Signal Lamp:

1. Remove the turn signal lamp bulb socket from the headlamp assembly.
2. Remove the turn signal lamp bulb from the socket.
3. Replace the bulb in the bulb socket.
4. Install the bulb socket in the headlamp assembly.
5. For driver side, reinstall the underhood electrical center cover by latching three clips.
6. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

Turn Signal Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate (Manual) on page 1-13* or *Liftgate (Power) on page 1-14*.

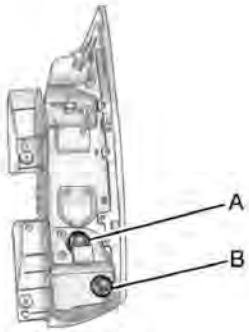


A. Push Pin

B. Taillamp Cover

2. Pull on push pin (A) to release the taillamp cover (B).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.



A. Turn Signal Lamp

B. Back-Up Bulb/Socket

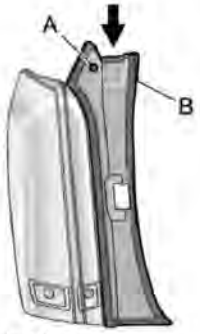
6. Turn the turn signal lamp (A) bulb socket counterclockwise to remove it from the taillamp assembly.
7. Pull the bulb straight out from the socket.

8. Press a new bulb into the socket, insert it into the taillamp assembly and turn the bulb socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

Back-Up Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate (Manual) on page 1-13* or *Liftgate (Power) on page 1-14*.

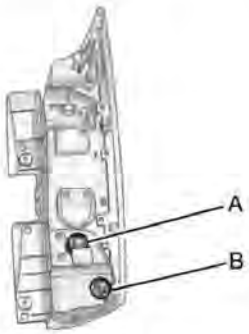


A. Push Pin

B. Taillamp Cover

2. Pull on push pin (A) to release the taillamp cover (B).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.



A. Turn Signal Lamp

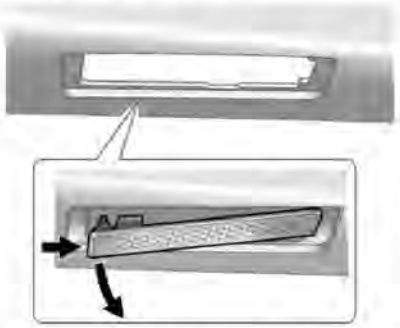
B. Back–Up Bulb/Socket

6. Disconnect the wire harness from the back–up bulb/socket (B).
7. Turn the back–up bulb socket counterclockwise to remove it from the taillamp assembly.
8. Press a new bulb/socket into the taillamp assembly and turn the bulb/socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

License Plate Lamp

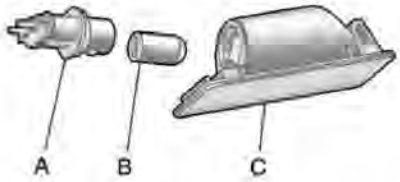
To replace one of these bulbs:

1. Open the liftgate. See *Liftgate (Manual) on page 1-13* or *Liftgate (Power) on page 1-14* for more information.



Passenger side shown, driver side similar

2. Push the left end of the lamp assembly towards the right.
3. Turn the lamp assembly down to remove from liftgate.



A. Bulb Socket

B. Bulb

C. Lamp Assembly

4. Turn the bulb socket (A) counterclockwise to remove from lamp assembly (C).
5. Pull the bulb (B) straight out of the bulb socket.
6. Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install into lamp assembly.
7. Turn the lamp assembly into the liftgate engaging the clip side first.
8. Push on the lamp side opposite the clip until the lamp assembly snaps into place.

Replacement Bulbs

Exterior Lamp	Bulb Number
Daytime Running Lamp	7443
Fog Lamp	H10
Headlamp High-Beam	9005
Headlamp Low-Beam	H10
License Plate Lamp	194
Turn Signal Front	7440
Tail/Turn Signal Rear	7440

For replacement bulbs not listed here, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect the following in the vehicle:

- Headlamp Wiring
- Windshield Wiper Motor
- Power Windows and Other Power Accessories

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

Windshield Wipers

If the wiper motor overheats due to heavy snow or ice, the windshield wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windshield before using the windshield wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

Fuses and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit breakers. This greatly reduces the chance of damage caused by electrical problems.

To check a fuse, look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating.

Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as you can.

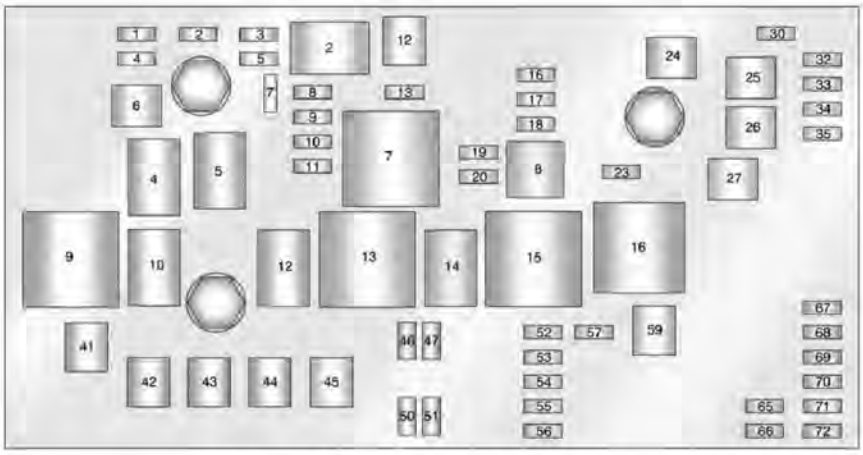
To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse Block on page 9-45* and *Rear Compartment Fuse Block on page 9-49*.

Engine Compartment Fuse Block

To remove the fuse block cover, press the clips on the cover and lift it straight up.

The vehicle might not have all the fuses and features listed.

Notice: **Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.**



Engine Compartment Fuse Block

J-Case Fuses	Usage
6	Wiper
12	Vacuum Pump
24	Anitlock Brake System Pump

J-Case Fuses	Usage
25	Rear Electrical Center 1
26	Rear Electrical Center 2
27	Not Used

J-Case Fuses	Usage
41	Cooling Fan 2
42	Starter
43	Not Used
44	Not Used
45	Cooling Fan 1
59	Secondary AIR Pump

Mini Fuses	Usage
1	Engine Control Module Battery
2	Transmission Control Module Battery
3	Mass Air Flow Sensor
4	Not Used
5	Engine Control Module Run Crank

Mini Fuses	Usage
7	Post–Catalytic Converter O2 Sensor
8	Pre–Catalytic Converter O2 Sensor
9	Engine Control Module Powertrain
10	Fuel Injectors–Even
11	Fuel Injectors–Odd
13	Washer
16	Instrument Panel Cluster/Malfunction Indicator Lamp/ Ignition
17	Air Quality Sensor
18	Headlamp Washer
19	Transmission Control Module Run Crank
20	Rear Electrical Center Run Crank

Mini Fuses	Usage
23	Heater Motor
30	Switch Back Light
32	Battery Sense (Regulated Voltage Control)
33	Adaptive Forward Lighting / Adaptive Headlamp Leveling Module
34	Body Control Module 7
35	Electronic Brake Control Module
46	Low Beam Headlamp-Right
47	Low Beam Headlamp-Left
50	Front Fog Lamps
51	Horn
52	Fuel System Control Module

Mini Fuses	Usage
53	Headlamp Level
54	Sensing Diagnostic Module Ignition
55	High Beam Headlamp–Right
56	High Beam Headlamp–Left
57	Ignition Steering Column Lock
65	Trailer Right Stop Lamp
66	Trailer Left Stop Lamp
67	Spare

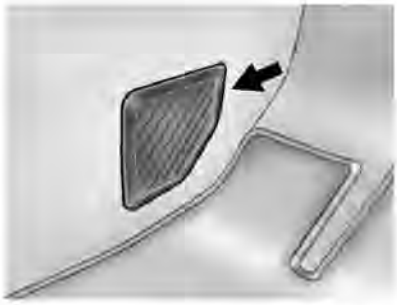
Mini Fuses	Usage
68	Spare
69	Spare
70	Spare
71	Spare
72	Spare

Mini Relays	Usage
7	Powertrain
9	Cooling Fan 2
13	Cooling Fan 1
15	Run/Crank
16	Secondary AIR Pump

Micro Relays	Usage
2	Vacuum Pump
4	Wiper Control
5	Wiper Speed
10	Starter
12	Cool Fan 3
14	Low Beam/HID

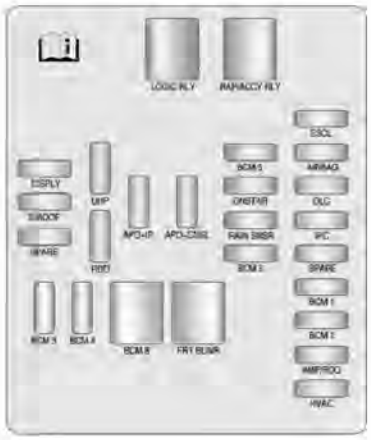
U Micro Relays	Usage
8	Headlamp Washer

Instrument Panel Fuse Block



The instrument panel fuse block is located in the center console between the driver and passenger seats. To access the fuses, open the fuse panel door from the passenger side by pulling it out.

To reinstall the door, push the door back into its original location.



Instrument Panel Fuse Block

Mini Fuses	Usage
DISPLY	Display
S/ROOF	Sun Roof
SPARE	Spare
UHP	Universal Handsfree Phone
RDO	Radio
APO - IP	Auxiliary Power Outlet - Instrument Panel
APO - CNSL	Auxiliary Power Outlet - Floor Console
BCM 3	Body Control Module 3
BCM 4	Body Control Module 4
BCM 5	Body Control Module 5
ONSTAR	OnStar® System

Mini Fuses	Usage
RAIN SNSR	Rain Sensor
BCM 6	Body Control Module 6
ESCL	Electronic Steering Column Lock
AIRBAG	Sensing and Diagnostic Module
DLC	Data Link Connection
IPC	Instrument Panel Cluster
SPARE	Not Used
BCM 1	Body Control Module 1
BCM 2	Body Control Module 2

Mini Fuses	Usage
AMP/RDO	Amplifier/Radio
HVAC	Heating Ventilation & Air Conditioning

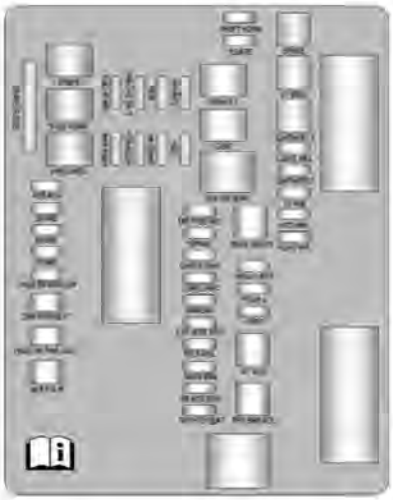
J—Case Fuses	Usage
BCM 8	Body Control Module 8
FRT BLWR	Front Blower

Relays	Usage
LOGIC RLY	Logistics Relay
RAP/ ACCY RLY	Retained Accessory Power/ Accessory Relay

Rear Compartment Fuse Block

The rear compartment fuse block is located in the cargo area, on the driver side of the vehicle behind the lower trim panel. To open, turn the latch with a flat bladed tool and pull the trim panel from the edges to fold it down.

The vehicle may not be equipped with all of the fuses and relays shown.



Rear Compartment Fuse Block

Fuses	Usage
SPARE FUSES	Spare Fuses
AOS MDL	Automatic Occupant Sensing Module
SPARE	Not Used
SPARE	Not Used
SPARE	Not Used
PASS DR WDO SW	Passenger Door Window Switch
DRV PWR SEAT	Driver Power Seat
PASS DR PWR SEAT	Passenge/Driver Power Seats
MDL TRLR	Trailer Module
RPA MDL	Rear Parking Assist Module
RDM	Rear Drive Module
PRK LPS TRLR	Trailer Park Lamps
FUEL PUMP	Fuel Pump

Fuses	Usage
* SEC	Security
INFOTMNT	Infotainment
* TRLR EXP	Trailer Export
WPR REAR	Rear Wiper
MIR WDO MDL	Mirror Window Module
* SPARE	Not Used
CNSTR VENT	Canister Vent
LGM LOGIC	Lift Gate Module Logic
CAMERA	Rear Vision Camera
FRT VENT SEAT	Front Ventilated Seats
TRLR MDL	Trailer Module
SADS MDL	Semi Active Damping System Module
RR HTD SEAT	Rear Heated Seats

Fuses	Usage
FRT HTD SEAT	Front Heated Seats
THEFT HORN	Theft Horn
* LGATE	Liftgate
REAR DEFOG	Rear Defog
* BCM THEFT	Body Control Module Theft
* TRLR 2	Trailer 2
UGDO	Universal Garage Door Opener
RT WDO	Right Window
PRK BRK MDL	Park Brake Module

Fuses	Usage
SPARE	Not Used
LT WDO	Left Window
IGN/ THEFT 1	Ignition/Theft 1
LGATE MDL	Liftgate Module
IGN/ THEFT 2	Ignition/Theft 2
SPARE	Not Used
HTD MIR	Heated Mirror
AUX PWR	Auxiliary Power Outlet

Relays	Usage
SPARE	Not Used
* FUEL PUMP	Fuel Pump
WPR CONTRL	Wiper Control
* RUN RLY	Run Relay
LOGIC	Logistic Relay
DEFOG REAR	Rear Window Defogger

*-Denotes up-level content.

Wheels and Tires

Tires

Your new vehicle comes with high-quality tires made by a leading tire manufacturer. If you ever have questions about your tire warranty and where to obtain service, see your vehicle Warranty booklet for details. For additional information refer to the tire manufacturer.

⚠ WARNING

Poorly maintained and improperly used tires are dangerous.

- Overloading your tires can cause overheating as a result of too much flexing. You could have an air-out and a serious accident. See *Vehicle Load Limits on page 8-11*.
- Underinflated tires pose the same danger as overloaded tires. The resulting accident could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when your tires are cold. See *Tire Pressure on page 9-59*.

(Continued)

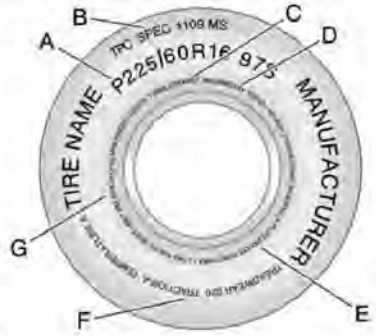
WARNING (Continued)

- Overinflated tires are more likely to be cut, punctured or broken by a sudden impact — such as when you hit a pothole. Keep tires at the recommended pressure.
- Worn, old tires can cause accidents. If your tread is badly worn, or if your tires have been damaged, replace them.

See *Tire Pressure for High-Speed Operation on page 9-60* for inflation pressure adjustment for high speed driving.

Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples below show a typical passenger vehicle tire and a compact spare tire sidewall.



Passenger (P-Metric) Tire Example

(A) Tire Size: The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type, and service description. See the "Tire Size" illustration later in this section for more detail.

(B) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

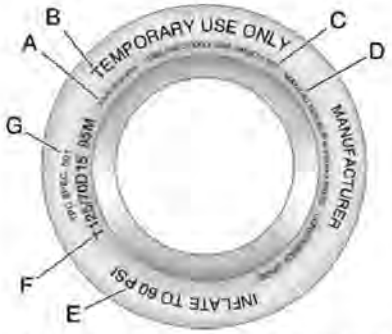
(C) DOT (Department of Transportation): The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

(D) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code is the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(E) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(F) Uniform Tire Quality Grading (UTQG): Tire manufacturers are required to grade tires based on three performance factors: treadwear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading on page 9-71*.

(G) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.



Compact Spare Tire Example

(A) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(B) Temporary Use Only: The compact spare tire or temporary use tire has a tread life of approximately 5 000 km (3,000 miles) and should not be driven at speeds over 105 km/h (65 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If your vehicle has a compact spare tire, see *Compact Spare Tire on page 9-100* and *If a Tire Goes Flat on page 9-74*.

(C) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code is the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(D) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.

(E) Tire Inflation: The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure on page 9-59*.

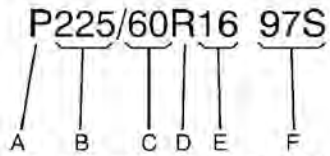
(F) Tire Size: A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(G) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

Tire Designations

Tire Size

The following illustration shows an example of a typical passenger vehicle tire size.



(A) Passenger (P-Metric) Tire: The United States version of a metric tire sizing system. The letter P as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

(B) Tire Width: The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(C) Aspect Ratio: A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item C of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(D) Construction Code: A letter code is used to indicate the type of ply construction in the tire. The letter R means radial ply construction; the letter D means diagonal or bias ply construction; and the letter B means belted-bias ply construction.

(E) Rim Diameter: Diameter of the wheel in inches.

(F) Service Description: These characters represent the load index and speed rating of the tire. The load index represents the load carrying capacity a tire is certified to carry. The speed rating is the maximum speed a tire is certified to carry a load.

Tire Terminology and Definitions

Air Pressure: The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in psi (pounds per square inch) or kPa (kilopascal).

Accessory Weight: This means the combined weight of optional accessories. Some examples of optional accessories are, automatic transmission, power steering, power brakes, power windows, power seats, and air conditioning.

Aspect Ratio: The relationship of a tire's height to its width.

Belt: A rubber coated layer of cords that is located between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead: The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire: A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure: The amount of air pressure in a tire, measured in psi (pounds per square inch) or kPa (kilopascal) before a tire has built up heat from driving. See *Tire Pressure on page 9-59*.

Curb Weight: The weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil, and coolant, but without passengers and cargo.

DOT Markings: A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation (DOT) motor vehicle safety standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand, and date of production.

GVWR: Gross Vehicle Weight Rating. See *Vehicle Load Limits on page 8-11*.

GAWR FRT: Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits on page 8-11*.

GAWR RR: Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits on page 8-11*.

Intended Outboard Sidewall: The side of an asymmetrical tire, that must always face outward when mounted on a vehicle.

Kilopascal (kPa): The metric unit for air pressure.

Light Truck (LT-Metric) Tire: A tire used on light duty trucks and some multipurpose passenger vehicles.

Load Index: An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

Maximum Inflation Pressure: The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.

Maximum Load Rating: The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum Loaded Vehicle Weight: The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Normal Occupant Weight: The number of occupants a vehicle is designed to seat multiplied by 68 kg (150 lbs). See *Vehicle Load Limits on page 8-11*.

Occupant Distribution: Designated seating positions.

Outward Facing Sidewall: The side of an asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The side of the tire that contains a whitewall, bears white lettering, or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the other sidewall of the tire.

Passenger (P-Metric) Tire: A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

Recommended Inflation Pressure: Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Tire Pressure on page 9-59* and *Vehicle Load Limits on page 8-11*.

Radial Ply Tire: A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

Rim: A metal support for a tire and upon which the tire beads are seated.

Sidewall: The portion of a tire between the tread and the bead.

Speed Rating: An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

Traction: The friction between the tire and the road surface. The amount of grip provided.

Tread: The portion of a tire that comes into contact with the road.

Treadwear Indicators: Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1.6 mm (1/16 inch) of tread remains. See *When It Is Time for New Tires on page 9-68.*

UTQGS (Uniform Tire Quality Grading Standards): A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading on page 9-71.*

Vehicle Capacity Weight: The number of designated seating positions multiplied by 68 kg (150 lbs) plus the rated cargo load. See *Vehicle Load Limits on page 8-11.*

Vehicle Maximum Load on the Tire: Load on an individual tire due to curb weight, accessory weight, occupant weight, and cargo weight.

Vehicle Placard: A label permanently attached to a vehicle showing the vehicle's capacity weight and the original equipment tire size and recommended inflation pressure. See "Tire and Loading Information Label" under *Vehicle Load Limits on page 8-11.*

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

Notice: **Do not let anyone tell you that under-inflation or over-inflation is all right. It is not. If your tires do not have enough air (under-inflation), you can get the following:**

- **Too much flexing**
- **Too much heat**
- **Tire overloading**
- **Premature or irregular wear**
- **Poor handling**
- **Reduced fuel economy**

If your tires have too much air (over-inflation), you can get the following:

- **Unusual wear**
- **Poor handling**
- **Rough ride**
- **Needless damage from road hazards**

A vehicle specific Tire and Loading Information label is attached to your vehicle. This label shows your vehicle's original equipment tires and the correct inflation pressures for your tires when they are cold. The recommended cold tire inflation pressure, shown on the label, is the minimum amount of air pressure needed to support your vehicle's maximum load carrying capacity.

For additional information regarding how much weight your vehicle can carry, and an example of the Tire and Loading Information label, see *Vehicle Load Limits on page 8-11*. How you load your vehicle affects vehicle handling and ride comfort. Never load your vehicle with more weight than it was designed to carry.

When to Check

Check your tires once a month or more. Do not forget to check the compact spare tire, if the vehicle has one. The compact spare should be at 60 psi (420 kPa). For additional information regarding the compact spare tire, see *Compact Spare Tire on page 9-100.*

How to Check

Use a good quality pocket-type gauge to check tire pressure. You cannot tell if your tires are properly inflated simply by looking at them. Radial tires may look properly inflated even when they are under-inflated. Check the tire's inflation pressure when the tires are cold. Cold means your vehicle has been sitting for at least three hours or driven no more than 1.6 km (1 mile).

Remove the valve cap from the tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement. If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until you reach the recommended amount.

If you overfill the tire, release air by pushing on the metal stem in the center of the tire valve. Re-check the tire pressure with the tire gauge.

Be sure to put the valve caps back on the valve stems. They help prevent leaks by keeping out dirt and moisture.

Tire Pressure for High-Speed Operation

⚠ WARNING

Driving at high speeds, 160 km/h (100 mph) or higher, puts an additional strain on tires. Sustained high-speed driving causes excessive heat build up and can cause sudden tire failure. You could have a crash and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for high speed operation. When speed limits and road conditions are such that a vehicle can be driven at high speeds, make sure the tires are rated for high speed operation, in excellent condition, and set to the correct cold tire inflation pressure for the vehicle load.

Vehicles with P235/65R18, P235/55R20, or 235/55R20 size tires require inflation pressure adjustment when driving your vehicle at speeds of 100 mph (160 km/h) or higher. Set the cold inflation pressure to the maximum inflation pressure shown on the tire sidewall, or 44 psi (300 kPa), whichever is lower. When you end this high-speed driving, return the tires to the cold tire inflation pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 8-11* and *Tire Pressure on page 9-59*.

You will find the maximum load and inflation pressure molded on the tire's sidewall, in small letters, near the rim flange. It will read something like this: Maximum load 690 kg (1521 lbs) 300 kPa (44 psi) Max. Press.

Tire Pressure Monitor System

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS sensors monitor the air pressure in your tires and transmit tire pressure readings to a receiver located in the vehicle.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated.

Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

See *Tire Pressure Monitor Operation on page 9-62* for additional information.

Federal Communications Commission (FCC) and Industry Canada

See *Radio Frequency Statement on page 12-17* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the vehicle's tires and transmit the tire pressure readings to a receiver located in the vehicle.

When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light located on the instrument panel cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the tire loading information label. See *Vehicle Load Limits on page 8-11*.

At the same time a message to check the pressure appears on the Driver Information Center (DIC) display. The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure. Using the DIC, tire pressure levels can be viewed by the driver. For additional information and details about the DIC operation and displays see *Driver Information Center (DIC) on page 4-29*.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as you start to drive. This could be an early indicator that the air pressure in the tire(s) are getting low and need to be inflated to the proper pressure.

A Tire and Loading Information label, attached to your vehicle, shows the size of your vehicle's original equipment tires and the correct inflation pressure for your vehicle's tires when they are cold. See *Vehicle Load Limits on page 8-11*, for an example of the Tire and Loading Information label and its location on your vehicle. Also see *Tire Pressure on page 9-59*.

Your vehicle's TPMS can warn you about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection on page 9-66*, *Tire Rotation on page 9-66* and *Tires on page 9-52*.

Notice: **Using non-approved tire sealants could damage the Tire Pressure Monitor System (TPMS) sensors. TPMS sensor damage caused by using an incorrect tire sealant is not covered by the vehicle warranty. Always use the GM approved tire sealant available through your dealer.**

Factory-installed Tire Inflator Kits use a GM approved liquid tire sealant. Using non-approved tire sealants could damage the TPMS sensors. See *Tire Sealant and Compressor Kit (Without Selector Switch) on page 9-76* or *Tire Sealant and Compressor Kit (With Selector Switch) on page 9-84* for information regarding the inflator kit materials and instructions.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tire warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message is also displayed. The low tire warning light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause the malfunction light and DIC message to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The TPMS malfunction light and DIC message should go off once you re-install the road tire containing the TPMS sensor.
- The TPMS sensor matching process was started but not completed or not completed successfully after rotating the vehicle's tires. The DIC message and TPMS malfunction light should go off once the TPMS sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The DIC message and the TPMS malfunction light should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tires or wheels do not match your vehicle's original equipment tires or wheels. Tires and wheels other than those recommended for your vehicle could prevent the TPMS from functioning properly. See *Buying New Tires on page 9-68*.
- Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning it cannot detect or signal a low tire condition. See your dealer for service if the TPMS malfunction light and DIC message comes on and stays on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. Any time you rotate your vehicle's tires or replace one or more of the TPMS sensors, the identification codes will need to be matched to the new tire/wheel position. The sensors are matched to the tire/wheel positions in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear tire using a TPMS diagnostic tool. See your dealer for service.

The TPMS sensors can also be matched to each tire/wheel position by increasing or decreasing the tire's air pressure. If increasing the tire's air pressure, do not exceed the maximum inflation pressure indicated on the tire's sidewall.

To decrease air-pressure out of a tire you can use the pointed end of the valve cap, a pencil-style air pressure gauge, or a key.

You have two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer than two minutes, to match the first tire and wheel, or more than five minutes to match all four tire and wheel positions the matching process stops and you need to start over.

The TPMS sensor matching process is outlined below:

1. Set the parking brake.
2. Place the vehicle power mode in ON/RUN/START. See *Ignition Positions on page 8-18*.
3. Select the vehicle information menu using the menu button.
4. Select the tire pressure screen using the up/down thumbwheel.
5. Press and hold SET to begin the sensor matching process.
6. Press SET to confirm selection. The horn sounds twice to signal the receiver is in relearn mode and TIRE LEARNING ACTIVE message displays on the DIC screen.

7. Start with the driver side front tire.
8. Remove the valve cap from the valve cap stem. Activate the TPMS sensor by increasing or decreasing the tire's air pressure for five seconds, or until a horn chirp sounds. The horn chirp, which may take up to 30 seconds to sound, confirms that the sensor identification code has been matched to this tire and wheel position.
9. Proceed to the passenger side front tire, and repeat the procedure in Step 8.
10. Proceed to the passenger side rear tire, and repeat the procedure in Step 8.
11. Proceed to the driver side rear tire, and repeat the procedure in Step 8. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
12. Press STOP to turn the ignition off.
13. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.
14. Put the valve caps back on the valve stems.

Tire Inspection

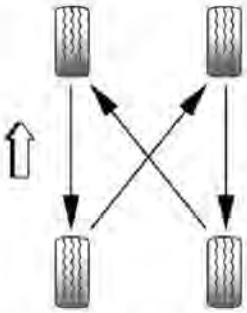
We recommend that you regularly inspect your vehicle's tires, including the spare tire, if the vehicle has one, for signs of wear or damage. See *When It Is Time for New Tires on page 9-68* for more information.

Tire Rotation

Tires should be rotated every 8 000 to 13 000 km (5,000 to 8,000 miles). See *Scheduled Maintenance on page 10-2*.

The purpose of a regular tire rotation is to achieve a uniform wear for all tires on the vehicle. This will ensure that the vehicle continues to perform most like it did when the tires were new.

Any time you notice unusual wear, rotate the tires as soon as possible and check wheel alignment. Also check for damaged tires or wheels. See *When It Is Time for New Tires on page 9-68* and *Wheel Replacement on page 9-73*.



When rotating the vehicle's tires, always use the correct rotation pattern shown here.

Do not include the compact spare tire in the tire rotation.

After the tires have been rotated, adjust the front and rear inflation pressures as shown on the Tire and Loading Information label. See *Tire Pressure on page 9-59* and *Vehicle Load Limits on page 8-11*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 9-62*.

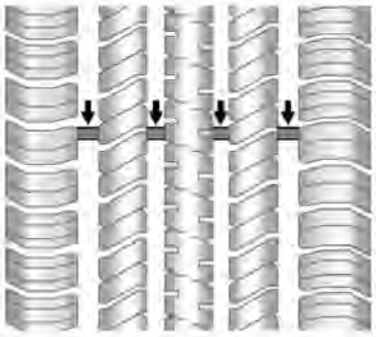
Make certain that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications on page 11-2*.

⚠ WARNING

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, use a cloth or a paper towel to do this; but be sure to use a scraper or wire brush later, if needed, to get all the rust or dirt off. See *If a Tire Goes Flat on page 9-74*.

When It Is Time for New Tires

Various factors, such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions influence when you need new tires.



One way to tell when it is time for new tires is to check the treadwear indicators, which appear when the tires have only 1.6 mm (1/16 inch) or less of tread remaining.

The vehicle needs new tires if any of the following statements are true:

- You can see the indicators at three or more places around the tire.
- You can see cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

The rubber in tires degrades over time. This is also true for the spare tire, if the vehicle has one, even if it is not being used. Multiple conditions affect how fast this aging takes place, including temperatures, loading conditions, and inflation pressure maintenance. With proper care and maintenance tires typically wear out before they degrade due to age. If you are unsure about the need to replace the tires as they get older, consult the tire manufacturer for more information.

Buying New Tires

GM has developed and matched specific tires for your vehicle. The original equipment tires installed on your vehicle, when it was new, were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. If you need replacement tires, GM strongly recommends that you get tires with the same TPC Spec rating. This way, your vehicle will continue to have tires that are designed to give the same performance and vehicle safety, during normal use, as the original tires.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of your vehicle, including brake system performance, ride and handling, traction control, and tire pressure monitoring performance. GM's TPC Spec number is molded onto the tire's sidewall near the tire size. If the tires have an all-season tread design, the TPC Spec number will be followed by an MS for mud and snow. See *Tire Sidewall Labeling on page 9-53* for additional information.

GM recommends replacing tires in sets of four. This is because uniform tread depth on all tires will help keep your vehicle performing most like it did when the tires were new. Replacing less than a full set of tires can affect the braking and handling performance of your vehicle.

See *Tire Inspection on page 9-66* and *Tire Rotation on page 9-66* for information on proper tire rotation.

⚠ WARNING

Mixing tires could cause you to lose control while driving. If you mix tires of different sizes, brands, or types (radial and bias-belted tires), the vehicle may not handle properly, and you could have a crash. Using tires of different sizes, brands, or types may also cause damage to your vehicle. Be sure to use the correct size, brand, and type of tires on all wheels. It is all right to drive with your compact spare temporarily, as it was developed for use on your vehicle. See *Compact Spare Tire on page 9-100*.

⚠ WARNING

If you use bias-ply tires on the vehicle, the wheel rim flanges could develop cracks after many miles of driving. A tire and/or wheel could fail suddenly, causing a crash. Use only radial-ply tires with the wheels on the vehicle.

If you must replace your vehicle's tires with those that do not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction type (radial and bias-belted tires) as your vehicle's original tires.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed on your vehicle. Non-TPC Spec rated tires may give a low-pressure warning that is higher or lower than the proper warning level you would get with TPC Spec rated tires. See *Tire Pressure Monitor System on page 9-61*.

Your vehicle's original equipment tires are listed on the Tire and Loading Information Label. See *Vehicle Load Limits on page 8-11*, for more information about the Tire and Loading Information Label and its location on your vehicle.

Different Size Tires and Wheels

If you add wheels or tires that are a different size than your original equipment wheels and tires, this could affect the way your vehicle performs, including its braking, ride and handling characteristics, stability, and resistance to rollover. Additionally, if your vehicle has electronic systems such as antilock brakes, rollover airbags, traction control, and electronic stability control, the performance of these systems can be affected.

⚠ WARNING

If you add different sized wheels, your vehicle may not provide an acceptable level of performance and safety if tires not recommended for those wheels are selected. You may increase the chance that you will crash and suffer serious injury. Only use GM specific wheel and tire systems developed for your vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires on page 9-68* and *Accessories and Modifications on page 9-3* for additional information.

Uniform Tire Quality Grading

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter-type snow tires, space-saver, or temporary use spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and a half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

Traction – AA, A, B, C

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature – A, B, C

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

Wheel Alignment and Tire Balance

The tires and wheels on the vehicle were aligned and balanced carefully at the factory to give the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing will not be necessary on a regular basis. However, if there is unusual tire wear or the vehicle pulls to one side or the other, the alignment should be checked. If the vehicle vibrates when driving on a smooth road, the tires and wheels might need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it, except some aluminum wheels, which can sometimes be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel you need.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

If you need to replace any of the wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors, replace them only with new GM original equipment parts. This way, you will be sure to have the right wheel, wheel bolts, wheel nuts, and TPMS sensors for the vehicle.

⚠ WARNING

Using the wrong replacement wheels, wheel bolts, or wheel nuts on your vehicle can be dangerous. It could affect the braking and handling of your vehicle, make your tires lose air and make you lose control. You could have a collision in which you or others could be injured. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

Notice: **The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tire or tire chain clearance to the body and chassis.**

See *If a Tire Goes Flat on page 9-74* for more information.

Used Replacement Wheels

⚠ WARNING

Putting a used wheel on the vehicle is dangerous. You cannot know how it has been used or how far it has been driven. It could fail suddenly and cause a crash. If you have to replace a wheel, use a new GM original equipment wheel.

Tire Chains

⚠ WARNING

Do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes, suspension or other vehicle parts.

(Continued)

WARNING (Continued)

The area damaged by the tire chains could cause you to lose control of the vehicle and you or others may be injured in a crash.

Use another type of traction device only if its manufacturer recommends it for use on the vehicle and tire size combination and road conditions. Follow that manufacturer's instructions. To help avoid damage to the vehicle, drive slowly, readjust or remove the device if it is contacting the vehicle, and do not spin the vehicle's wheels. If you do find traction devices that will fit, install them on the front tires.

If a Tire Goes Flat

It is unusual for a tire to blowout while you are driving, especially if you maintain your vehicle's tires properly. If air goes out of a tire, it is much more likely to leak out slowly. But if you should ever have a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop well out of the traffic lane.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction you would use in a skid. In any rear blowout remove your foot from the accelerator pedal. Get the vehicle under control by steering the way you want the vehicle to go.

It may be very bumpy and noisy, but you can still steer. Gently brake to a stop, well off the road if possible.

⚠ WARNING

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 5-5*.

⚠ WARNING

Changing a tire can be dangerous. The vehicle can slip off the jack and roll over or fall on you or other people. You and they could be badly injured or even killed. Find a level place to change your tire. To help prevent the vehicle from moving:

1. Set the parking brake firmly.
2. Put an automatic transmission shift lever in P (Park), or shift a manual transmission to 1 (First) or R (Reverse).
3. Turn off the engine and do not restart while the vehicle is raised.
4. Do not allow passengers to remain in the vehicle.

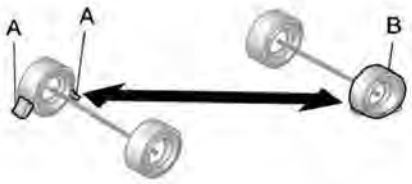
(Continued)

WARNING (Continued)

To be certain the vehicle will not move, put blocks at the front and rear of the tire farthest away from the one being changed. That would be the tire on the other side, at the opposite end of the vehicle.

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. To use the jacking equipment to change a spare tire safely, follow the instructions below. Then see *Tire Changing on page 9-93*. To use the tire sealant and compressor kit, see *Tire Sealant and Compressor Kit (Without Selector Switch) on page 9-76* or *Tire Sealant and Compressor Kit (With Selector Switch) on page 9-84*.

When the vehicle has a flat tire (B), use the following example as a guide to assist you in the placement of wheel blocks (A).



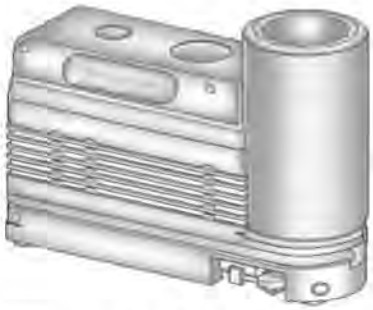
A. Wheel Block

B. Flat Tire

The following information explains how to repair or change a tire.

Tire Sealant and Compressor Kit (Without Selector Switch)

System Identification



If the vehicle has the tire sealant and compressor kit shown above, see the operating instructions that follow.

If the vehicle has the tire sealant and compressor kit shown above, follow the operating instructions under "Tire Sealant and Compressor Kit (With Selector Switch)."

⚠ WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 8-24*.

⚠ WARNING

Over-inflating a tire could cause the tire to rupture and you or others could be injured. Be sure to read and follow the tire sealant and compressor kit instructions and inflate the tire to its recommended pressure. Do not exceed the recommended pressure.

⚠ WARNING

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

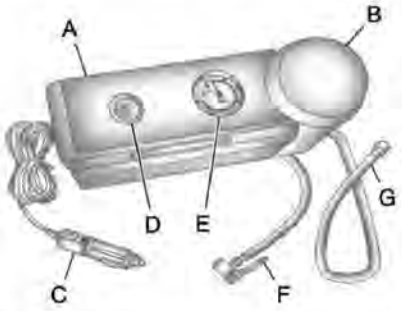
If this vehicle has a tire sealant and compressor kit, there may not be a spare tire, tire changing equipment, and on some vehicles there may not be a place to store a tire.

The tire sealant and compressor can be used to temporarily seal punctures up to ¼ inch (6 mm) in the tread area of the tire. It can also be used to inflate an under inflated tire.

If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Service on page 12-6*.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:



A. Air Compressor
B. Tire Sealant Canister
C. Power Plug
D. On/Off Button
E. Pressure Gauge
F. Air Only Hose (Black)
G. Sealant/Air Hose (Clear)

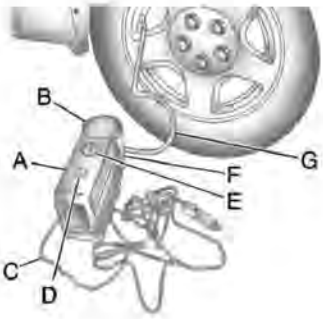
Tire Sealant

Read and follow the safe handling instructions on the label adhered to the sealant canister.

Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date. Replacement sealant canisters are available at your local dealer. See "Removal and Installation of the Sealant Canister" following.

There is only enough sealant to seal one tire. After usage, the sealant canister and sealant/air hose assembly must be replaced. See "Removal and Installation of the Sealant Canister" following.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire



When using the tire sealant and compressor kit during cold temperatures, warm the kit in a heated environment for 5 minutes. This will help to inflate the tire faster.

Always do a safety check first. See *If a Tire Goes Flat on page 9-74*.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 9-93*.

   Make sure the on/off button (D) is in the off (O) position.

2. Unwrap the sealant/air hose (G) and the power plug (C).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.

4. Remove the valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the sealant/air hose (G) onto the tire valve stem. Turn it clockwise until it is tight.
6. Plug the power plug (C) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 4-11*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.

7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Press the on/off (D) button to turn the tire sealant and compressor kit on.

   The compressor will inject sealant and air into the tire.

   The pressure gauge (E) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.

9. Inflate the tire to the recommended inflation pressure using the pressure gauge (E). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 9-59*.

   The pressure gauge (E) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

   Notice: **If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tire is too severely damaged and the tire sealant and compressor kit cannot inflate the tire. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Service on page 12-6*.**

10. Press the on/off button (D) to turn the tire sealant and compressor kit off.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire, therefore, Steps 11 through 17 must be done immediately after Step 10.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

11. Unplug the power plug (C) from the accessory power outlet in the vehicle.
12. Turn the sealant/air hose (G) counterclockwise to remove it from the tire valve stem.
13. Replace the tire valve stem cap.
14. Replace the sealant/air hose (G), and the power plug (C) back in their original location.

15. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (B) and place it in a highly visible location.

    The label is a reminder not to exceed 55 mph (90 km/h) until the damaged tire is repaired or replaced.

16. Return the equipment to its original storage location in the vehicle.

17. Immediately drive the vehicle 5 miles (8 km) to distribute the sealant in the tire.

18. Stop at a safe location and check the tire pressure. Refer to Steps 1 through 11 under "Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)."

    If the tire pressure has fallen more than 10 psi (68 kPa) below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant cannot seal the tire. See *Roadside Service on page 12-6*.

    If the tire pressure has not dropped more than 10 psi (68 kPa) from the recommended inflation pressure, inflate the tire to the recommended inflation pressure.

19. Wipe off any sealant from the wheel, tire or vehicle.

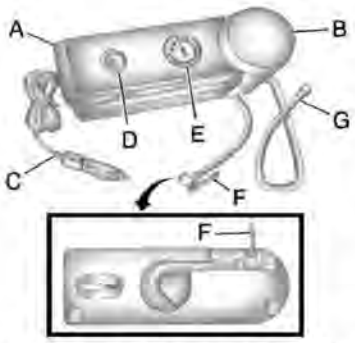
20. Dispose of the used sealant canister (B) and sealant/air hose (G) assembly at a local dealer or in accordance with local state codes and practices.

21. Replace it with a new canister available from your dealer.

22. After temporarily sealing a tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within a 100 miles (161 km) of driving to have the tire repaired or replaced.

Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:



Always do a safety check first. See *If a Tire Goes Flat on page 9-74*.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 9-93*.
2. Unlock the air only hose (F) from the sealant canister (B) by pulling up on the lever.
3. Pull the air only hose (F) from the sealant canister (B).
4. Remove the power plug (C) from the air compressor (A).
5. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
6. Remove the tire valve stem cap by turning it counterclockwise.
7. Attach the air only hose (F) onto the tire valve stem and press the lever down to secure it.
8. Plug the power plug (C) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 4-11*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
9. Start the vehicle. The vehicle must be running while using the air compressor.
10. Press the on/off (D) button to turn the compressor on.

    The compressor will inflate the tire with air only.

11. Inflate the tire to the recommended inflation pressure using the pressure gauge (E). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 9-59*.

    The pressure gauge (E) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on/off until the correct pressure is reached.

12. Press the on/off button (D) to turn the tire sealant and compressor kit off.

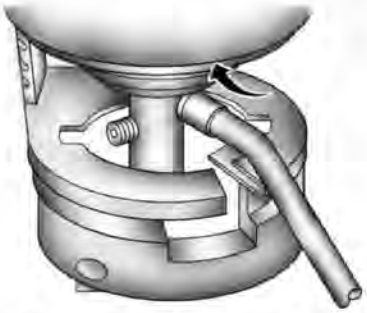
    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

13. Unplug the power plug (C) from the accessory power outlet in the vehicle.
14. Disconnect the air only hose (F) from the tire valve stem, by turning it counterclockwise, and replace the tire valve stem cap.
15. Replace the air only hose (F) and the power plug (C) back in its original location.
16. Place the equipment in the original storage location in the vehicle.

Removal and Installation of the Sealant Canister

To remove the sealant canister:

1. Unlock the air only hose (F) from the sealant canister (B) by pulling up on the lever.
2. Pull the air only hose (F) from the sealant canister (B).
3. Unwrap the sealant/air hose (G) from the compressor (A).



4. Turn the sealant canister (B) so the inflator filling hose is aligned with the slot in the compressor.
5. Lift the sealant canister (B) from the compressor and replace with a new sealant canister. See your dealer for more information.

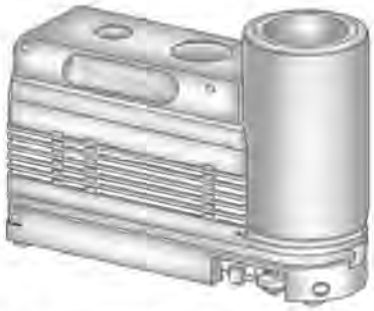
To install a new sealant canister:

1. Align the sealant/air hose (G) with the slot in the air compressor.
2. Push the sealant canister (B) down and turn it clockwise.
3. Wrap the sealant/air hose (G) around the air compressor channel to stow it in its original location.
4. Push the air compressor inflator hose (F) onto the sealant canister inlet and push the lever down.

Tire Sealant and Compressor Kit (With Selector Switch)

System Identification

If the vehicle has the tire sealant and compressor kit shown above, see the operating instructions that follow.



If the vehicle has the tire sealant and compressor kit shown above, follow the operating instructions under "Tire Sealant and Compressor Kit (Without Selector Switch).

⚠ WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 8-24*.

⚠ WARNING

Over-inflating a tire could cause the tire to rupture and you or others could be injured. Be sure to read and follow the tire sealant and compressor kit instructions and inflate the tire to its recommended pressure. Do not exceed the recommended pressure.

⚠ WARNING

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

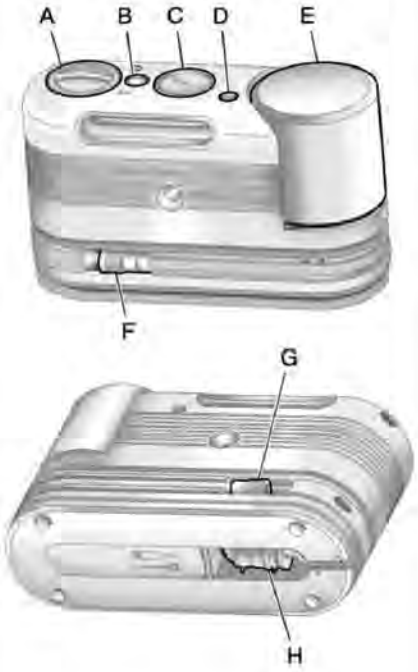
If this vehicle has a tire sealant and compressor kit, there may not be a spare tire, tire changing equipment, and on some vehicles there may not be a place to store a tire.

The tire sealant and compressor can be used to temporarily seal punctures up to ¼ inch (6 mm) in the tread area of the tire. It can also be used to inflate an under inflated tire.

If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Service on page 12-6*.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:



A. Selector Switch (Sealant/Air or Air Only)
B. On/Off Button
C. Pressure Gauge
D. Pressure Deflation Button (If equipped)
E. Tire Sealant Canister
F. Sealant/Air Hose (Clear)
G. Air Only Hose (Black)
H. Power Plug

Q8_000002323

Tire Sealant

Read and follow the safe handling instructions on the label adhered to the sealant canister.

Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date. Replacement sealant canisters are available at your local dealer. See "Removal and Installation of the Sealant Canister" following.

There is only enough sealant to seal one tire. After usage, the sealant canister and sealant/air hose assembly must be replaced. See "Removal and Installation of the Sealant Canister" following.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.

When using the tire sealant and compressor kit during cold temperatures, warm the kit in a heated environment for 5 minutes. This will help to inflate the tire faster.

Always do a safety check first. See *If a Tire Goes Flat on page 9-74*. Do not remove any objects that have penetrated the tire.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 9-93*.
2. Unwrap the sealant/air hose (F) and the power plug (H).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the valve stem cap from the flat tire by turning it counterclockwise.

5. Attach the sealant/air hose (F) onto the tire valve stem. Turn it clockwise until it is tight.
6. Plug the power plug (H) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 4-11*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Turn the selector switch (A) counterclockwise to the Sealant + Air position.
9. Press the on/off (B) button to turn the tire sealant and compressor kit on.

   The compressor will inject sealant and air into the tire.

   The pressure gauge (C) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.
10. Inflate the tire to the recommended inflation pressure using the pressure gauge (C). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 9-59*.

    The pressure gauge (C) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

    ***Notice:* If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tire is too severely damaged and the tire sealant and compressor kit cannot inflate the tire. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Service on page 12-6*.**
11. Press the on/off button (B) to turn the tire sealant and compressor kit off.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire, therefore, Steps 12 through 18 must be done immediately after Step 11.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (H) from the accessory power outlet in the vehicle.
13. Turn the sealant/air hose (F) counterclockwise to remove it from the tire valve stem.
14. Replace the tire valve stem cap.
15. Replace the sealant/air hose (F), and the power plug (H) back in their original location.

16. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (E) and place it in a highly visible location.

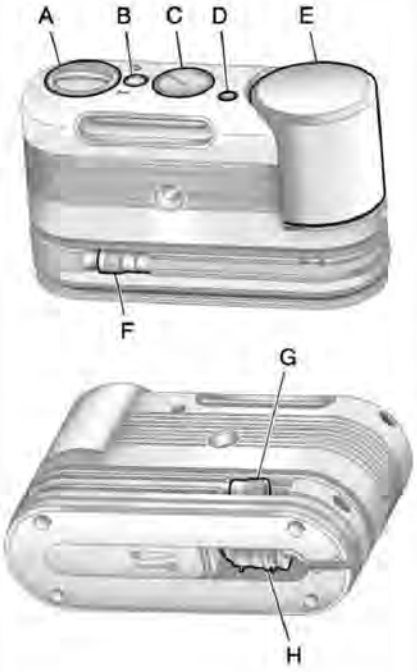
    The label is a reminder not to exceed 55 mph (90 km/h) until the damaged tire is repaired or replaced.
17. Return the equipment to its original storage location in the vehicle.
18. Immediately drive the vehicle 5 miles (8 km) to distribute the sealant in the tire.
19. Stop at a safe location and check the tire pressure. Refer to Steps 1 through 11 under "Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)."

    If the tire pressure has fallen more than 10 psi (68 kPa) below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant cannot seal the tire. See *Roadside Service on page 12-6*.

    If the tire pressure has not dropped more than 10 psi (68 kPa) from the recommended inflation pressure, inflate the tire to the recommended inflation pressure.
20. Wipe off any sealant from the wheel, tire, and vehicle.
21. Dispose of the used sealant canister (E) and sealant/air hose (F) assembly at a local dealer or in accordance with local state codes and practices.
22. Replace it with a new canister available from your dealer.
23. After temporarily sealing a tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within a 100 miles (161 km) of driving to have the tire repaired or replaced.

Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:



Always do a safety check first. See *If a Tire Goes Flat on page 9-74*.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 9-93*.
2. Unwrap the air only hose (G) and the power plug (H).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the tire valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the air only hose (G) onto the tire valve stem by turning it clockwise until it is tight.

6. Plug the power plug (H) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 4-11*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Turn the selector switch (A) clockwise to the Air Only position.
9. Press the on/off (B) button to turn the compressor on.

   The compressor will inflate the tire with air only.
10. Inflate the tire to the recommended inflation pressure using the pressure gauge (C). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 9-59*.

    The pressure gauge (C) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on/off until the correct pressure is reached.

    If you inflate the tire higher than the recommended pressure you can adjust the excess pressure by pressing the pressure deflation button (D), if equipped, until the proper pressure reading is reached. This option is only functional when using the air only hose (G).
11. Press the on/off button (B) to turn the tire sealant and compressor kit off.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.
12. Unplug the power plug (H) from the accessory power outlet in the vehicle.

13. Disconnect the air only hose (G) from the tire valve stem, by turning it counterclockwise, and replace the tire valve stem cap.
14. Replace the air only hose (G) and the power plug (H) and cord back in its original location.
15. Place the equipment in the original storage location in the vehicle.

The tire sealant and compressor kit has an accessory adapter located in a compartment on the bottom of its housing that may be used to inflate air mattresses, balls, etc.

Removal and Installation of the Sealant Canister

To remove the sealant canister:

1. Unwrap the sealant hose.
2. Press the canister release button.
3. Pull up and remove the canister.
4. Replace with a new canister which is available from your dealer.
5. Push the new canister into place.

Storing the Tire Sealant and Compressor Kit

With Selector Switch

Without Selector Switch

This vehicle may have a tire sealant and compressor kit in place of a jack or spare tire. It is located in a foam container in the rear compartment storage area. See *Cargo Management System on page 3-5*.

Tire Changing

Removing the Spare Tire and Tools

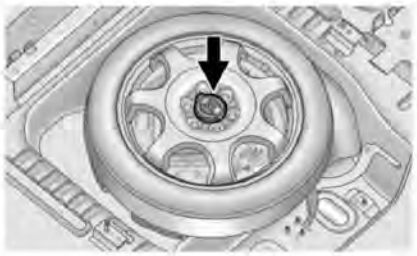
To access the spare tire and tools:

1. Open the liftgate. See *Liftgate (Manual) on page 1-13* or *Liftgate (Power) on page 1-14*.

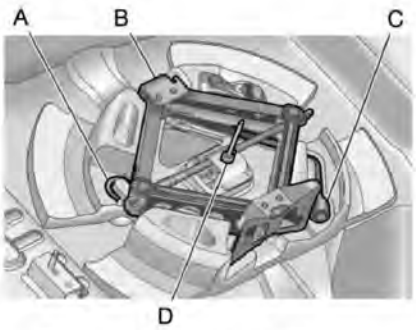
2. Press on the bottom of the handle assembly to unlatch it and lift up on the handle.

   The prop rod locks into place when open.

3. Remove the spare tire cover.



4. Remove the nut retaining the spare tire.
5. Remove the spare tire and place it next to the tire being changed.



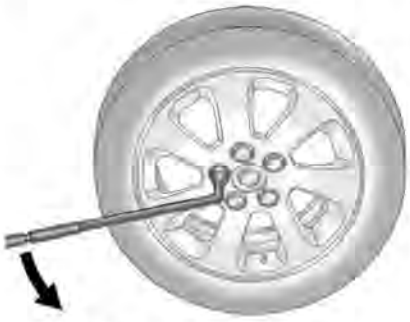
6. Remove the wing nut (D).
7. Remove the extension (A), jack (B) and wheel wrench (C) and place them near the tire being changed.

Removing the Flat Tire and Installing the Spare Tire

Take off the wheel cover or center cap, if the vehicle has one, to reach the wheel bolts.

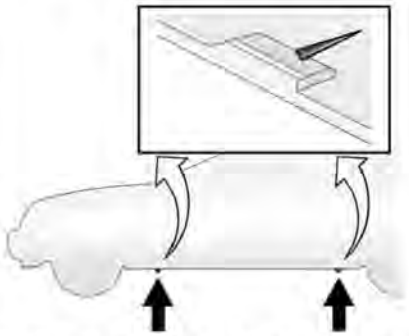
1. Do a safety check before proceeding. See *If a Tire Goes Flat on page 9-74* for more information.
2. Turn the wheel wrench counterclockwise to loosen and remove the wheel nut caps.

   Do not try to remove plastic caps from the cover or center cap.
3. Pull the cover or center cap away from the wheel. Store the wheel cover in the cargo area until you have the flat tire repaired or replaced.



4. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
5. Place the jack near the flat tire.

Notice: **Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.**



6. Position the jack lift head at the jack location nearest the flat tire.

   The jacking location is indicated by a V-shaped notch in the plastic molding. The jack must not be used in any other position.

7. Insert the hooked end of the extension handle through the jack and the flat end through the wheel wrench.

⚠ WARNING

Getting under a vehicle when it is jacked up is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

⚠ WARNING

Raising your vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

⚠ WARNING

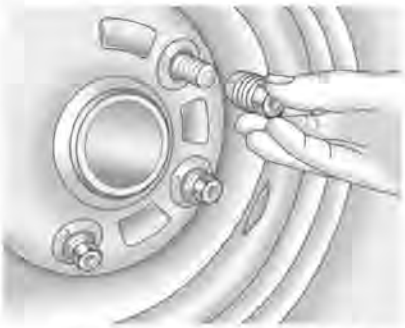
Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

8. Turn the extension with the wheel wrench clockwise to raise the jack lift head until the jack just fits under the vehicle.

9. Raise the vehicle by turning the wheel wrench clockwise until the slots in the jack head fit into the metal flange located behind the triangle on the plastic moulding.

Notice: **Using a jack to raise the vehicle without positioning it correctly could damage your vehicle. When raising your vehicle on a jack, be sure to position it correctly under the frame and avoid contact with the plastic molding.**

10. Put the compact spare tire near you.



Remove all of the wheel nuts.

11. Remove the flat tire.

⚠ WARNING

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any

(Continued)

WARNING (Continued)

rust or dirt from places where the wheel attaches to the vehicle. In an emergency, use a cloth or a paper towel to do this; but be sure to use a scraper or wire brush later, if needed, to get all the rust or dirt off. See *If a Tire Goes Flat on page 9-74*.

12. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.

13. Place the compact spare tire on the wheel-mounting surface.

⚠ WARNING

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

14. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
15. Lower the vehicle by turning the jack handle counterclockwise.

⚠ WARNING

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench to the proper torque specification after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications on page 11-2* for original equipment wheel nut torque specifications.

Notice: **Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications on page 11-2* for the wheel nut torque specification.**

16. Tighten the wheel nuts firmly in a crisscross sequence, as shown.
17. Lower the jack all the way and remove the jack from under the vehicle.
18. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or center cap on the full-size tire, tighten all five plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

Notice: **Wheel covers will not fit on your vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.**

Storing a Flat or Spare Tire and Tools

⚠ WARNING

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

To store the flat or spare tire and tools:

1. Open the liftgate. See *Liftgate (Manual) on page 1-13* or *Liftgate (Power) on page 1-14* for more information.
2. Put back all tools as they were stored in the rear storage compartment and put the compartment cover back on. For more information, see "Storing the Compact Spare Tire and Tools" next in this section.
3. Install the cargo cover. For more information, see *Cargo Management System on page 3-5*.
4. Place the tire, lying flat, in the rear storage compartment.

5. Attach the strap to the cargo tie-down in the rear of the vehicle.

6. Route the strap through the wheel, as shown.
7. Attach the strap to the other cargo tie-down in the rear of the vehicle.
8. Tighten the strap.

The compact spare is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can.

Compact Spare Tire

⚠ WARNING

Driving with more than one compact spare tire at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tire at a time.

If this vehicle has a compact spare tire, it was fully inflated when the vehicle was new; however, it can lose air after a time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

After installing the compact spare on the vehicle, stop as soon as possible and make sure the spare tire is correctly inflated. The compact spare is made to perform well at speeds up to 105 km/h (65 mph) for distances up to 5 000 km (3,000 miles), so you can finish your trip and have the full-size tire repaired or replaced at your convenience. Of course, it is best to replace the spare with a full-size tire as soon as possible. The spare tire will last longer and be in good shape in case it is needed again.

Notice: **When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tire, wheel and other parts of the vehicle.**

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

Notice: **Tire chains will not fit the compact spare. Using them can damage the vehicle and can damage the chains too. Do not use tire chains on the compact spare.**

Jump Starting

For more information about the vehicle battery, see *Battery on page 9-27*.

If the vehicle battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠ WARNING

Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

Notice: **Ignoring these steps could result in costly damage to the vehicle that would not be covered by the warranty.**

Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

Notice: **If the other vehicle's system is not a 12-volt system with a negative ground, both vehicles can be damaged. Only use vehicles with 12-volt systems with negative grounds to jump start your vehicle.**

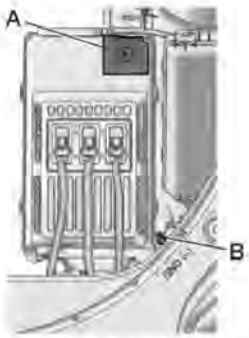
2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start your vehicle, and the bad grounding could damage the electrical systems.

   To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the transmission in P (Park) before setting the parking brake.

Notice: **If you leave the radio or other accessories on during the jump starting procedure, they could be damaged. The repairs would not be covered by the warranty. Always turn off the radio and other accessories when jump starting the vehicle.**

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or the accessory power outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks, helping save both batteries and the radio.
4. Open the hood on the other vehicle and locate the positive (+) and negative (−) terminal locations on that vehicle.

   Open the hood on your vehicle and find the remote positive (+) and remote negative (−) jump starting terminals.



Your vehicle is equipped with a remote positive (+) terminal (A) and a remote negative (−) terminal (B). The remote positive (+) terminal is located in the engine compartment on the driver side of the vehicle, above the rear of the battery. The remote negative (−) terminal is a stud located in the engine compartment on the driver side of the vehicle, on the front tie bar. See *Engine Compartment Overview on page 9-6* for more information on location.

To uncover the remote positive (+) terminal, lift open the access panel on the battery cover indicated by the (+) sign.

⚠ WARNING

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.

⚠ WARNING

Using an open flame near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.

Be sure the battery has enough water. You do not need to add water to the battery installed in your new vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you do not, explosive gas could be present.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

⚠ WARNING

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could also be damaged.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the vehicle has one. Negative (−) will go to a heavy, unpainted metal engine part or to a remote negative (−) terminal if the vehicle has one.

   Do not connect positive (+) to negative (−) or you will get a short that would damage the battery and maybe other parts. Do not connect the negative (−) cable to the negative (−) terminal on the dead battery because this can cause sparks.

6. Connect the red positive (+) cable to the positive (+) terminal on the vehicle with the dead battery. Use a remote positive (+) terminal if the vehicle has one.

7. Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.

8. Now connect the black negative (−) cable to the negative (−) terminal of the good battery. Use a remote negative (−) terminal if the vehicle has one.

   Do not let the other end touch anything until the next step. The other end of the negative (−) cable does not go to the dead battery. It goes to a heavy, unpainted metal engine part or to a remote negative (−) terminal on the vehicle with the dead battery.

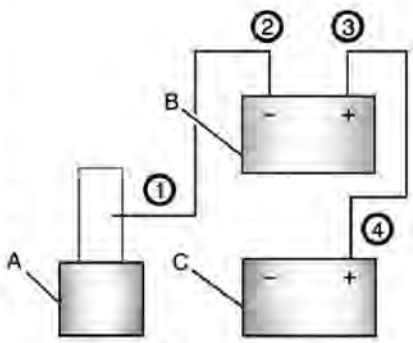
9. Connect the other end of the negative (−) cable away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, and the chance of sparks getting back to the battery is much less.

   Your vehicle has a remote (−) terminal for this purpose.

10. Now start the vehicle with the good battery and run the engine for a while.

11. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

Notice: **If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.**



Jumper Cable Removal

A. Heavy, Unpainted Metal Engine Part or Remote Negative (−) Terminal

B. Good Battery or Remote Positive (+) and Remote Negative (−) Terminals

C. Dead Battery or Remote Positive (+) Terminal

To disconnect the jumper cables from both vehicles, do the following:

1. Disconnect the black negative (−) cable from the vehicle that had the dead battery.
2. Disconnect the black negative (−) cable from the vehicle with the good battery.
3. Disconnect the red positive (+) cable from the vehicle with the good battery.
4. Disconnect the red positive (+) cable from the other vehicle.
5. Close the access panel on the battery cover, if applicable.

Towing

Towing the Vehicle

To avoid damage, the disabled vehicle should be towed with all four wheels off the ground. Consult your dealer or a professional towing service if the disabled vehicle must be towed.

To tow the vehicle behind another vehicle for recreational purposes — such as behind a motorhome, see Recreational Vehicle Towing following.

Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle – such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

- What is the towing capacity of the towing vehicle? Be sure to read the tow vehicle manufacturer's recommendations.
- What is the distance that will be travelled? Some vehicles have restrictions on how far and how long they can tow.
- Is the proper towing equipment going to be used? See your dealer or trailering professional for additional advice and equipment recommendations.
- Is the vehicle ready to be towed? Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

Dinghy Towing

Front-wheel-drive and all-wheel-drive vehicles may be dinghy towed from the front. These vehicles can also be towed by placing them on a platform trailer with all four wheels off of the ground. For other towing options, see "Dolly Towing" following in this section.

Vehicles with an 2.8 L V 6 engine can be dinghy towed only for service and are restricted to a maximum distance of 100 km (60 miles) and not to exceed 80 km/h (50 mph).

Vehicles with the 3.0 L V 6 engine can be dinghy towed without distance restrictions.

Notice: **If 105 km/h (65 mph) is exceeded while towing the vehicle, it could be damaged. Never exceed 105 km/h (65 mph) while towing the vehicle.**

For vehicles being dinghy towed, the vehicle should be run at the beginning of each day and at each RV fuel stop for about five minutes. This will ensure proper lubrication of transmission components.

To tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle that will be towed and secure it to the towing vehicle.
2. Open the drivers door.

3. With the vehicle OFF, press the brake pedal and press the START/STOP switch to start the engine (the green LED on the switch will illuminate).
4. Put the vehicle in N (Neutral).
5. Press the START/STOP switch again. The engine will stop, the DIC will display Shift to Park and the amber LED on the switch illuminates. See *Transmission Messages on page 4-40*.
6. Remove the following fuses: BCM 1, BCM 2 and BCM 3. The START/STOP switch LED's will be off. See *Instrument Panel Fuse Block on page 9-48*.
7. Close the drivers door.

Notice: **If the vehicle is towed without performing each of the steps listed under "Dinghy Towing," the automatic transmission could be damaged. Be sure to follow all steps of the dinghy towing procedure prior to and after towing the vehicle.**

Once the destination has been reached:

1. Shift the vehicle to P (Park).
2. Reinstall the BCM fuses. See *Instrument Panel Fuse Block on page 9-48*.
3. Disconnect the vehicle from the tow vehicle.

Notice: **Too much or too little fluid can damage the transmission. Be sure that the transmission fluid is at the proper level before towing with all four wheels on the ground.**

Notice: **Do not tow a vehicle with the front drive wheels on the ground if one of the front tires is a compact spare tire. Towing with two different tire sizes on the front of the vehicle can cause severe damage to the transmission.**

Dolly Towing (All-Wheel-Drive Vehicles)

All-wheel-drive vehicles should not be towed with two wheels on the ground. To properly tow these vehicles, they should be placed on a platform trailer with all four wheels off of the ground or dinghy towed from the front. See Dinghy Towing earlier in this section.

Dolly Towing (Front-Wheel-Drive Vehicles)

To tow the vehicle from the front with the rear wheels on the ground, do the following:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park). See *Shifting Into Park on page 8-22*.
3. Set the parking brake.
4. Secure the vehicle to the dolly.
5. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.
6. Release the parking brake.

Towing the Vehicle From the Rear

Notice: **Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.**

Appearance Care

Exterior Care

Cleaning Exterior Lamps/Lenses

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps and lenses. Follow instructions under "Washing the Vehicle" later in this section.

Finish Care

Occasional waxing or mild polishing of the vehicle by hand may be necessary to remove residue from the paint finish. Approved cleaning products can be obtained from your dealer.

If the vehicle has a basecoat/clearcoat paint finish, the clearcoat gives more depth and gloss to the colored basecoat. Always use waxes and polishes that are non-abrasive and made for a basecoat/clearcoat paint finish.

Notice: **Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/clearcoat paint finish on the vehicle.**

Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Exterior painted surfaces are subject to aging, weather, and chemical fallout that can take their toll over a period of years. To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Parts

Bright metal parts should be cleaned regularly to keep their luster. Wash with water or use chrome polish on chrome or stainless steel trim, if necessary.

Use special care with aluminum trim. To avoid damaging protective trim, never use auto or chrome polish, steam, or caustic soap to clean aluminum. A coating of wax, rubbed to high polish, is recommended for all bright metal parts.

Washing the Vehicle

To preserve the vehicle's finish, keep it clean by washing it often.

Do not wash the vehicle in direct sunlight and use a car washing soap.

Notice: **Certain cleaners contain chemicals that can damage the emblems or nameplates on the vehicle. Check the cleaning product label. If it states that it should not be used on plastic parts, do not use it on the vehicle or damage may occur and it would not be covered by the warranty.**

Do not use cleaning agents that are petroleum based or that contain acid or abrasives, as they can damage the paint, metal, or plastic on the vehicle. Approved cleaning products can be obtained from your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

High pressure car washes could cause water to enter the vehicle. Avoid using high pressure washes closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.

Notice: **Conveyor systems on some automatic car washes could damage the vehicle. There may not be enough clearance for the undercarriage. Check with the car wash manager before using the automatic car wash.**

Weatherstrips

Silicone grease on weatherstrips will make them last longer, seal better, and not stick or squeak. Apply silicone grease with a clean cloth. During very cold, damp weather frequent application may be required. See *Recommended Fluids and Lubricants on page 10-6*.

Wheels and Trim — Aluminum or Chrome

The vehicle may have either aluminum or chrome-plated wheels.

Keep the wheels clean using a soft, clean cloth with mild soap and water. Rinse with clean water. After rinsing thoroughly, dry with a soft, clean towel. A wax may then be applied.

Notice: **Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the vehicle's chrome with soap and water after exposure.**

Notice: **Using strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels, could damage the surface of the wheel(s). The repairs would not be covered by the vehicle warranty. Use only approved cleaners on aluminum or chrome-plated wheels.**

The surface of these wheels is similar to the painted surface of the vehicle. Do not use strong soaps, chemicals, abrasive polishes, abrasive cleaners, cleaners with acid, or abrasive cleaning brushes on them because the surface could be damaged. Do not use chrome polish on aluminum wheels.

Notice: **Using chrome polish on aluminum wheels could damage the wheels. The repairs would not be covered by the vehicle warranty. Use chrome polish on chrome wheels only.**

Use chrome polish only on chrome-plated wheels, but avoid any painted surface of the wheel, and buff off immediately after application.

Notice: **Driving the vehicle through an automatic car wash that has silicone carbide tire cleaning brushes, could damage the aluminum or chrome-plated wheels. The repairs would not be covered by the vehicle warranty. Never drive a vehicle that has aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning brushes.**

Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean the rubber blades using a lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking. Replace the wiper blades if they are worn or damaged.

Wipers can be damaged by:

- Extreme dusty conditions
- Sand and salt
- Heat and sun
- Snow and ice, without proper removal

Tires

Use a stiff brush with tire cleaner to clean the tires.

Notice: **Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on the vehicle.**

Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

Finish Damage

Any stone chips, fractures, or deep scratches in the finish should be repaired right away. Bare metal will corrode quickly and may develop into major repair expense.

Minor chips and scratches can be repaired with touch-up materials available from your dealer. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

Underbody Maintenance

Chemicals used for ice and snow removal and dust control can collect on the underbody. If these are not removed, corrosion and rust can develop on the underbody parts such as fuel lines, frame, floor pan, and exhaust system even though they have corrosion protection.

At least every spring, flush these materials from the underbody with plain water. Clean any areas where mud and debris can collect. Dirt packed in close areas of the frame should be loosened before being flushed. Your dealer or an underbody car washing system can do this.

Chemical Paint Spotting

Some weather and atmospheric conditions can create a chemical fallout. Airborne pollutants can fall upon and attack painted surfaces on the vehicle. This damage can take two forms: blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface.

Interior Care

The vehicle's interior will continue to look its best if it is cleaned often. Dust and dirt can accumulate on the upholstery and cause damage to the carpet, fabric, leather, and plastic surfaces. Stains should be removed quickly as extreme heat could cause them to set rapidly.

Lighter colored interiors may require more frequent cleaning. Newspapers and garments that can transfer color to home furnishings can also transfer color to the vehicle's interior.

Remove dust from small buttons and knobs with a small brush with soft bristles.

Your dealer has products for cleaning the vehicle's interior. When cleaning the vehicle's interior, only use cleaners specifically designed for the surfaces that are being cleaned. Permanent damage can result from using cleaners on surfaces for which they were not intended. Apply the cleaner directly to the cleaning cloth to prevent over-spray. Remove any accidental over-spray from other surfaces immediately.

Notice: **Using abrasive cleaners when cleaning glass surfaces on the vehicle, could scratch the glass and/or cause damage to the rear window defogger. When cleaning the glass on the vehicle, use only a soft cloth and glass cleaner.**

Cleaners can contain solvents that can become concentrated in the vehicle's interior. Before using cleaners, read and adhere to all safety instructions on the label. While cleaning the vehicle's interior, maintain adequate ventilation by opening the vehicle's doors and windows.

Do not clean the interior using the following cleaners or techniques:

- Never use a knife or any other sharp object to remove a soil from any interior surface.
- Never use a stiff brush. It can cause damage to the vehicle's interior surfaces.
- Never apply heavy pressure or rub aggressively with a cleaning cloth. Use of heavy pressure can damage the interior and does not improve the effectiveness of soil removal.
- Use only mild, neutral-pH soaps. Avoid laundry detergents or dishwashing soaps with degreasers. Using too much soap will leave a residue that leaves streaks and attracts dirt. For liquid cleaners, about 20 drops per 3.78 L (1 gal) of water is a good guide.
- Do not heavily saturate the upholstery while cleaning.
- Damage to the vehicle's interior may result from the use of many organic solvents such as naptha, alcohol, etc.

Fabric/Carpet

Use a vacuum cleaner with a soft brush attachment to remove dust and loose dirt. A canister vacuum with a beater bar in the nozzle may only be used on floor carpet and carpeted floor mats. For soils, always try to remove them first with plain water or club soda. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- For liquids: gently blot the remaining soil with a paper towel. Allow the soil to absorb into the paper towel until no more can be removed.
- For solid dry soils: remove as much as possible and then vacuum.

To clean:

1. Saturate a lint-free, clean white cloth with water or club soda.
2. Remove excess moisture.
3. Start on the outside edge of the soil and gently rub toward the center. Continue cleaning, using a clean area of the cloth each time it becomes soiled.
4. Continue to gently rub the soiled area.
5. If the soil is not completely removed, use a mild soap solution and repeat the cleaning process with plain water.

If any of the soil remains, a commercial fabric cleaner or spot lifter may be necessary. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If the locally cleaned area gives any impression that a ring formation may result, clean the entire surface.

A paper towel can be used to blot excess moisture from the fabric or carpet after the cleaning process.

Leather

To remove dust, a soft cloth dampened with water can be used. If a more thorough cleaning is necessary, a soft cloth dampened with a mild soap solution can be used. Allow the leather to dry naturally. Do not use heat, steam, spot lifters or spot removers, or shoe polish on leather. Many commercial leather cleaners and coatings that are sold to preserve and protect leather may permanently change the appearance and feel of the leather and are not recommended. Do not use silicone or wax-based products, or those containing organic solvents to clean the vehicle's interior because they can alter the appearance by increasing the gloss in a non-uniform manner.

Instrument Panel, Vinyl, and Other Plastic Surfaces

To remove dust, a soft cloth dampened with water can be used. If a more thorough cleaning is necessary, a clean soft cloth dampened with a mild soap solution can be used to gently remove dust and dirt. Never use spot lifters or removers on plastic surfaces. Many commercial cleaners and coatings that are sold to preserve and protect soft plastic surfaces may permanently change the appearance and feel of the interior and are not recommended. Do not use silicone or wax-based products, or those containing organic solvents to clean the vehicle's interior because they can alter the appearance by increasing the gloss in a non-uniform manner.

Some commercial products may increase gloss on the instrument panel. The increase in gloss may cause annoying reflections in the windshield and even make it difficult to see through the windshield under certain conditions.

Care of Safety Belts

Keep belts clean and dry.

⚠ WARNING

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Service and Maintenance

General Information
General Information 10-1

Scheduled Maintenance
Scheduled Maintenance 10-2

Recommended Fluids, Lubricants, and Parts
Recommended Fluids and Lubricants 10-6
Maintenance Replacement Parts 10-8

Maintenance Records
Maintenance Records 10-9

General Information

Notice: **Maintenance intervals, checks, inspections, recommended fluids, and lubricants are necessary to keep this vehicle in good working condition. Damage caused by failure to follow scheduled maintenance might not be covered by the vehicle warranty.**

As the vehicle owner, you are responsible for the scheduled maintenance in this section. We recommend having your dealer perform these services. Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions for better air quality.

Because of all the different ways people use vehicles, maintenance needs vary. The vehicle might need more frequent checks and services. Please read the information under Scheduled Maintenance. To keep the vehicle in good condition, see your dealer.

The maintenance schedule is for vehicles that:

- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See *Vehicle Load Limits on page 8-11*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Recommended Fuel on page 8-47*.

⚠ WARNING

Performing maintenance work can be dangerous. Some jobs can cause serious injury. Perform maintenance work only if you have the required know-how and the proper tools and equipment. If in doubt, see your dealer to have a qualified technician do the work. See *Doing Your Own Service Work on page 9-4*.

At your dealer, you can be certain that you will receive the highest level of service available. Your dealer has specially trained service technicians, uses genuine replacement parts, as well as, up to date tools and equipment to ensure fast and accurate diagnostics.

The proper replacement parts, fluids, and lubricants to use are listed in *Recommended Fluids and Lubricants on page 10-6* and *Maintenance Replacement Parts on page 10-8*. We recommend the use of genuine parts from your dealer.

Rotation of New Tires

To maintain ride, handling, and performance of the vehicle, it is important that the first rotation service for new tires be performed when they have 8 000 to 13 000 km (5,000 to 8,000 miles). See *Tire Rotation on page 9-66*.

Scheduled Maintenance

When the Change Engine Oil Soon Message Displays

Change engine oil and filter. See *Engine Oil on page 9-10*. *An Emission Control Service*.

When the "Change Engine Oil Soon" message displays, service is required for the vehicle as soon as possible, within the next 1 000 km/600 miles. If driving under the best conditions, the engine oil life system might not indicate the need for vehicle service for more than a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your dealer has trained service technicians who will perform this work and reset the system.

If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 miles since the last service. Reset the oil life system whenever the oil is changed. See *Engine Oil Life System on page 9-12*.

Every Engine Oil Change

- Change engine oil and filter. See *Engine Oil on page 9-10. An Emission Control Service.*
- Engine coolant level check. See *Engine Coolant on page 9-17*.
- Engine cooling system inspection. Visual inspection of hoses, pipes, fittings, and clamps and replacement, if needed.
- Windshield washer fluid level check. See *Washer Fluid on page 9-23*.
- Windshield wiper blade inspection for wear, cracking, or contamination and windshield and wiper blade cleaning, if contaminated. See *Exterior Care on page 9-109*. Worn or damaged wiper blade replacement. See *Wiper Blade Replacement on page 9-29*.
- Tire inflation check. See *Tire Pressure on page 9-59*.
- Tire wear inspection. See *Tire Inspection on page 9-66*.
- Rotate tires. See *Tire Rotation on page 9-66*.
- Fluids visual leak check (or every 12 months, whichever occurs first). A leak in any system must be repaired and the fluid level checked.
- Engine air cleaner filter inspection. See *Engine Air Cleaner/Filter on page 9-14*.
- Brake system inspection (or every 12 months, whichever occurs first).
- Steering and suspension inspection. Visual inspection for damaged, loose, or missing parts or signs of wear.
- Body hinges and latches, key lock cylinders, folding seat hardware, and sunroof (if equipped) lubrication. See *Recommended Fluids and Lubricants on page 10-6*. More frequent lubrication may be required when vehicle is exposed to a corrosive environment. Applying silicone grease on weatherstrips with a clean cloth makes them last longer, seal better, and not stick or squeak.
- Restraint system component check. See *Safety System Check on page 2-26*.
- Automatic transmission fluid level check and adding fluid, if needed. See *Automatic Transmission Fluid on page 9-13*.

Additional Required Services

At Each Fuel Stop

- Engine oil level check. See *Engine Oil on page 9-10*.
- Engine coolant level check. See *Engine Coolant on page 9-17*.
- Windshield washer fluid level check. See *Washer Fluid on page 9-23*.

Once a Month

- Tire inflation check. See *Tire Pressure on page 9-59*.
- Tire wear inspection. See *Tire Inspection on page 9-66*.

Once a Year

- See *Starter Switch Check on page 9-28*.
- See *Park Brake and P (Park) Mechanism Check on page 9-28*.
- Exhaust system and nearby heat shields inspection for loose or damaged components.
- Accelerator pedal check for damage, high effort, or binding. Replace if needed.
- If the vehicle has a Tire Sealant and Compressor Kit, check the sealant expiration date printed on the instruction label of the kit. See *Tire Sealant and Compressor Kit (Without Selector Switch) on page 9-76* or *Tire Sealant and Compressor Kit (With Selector Switch) on page 9-84*.

First Engine Oil Change After Every 40 000 km/25,000 Miles

- Fuel system inspection for damage or leaks.
- Passenger compartment air filter replacement (or every 12 months, whichever occurs first). More frequent replacement may be required if vehicle is driven regularly under dusty conditions.

First Engine Oil Change After Every 80 000 km/50,000 Miles

- Engine air cleaner filter replacement. See *Engine Air Cleaner/Filter on page 9-14*.
- Automatic transmission fluid change (severe service) for vehicles mainly driven in heavy city traffic in hot weather, in hilly or mountainous terrain, when frequently towing a trailer, or used for taxi, police, or delivery service. See *Automatic Transmission Fluid on page 9-13*.

First Engine Oil Change After Every 160 000 km/100,000 Miles

- Automatic transmission fluid change (normal service). See *Automatic Transmission Fluid on page 9-13*.
- Spark plug replacement. *An Emission Control Service.*

First Engine Oil Change After Every 240 000 km/150,000 Miles

- Engine cooling system drain, flush, and refill, cooling system and cap pressure check, and cleaning of outside of radiator and air conditioning condenser (or every 5 years, whichever occurs first). See *Cooling System on page 9-16. An Emission Control Service.*
- Engine accessory drive belt inspection for fraying, excessive cracks, or obvious damage and replacement, if needed. *An Emission Control Service.*

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Usage	Fluid/Lubricant
Engine Oil	The engine requires a special engine oil meeting GM Standard GM4718M. Oils meeting this standard can be identified with the American Petroleum Institute (API) Certified for Gasoline Engines starburst symbol. However, not all synthetic API oils with the starburst symbol will meet this GM standard. Look for and use only an oil that meets GM Standard GM4718M. For the proper viscosity, see *Engine Oil on page 9-10*.
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL® Coolant. See *Engine Coolant on page 9-17*.
Hydraulic Brake System	DOT 3 Hydraulic Brake Fluid (GM Part No. U.S. 88863461, in Canada 88863462).
Windshield Washer	Optikleen® Washer Solvent.
Hydraulic Power Steering System	DEXRON®-VI Automatic Transmission Fluid.
Automatic Transmission (3.0L V6 Engine)	DEXRON®-VI Automatic Transmission Fluid.

Usage	Fluid/Lubricant
Automatic Transmission (2.8L V6 Engine)	AW-1 Automatic Transmission Fluid (GM Part No. U.S. 19256039, in Canada 19256040).
Chassis Lubrication	Chassis Lubricant (GM Part No. U.S. 12377985, in Canada 88901242) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Key Lock Cylinders	Multi-Purpose Lubricant, Superlube (GM Part No. U.S. 12346241, in Canada 10953474).
Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl	Lubriplate Lubricant Aerosol (GM Part No. U.S. 12346293, in Canada 992723) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Hood, Door, and Folding Seat Hinges	Multi-Purpose Lubricant, Superlube (GM Part No. U.S. 12346241, in Canada 10953474).
Power Liftgate Actuator Ball Joint	Multi-Purpose Lubricant (GM Part No. U.S. 89021668, in Canada 89021674).
Weatherstrip Conditioning	Weatherstrip Lubricant (GM Part No. U.S. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. U.S. 12345579, in Canada 992887).

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

Part	GM Part Number	ACDelco Part Number
Engine Air Cleaner/Filter	20897358	A3147C
Engine Oil Filter		
2.8L V6 Engine	12593333	PF457G
3.0L V6 Engine	89017524	PF48
Passenger Compartment Air Filter Element	13271191	CF176
Spark Plugs		
2.8L V6 Engine	12622561	41–109
3.0L V6 Engine	12622561	41–109
Wiper Blades		
Driver Side – 65.0 cm (25.6 in)	25979378	—
Passenger Side – 42.5 cm (16.7 in)	25979379	—
Rear – 30.0 cm (11.8 in)	20825882	—

Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

Maintenance Record

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Maintenance Record (cont'd)

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Maintenance Record (cont'd)

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Maintenance Record (cont'd)

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

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Vehicle Identification

Vehicle Identification Number (VIN)

This legal identifier is in the front corner of the instrument panel, on the left side of the vehicle. It can be seen through the windshield from outside. The VIN also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under *Capacities and Specifications on page 11-2* for the vehicle's engine code.

Service Parts Identification Label

This label, on the inside of the glove box, has the following information:

- Vehicle Identification Number (VIN)
- Model designation
- Paint information
- Production options and special equipment

Do not remove this label from the vehicle.

Vehicle Data

Capacities and Specifications

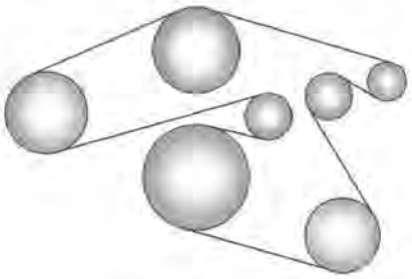
Application	Capacities	
	Metric	English
Air Conditioning Refrigerant R134a	For the air conditioning system refrigerant charge amount, see the refrigerant label located under the hood. See your dealer for more information.	
Engine Cooling System		
2.8L V6 Engine	12.4 L	13.1 qt
3.0L V6 Engine	11.9 L	12.6 qt
Engine Oil with Filter		
2.8L V6 Engine	5.7 L	6.0 qt
3.0L V6 Engine	5.7 L	6.0 qt
Fuel Tank	79.5 L	21.0 gal

Application	Capacities	
	Metric	English
Transmission Fluid		
2.8L V6 6–Speed Automatic (Transmission Requires No Fluid Replacement)	—	—
3.0L V6 6–Speed Automatic* (Drain and Refill)	9.0 L	9.5 qt
Wheel Nut Torque	150 N•m	110 ft lb
*See *Automatic Transmission Fluid on page 9-13* for information on checking fluid level.		
All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.		

Engine Specifications

Engine	VIN Code	Transmission	Spark Plug Gap
2.8L V6 (LAU)	4	Automatic	1.10 mm (0.043 in)
3.0L V6 (LF1)	Y	Automatic	1.10 mm (0.043 in)

Engine Drive Belt Routing



2.8L, 3.0L V6 Engines

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Customer Information

Customer Satisfaction Procedure

Your satisfaction and goodwill are important to your dealer and to Cadillac. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by the dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

STEP ONE: Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service or parts manager, contact the owner of the dealership or the general manager.

STEP TWO : If after contacting a member of dealership management, it appears your concern cannot be resolved by the dealership without further help, in the United States, call the Cadillac Customer Assistance Center, 24 hours a day, at 1-800-458-8006. In Canada, call the Canadian Cadillac Customer Communication Centre at 1-888-446-2000.

We encourage you to call the toll-free number in order to give your inquiry prompt attention. Have the following information available to give the Customer Assistance Representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Cadillac, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

STEP THREE (U.S. Owners): Both General Motors and your dealer are committed to making sure you are completely satisfied with your new vehicle. However, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you can file with the Better Business Bureau (BBB) Auto Line Program to enforce your rights.

The BBB Auto Line Program is an out of court program administered by the Council of Better Business Bureaus to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you.

You may contact the BBB Auto Line Program using the toll-free telephone number or write them at the following address:

BBB Auto Line Program
Council of Better Business Bureaus, Inc.
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203-1838

Telephone: 1-800-955-5100
www.dr.bbb.org/goauto

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

STEP THREE (Canadian Owners):

General Motors Participation in the Mediation/Arbitration Program

In the event that you do not feel your concerns have been addressed after the following the procedure outlined in Steps One and Two. General Motors of Canada Limited wants you to be aware of its participation in a no-charge mediation/Arbitration program. General Motors of Canada Limited has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in approximately 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call the General Motors Customer Communication Centre, 1-800-263-3777 (English), 1-800-263-7854 (French), or write to the Mediation/Arbitration Program at the following address:

Mediation/Arbitration Program
c/o Customer Communication Centre
General Motors of Canada Limited
Mail Code: CA1–163–005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Your inquiry should be accompanied by the Vehicle Identification Number (VIN).

Customer Assistance Offices

Cadillac encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Cadillac, the letter should be addressed to:

United States

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169
www.Cadillac.com

1-800-458-8006
1-800-833-2622 (For Text Telephone devices (TTYs))
Roadside Assistance:
1-800-882-1112

From Puerto Rico:

1-800-496-9992 (English)
1-800-496-9993 (Spanish)

From U.S. Virgin Islands:

1-800-496-9994

Canada

General Motors of Canada Limited
Canadian Cadillac Customer Communication Centre,
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
www.gm.ca

1-888-446-2000
1-800-263-3830 (For Text Telephone devices (TTYs))
Roadside Assistance:
1-800-882-1112

Overseas

Please contact the local General Motors Business Unit.

Mexico, Central America and Caribbean Islands/Countries (Except Puerto Rico and U.S. Virgin Islands)

General Motors de Mexico,
S. de R.L. de C.V.
Customer Assistance Center
Av. Ejercito Nacional #843
Col. Granada
C.P. 11520, Mexico, D.F.

01-800-466-0805
Long Distance: 011-52-53 29 0805

Customer Assistance for Text Telephone (TTY) Users

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Cadillac has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Cadillac by dialing: 1-800-833-2622. TTY users in Canada can dial 1-800-263-3830.

Online Owner Center

Cadillac Owner Center (U.S.) — www.cadillacownercenter.com

Information and services customized for your specific vehicle — all in one convenient place.

- Digital owner manual, warranty information, and more
- Store online service and maintenance records
- Cadillac dealer locator for service nationwide
- Exclusive privileges and offers
- Recall notices for your specific vehicle
- OnStar and GM Cardmember Services Earnings summaries

Other Helpful Links:

Cadillac — www.cadillac.com

Cadillac Merchandise — www.cadillaccollection.com

Help Center — www.cadillac.com/helpcenter

- FAQ
- Contact Us

My GM Canada (Canada) — www.gm.ca

My GM Canada is a password-protected section of www.gm.ca where you can save information on GM vehicles, get personalized offers, and use handy tools and forms with greater ease.

Here are a few of the valuable tools and services you will have access to:

- My Showroom: Find and save information on vehicles and current offers in your area.
- My Dealers: Save details such as address and phone number for each of your preferred GM dealers.
- My Driveway: Access quick links to parts and service estimates, check trade-in values, or schedule a service appointment by adding the vehicles you own to your driveway profile.
- My Preferences: Manage your profile and use tools and forms with greater ease.

To sign up, visit the My GM Canada section within www.gm.ca.

GM Mobility Reimbursement Program

GM MOBILITY

This program is available to qualified applicants for cost reimbursement of eligible aftermarket adaptive equipment required for your vehicle, such as hand controls or a wheelchair/scooter lift for the vehicle.

For more information on the limited offer, visit www.gmmobility.com or call the GM Mobility Assistance Center at 1-800-323-9935. Text Telephone (TTY) users, call 1-800-833-9935.

General Motors of Canada also has a Mobility Program. Call 1-800-GM-DRIVE (463-7483) for details. TTY users call 1-800-263-3830.

Roadside Service

In the United States or Canada, call **1-800-882-1112**.

Text Telephone (TTY), U.S. only, call **1-888-889-2438**.

Service is available 24 hours a day, 365 days a year.

Calling for Service

When calling Roadside Service, have the following information ready:

- Your name, home address, and home telephone number
- Telephone number of your location
- Location of the vehicle
- Model, year, color, and license plate number of the vehicle
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle
- Description of the problem

Coverage

Services are provided up to 5 years/160 000 km (100,000 miles), whichever comes first.

In the U.S., anyone driving the vehicle is covered. In Canada, a person driving the vehicle without permission from the owner is not covered.

Roadside Service is not a part of the New Vehicle Limited Warranty. Cadillac and General Motors of Canada Limited reserve the right to make any changes or discontinue the Roadside Service program at any time without notification.

Cadillac and General Motors of Canada Limited reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

Cadillac Owner Privileges™

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.
- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.

- **Emergency Tow From a Public Road or Highway:** Tow to the nearest Cadillac dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is also given when the vehicle is stuck in the sand, mud, or snow.
- **Flat Tire Change:** Service to change a flat tire with spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is your responsibility for the repair or replacement of the tire if it is not covered by the warranty.
- **Battery Jump Start:** Service to jump start a dead battery.
- **Trip Routing Service:** Detailed maps of North America are provided when requested either with the most direct route or the most scenic route. Additional travel information is also available. Allow three weeks for delivery.
- **Trip Interruption Benefits and Service:** If your trip is interrupted due to a warranty failure, incidental expenses may be reimbursed during the 5 years/160 000 km (100,000 miles) Powertrain warranty period. Items considered are hotel, meals, and rental car.

Cadillac Technician Roadside Service (U.S. only)

Cadillac's exceptional Roadside Service is more than an auto club or towing service. It provides every Cadillac owner in the United States with the advantage of contacting a Cadillac advisor and, where available, a Cadillac trained dealer technician who can provide on-site service.

A dealer technician will travel to your location within a 30 mile radius of a participating Cadillac dealership. If beyond this radius, we will arrange to have your car towed to the nearest Cadillac dealership.

Each technician travels with a specially equipped service vehicle complete with the necessary Cadillac parts and tools required to handle most roadside repairs.

Services Not Included in Roadside Service

- Impound towing caused by violation of any laws.
- Legal fines.
- Mounting, dismounting, or changing of snow tires, chains, or other traction devices.
- Towing or services for vehicles driven on a non-public road or highway.

Services Specific to Canadian-Purchased Vehicles

- **Fuel delivery:** Reimbursement is approximately $5 Canadian. Diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.
- **Lock-Out Service:** Vehicle registration is required.
- **Trip Routing Service:** Limit of six requests per year.
- **Trip Interruption Benefits and Service:** Pre-authorization, original detailed receipts, and a copy of the repair orders are required. Once authorization has been received, the Roadside Service advisor will help you make arrangements and explain how to receive payment.
- **Alternative Service:** If assistance cannot be provided right away, the Roadside Service advisor may give you permission to get local emergency road service. You will receive payment, up to $100, after sending the original receipt to Roadside Service. Mechanical failures may be covered, however any cost for parts and labor for repairs not covered by the warranty are the owner responsibility.

Scheduling Service Appointments

When your vehicle requires warranty service, contact your dealer and request an appointment. By scheduling a service appointment and advising your service consultant of your transportation needs, your dealer can help minimize your inconvenience.

If your vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety related. If it is, please call your dealership, let them know this, and ask for instructions.

If the dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for the same day repair.

Courtesy Transportation Program

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper to Bumper (Base Warranty Coverage period in Canada), extended powertrain, and/or hybrid-specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing your inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled "Warranty and Owner Assistance Information" furnished with each new vehicle provides detailed warranty coverage information.

Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to wait, GM helps to minimize your inconvenience by providing several transportation options. Depending on the circumstances, your dealer can offer you one of the following:

Shuttle Service

Shuttle service is the preferred means of offering Courtesy Transportation. Dealers may provide shuttle service to get you to your destination with minimal interruption of your daily schedule. This includes one-way or round-trip shuttle service within reasonable time and distance parameters of the dealer's area.

Public Transportation or Fuel Reimbursement

If your vehicle requires overnight warranty repairs, and public transportation is used instead of the dealer's shuttle service, the expense must be supported by original receipts and can only be up to the maximum amount allowed by GM for shuttle service. In addition, for U.S. customers, should you arrange transportation through a friend or relative, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information regarding the allowance amounts for reimbursement of fuel or other transportation costs.

Courtesy Rental Vehicle

Your dealer may arrange to provide you with a courtesy rental vehicle or reimburse you for a rental vehicle that you obtain if your vehicle is kept for an overnight warranty repair. Rental reimbursement will be limited and must be supported by original receipts. This requires that you sign and complete a rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. You are responsible for fuel usage charges and may also be responsible for taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair.

It may not be possible to provide a like vehicle as a courtesy rental.

Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Please contact your dealer for specific information about availability. All Courtesy Transportation arrangements will be administered by appropriate dealer personnel.

General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

Collision Damage Repair

If your vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish your vehicle's resale value, and safety performance can be compromised in subsequent collisions.

Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which your vehicle was originally built. Genuine GM Collision parts are your best choice to ensure that your vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain your GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain your vehicle's originally designed appearance and safety performance; however, the history of these parts is not known. Such parts are not covered by your GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for your vehicle. As a result, these parts may fit poorly, exhibit premature durability/corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by your GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

Repair Facility

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

Insuring Your Vehicle

Protect your investment in your GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to your GM vehicle by limiting compensation for damage repairs by using aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you ensure that your vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If your vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read your lease carefully, as you may be charged at the end of your lease for poor quality repairs.

If a Crash Occurs

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see *Roadside Service on page 12-6*.

Gather the following information:

- Driver's name, address, and telephone number
- Driver's license number
- Owner's name, address, and telephone number
- Vehicle license plate number
- Vehicle make, model, and model year
- Vehicle Identification Number (VIN)
- Insurance company and policy number
- General description of the damage to the other vehicle

Choose a reputable repair facility that uses quality replacement parts. See "Collision Parts" earlier in this section.

If the airbag has inflated, see *What Will You See After an Airbag Inflates? on page 2-34*.

Managing the Vehicle Damage Repair Process

In the event that your vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take your vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by your GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with your repair professional, and insist on Genuine GM parts. Remember, if your vehicle is leased, you may be

obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

Service Publications Ordering Information

Service Manuals

Service Manuals have the diagnosis and repair information on the engines, transmission, axle, suspension, brakes, electrical, steering, body, etc.

Service Bulletins

Service Bulletins give additional technical service information needed to knowledgeably service General Motors cars and trucks. Each bulletin contains instructions to assist in the diagnosis and service of your vehicle.

Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The Owner Manual includes the Maintenance Schedule for all models.

In-Portfolio: Includes a Portfolio, Owner Manual, and Warranty Booklet.

RETAIL SELL PRICE: $35.00 (U.S.) plus handling and shipping fees

Without Portfolio: Owner Manual only.

RETAIL SELL PRICE: $25.00 (U.S.) plus handling and shipping fees

Current and Past Models

Technical Service Bulletins and Manuals are available for current and past model GM vehicles.

ORDER TOLL FREE:
1-800-551-4123 Monday - Friday
8:00 AM - 6:00 PM Eastern Time

For Credit Card Orders Only (VISA-MasterCard-Discover), visit Helm, Inc. at: www.helminc.com

Or you can write to:

Helm, Incorporated
P.O. Box 07130
Detroit, MI 48207

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

Note to Canadian Customers: All listed prices are quoted in U.S. funds. Canadian residents are to make checks payable in U.S. funds.

Reporting Safety Defects

Reporting Safety Defects to the United States Government

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign.

However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to *http://www.safercar.gov*; or write to:

Administrator, NHTSA
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from *http://www.safercar.gov*.

Reporting Safety Defects to the Canadian Government

If you live in Canada, and you believe that your vehicle has a safety defect, notify Transport Canada immediately, in addition to notifying General Motors of Canada Limited. Call them at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
2780 Sheffield Road
Ottawa, Ontario K1B 3V9

Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify General Motors.

Call 1-800-458-8006, or write:

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169

In Canada, call 1-888-446-2000, or write:

Canadian Cadillac Customer Communication Centre,
Mail Code: CA1-163-005
General Motors of Canada Limited
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Vehicle Data Recording and Privacy

Your GM vehicle has a number of sophisticated computers that record information about the vehicle's performance and how it is driven. For example, your vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy airbags in a crash and, if so equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help your dealer technician service your vehicle. Some modules may also store data about how you operate the vehicle, such as rate of fuel consumption or average speed. These modules may also retain the owner's personal preferences, such as radio pre-sets, seat positions, and temperature settings.

Event Data Recorders

This vehicle has an Event Data Recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an airbag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating
- Whether or not the driver and passenger safety belts were buckled/fastened
- How far, if at all, the driver was pressing the accelerator and/or brake pedal
- How fast the vehicle was traveling

This data can help provide a better understanding of the circumstances in which crashes and injuries occur.

Important: EDR data is recorded by your vehicle only if a non-trivial crash situation occurs; no data is recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) is recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access this data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request by police or similar government office; as part of GM's defense of litigation through the discovery process; or, as required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

OnStar®

If your vehicle is equipped with an active OnStar system, that system may also record data in crash or near crash-like situations. The OnStar Terms and Conditions provides information on data collection and use and is available in the OnStar glove box kit, at www.onstar.com (U.S.) or www.onstar.ca (Canada), or by pressing the button and speaking to an advisor.

Navigation System

If your vehicle has a navigation system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. Refer to the navigation system operating manual for information on stored data and for deletion instructions.

Radio Frequency Identification (RFID)

RFID technology is used in some vehicles for functions such as tire pressure monitoring and ignition system security, as well as in connection with conveniences such as key fobs for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in GM vehicles does not use or record personal information or link with any other GM system containing personal information.

Radio Frequency Statement

This vehicle has systems that operate on a radio frequency that comply with Part 15 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-210/220/310.

Operation is subject to the following two conditions:

1. The device may not cause interference.
2. The device must accept any interference received, including interference that may cause undesired operation of the device.

Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

✍ NOTES

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This manual describes features that may or may not be on your specific vehicle either because they are options that you did not purchase or due to changes subsequent to the printing of this owner manual. Please refer to the purchase documentation relating to your specific vehicle to confirm each of the features found on your vehicle. For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Cadillac Motor Car Division wherever it appears in this manual.

Canadian Vehicle Owners

Propriétaires Canadiens

A French language copy of this manual can be obtained from your dealer or from:

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire ou à l'adresse suivante:

Helm, Incorporated
P.O. Box 07130
Detroit, MI 48207

1-800-551-4123
Numéro de poste 6438
de langue française
www.helminc.com

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Using this Manual

To quickly locate information about the vehicle, use the Index in the back of the manual. It is an alphabetical list of what is in the manual and the page number where it can be found.

Danger, Warnings, and Cautions

Warning messages found on vehicle labels and in this manual describe hazards and what to do to avoid or reduce them.

Danger indicates a hazard with a high level of risk which will result in serious injury or death.

Warning or **Caution** indicates a hazard that could result in injury or death.

⚠ WARNING
These mean there is something that could hurt you or other people.

***Notice:* This means there is something that could result in property or vehicle damage. This would not be covered by the vehicle's warranty.**

A circle with a slash through it is a safety symbol which means "Do Not," "Do not do this," or "Do not let this happen."

Symbols

The vehicle has components and labels that use symbols instead of text. Symbols are shown along with the text describing the operation or information relating to a specific component, control, message, gauge, or indicator.

: This symbol is shown when you need to see your owner manual for additional instructions or information.

: This symbol is shown when you need to see a service manual for additional instructions or information.

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. For more information on the symbol, refer to the Index.

: Adjustable Pedals

: Airbag Readiness Light

: Air Conditioning

: Antilock Brake System (ABS)

: Audio Steering Wheel Controls or OnStar®

: Brake System Warning Light

: Charging System

: Cruise Control

: Engine Coolant Temperature

: Exterior Lamps

: Fog Lamps

: Fuel Gauge

: Fuses

: Headlamp High/Low-Beam Changer

: LATCH System Child Restraints

: Malfunction Indicator Lamp

: Oil Pressure

: Outside Power Foldaway Mirrors

: Power

: Remote Vehicle Start

: Safety Belt Reminders

: Tire Pressure Monitor

: Traction Control/StabiliTrak

: Windshield Washer Fluid

✍ NOTES

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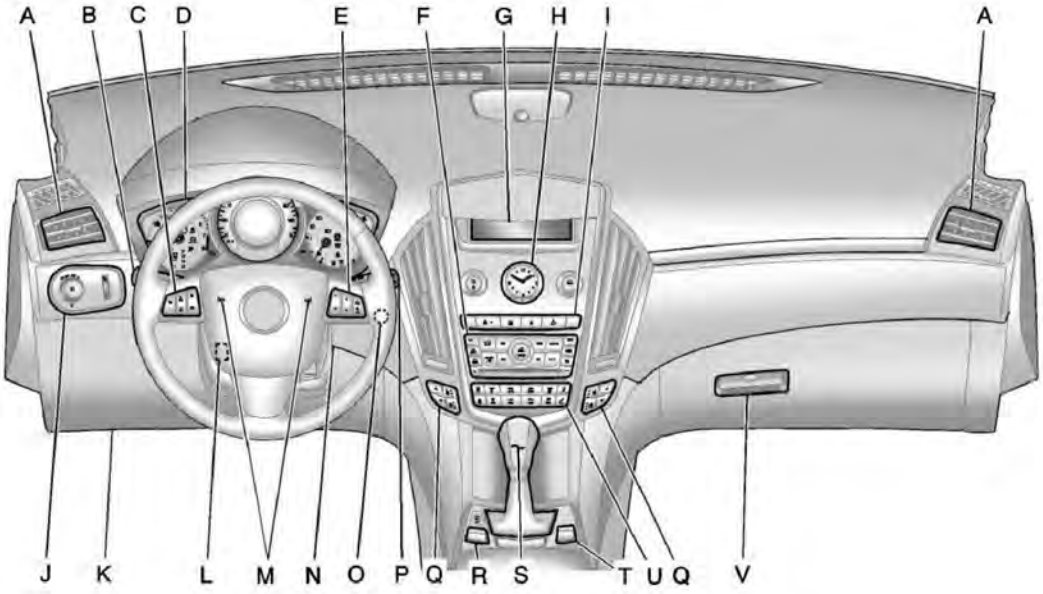
Instrument Panel



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A. *Air Vents on page 8-6.*

B. Turn and Lane-Change Lever. See *Turn and Lane-Change Signals on page 6-6.*

Driver Information Center (DIC) Controls. See *Driver Information Center (DIC) on page 5-29.*

C. *Cruise Control on page 9-38.*

D. *Instrument Cluster on page 5-11.*

E. *Steering Wheel Controls on page 5-2.*

F. *AM-FM Radio on page 7-11.*

Navigation System (If Equipped). See Navigation System Manual.

G. Driver Information Center (DIC) Display. See *Driver Information Center (DIC) on page 5-29.*

H. *Clock (Analog Clock) on page 5-7* or *Clock (Digital Clock) on page 5-7.*

I. *Safety Locks on page 2-13.*

Power Door Locks on page 2-12.

Hazard Warning Flashers on page 6-5.

J. *Exterior Lamp Controls on page 6-1.*

Front Fog Lamps on page 6-6 (If Equipped).

Instrument Panel Illumination Control on page 6-7.

K. Data Link Connector (DLC) (Out of View). See *Malfunction Indicator Lamp on page 5-19.*

L. *Steering Wheel Adjustment on page 5-2.*

M. *Horn on page 5-3.*

N. Adjustable Pedal Control (If Equipped). See *Adjustable Throttle and Brake Pedal on page 9-18.*

O. Start/Stop Button. See *Ignition Positions on page 9-18.*

P. *Windshield Wiper/Washer on page 5-3.*

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Q. *Heated Front Seats on page 3-10* (If Equipped).

Heated and Ventilated Front Seats on page 3-11 (If Equipped).

R. *Parking Brake on page 9-31.*

S. Shift Lever. See *Shifting Into Park on page 9-23.*

T. *StabiliTrak® System on page 9-36.*

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Economy Mode (If Equipped). See *Fuel Economy Mode on page 9-29.*

U. *Dual Automatic Climate Control System on page 8-1.*

V. *Glove Box on page 4-1.*

Initial Drive Information

This section provides a brief overview about some of the important features that may or may not be on your specific vehicle.

For more detailed information, refer to each of the features which can be found later in this owner manual.

Remote Keyless Entry (RKE) System

The Remote Keyless Entry (RKE) transmitter is used to lock and unlock the doors from up to 60 m (195 ft) away from the vehicle.

: Press to unlock the driver door or all doors depending on the vehicle personalization settings.

: Press to lock all doors.

Lock and unlock feedback can be personalized. See *Vehicle Personalization on page 5-42*.

: Press and hold to open the liftgate.

: Press and release to locate the vehicle.

Press and hold for three seconds to sound the panic alarm.

Press again or start the vehicle to cancel the panic alarm.

Press the key release button near the bottom of the transmitter to remove the key. The key can be used for the driver door and the glove box.

See *Keys on page 2-2* and *Remote Keyless Entry (RKE) System Operation on page 2-4*.

Remote Vehicle Start

With this feature the engine can be started from outside of the vehicle.

Starting the Vehicle

1. Press on the RKE transmitter.
2. Within two seconds, press and hold until the turn signal lamps flash, or for about two seconds if the vehicle is not in view.

When the vehicle starts, the parking lamps will turn on and remain on as long as the engine is running. The doors will be locked and the climate control system may come on.

The engine will continue to run for 10 minutes. Repeat the steps for a 10-minute time extension. Remote start can be extended only once.

Canceling a Remote Start

To cancel a remote start:

- Press and hold until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

See *Remote Vehicle Start on page 2-10.*

Door Locks

To lock or unlock a door, use the Remote Keyless Entry (RKE) transmitter from the outside.

From inside the vehicle with the doors locked, pull once on the door handle to unlock it, and a second time to open it or use the power door lock switch.

The power door lock switches are on the instrument panel.

: Press to unlock the doors.

: Press to lock the doors.

See *Power Door Locks on page 2-12.*

Liftgate

Manual Liftgate Operation

For vehicles without keyless access, unlock the vehicle before opening the liftgate.

Press the touchpad located in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touchpad while closing the liftgate. This will cause the liftgate to be unlatched.

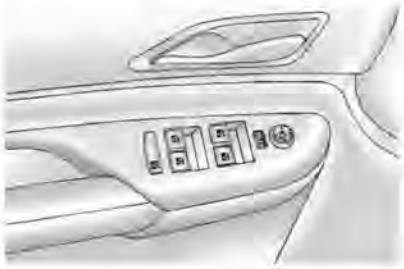
Power Liftgate Operation

On vehicles with a power liftgate the switch is located on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

Choose the power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position. Press the center of the switch.

See *Liftgate on page 2-14* for more information.

Windows



Driver Side Shown

The power window controls are on each of the side doors.

The driver door also has switches that control the passenger and rear windows.

Operate the switch for the window by pressing to open and pulling to close.

Pushing or pulling the switch part of the way will open or close the window as long as the switch is operated.

Seat Adjustment

Manual Seats

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

To raise or recline the seatback, use the lever on the outboard side of the seat.

See *Seat Adjustment on page 3-4* and *Reclining Seatbacks on page 3-8* for more information.

Power Seats

A. Seat Position Control
B. Seatback Adjustment Control
C. Lumbar Adjustment Control

To adjust a power seat, if equipped:

- Slide control (A) forward or rearward, and up or down to adjust the power seat.

  See *Power Seat Adjustment on page 3-4*.

- Raise or recline the seatback by tilting control (B) forward or rearward.

  See *Reclining Seatbacks on page 3-8*.

- Increase or decrease the lumbar support by pressing and holding the front or rear of control (C). See *Lumbar Adjustment on page 3-7*.

Memory Features

On vehicles with the memory feature, the "1" and "2" buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedals, if available. These manually stored positions are referred to as Button Memory positions.

The vehicle will also automatically save driver seat, outside mirror, and adjustable throttle and brake pedal positions to the current driver Remote Keyless Entry (RKE) transmitter when the ignition is turned off. These automatically stored positions are referred to as RKE Memory positions.

Storing Button Memory Positions

To save positions into Button Memory:

1. Adjust the driver seat, seatback recliner, both outside mirrors, and adjustable pedals, if available, to the desired driving positions.
2. Press and release the MEM (Memory) button.
3. Press "1" until a beep sounds.
4. Repeat Steps 1 through 3 for a second driver using "2."

To recall the manually saved Button Memory positions, press and hold "1" or "2." The driver seat, outside mirrors, and adjustable pedals, if available, move to the positions stored to those buttons when pressed. Releasing "1" or "2" before the stored positions are reached stops the recall.

To automatically recall RKE Memory positions, unlock the driver door with the RKE transmitter, and open the driver door. On vehicles with Keyless Access, opening the driver door when an RKE transmitter is present will activate the RKE Memory recall. If the driver door is already open, pressing the RKE transmitter button will also activate the RKE Memory recall. The driver seat, outside mirrors, and pedals, if available, will move to the previously saved RKE Memory positions.

See "Memory Seats" under *Power Seat Adjustment on page 3-4* for more information.

Easy Exit Driver Seat

This feature moves the seat rearward allowing the driver more room to exit the vehicle.

To activate, place the ignition in OFF and open the driver door. If the driver door is already open, placing the ignition in OFF will activate the easy exit driver seat.

This feature is turned on or off using the vehicle personalization menu. See "Easy Exit Driver Seat" under *Vehicle Personalization on page 5-42* for more information.

Heated and Ventilated Seats

Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the instrument panel. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat.

For more information, see *Heated Front Seats on page 3-10* or *Heated and Ventilated Front Seats on page 3-11*.

Head Restraint Adjustment

Do not drive until the head restraints for all occupants are installed and adjusted properly.

To achieve a comfortable seating position, change the seatback recline angle as little as necessary while keeping the seat and the head restraint height in the proper position.

For more information see *Head Restraints on page 3-2* and *Seat Adjustment on page 3-4*.

Safety Belts

Refer to the following sections for important information on how to use safety belts properly.

- *Safety Belts on page 3-15*.
- *How to Wear Safety Belts Properly on page 3-19*.
- *Lap-Shoulder Belt on page 3-24*.
- *Lower Anchors and Tethers for Children (LATCH System) on page 3-55*.

Sensing System for Passenger Airbag

United States

Canada and Mexico

The passenger sensing system will turn off the right front passenger frontal airbag and seat-mounted side impact airbag under certain conditions. The driver airbags and roof-rail airbags are not affected by the passenger sensing system.

The passenger airbag status indicator will be visible on the overhead console when the vehicle is started. See *Passenger Sensing System on page 3-39* for more information.

Mirror Adjustment

Exterior

Controls for the outside power mirrors are on the driver door.

To adjust the mirror:

1. Move the selector switch to L (left) or R (right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror to the desired position.
3. Return the selector switch to the center position.

See *Power Mirrors on page 2-21*.

Manual Folding Mirrors

Vehicles with manual fold mirrors are folded inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

Power Folding Mirrors

Vehicles with power folding mirrors have controls on the driver door.

To fold the mirrors:

1. With the selector switch in the ● position, push the down arrow on the control pad. Both mirrors will automatically fold.
2. Push the down arrow on the control pad again to return the mirrors to their original position.

See *Folding Mirrors on page 2-21*.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror and the inside rearview mirror automatically adjust for the glare of headlamps behind you. See *Automatic Dimming Mirror on page 2-22* or *Automatic Dimming Rearview Mirror on page 2-23*.

Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Throttle and Brake Pedal Adjustment

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.

The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

See *Adjustable Throttle and Brake Pedal on page 9-18*.

Interior Lighting

Dome Lamps

The dome lamp controls are located in the overhead console.

To change the dome lamp settings, press the following:

: Turns the lamp off, even when a door is open.

: The lamp comes on automatically when a door is opened.

: Turns the dome lamp on.

Reading Lamps

There are reading lamps located on the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

- For the overhead console reading lamps, press the button next to each lamp.
- For the rear passenger reading lamps, press the lamp lens.

For more information on interior lighting, see *Instrument Panel Illumination Control on page 6-7*.

Exterior Lighting

The exterior lamps control is located on the instrument panel to the left of the steering column.

The exterior lamps control has four positions:

⏻ : Briefly turn to this position to turn the automatic light control off or on again.

AUTO: Turns the headlamps on automatically at normal brightness, together with the parking lamps, taillamps, license plate lamps, and instrument panel lights.

: Turns the parking lamps on together with the taillamps, license plate lamps, and instrument panel lights.

: Turns the headlamps on together with the parking lamps, taillamps, license plate lamps, and instrument panel lights.

: For vehicles with fog lamps, press to turn the lamps on or off.

For more information, see:

- *Exterior Lamp Controls on page 6-1.*
- *Daytime Running Lamps (DRL) on page 6-3.*

Windshield Wiper/Washer

The windshield wiper/washer lever is located on the right side of the steering column. With the ignition in ACC/ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

2: Use for fast wipes.

1: Use for slow wipes.

: Turn the band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see following Rainsense information.

: Use to turn the wipers off.

: For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Windshield Washer

Pull the lever toward you to spray washer fluid on the windshield.

See *Windshield Wiper/Washer on page 5-3* and *Rear Window Wiper/Washer on page 5-5*, if equipped.

Rainsense™

For vehicles with Rainsense:

: Move the windshield wiper lever to . Turn the band on the wiper lever to adjust the sensitivity.

Turn the band up for more sensitivity to moisture.

Turn the band down for less sensitivity to moisture.

To deactivate Rainsense, move the windshield wiper lever out of the position.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.

Press the upper or lower portion of the button to control the rear wiper and rear wiper delay.

The system turns off when the button is returned to the middle position.

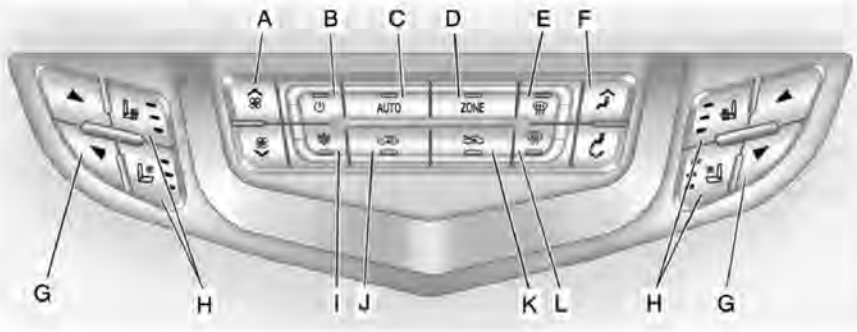
: Use for continuous rear window wipes.

: Use to set a delay between wipes.

: Push the windshield wiper lever forward to spray washer fluid on the rear window.

Climate Controls

The heating, cooling, and ventilation for the vehicle can be controlled with this system.



A. Fan Control
B. Power
C. AUTO (Automatic Operation)
D. ZONE
E. Defrost
F. Air Delivery Mode Control
G. Driver and Passenger Temperature Control
H. Driver and Passenger Heated and Ventilated Seats
I. Air Conditioning
J. Recirculation
K. Outside Air
L. Rear Window Defogger

See *Dual Automatic Climate Control System on page 8-1* and *Rear Climate Control System on page 8-5*, if equipped.

Transmission

Driver Shift Control (DSC)

Notice: **If you drive the vehicle at a high rpm without upshifting while using Driver Shift Control (DSC), you could damage the vehicle. Always upshift when necessary while using DSC.**

Driver Shift Control (DSC) allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).
2. To enter M (Manual Mode), press the shift lever forward (+) to upshift or rearward (−) to downshift.

See *Manual Mode on page 9-28*.

Vehicle Features

Radio(s)

VOL/ ⏻ : Press to turn the system on and off. Turn to increase or decrease the volume.

RADIO/BAND: Press to choose between FM, AM, or XM™, if equipped.

TUNE ⏵/⏸ : Turn to select radio stations.

Press to show play or pause track.

SEEK ⏪⏮ : Press to seek the previous station or track.

SEEK ⏩⏭ : Press to seek the next station or track.

⇦ BACK or BACK ⇦ (depending on system): Press to exit or move backwards in a menu.

Buttons 1 - 6: Press to save and select favorite stations

For more information about these and other radio features, see *Operation on page 7-7*.

Storing a Favorite Station

Stations from all bands can be stored in the favorite lists in any order. Up to six stations can be stored in each favorite page and the number of available favorite pages can be set.

To store the station to a position in the list, press the corresponding numeric button 1-6 until the station can be heard again.

For more information, see "Storing a Station as a Favorite" in *AM-FM Radio on page 7-11*.

Setting the Clock

The vehicle has a digital and an analog clock.

For detailed instructions on setting either clock, see *Clock (Analog Clock) on page 5-7* or *Clock (Digital Clock) on page 5-7*.

Turning the Digital Clock On or Off

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Clock Displayed.
4. Press the MENU/SELECT button to turn the clock on or off.

Setting the Time and Date

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Set Time or Set Date.
4. Turn the MENU/SELECT knob to adjust the highlighted value.
5. Press the MENU/SELECT knob to select the next value.
6. To save the time or date and return to the Time and Date Settings menu, press the BACK button at any time or press the MENU/SELECT knob after adjusting the minutes or year.

Setting the 12/24 Hour Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight 12/24 Hour Format.
4. Press the MENU/SELECT button to select the 12 hour or 24 hour display format.

Setting the Month & Day Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Month & Day Format.
4. Press the MENU/SELECT knob to select MM/DD (month/day) or DD/MM (day/month).

Setting the Auto Time Adjust (If Equipped)

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Auto Time Adjust.
4. Press the MENU/SELECT knob to turn Auto Time Adjust on or off.

Satellite Radio

Vehicles with an XM™ Satellite Radio tuner and a valid XM Satellite Radio subscription can receive XM programming.

XM Satellite Radio Service

XM is a satellite radio service based in the 48 contiguous United States and 10 Canadian provinces. XM Satellite Radio has a wide variety of programming and commercial-free music, coast to coast, and in digital-quality sound. A fee is required to receive the XM service.

For more information refer to:

- www.xmradio.com or call 1-800-929-2100 (U.S.).
- www.xmradio.ca or call 1-877-438-9677 (Canada).

For more information, see *Satellite Radio on page 7-14*.

Portable Audio Devices

Some vehicles have a 3.5 mm (1/8 in) auxiliary input and a USB port located in the center console. External devices such as iPods®, laptop computers, MP3 players, CD changers, and USB storage devices may be connected, depending on the audio system.

For more information, see *Auxiliary Devices (Radio with CD) on page 7-29* or *Auxiliary Devices (Radio with CD/DVD and MEM) on page 7-35*.

Bluetooth®

The Bluetooth system allows users with a Bluetooth-enabled cell phone to make and receive hands-free calls using the vehicle audio system, microphone, and controls.

The Bluetooth-enabled cell phone must be paired with the in-vehicle Bluetooth system before it can be used in the vehicle. Not all phones will support all functions.

See *Bluetooth (Overview) on page 7-50* or *Bluetooth (Infotainment Controls) on page 7-52* or *Bluetooth (Voice Recognition) on page 7-56*.

Steering Wheel Controls

If available, some audio controls can be adjusted at the steering wheel.

∧ ∨ : Press ∧ to select the next favorite radio station or next CD, DVD, if equipped, or MP3 track.

Press ∨ to select the previous favorite radio station or previous CD, DVD, if equipped, or MP3 track.

+ ◁ −: Press + to increase the volume, press − to decrease the volume.

✆ : Press to interact with the available Bluetooth, OnStar, or Navigation system.

🔇 : Press to silence the vehicle speakers only. Press again to turn the sound on. For vehicles with OnStar or Bluetooth systems, press to reject an incoming call, or end a current call.

SRCE: Press to select an audio source.

For more information, see *Steering Wheel Controls on page 5-2.*

Cruise Control

: Press to turn cruise control on and off.

+ RES: Press briefly to make the vehicle resume to a previously set speed or press and hold to accelerate.

−SET: Press to set the speed and activate cruise control or make the vehicle decelerate.

⊗ : Press to disengage cruise control without erasing the set speed from memory.

See *Cruise Control on page 9-38.*

Navigation System

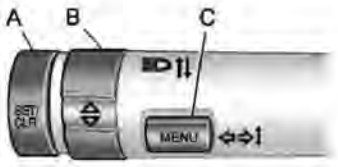
If the vehicle has a navigation system, there is a separate Navigation System Manual that includes information on the radio, audio players, and navigation system.

The navigation system provides detailed maps of most major freeways and roads. After a destination has been set, the system provides turn-by-turn instructions for reaching the destination. In addition, the system can help locate a variety of points of interest (POIs), such as banks, airports, restaurants, and more.

See the navigation system manual for more information.

Driver Information Center (DIC)

The DIC display is located in the center of the instrument panel cluster. It shows the status of many vehicle systems. The controls for the DIC are located on the turn signal lever.



A. **SET/CLR:** Press to set or clear the menu item when it is displayed.

B. △ ▽: Use the thumbwheel to scroll through the items in each menu.

C. **MENU:** Press to get to the Trip/Fuel Menu and the Vehicle Information Menu. This button is also used to return to or exit the last screen displayed on the DIC.

For more information, see *Driver Information Center (DIC) on page 5-29.*

Vehicle Personalization

Some vehicle features can be programmed by using the audio system controls. These features include:

- Climate and Air Quality
- Comfort and Convenience
- Language
- Lighting
- Power Door Locks
- Remote Lock/Unlock/Start
- Return to Factory Settings

See *Vehicle Personalization on page 5-42.*

Rear Vision Camera (RVC)

If available, the rear vision camera displays a view of the area behind the vehicle when the vehicle is shifted into R (Reverse). The display will appear on either the inside rearview mirror or navigation screen, if equipped.

To clean the camera lens, located above the license plate, rinse it with water and wipe it with a soft cloth.

See *Rear Vision Camera (RVC) on page 9-43*.

Ultrasonic Parking Assist

If available, this feature uses sensors on the front and rear bumpers to detect objects while parking the vehicle. Ultrasonic Front and Rear Parking Assist (UFRPA) comes on automatically when the shift lever is moved into R (Reverse) and operates at speeds less than 8 km/h (5 mph). UFRPA uses audible beeps and a display in the instrument panel to provide distance and system information.

Keep the sensors on the vehicle's front and rear bumpers clean to ensure proper operation.

The system can be disabled by pressing the park assist button located next to the shift lever.

See *Ultrasonic Parking Assist on page 9-40* for more information.

Storage Compartments

The glove box is air conditioned and can be used to store items at a lower temperature. Slide the control across the small hole to adjust the air flow. See *Glove Box on page 4-1* for more information.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle has four accessory power outlets. The power outlets located below the climate control system inside the front storage bin, inside the center floor console, and on the rear of the center floor console are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

Open the protective cap to use the accessory power outlet.

See *Power Outlets on page 5-8*.

Universal Remote System

This system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Read the instructions completely before attempting to program the Universal Home Remote. Because of the steps involved, it may be helpful to have another person available to assist you with programming the Universal Home Remote.

See *Universal Remote System on page 5-48*.

Performance and Maintenance

Traction Control System (TCS)

The traction control system limits wheel spin. The system is on when the vehicle is started.

- To turn off traction control, press and release TCS OFF located on the console. TCS illuminates and the appropriate DIC message displays. See *Vehicle Messages on page 5-34*.
- Press and release TCS OFF again to turn traction control back on.

For more information, see *Traction Control System (TCS) on page 9-34*.

StabiliTrak® System

The StabiliTrak system assists with directional control of the vehicle in difficult driving conditions. The system is on when the vehicle is started.

- To turn off both Traction Control and StabiliTrak, press and hold OFF until OFF and illuminate and the appropriate DIC message displays. See *Vehicle Messages on page 5-34*.
- Press OFF again to turn on both systems.

For more information, see *StabiliTrak® System on page 9-36*.

Tire Pressure Monitor

This vehicle may have a Tire Pressure Monitor System (TPMS).

The TPMS warning light alerts you to a significant loss in pressure of one of the vehicle's tires. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-12*. The warning light will remain on until the tire pressure is corrected.

During cooler conditions, the low tire pressure warning light may appear when the vehicle is first started and then turn off. This may be an early indicator that the tire pressures are getting low and the tires need to be inflated to the proper pressure.

The TPMS does not replace normal monthly tire maintenance. It is the driver's responsibility to maintain correct tire pressures.

See *Tire Pressure Monitor System on page 10-65*.

Tire Sealant and Compressor Kit

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. The kit can be used to temporarily seal small punctures in the tread area of the tire.

See *Tire Sealant and Compressor Kit on page 10-81* for complete operating information.

If the vehicle came with a jack and spare tire, see *If a Tire Goes Flat on page 10-79*.

Engine Oil Life System

The engine oil life system calculates engine oil life based on vehicle use and displays the CHANGE ENGINE OIL SOON message when it is time to change the engine oil and filter. The oil life system should be reset to 100% only following an oil change.

Resetting the Oil Life System

1. Using the DIC MENU button and thumbwheel on the turn signal lever, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-29* and *Engine Oil Messages on page 5-37*.
2. Press the SET/CLR button to reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

See *Engine Oil Life System on page 10-14*.

Fuel E85 (85% Ethanol)

Vehicles that have a FlexFuel badge and a yellow fuel cap can use either unleaded gasoline or ethanol fuel containing up to 85% ethanol (E85). See *Fuel E85 (85% Ethanol) on page 9-50*. For all other vehicles, use only the unleaded gasoline described under *Recommended Fuel on page 9-48*.

Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tires properly inflated.
- Combine several trips into a single trip.
- Replace the vehicle's tires with the same TPC Spec number molded into the tire's sidewall near the size.
- Follow recommended scheduled maintenance.

Roadside Service

U.S. or Canada: **1-800-882-1112**

TTY Users (U.S. or Canada): **1-888-889-2438**

Mexico: **01-800-466-0805**

As the owner of a new Cadillac, you are automatically enrolled in the Roadside Service program.

See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-11* for more information.

Roadside Service and OnStar (U.S. and Canada)

If you have an active OnStar subscription, press the button and the current GPS location will be sent to an OnStar advisor who will assess your problem, contact Roadside Service, and relay your exact location to get the help you need.

Online Owner Center (U.S. and Canada)

The Online Owner Center is a complimentary service that includes online service reminders, vehicle maintenance tips, online owner manual, special privileges, and more.

Sign up today at: **www.cadillacownercenter.com** (U.S.) or **www.gm.ca** (Canada).

OnStar®

For vehicles with an active OnStar subscription, OnStar uses several innovative technologies and live Advisors to provide a wide range of safety, security, navigation, diagnostics, and calling services.

Automatic Crash Response

In a crash, built-in sensors can automatically alert an OnStar Advisor who is immediately connected to the vehicle to see if you need help.

How OnStar Service Works

: Push this blue button to connect to a specially trained OnStar Advisor to verify your account information and to answer questions.

: Push this red emergency button to get priority help from specially trained OnStar Emergency Advisors.

: Push this button for hands-free, voice-activated calling and to give voice commands for Hands-Free Calling and Turn-by-Turn Navigation.

Automatic Crash Response, Emergency Services, Crisis Assist, Stolen Vehicle Assistance, Vehicle Diagnostics, Remote Door Unlock, Roadside Assistance, Turn-by-Turn Navigation, and Hands-Free Calling are available on most vehicles. Not all OnStar services are available on all vehicles. For more information, see the OnStar Owner's Guide; visit www.onstar.com (U.S.) or www.onstar.ca (Canada); contact OnStar at 1-888-4-ONSTAR (1-888-466-7827) or TTY 1-877-248-2080; or push the button to speak with an OnStar Advisor 24 hours a day, 7 days a week.

For a full description of OnStar services and system limitations, see the OnStar Owner's Guide in the glove box.

OnStar service is subject to the OnStar Terms and Conditions included in the OnStar Glove Box Kit.

OnStar service requires wireless communication networks and the Global Positioning System (GPS) satellite network. Not all OnStar services are available everywhere or on all vehicles at all times.

OnStar service can't work unless the vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area, and the wireless service provider has coverage, network capacity, reception, and technology compatible with OnStar service. Service involving location information about the vehicle can't work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. The vehicle has to have a working electrical system and adequate battery power for the OnStar equipment to operate. OnStar service may not work if the OnStar equipment isn't properly installed or you haven't maintained it and the vehicle is in good working order and in compliance with all government regulations. If you try to add, connect, or modify any equipment or software in the vehicle, OnStar service may not work. Other problems OnStar can't control may prevent service to you, such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage to important parts of the vehicle in a crash, or wireless phone network congestion or jamming.

See *Radio Frequency Statement on page 13-20* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

OnStar Steering Wheel Controls

This vehicle may have a Talk/Mute button that can be used to interact with OnStar Hands-Free calling. See *Steering Wheel Controls on page 5-2* for more information.

On some vehicles, the Talk button can be used to dial numbers into voice mail systems, or to dial phone extensions. See the OnStar Owner's Guide for more information.

Your Responsibility

Increase the volume of the radio if the OnStar Advisor cannot be heard.

If the light next to the OnStar buttons is red, the system may not be functioning properly. Push the button and request a vehicle diagnostic check. If the light appears clear (no light appears), your OnStar subscription has expired and all services have been deactivated. Push the button to confirm that the OnStar equipment is active.

Keys, Doors and Windows

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Keys and Locks

Keys

⚠ WARNING

Leaving children in a vehicle with the Remote Keyless Entry (RKE) transmitter is dangerous for many reasons; children or others could be badly injured or even killed. They could operate the power windows or other controls or even make the vehicle move. The windows will function with the RKE transmitter in the vehicle and they could be seriously injured or killed if caught in the path of a closing window. Do not leave the RKE transmitter in a vehicle with children.

This key, located inside the Remote Keyless Entry (RKE) transmitter, is used for the driver door and glove box.

To remove the key, press the button near the bottom of the transmitter, and pull the key out. Never pull the key out without pressing the button.

See your dealer if a new key is needed.

Notice: **If the keys get locked in the vehicle, it may have to be damaged to get them out. Always carry a spare key.**

Contact Roadside Service if you are locked out of the vehicle. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-11*.

Remote Keyless Entry (RKE) System

See *Radio Frequency Statement on page 13-20* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

If there is a decrease in the RKE operating range:

- Check the distance. The transmitter may be too far from the vehicle.
- Check the location. Other vehicles or objects may be blocking the signal.
- Check the transmitter's battery. See "Battery Replacement" later in this section.
- If the transmitter is still not working correctly, see your dealer or a qualified technician for service.

Remote Keyless Entry (RKE) System Operation

The Remote Keyless Entry (RKE) transmitter functions will work up to 60 m (195 ft) away from the vehicle.

Keep in mind that other conditions, such as those previously stated, can impact the performance of the transmitter.

With Remote Start and Power Liftgate Shown, Without Similar

(Lock): Press to lock all doors. The turn signal indicators may flash and/or the horn may sound to indicate locking, see "Locking Feedback" under *Vehicle Personalization on page 5-42*.

If the driver door is open when is pressed, all doors lock except the driver door, if enabled through the vehicle personalization. If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the theft-deterrent system. See *Anti-Theft Alarm System on page 2-18*.

(Unlock): Press to unlock the driver door or all doors, see "Door Unlock Options" under *Vehicle Personalization on page 5-42*. When remotely unlocking the vehicle at night the fog lamps and reverse lamps will come on for about 20 seconds to light your approach to the vehicle. The turn signal indicators may flash and/or the horn may sound to indicate unlocking. See "Unlock Feedback" under *Vehicle Personalization on page 5-42*.

Memory seat positions may be recalled when unlocking the vehicle. See "Memory Remote Recall" under *Vehicle Personalization on page 5-42* for more information.

Pressing will disarm the theft-deterrent system. See *Anti-Theft Alarm System on page 2-18*.

(Remote Start): For vehicles with this feature, press and then press and hold within two seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 2-10* for additional information.

(Vehicle Locator/Panic Alarm): Press and release one time to locate the vehicle. The exterior lamps flash and the horn chirps. Press and hold for three seconds to sound the panic alarm. The horn sounds and the turn signal lamps flash for 30 seconds, or until is pressed again or the vehicle is started.

(Remote Liftgate Release): Press until the liftgate begins to move to open or close the power liftgate.

Keyless Access Operation

Some vehicles have the keyless access system that lets you lock and unlock the doors and access the liftgate without removing the remote transmitter from your pocket, purse, briefcase, etc. The keyless entry transmitter must be within 1 m (3 ft) of the door being opened. If the vehicle has this feature, there will be a body colored touch pad on the outside front door handles.

Keyless Unlocking

With the transmitter within 1 m (3 ft), approach the front door and pull the handle. If the transmitter is recognized, the door will unlock and open.

Entering any door other than the driver door will always cause all of the doors to unlock. This is not customizable.

To customize which doors unlock when the driver's door is opened, see "Passive Unlock" under *Vehicle Personalization on page 5-42*.

Keyless Locking

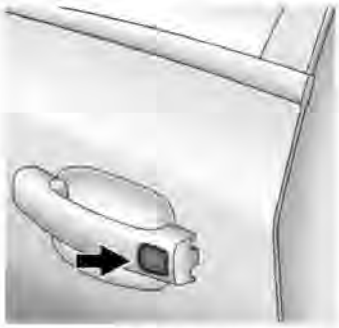
If the vehicle has the keyless access system, this feature allows you to select whether the doors automatically lock during normal vehicle exit. When the vehicle is turned off and all doors become closed, the vehicle will determine how many keyless access transmitters remain in the vehicle interior. If at least one keyless access transmitter has been removed from the interior of the vehicle, the doors will lock after eight seconds.

If there are two keyless access transmitters in the vehicle and one is removed, the other will be locked in. A person approaching the outside of the locked vehicle without an authorized keyless access transmitter will not be able to open the door, even with the transmitter in the vehicle.

You may temporarily disable the keyless locking feature by pressing and holding the power door unlock button on the instrument panel for several seconds with a door open. Keyless locking will then remain disabled until the door lock switch is pressed, or until the vehicle is turned on.

To customize whether the doors automatically lock when you exit the vehicle, see "Passive Locking" under *Vehicle Personalization on page 5-42*.

Lock Sensor



When all doors are closed and the ignition is off, the vehicle can be locked by pressing this area on the door handle. This feature will be available for several minutes after the vehicle has been turned off.

Keyless Liftgate Opening

Press the touch pad on the liftgate handle to open the liftgate if the keyless entry transmitter is within range.

Programming Transmitters to the Vehicle

Only keyless entry transmitters programmed to the vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen transmitters no longer work. Each vehicle can have up to eight transmitters matched to it.

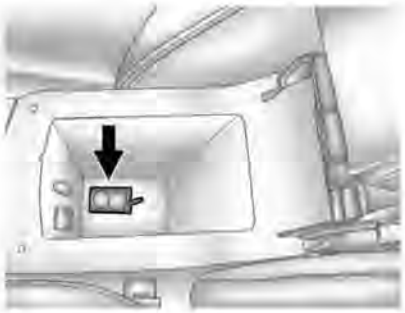
Programming with a Recognized Transmitter (Keyless Access Vehicles Only)

A new transmitter can be programmed to the vehicle when there is one recognized transmitter.

To program, the vehicle must be off and all of the transmitters, both currently recognized and new, must be with you.

1. Place the recognized transmitter(s) in the cupholder.
2. Insert the vehicle key of the new transmitter into the key lock cylinder located on the outside of the driver door and turn the key to the unlock position five times within ten seconds.

   The Driver Information Center (DIC) displays READY TO LEARN ELECTRONIC KEY #2, 3, 4, ETC.



3. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
4. Press the ignition. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
5. Remove the transmitter from the transmitter pocket and press on the transmitter.

   To program additional transmitters, repeat Steps 3 through 5.

   When all additional transmitters are programmed, press and hold the ignition for 10 seconds to exit programming mode.

Programming without a Recognized Transmitter (Keyless Access Vehicles Only)

If there are no currently recognized transmitters available, follow this procedure to program up to eight transmitters. This feature is not available in Canada. This procedure will take approximately 30 minutes to complete. The vehicle must be off and all of the transmitters you wish to program must be with you.

1. Insert the vehicle key of the transmitter into the key lock cylinder located on the outside of the driver door and turn the key to the unlock position five times within ten seconds.

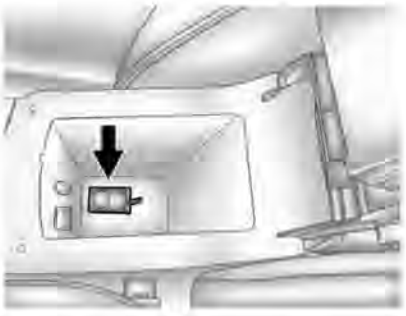
   The Driver Information Center (DIC) displays REMOTE LEARN PENDING, PLEASE WAIT.

2. Wait for ten minutes until the DIC displays PRESS ENGINE START BUTTON TO LEARN and then press the ignition.

   The DIC displays will again show REMOTE LEARN PENDING, PLEASE WAIT.

3. Repeat Step 2 two additional times. After the third time all previously known transmitters will no longer work with the vehicle. Remaining transmitters can be relearned during the next steps.

   The DIC display should now show READY FOR REMOTE # 1.



4. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.

5. Press the ignition. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.

6. Remove the transmitter from the transmitter pocket and press on the transmitter.

   To program additional transmitters, repeat Steps 4 through 6.

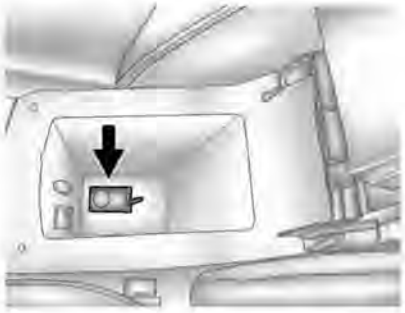
   When all additional transmitters are programmed, press and hold the ignition for 10 seconds to exit programming mode.

Starting the Vehicle with a Low Transmitter Battery

If the transmitter battery is weak, the DIC may display NO REMOTE DETECTED when you try to start the vehicle. The REPLACE BATTERY IN REMOTE KEY message may also be displayed at this time.

To start the vehicle:

1. Open the center console storage area and the storage tray.



2. Place the transmitter in the transmitter pocket.
3. With the vehicle in P (Park) or N (Neutral), press the brake pedal and the START button.

   Replace the transmitter battery as soon as possible.

Battery Replacement

***Notice:* When replacing the battery, do not touch any of the circuitry on the transmitter. Static from your body could damage the transmitter.**

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC.

1. Press the button near the bottom of the transmitter and pull the key out.

2. Use the key blade to separate the two halves of the transmitter.
3. Remove the old battery. Do not use a metal object.
4. Insert the new battery, positive side facing down. Replace with a CR2032 or equivalent battery.
5. Snap the transmitter back together.

Remote Vehicle Start

If available, this feature allows you to start the engine from outside the vehicle.

(Remote Vehicle Start): This button will be on the RKE transmitter if the vehicle has remote start.

Vehicles with an automatic climate control system will automatically change to a heating or cooling mode depending on the outside temperature during a remote start. When the ON/RUN/START ignition mode is selected , the climate control system will return to its setting from when the vehicle was last turned off.

Laws in some local communities may restrict the use of remote starters. For example, some laws may require a person using remote start to have the vehicle in view. Check local regulations for any requirements.

There are other conditions which can affect the performance of the transmitter See *Remote Keyless Entry (RKE) System on page 2-3* for additional information.

Starting the Engine Using Remote Start

To start the engine using the remote start feature use the following procedure.

1. Press on the RKE transmitter.
2. Within two seconds, press and hold until the turn signal lamps flash. This confirms the request to remote start the vehicle has been received.

   If the vehicle' s lamps are not visible, press and hold for at least two seconds.

   During the remote start the doors will be locked and the parking lamps will remain on as long as the engine is running.

   The engine will shut off after 10 minutes unless a time extension is done or the ignition is put in ON/RUN/START.
3. Press the brake pedal and select the ON/RUN/START ignition mode to drive the vehicle.

Extending Engine Run Time

For a 10-minute extension, repeat Steps 1 and 2 while the engine is still running. The remote start can only be extended once.

When the remote start is extended, the second 10-minute period will start immediately.

For example, if the vehicle has been running for five minutes, and 10 minutes are added, the engine will run for a total of 15 minutes.

A maximum of two remote starts, or a remote start with an extension, are allowed between ignition cycles.

The vehicle's ignition must be changed to ON/RUN/START and then back to OFF before the remote start procedure can be used again.

Shutting the Engine Off After a Remote Start

To cancel a remote start, do any of the following.

- Press ⍝ until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then back off.

Conditions in Which Remote Start Will Not Work

The remote start will not operate if any of the following occur.

- The ignition is in any mode other than OFF.
- The transmitter is in the vehicle.
- The hood is not closed.
- The hazard warning flashers are on.
- There is an emission control system malfunction.
- The engine coolant temperature is too high.
- The oil pressure is low.
- Two remote vehicle starts have already been used.
- The vehicle is not in P (Park).

Door Locks

⚠ WARNING

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked. So, all passengers should wear safety belts properly and the doors should be locked whenever the vehicle is driven.

(Continued)

WARNING (Continued)

- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.
- Outsiders can easily enter through an unlocked door when slowing or stopping the vehicle. Lock the doors to help prevent this from happening.

To lock or unlock a door, use the Remote Keyless Entry (RKE) transmitter from the outside.

From inside the vehicle with the doors locked, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks

The power door lock switches are on the instrument panel.

(Unlock): Press to unlock the doors.

(Lock): Press to lock the doors.

Lockout Deterrent

Lockout deterrent decreases the chances that the keys may be accidentally locked in the vehicle.

When door locking is requested by pressing on the instrument panel or on the RKE transmitter and the driver door is open, all doors will lock and the driver door will immediately unlock. The driver door must be closed when is pressed for all doors to remain locked.

This feature can be programmed to provide the lockout deterrent feature only when the ignition mode is ACC/ACCESSORY, or ON/RUN/START. See "Power Door Locks" in *Vehicle Personalization on page 5-42*.

Delayed Locking

When this feature is enabled and the doors are locked with the power lock switch on the instrument panel, three chimes sound to signal that the delayed locking feature is in use. All doors lock five seconds after the last door is closed.

When the delayed locking feature is in use, pressing on the instrument panel or on the RKE transmitter will override the feature and lock all doors immediately.

This feature can be programmed by using the Driver Information Center (DIC). See "Delayed Door Lock" in *Vehicle Personalization on page 5-42*. The delayed locking feature is only available if "Unlocked Door Anti-Lockout" is disabled.

Safety Locks

Rear door security locks prevent passengers from opening the rear doors from the inside.

Press to activate the safety locks. Once activated, the LED light in the switch illuminates.

Pressing the button again deactivates the safety locks.

Doors

Liftgate

⚠ WARNING

Exhaust gases can enter the vehicle if it is driven with the liftgate, trunk/hatch open, or with any objects that pass through the seal between the body and the trunk/hatch or liftgate. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle must be driven with the liftgate, or trunk/hatch open:

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.

(Continued)

WARNING (Continued)

- Adjust the Climate Control system to a setting that brings in only outside air and set the fan speed to the highest setting. See Climate Control Systems in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

For more information about carbon monoxide, see *Engine Exhaust on page 9-24*.

Notice: **If you open the liftgate without checking for overhead obstructions such as a garage door, you could damage the liftgate or the liftgate glass. Always check to make sure the area above and behind the liftgate is clear before opening it.**

Manual Liftgate

For vehicles without keyless access, unlock the vehicle before opening the liftgate.

Press the touchpad located in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touchpad while closing the liftgate. This will cause the liftgate to be unlatched.

Always close the liftgate before driving.

Power Liftgate

On vehicles with a power liftgate, the switch is on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

⚠ WARNING

You or others could be injured if caught in the path of the power liftgate. Make sure there is no one in the way of the liftgate as it is opening and closing.

Choose the power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position.

The three modes are.

MAX : The liftgate opens to the full open height.

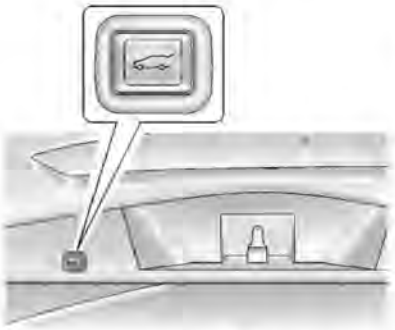
3/4 : The liftgate opens to a reduced open height that can be set by the vehicle operator in a range of approximately 3/4 open to full open. Use this setting to prevent the liftgate from opening into overhead obstructions such as a garage door or roof mounted cargo during power operation. The liftgate can still be opened fully manually.

OFF: The liftgate only operates manually in this position.

Manual operation of a liftgate that also has power operation requires more effort than with a standard manual liftgate.

In either the MAX or the 3/4 mode, the liftgate can be power opened and closed by.

- Pressing on the Remote Keyless Entry (RKE) transmitter until the liftgate starts moving. See *Remote Keyless Entry (RKE) System Operation on page 2-4*.
- Pressing on the center of the mode switch on the driver door, with the driver door unlocked.
- Pressing the touchpad switch on the liftgate outside handle, with all doors unlocked, to open the liftgate.



Press and release on the liftgate adjacent to the latch to close the liftgate.

Pressing any liftgate button, or the touchpad switch while the liftgate is moving, stops it. Pressing the button or RKE switch again reverses the direction. There is a minimum distance that the power liftgate must already be open for the system to hold it open. If movement is stopped below that minimum, the liftgate closes.

Do not force the liftgate open or closed during a power cycle.

The power liftgate may be temporarily disabled under extreme temperatures or low battery conditions. If this occurs, the liftgate can still be operated manually.

If you shift the transmission out of P (Park) while the power function is in progress, the liftgate power function will continue to completion. If you shift the transmission out of P (Park) and accelerate before the power liftgate latch is closed, the liftgate may reverse to the open position. Cargo could fall out of the vehicle. Always make sure the power liftgate is closed and latched before you drive away.

If you power open the liftgate and the liftgate support struts have lost pressure, the turn signals flash and a chime sounds. The liftgate stays open temporarily, then slowly closes. See your dealer for service before using the liftgate.

Obstacle Detection Features

If the liftgate encounters an obstacle during a power open or close cycle, a warning chime will sound and the liftgate will automatically reverse direction to the full closed or open position. After removing the obstruction, the power liftgate operation can be used again. If the liftgate encounters multiple obstacles on the same power cycle, the power function will deactivate. The Power Liftgate Unavailable warning message in the Driver Information Center (DIC) will display. After removing the obstructions, the liftgate will resume normal power operation.

The vehicle has pinch sensors located on the side edges of the liftgate. If an object is caught between the liftgate and the body and presses against this sensor, the liftgate will reverse direction and open fully. The liftgate will remain open until it is activated again or closed manually.

Setting the Power Liftgate 3/4 Mode

To change the liftgate stop position.

1. Turn the liftgate switch to either the MAX, or the 3/4 mode position and power open the liftgate.
2. Stop the liftgate movement at the desired height by pressing any liftgate switch. Manually adjust the liftgate position if required.
3. Press and hold the button on the liftgate adjacent to the latch until the turn signals flash and a beep sounds to indicate that the new setting is recorded.

When power opened with the 3/4 mode selected, the liftgate stops at the new set position.

If you do not hear the audible and visual feedback when setting the intermediate stop position, you are attempting to set the height below the 3/4 open height minimum (approximately 16.4 m or 5 ft). The liftgate cannot be set below that minimum and the new setting will not be recorded.

Manual Operation of Power Liftgate

To change the liftgate to manual operation, turn the mode switch to the OFF position.

With the power liftgate disabled and all of the doors unlocked, the liftgate can be manually opened and closed. Manual efforts of a vehicle equipped with a power liftgate will be higher than a standard non-power liftgate.

To open the liftgate, press the touchpad on the handle on the outside of the liftgate, and lift the gate open. To close the liftgate, use the pull cup to lower the liftgate and close. With the power liftgate disabled, the liftgate electric latch will still power latch once contact is made with the striker. Always close the liftgate before driving.

If the RKE button is pressed while power operation is disabled, the turn signals flash and the liftgate will not move.

The liftgate has an electric latch. If the battery is disconnected or has low voltage, the liftgate will not open. The liftgate will resume operation when the battery is reconnected and charged.

Vehicle Security

This vehicle has theft-deterrent features; however, they do not make it impossible to steal.

Anti-Theft Alarm System

This vehicle has an anti-theft alarm system.

The LED light, located on the instrument panel near the windshield, indicates the status of the system.

Arming the System

To arm the system,

1. Close all doors, liftgate, and hood.
2. Lock the vehicle using the transmitter or the power door lock button. The LED on the instrument panel should come on and stay on for about 30 seconds.
3. After 30 seconds, the alarm system will arm, and the LED will begin to slowly flash indicating the alarm is operating.

If a door, the hood, or liftgate is opened without first unlocking with the transmitter, the turn signals will flash and the horn will sound for about 30 seconds. The alarm system will then re-arm to monitor for the next unauthorized event.

The theft-deterrent alarm system will not activate if the doors are locked with the vehicle's key. You can start the vehicle with a recognized transmitter in the vehicle if the alarm has been set off.

Disarming the System

To disarm the system, either unlock the doors using the transmitter, or start the vehicle with a recognized transmitter in the vehicle.

To avoid setting off the alarm by accident:

- Lock the vehicle with the transmitter after all occupants have left the vehicle and all doors are closed.
- Always unlock a door with the transmitter. Unlocking a door any other way will not disarm the alarm.

If you set off the alarm by accident, turn off the alarm by pressing on the transmitter. The alarm will not stop if you try to unlock a door any other way.

How to Detect a Tamper Condition

If is pressed and the horn chirps three times, an attempted break-in has occurred while the system was armed.

If the alarm has been activated, the THEFT ATTEMPTED message will appear on the DIC. See *Key and Lock Messages on page 5-38* for additional information.

Immobilizer

See *Radio Frequency Statement on page 13-20* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

Immobilizer Operation

This vehicle has a passive theft-deterrent system.

The system does not have to be manually armed or disarmed.

The vehicle is automatically immobilized when the vehicle is turned off.

The immobilization system is disarmed when the pushbutton start is activated to enter the ACC/ACCESSORY mode or the ON/RUN/START mode and a valid transmitter is present in the vehicle.

The security light, located in the instrument panel cluster, comes on if there is a problem with arming or disarming the theft-deterrent system.

The system has one or more RKE transmitters matched to an immobilizer control unit in your vehicle. Only a correctly matched RKE transmitter will start the vehicle. If the transmitter is ever damaged, you may not be able to start your vehicle.

When trying to start the vehicle, the security light comes on briefly when the ignition is turned on.

If the engine does not start and the security light stays on, there is a problem with the system. Turn the ignition off and try again.

If the vehicle will not change ignition modes (ACC/ACCESSORY, ON/RUN/START, OFF), and the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket located in the center console. See "NO REMOTE DETECTED" under *Key and Lock Messages on page 5-38*.

If the ignition modes will not change with the other transmitter, your vehicle needs service. If the ignition does change modes, the first transmitter may be faulty. See your dealer who can service the theft-deterrent system and have a new RKE transmitter programmed to the vehicle.

It is possible for the immobilizer system to learn new or replacement RKE transmitters. Up to eight transmitters can be programmed for the vehicle. To program additional transmitters, see "Programming Transmitters to the Vehicle" under *Remote Keyless Entry (RKE) System Operation on page 2-4*.

Do not leave the key or device that disarms or deactivates the theft-deterrent system in the vehicle.

Exterior Mirrors

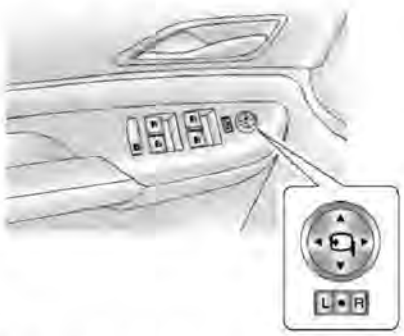
Convex Mirrors

⚠ WARNING

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on the right. Check the inside mirror or glance over your shoulder before changing lanes.

The passenger side mirror is convex shaped. A convex mirror's surface is curved so more can be seen from the driver seat.

Power Mirrors



Controls for the outside power mirrors are located on the driver door.

To adjust the mirror:

1. Move the selector switch to L (left) or R (right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror in the desired direction.
3. Return the selector switch to the center position.

Folding Mirrors

Power Foldaway Mirrors

The power folding mirrors have controls on the driver door.

To fold the mirrors:

1. With the selector switch in the ● position, press the down arrow on the control pad. Both mirrors will automatically fold.
2. Press the down arrow again to return the mirrors to their original position.

Resetting the Power Foldaway Mirrors

Reset the power foldaway mirrors if:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.
- The mirrors do not stay in the unfolded position.
- The mirrors vibrate at normal driving speeds.

Fold and unfold the mirrors one time using the mirror controls to reset them to their normal position. A noise may be heard during the resetting of the power foldaway mirrors. This sound is normal after a manual folding operation.

Heated Mirrors

(Rear Window Defogger): Press to heat the mirrors.

See "Rear Window Defogger" under *Dual Automatic Climate Control System on page 8-1* for more information.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror automatically adjusts for the glare of headlamps behind you.

Reverse Tilt Mirrors

If the vehicle is equipped with memory mirrors, there is an option to have the mirrors tilt down, when in R (Reverse), to more easily see the ground near the vehicle.

When the vehicle is shifted to R (Reverse), both the driver and passenger mirrors will tilt downward. They will return to their previous position when the vehicle is shifted out of R (Reverse), the ignition is turned to OFF, or the vehicle is left in R (Reverse) for an extended period of time.

This feature can be turned on or off. See *Vehicle Personalization on page 5-42*.

Interior Mirrors

Manual Rearview Mirror

Adjust the inside rearview mirror for a clear view of the area behind your vehicle. To avoid glare of the headlamps from behind, push the tab forward for daytime and pull it for nighttime use.

Vehicles with OnStar® have three control buttons at the bottom of the mirror. See your dealer for more information about OnStar and how to subscribe to it. See the OnStar Owner's Guide for more information about the services OnStar provides.

Automatic Dimming Rearview Mirror

The vehicle may have an automatic dimming inside rearview mirror. Automatic dimming reduces the glare from the headlamps of the vehicle behind you. The dimming feature and the indicator light come on each time the vehicle is started.

Vehicles with OnStar have three control buttons located at the bottom of the mirror. See your dealer for more information about OnStar and how to subscribe to it. See the OnStar Owner's Guide for more information about the services OnStar provides.

Cleaning the Mirror

Do not spray glass cleaner directly on the mirror. Use a soft towel dampened with water.

Windows

⚠ WARNING

Leaving children, helpless adults, or pets in a vehicle with the windows closed is dangerous. They can be overcome by the extreme heat and suffer permanent injuries or even death from heat stroke. Never leave a child, a helpless adult, or a pet alone in a vehicle, especially with the windows closed in warm or hot weather.

The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a pulsing sound when either rear window is down and the front windows are up. To reduce the sound, open either a front window or the sunroof (if equipped).

Power Windows

⚠ WARNING

Leaving children in a vehicle with the RKE transmitter is dangerous for many reasons; children or others could be badly injured or even killed. They could operate the power windows or other controls or even make the vehicle move. The windows will function with the RKE transmitter in the vehicle and they could be seriously injured or killed if caught in the path of a closing window. Do not leave the RKE transmitter in a vehicle with children.

When there are children in the rear seat, use the window lockout button to prevent unintentional operation of the windows.

Driver Side Shown

The power window controls are on each of the side doors.

The driver door also has switches that control the passenger and rear windows.

The power windows:

- Can be operated with the ignition in ACC/ACCESSORY or ON/RUN/START.
- Can be operated within 10 minutes of switching the ignition off. See *Retained Accessory Power (RAP) on page 9-22*.
- Will stop operation when any door is opened.

Operate the switch for the desired window by pressing to open and pulling to close.

Pushing or pulling the switch part of the way will open or close the window as long as the switch is operated.

Express-Down/Up Windows

Windows that have the express-down/up feature allow the windows to be lowered and raised fully without holding the window switch. Press the window switch fully and release it to activate the express-down feature. Pull the window switch fully up and release it to activate the express-up feature. The express mode can be canceled at any time by briefly pressing, or pulling the switch.

Programming the Power Windows

Programming the power windows may be necessary if the vehicle's battery has been disconnected or discharged.

If the window will not express up after power has been restored and a message is displayed in the Driver Information Center:

1. Close all doors .
2. Place the ignition in ACC/ACCESSORY or ON/RUN/START.
3. From any partial open position, close the window and continue to pull the switch briefly after the window has fully closed.

Obstacle Detection Feature

The Obstacle Detection Feature is part of the express-up feature and is active:

1. In the middle and upper portions of the window opening.
2. During window up movements.
3. In ignition OFF during all window up movements and during express-up window movements in ignition ON/RUN/START.

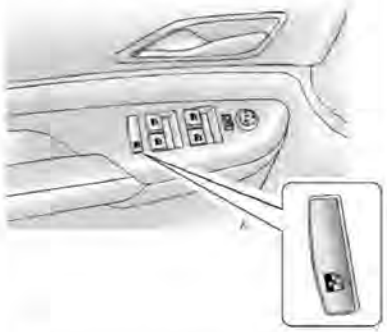
If there is something blocking the window during automatic closing, the window will reverse direction for a short distance. Weather conditions such as extreme cold and/or ice may cause the window to auto-reverse. The window will return to normal operation once the object or condition is removed.

If conditions prevent the window from closing and the window continues to auto-reverse, it is possible to close the window with the ignition in ON/RUN/START by holding the window switch in the partially or fully pulled up position. Release of the switch from the partially pulled up position will cause the window to stop. Release of the switch from the fully pulled up position will activate the express-up and related obstacle detection features.

Overload

If the windows are repeatedly operated within a short time, the window operation is disabled for a short time.

Window Lockout



(Window Lockout): The window lockout switch is on the driver door. This feature prevents the rear passenger windows from operating, except from the driver position. Press the switch to turn the lockout feature on or off. An indicator light shows the feature is on.

Sun Visors

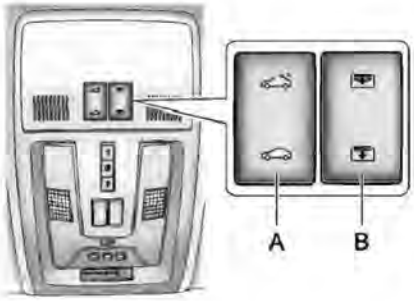
Pull the sun visor down to block glare. Detach the sun visor from the center mount to pivot to the side window, or to extend along the rod, if available.

Roof

Sunroof

On vehicles with a sunroof, the switches are on the overhead console.

The sunroof only operates when the ignition is in ON/RUN/START or ACC/ACCESSORY, or in Retained Accessory Power (RAP). See *Ignition Positions on page 9-18* and *Retained Accessory Power (RAP) on page 9-22*.



A. Sunroof Switch

B. Sunshade Switch

To open the sunroof, press the back of the sunroof switch (A) to the first detent and release, the sunroof will open to the vent position.

Press the back of the sunroof switch to the first detent and hold, to open the sunroof to a desired position at a normal speed. Press the rear of the switch to the second detent and release, to express open the sunroof to an automatically adjusted comfort position. Press the rear of the switch to the second detent and release again, to open the sunroof to the full open position. Press the front of the switch to second detent and release, to express close the sunroof.

Press the front of the sunroof switch to the first detent and hold, to close the sunroof to a desired position at a normal speed. Press the front of the switch to the second detent and release, to express close the sunroof.

To open or close the sunshade, press the open or close sunroof switch (B).

Press the front or back of the sunshade switch to the first detent and hold, to open or close the sunshade to a desired position at a normal speed. Press the switch to the second detent and release, to express open or close the sunshade.

Fully close the glass before fully closing the sunshade.

Anti-Pinch Feature

If an object is in the path of the sunroof when it is closing, the anti-pinch feature detects the object and stops the sunroof from closing at the point of the obstruction. The sunroof then returns to the full-open position.

Dirt and debris may collect on the sunroof seal or in the track. This could cause an issue with sunroof operation, noise, or plugging the water drainage system. Periodically open the sunroof and remove any obstacles or loose debris. Wipe the sunroof seal and roof sealing area using a clean cloth, mild soap, and water. Do not remove grease from the sunroof.

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Head Restraints

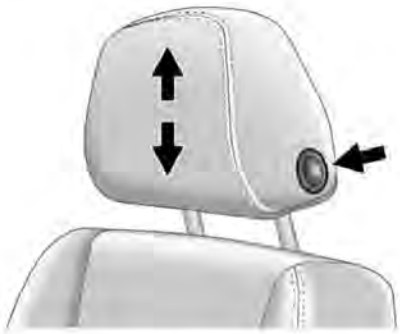
Front Seats

The vehicle's front seats have adjustable head restraints in all outboard seating positions.

⚠ WARNING

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.



1. To raise or lower the head restraint, press the release button while pulling up or pushing down on the head restraint.
2. Release the button then pull up or push down on the head restraint to make sure it is locked in place.

The front head restraints are designed not to be removed.

Rear Seats

The rear seats have adjustable head restraints in the outboard seating positions.

1. Pull the head restraint up to raise it.
2. To lower the head restraint, press the release button while pushing the head restraint down.
3. Release the button.
4. Push down on the head restraint to make sure it is locked in place.

The center seating position has an integrated headrest that can be adjusted the same way as the head restraints.

If you are installing a child restraint in the rear seat, see "Securing a Child Restraint Designed for the LATCH System" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-55.*

Front Seats

Seat Adjustment

⚠ WARNING

You can lose control of the vehicle if you try to adjust a manual driver seat while the vehicle is moving. The sudden movement could startle and confuse you, or make you push a pedal when you do not want to. Adjust the driver seat only when the vehicle is not moving.

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

Power Seat Adjustment

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front or rear part of the seat cushion by moving the front or rear of the control up or down.
- Raise or lower the seat by moving the control up or down.

To adjust the seatback, see *Reclining Seatbacks on page 3-8.*

To adjust the lumbar support, see *Lumbar Adjustment on page 3-7.*

Memory Seats

On vehicles with the memory feature, the "1" and "2" buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions, if available. These manually stored positions are referred to as Button Memory positions.

The vehicle will also automatically save driver seat, outside mirror, and adjustable throttle and brake pedal positions to the current driver Remote Keyless Entry (RKE) transmitter when the ignition is turned off. These automatically stored positions are referred to as RKE Memory positions. See *Remote Keyless Entry (RKE) System Operation on page 2-4* for more information.

Storing Button Memory Positions

To save positions into Button Memory:

1. Adjust the driver seat, seatback recliner, both outside mirrors, and adjustable pedals, if available, to the desired driving positions.
2. Press and release the MEM (Memory) button.
3. Press "1" until a beep sounds.
4. Repeat Steps 1 through 3 for a second driver using "2."

Recalling Button Memory Positions

To recall the manually saved Button Memory positions, press and hold "1" or "2." The driver seat, outside mirrors, and adjustable pedals, if available, move to the positions stored to those buttons when pressed. Releasing "1" or "2" before the stored positions are reached stops the recall.

If something has blocked the driver seat and/or the adjustable pedals, if available, while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by pressing the appropriate memory button. If the memory position is still not recalling, see your dealer for service.

Recalling RKE Memory Positions (Memory Remote Recall)

The Memory Remote Recall feature can recall the driver seat, outside mirrors, and adjustable pedals, if available, to previously stored RKE Memory positions when entering the vehicle.

Every time the ignition is placed in OFF, the positions of the driver seat, outside mirrors, and adjustable pedals, if available, are automatically stored to the RKE transmitter that was used to start the vehicle. These positions are called RKE Memory positions and may be different than the previously mentioned Button Memory positions saved to the "1" or "2" buttons.

To automatically recall RKE Memory positions, unlock the driver door with the RKE transmitter, and open the driver door. On vehicles with Keyless Access, opening the driver door when an RKE transmitter is present will activate the RKE Memory recall. If the driver door is already open, pressing the RKE transmitter button will also activate the RKE Memory recall. The driver seat, outside mirrors, and pedals, if available, will move to the previously saved RKE Memory positions.

This feature is turned on or off using the vehicle personalization menu. See "Memory Remote Recall" under *Vehicle Personalization on page 5-42* for more information.

To stop recall movement, press one of the memory, power mirror, or power seat controls, or the adjustable pedal switch, if available.

If something has blocked the driver seat and/or the adjustable pedals, if available, while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by opening the driver door and pressing the RKE transmitter button. If the memory position is still not recalling, see your dealer for service.

Easy Exit Driver Seat

This feature moves the seat rearward allowing the driver more room to exit the vehicle.

To activate, place the ignition in OFF and open the driver door. If the driver door is already open, placing the ignition in OFF will activate the easy exit driver seat.

This feature is turned on or off using the vehicle personalization menu. See "Easy Exit Driver Seat" under *Vehicle Personalization on page 5-42* for more information.

To stop recall movement, press one of the memory, power seat controls, or the adjustable pedal switch, if available.

If something has blocked the driver seat while recalling the exit position, the recall may stop. Remove the obstruction; then press and hold the power seat control rearward for two seconds. Try recalling the exit position again. If the exit position is still not recalling, see your dealer for service.

Lumbar Adjustment

Power Lumbar

If available, press and hold the front or rear of the control to increase or decrease lumbar support. Release the control when the seatback reaches the desired level of lumbar support.

Thigh Support Adjustment

If available, adjust the manual leg extension by pulling up on the lever, and then pulling or pushing on the support to lengthen or shorten it. Release the lever to lock it in place.

Reclining Seatbacks

⚠ WARNING

Sitting in a reclined position when the vehicle is in motion can be dangerous. Even when buckled up, the safety belts cannot do their job when reclined like this.

The shoulder belt cannot do its job because it will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

(Continued)

WARNING (Continued)

The lap belt cannot do its job either. In a crash, the belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.

For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the safety belt properly.

Do not have a seatback reclined if the vehicle is moving.

Manual Reclining Seatbacks

⚠ WARNING

You can lose control of the vehicle if you try to adjust a manual driver seat while the vehicle is moving. The sudden movement could startle and confuse you, or make you push a pedal when you do not want to. Adjust the driver seat only when the vehicle is not moving.

⚠ WARNING

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

To recline a manual seatback:

1. Lift the lever.
2. Move the seatback to the desired position, and then release the lever to lock the seatback in place.
3. Push and pull on the seatback to make sure it is locked.

To return the seatback to the upright position:

1. Lift the lever fully without applying pressure to the seatback, and the seatback will return to the upright position.
2. Push and pull on the seatback to make sure it is locked.

Power Reclining Seatbacks

To adjust a power seatback, if available:

- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

Heated Front Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures. To reduce the risk of burns, people with such a condition should use care when using the seat heater, especially for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket, cushion, cover, or similar item. This may cause the seat heater to overheat. An overheated seat heater may cause a burn or may damage the seat.

If available, the buttons are near the climate controls on the instrument panel. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat cushion and seatback.

Press the button once for the highest setting. With each press of the button, the heated seat will change to the next lower setting, and then to the off setting. The lights indicate three for the highest setting and one for the lowest.

The passenger seat may take longer to heat up.

Remote Start Heated Seats

When it is cold outside, the heated seats can be turned on automatically during a remote vehicle start. The heated seats will be canceled when the ignition is turned on. Press the button to use the heated seats after the vehicle is started.

The heated seat indicator lights on the button do not turn on during a remote start.

The temperature performance of an unoccupied seat may be reduced. This is normal.

The heated seats will not turn on during a remote start unless the heated seat feature is enabled in the vehicle personalization menu.

See *Remote Vehicle Start on page 2-10* and "Remote Start Auto Heated Seats" under *Vehicle Personalization on page 5-42* for more information.

Heated and Ventilated Front Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures. See the Warning under *Heated Front Seats on page 3-10*.

If available, the buttons are near the climate controls on the instrument panel. To operate, the ignition must be in ON/RUN/START.

Press to heat the seat or to ventilate the seat.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The lights indicate three for the highest setting and one for the lowest.

The passenger seat may take longer to heat up.

Remote Start Heated and Ventilated Seats

During a remote start, the heated or ventilated seats can be turned on automatically. They are canceled when the ignition is turned on. Press the button to use the heated or ventilated seats after the vehicle is started.

The heated or ventilated seat indicator lights on the button do not turn on during a remote start.

The temperature performance of an unoccupied seat may be reduced. This is normal.

The heated or ventilated seats will not turn on during a remote start unless they are enabled in the vehicle personalization menu. See *Remote Vehicle Start on page 2-10* and "Remote Start Auto Heated Seats" or "Remote Start Auto Seat Cool" under *Vehicle Personalization on page 5-42* for more information.

Rear Seats

Split Folding Seatbacks

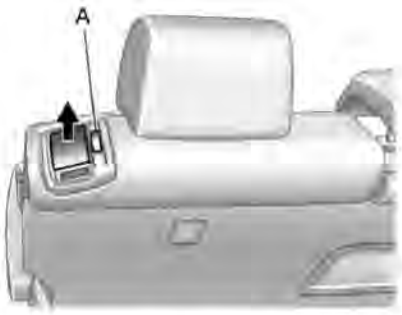
With this feature, either side of the rear seatback can be folded down for more cargo space.

Folding the Seatbacks

Notice: **Folding a rear seat with the safety belts still fastened may cause damage to the seat or the safety belts. Always unbuckle the safety belts and return them to their normal stowed position before folding a rear seat.**

To fold the seatback:

1. Unbuckle the rear safety belts and move the front seatbacks to the upright position. See *Reclining Seatbacks on page 3-8* for more information.
2. Make sure that there is nothing under, in front of, or on the seat.



A. Seatback Lock Indicator

3. Lift the lever on the top of the seatback. The rear seatback lock indicator (A) extends when the seatback is unlocked.
4. Fold the seatback forward. The rear seatback lock indicator (A) retracts when the seatback is locked.

Keep the seatback in the upright, locked position when not in use.

Raising the Seatbacks

⚠ WARNING

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

⚠ WARNING

A safety belt that is improperly routed, not properly attached, or twisted will not provide the protection needed in a crash. The person wearing the belt could be seriously injured. After raising the rear seatback, always check to be sure that the safety belts are properly routed and attached, and are not twisted.

To raise the seatback:

1. Lift the lever on top of the seatback. Raise the seatback and release the lever. The rear seatback lock indicator (A) extends when the seatback is unlocked.
2. Push the seatback rearward until it locks in the upright position. The rear seatback lock indicator (A) retracts when the seatback is locked in place.
3. Make sure the rear safety belts are not twisted or caught between the seat cushion and the seatback.

Reclining the Seatbacks

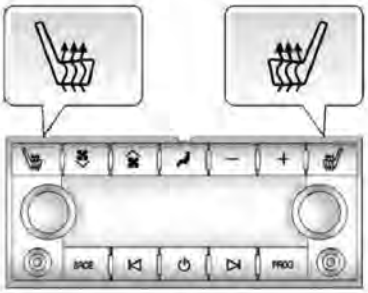
To recline the seatback:

1. Lift and hold the lever on top of the seatback. The rear seatback lock indicator (A) extends when the seatback is unlocked.
2. Tilt the seatback rearward, and then release the lever when the seatback is in the desired position. The rear seatback lock indicator (A) retracts when the seatback is locked in place.

Heated Rear Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures.
See the Warning under *Heated Front Seats on page 3-10*.

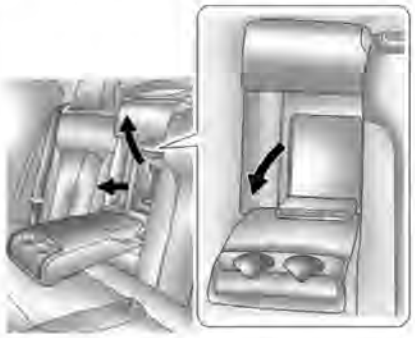


If available, the buttons are on the Rear Sear Audio (RSA) panel on the rear of the center console.

With the ignition in ON/RUN/START, press or to heat the left or right outboard seat cushion and seatback. An indicator on the RSA display appears when this feature is on.

Press the button once for the highest setting. With each press of the button, the heated seat changes to the next lower setting, and then the off setting. Three lights indicate the highest setting, and one light indicates the lowest.

Rear Seat Pass-Through Door



Some vehicles have a rear seat pass-through door in the center of the rear seatback. Fold down the center armrest and push down on the latch to open the door.

Safety Belts

This section of the manual describes how to use safety belts properly. It also describes some things not to do with safety belts.

⚠ WARNING

Do not let anyone ride where a safety belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing safety belts, the injuries can be much worse. You can hit things inside the vehicle harder or be ejected from the vehicle. You and your passenger(s) can be seriously injured or killed. In the same crash, you might not be, if you are buckled up. Always fasten your safety belt, and check that your passenger(s) are restrained properly too.

⚠ WARNING

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in the vehicle is in a seat and using a safety belt properly.

This vehicle has indicators as a reminder to buckle the safety belts. See *Safety Belt Reminders on page 5-15* for additional information.

In most states and in all Canadian provinces, the law requires wearing safety belts. Here is why:

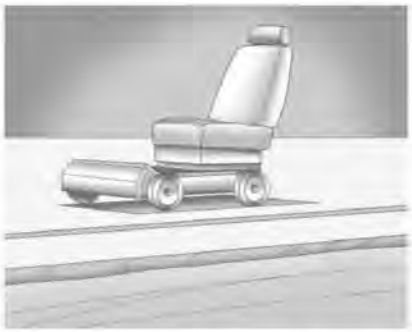
You never know if you will be in a crash. If you do have a crash, you do not know if it will be a serious one.

A few crashes are mild, and some crashes can be so serious that even buckled up, a person would not survive. But most crashes are in between. In many of them, people who buckle up can survive and sometimes walk away. Without safety belts they could have been badly hurt or killed.

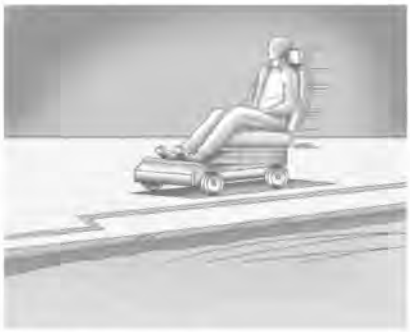
After more than 40 years of safety belts in vehicles, the facts are clear. In most crashes buckling up does matter ... a lot!

Why Safety Belts Work

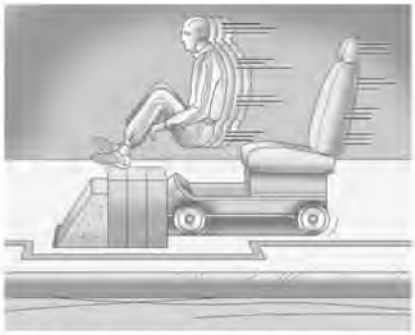
When you ride in or on anything, you go as fast as it goes.



Take the simplest vehicle. Suppose it is just a seat on wheels.



Put someone on it.



Get it up to speed. Then stop the vehicle. The rider does not stop.

The person keeps going until stopped by something. In a real vehicle, it could be the windshield...

or the instrument panel...

or the safety belts!

With safety belts, you slow down as the vehicle does. You get more time to stop. You stop over more distance, and your strongest bones take the forces. That is why safety belts make such good sense.

Questions and Answers About Safety Belts

Q: Will I be trapped in the vehicle after a crash if I am wearing a safety belt?

A: You *could* be — whether you are wearing a safety belt or not. But your chance of being conscious during and after an accident, so you *can* unbuckle and get out, is *much* greater if you are belted. And you can unbuckle a safety belt, even if you are upside down.

Q: If my vehicle has airbags, why should I have to wear safety belts?

A: Airbags are supplemental systems only; so they work *with* safety belts — not instead of them. Whether or not an airbag is provided, all occupants still have to buckle up to get the most protection. That is true not only in frontal collisions, but especially in side and other collisions.

Q: If I am a good driver, and I never drive far from home, why should I wear safety belts?

A: You may be an excellent driver, but if you are in a crash — even one that is not your fault — you and your passenger(s) can be hurt. Being a good driver does not protect you from things beyond your control, such as bad drivers.

Most accidents occur within 40 km (25 mi) of home. And the greatest number of serious injuries and deaths occur at speeds of less than 65 km/h (40 mph).

Safety belts are for everyone.

How to Wear Safety Belts Properly

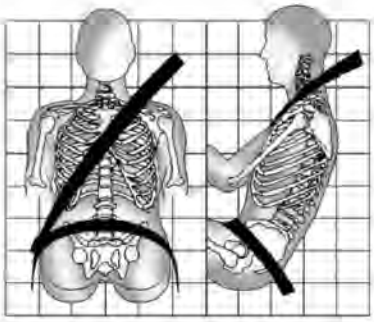
This section is only for people of adult size.

Be aware that there are special things to know about safety belts and children. And there are different rules for smaller children and infants. If a child will be riding in the vehicle, see *Older Children on page 3-46* or *Infants and Young Children on page 3-48*. Follow those rules for everyone's protection.

It is very important for all occupants to buckle up. Statistics show that unbelted people are hurt more often in crashes than those who are wearing safety belts.

Occupants who are not buckled up can be thrown out of the vehicle in a crash. And they can strike others in the vehicle who are wearing safety belts.

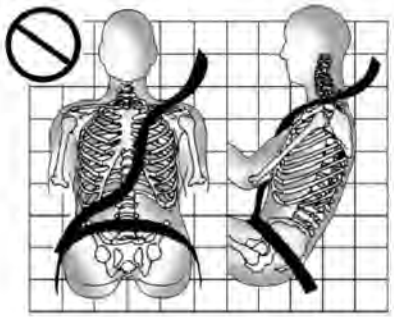
First, before you or your passenger(s) wear a safety belt, there is important information you should know.



Sit up straight and always keep your feet on the floor in front of you. The lap part of the belt should be worn low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries. The shoulder belt should go over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces.

The shoulder belt locks if there is a sudden stop or crash.

Q: What is wrong with this?

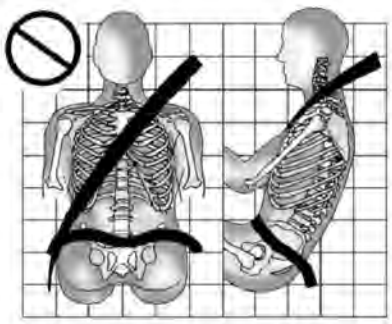


A: The shoulder belt is too loose. It will not give as much protection this way.

⚠ WARNING

You can be seriously hurt if the shoulder belt is too loose. In a crash, you would move forward too much, which could increase injury. The shoulder belt should fit snugly against your body.

Q: What is wrong with this?

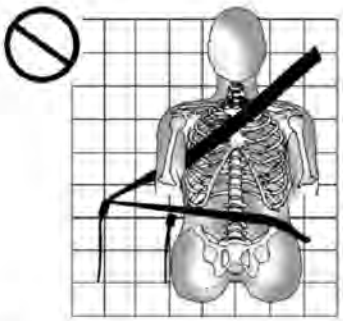


A: The lap belt is too loose. It will not give nearly as much protection this way.

⚠ WARNING

You can be seriously hurt if the lap belt is too loose. In a crash, you could slide under the lap belt and apply force on your abdomen. This could cause serious or even fatal injuries. The lap belt should be worn low and snug on the hips, just touching the thighs.

Q: What is wrong with this?

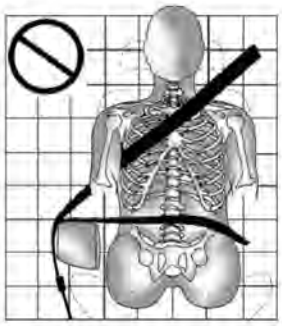


A: The belt is buckled in the wrong buckle.

⚠ WARNING

You can be seriously injured if the belt is buckled in the wrong place like this. In a crash, the belt would go up over your abdomen. The belt forces would be there, not on the pelvic bones. This could cause serious internal injuries. Always buckle the belt into the buckle nearest you.

Q: What is wrong with this?

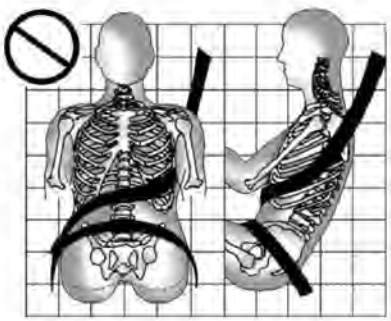


A: The belt is over an armrest.

⚠ WARNING

You can be seriously injured if the belt goes over an armrest like this. The belt would be much too high. In a crash, you can slide under the belt. The belt force would then be applied on the abdomen, not on the pelvic bones, and that could cause serious or fatal injuries. Be sure the belt goes under the armrests.

Q: What is wrong with this?

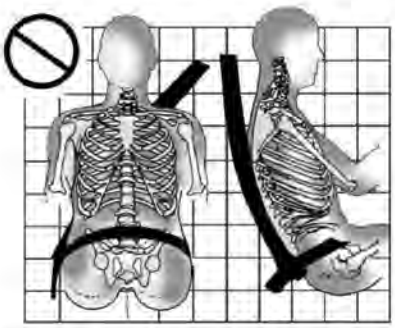


A: The shoulder belt is worn under the arm. It should be worn over the shoulder at all times.

⚠ WARNING

You can be seriously injured if you wear the shoulder belt under your arm. In a crash, your body would move too far forward, which would increase the chance of head and neck injury. Also, the belt would apply too much force to the ribs, which are not as strong as shoulder bones. You could also severely injure internal organs like your liver or spleen. The shoulder belt should go over the shoulder and across the chest.

Q: What is wrong with this?

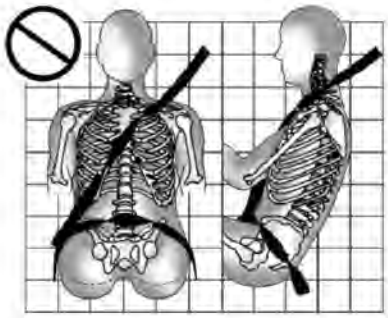


A: The belt is behind the body.

⚠ WARNING

You can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, you would not be restrained by the shoulder belt. Your body could move too far forward increasing the chance of head and neck injury. You might also slide under the lap belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Q: What is wrong with this?



A: The belt is twisted across the body.

⚠ WARNING

You can be seriously injured by a twisted belt. In a crash, you would not have the full width of the belt to spread impact forces. If a belt is twisted, make it straight so it can work properly, or ask your dealer to fix it.

Lap-Shoulder Belt

All seating positions in the vehicle have a lap-shoulder belt.

The following instructions explain how to wear a lap-shoulder belt properly.

1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see "Seats" in the Index.
2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

   The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

   If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. If this happens, let the belt go back all the way and start again.

3. Push the latch plate into the buckle until it clicks.

   Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Safety Belt Extender on page 3-29*.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. If equipped with a shoulder belt height adjuster, move it to the height that is right for you. See "Shoulder Belt Height Adjuster" later in this section for instructions on use and important safety information.

5. To make the lap part tight, pull up on the shoulder belt.

   It may be necessary to pull stitching on the safety belt through the latch plate to fully tighten the lap belt on smaller occupants.

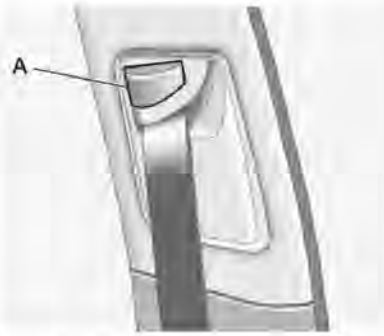
To unlatch the belt, just push the button on the buckle.

Before a door is closed, be sure the safety belt is out of the way. If a door is slammed against a safety belt, damage can occur to both the safety belt and the vehicle.

Shoulder Belt Height Adjuster

The vehicle has a shoulder belt height adjuster for the driver and right front passenger seating positions.

Adjust the height so that the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash. See *How to Wear Safety Belts Properly on page 3-19*.



Move the height adjuster up to the desired position by pushing up on the height adjuster.

After the height adjuster is set to the desired position, try to move it up or down without pressing the release button (A) to make sure it has locked into position. Press the release button to lower the height adjuster.

Safety Belt Pretensioners

This vehicle has safety belt pretensioners for front outboard occupants. Although the safety belt pretensioners cannot be seen, they are part of the safety belt assembly. They can help tighten the safety belts during the early stages of a moderate to severe frontal and near frontal crash and will deploy in side, rear and rollover events if the threshold conditions for pretensioner activation are met.

Pretensioners work only once. If the pretensioners activate in a crash, they will need to be replaced, and probably other new parts for the vehicle's safety belt system. See *Replacing Safety Belt System Parts After a Crash on page 3-30*.

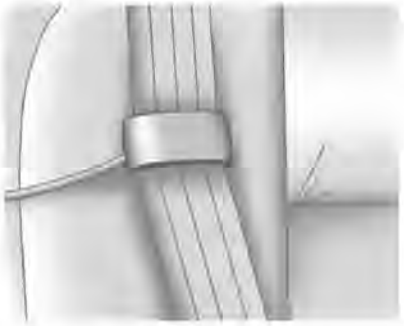
Rear Safety Belt Comfort Guides

This vehicle may have rear shoulder belt comfort guides for the outboard passenger positions in the rear seat. If not, they are available through your dealer. The guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, and properly adjusted, the comfort guide positions the belt away from the neck and head.

Here is how to install a comfort guide to the safety belt:

1. Remove the guide from its storage pocket on the side of the seat.

2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.



3. Be sure that the belt is not twisted and it lies flat. The elastic cord must be under the belt and the guide on top.

⚠ WARNING

A safety belt that is not properly worn may not provide the protection needed in a crash. The person wearing the belt could be seriously injured. The shoulder belt should go over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces.

4. Buckle, position, and release the safety belt as described previously in this section. Make sure the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck.

To remove and store the comfort guide, squeeze the belt edges together so that the safety belt can be removed from the guide. Slide the guide back into its storage pocket located on the side of the seat.

Safety Belt Use During Pregnancy

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear safety belts.

A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

The best way to protect the fetus is to protect the mother. When a safety belt is worn properly, it is more likely that the fetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child seats. To wear it, attach it to the regular safety belt. For more information, see the instruction sheet that comes with the extender.

Safety System Check

Now and then, check that the safety belt reminder light, safety belts, buckles, latch plates, retractors, and anchorages are working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from doing its job. See your dealer to have it repaired. Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Make sure the safety belt reminder light is working. See *Safety Belt Reminders on page 5-15* for more information.

Keep safety belts clean and dry. See *Safety Belt Care on page 3-29*.

Safety Belt Care

Keep belts clean and dry.

⚠ WARNING

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Replacing Safety Belt System Parts After a Crash

⚠ WARNING

A crash can damage the safety belt system in the vehicle. A damaged safety belt system may not properly protect the person using it, resulting in serious injury or even death in a crash. To help make sure the safety belt systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

After a minor crash, replacement of safety belts may not be necessary. But the safety belt assemblies that were used during any crash may have been stressed or damaged. See your dealer to have the safety belt assemblies inspected or replaced.

New parts and repairs may be necessary even if the safety belt system was not being used at the time of the crash.

Have the safety belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light on page 5-17*.

Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver.
- A frontal airbag for the right front passenger.
- A seat-mounted side impact airbag for the driver.
- A seat-mounted side impact airbag for the right front passenger.
- A roof-rail airbag for the driver and the passenger seated directly behind the driver.
- A roof-rail airbag for the right front passenger and the passenger seated directly behind the right front passenger.

All of the airbags in the vehicle will have the word AIRBAG embossed in the trim or on an attached label near the deployment opening.

For frontal airbags, the word AIRBAG will appear on the middle part of the steering wheel for the driver and on the instrument panel for the right front passenger.

With seat-mounted side impact airbags, the word AIRBAG will appear on the side of the seatback closest to the door.

With roof-rail airbags, the word AIRBAG will appear along the trim.

Even if you do not have a right front passenger seat in the vehicle there is still an active frontal airbag in the right side of the instrument panel. Do not place cargo in front of this airbag.

⚠ WARNING

Be sure that cargo is not near an airbag. In a crash, an inflating airbag might force that object toward a person. This could cause severe injury or even death. Secure objects away from the area in which an airbag would inflate. For more information, see *Where Are the Airbags? on page 3-33* and *Vehicle Load Limits on page 9-12*.

Airbags are designed to supplement the protection provided by safety belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating bag, all airbags must inflate very quickly to do their job.

Here are the most important things to know about the airbag system:

⚠ WARNING

You can be severely injured or killed in a crash if you are not wearing a safety belt — even if the vehicle has airbags. Airbags are designed to work with safety belts, but do not replace them. Also, airbags are not designed to deploy in every crash. In some crashes safety belts are the only restraint. See *When Should an Airbag Inflate? on page 3-34*.

Wearing a safety belt during a crash helps reduce your chance of hitting things inside the vehicle or being ejected from it. Airbags are "supplemental restraints" to the safety belts. Everyone in the vehicle should wear a safety belt properly — whether or not there is an airbag for that person.

⚠ WARNING

Airbags inflate with great force, faster than the blink of an eye. Anyone who is up against, or very close to, any airbag when it inflates can be seriously injured or killed. Do not sit unnecessarily close to any airbag, as you would be if you were sitting on the edge of the seat or leaning forward. Safety belts help keep you in position before and during a crash. Always wear a safety belt, even with airbags. The driver should sit as far back as possible while still maintaining control of the vehicle.

Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

⚠ WARNING

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Young children and infants need the protection that a child restraint system can provide. Always secure children properly in the vehicle. To read how, see *Older Children on page 3-46* or *Infants and Young Children on page 3-48*.

There is an airbag readiness light on the instrument panel cluster, which shows the airbag symbol.

The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light on page 5-17* for more information.

Where Are the Airbags?

The driver frontal airbag is in the middle of the steering wheel.

The right front passenger frontal airbag is in the instrument panel on the passenger side.

Driver Side Shown, Passenger Side Similar

The seat-mounted side impact airbags for the driver and right front passenger are in the side of the seatbacks closest to the door.

Driver Side Shown, Passenger Side Similar

The roof-rail airbags for the driver, right front passenger, and second row outboard passengers are in the ceiling above the side windows.

⚠ WARNING

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into

(Continued)

WARNING (Continued)

that person causing severe injury or even death. The path of an inflating airbag must be kept clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

Do not use seat accessories that block the inflation path of a seat-mounted side impact airbag.

Never secure anything to the roof of a vehicle with roof-rail airbags by routing a rope or tie down through any door or window opening. If you do, the path of an inflating roof-rail airbag will be blocked.

When Should an Airbag Inflate?

Frontal airbags are designed to inflate in moderate to severe frontal or near-frontal crashes to help reduce the potential for severe injuries mainly to the driver's or right front passenger's head and chest. However, they are only designed to inflate if the impact exceeds a predetermined deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants.

Whether the frontal airbags will or should deploy is not based on how fast your vehicle is traveling. It depends largely on what you hit, the direction of the impact, and how quickly your vehicle slows down.

Frontal airbags may inflate at different crash speeds. For example:

- If the vehicle hits a stationary object, the airbags could inflate at a different crash speed than if the vehicle hits a moving object.
- If the vehicle hits an object that deforms, the airbags could inflate at a different crash speed than if the vehicle hits an object that does not deform.
- If the vehicle hits a narrow object (like a pole), the airbags could inflate at a different crash speed than if the vehicle hits a wide object (like a wall).
- If the vehicle goes into an object at an angle, the airbags could inflate at a different crash speed than if the vehicle goes straight into the object.

Thresholds can also vary with specific vehicle design.

Frontal airbags are not intended to inflate during vehicle rollovers, rear impacts, or in many side impacts.

In addition, the vehicle has dual-stage frontal airbags. Dual-stage airbags adjust the restraint according to crash severity. The vehicle has electronic frontal sensors, which help the sensing system distinguish between a moderate frontal impact and a more severe frontal impact. For moderate frontal impacts, dual-stage airbags inflate at a level less than full deployment. For more severe frontal impacts, full deployment occurs.

The vehicle has seat-mounted side impact and roof-rail airbags. See *Airbag System on page 3-30*. Seat-mounted side impact and roof-rail airbags are intended to inflate in moderate to severe side crashes. In addition, these roof-rail airbags are intended to inflate during a rollover. Seat-mounted side impact and roof-rail airbags will inflate if the crash severity is above the system's designed threshold level. The threshold level can vary with specific vehicle design.

Seat-mounted side impact airbags are not intended to inflate in frontal impacts, near-frontal impacts, rollovers, or rear impacts. Roof-rail airbags are not intended to inflate in rear impacts. A seat-mounted side impact airbag is intended to deploy on the side of the vehicle that is struck. Both roof-rail airbags will deploy when either side of the vehicle is struck, or if the sensing system predicts that the vehicle is about to roll over, or in a severe frontal impact.

If the vehicle does not have a right front passenger seat and a rear seat, only the driver frontal airbag will deploy in a frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the damage to a vehicle or because of what the repair costs were. For frontal airbags, inflation is determined by what the vehicle hits, the angle of the impact, and how quickly the vehicle slows down. For seat-mounted side impact and roof-rail airbags, deployment is determined by the location and severity of the side impact. In a rollover event, roof-rail airbag deployment is determined by the direction of the roll.

What Makes an Airbag Inflate?

In a deployment event, the sensing system sends an electrical signal triggering a release of gas from the inflator. Gas from the inflator fills the airbag causing the bag to break out of the cover and deploy. The inflator, the airbag, and related hardware are all part of the airbag module.

Frontal airbag modules are located inside the steering wheel and instrument panel. For vehicles with seat-mounted side impact airbags, there are airbag modules in the side of the front seatbacks closest to the door. For vehicles with roof-rail airbags, there are airbag modules in the ceiling of the vehicle, near the side windows that have occupant seating positions.

How Does an Airbag Restrain?

In moderate to severe frontal or near frontal collisions, even belted occupants can contact the steering wheel or the instrument panel. In moderate to severe side collisions, even belted occupants can contact the inside of the vehicle.

Airbags supplement the protection provided by safety belts. Frontal airbags distribute the force of the impact more evenly over the occupant's upper body, stopping the occupant more gradually. Seat-mounted side impact and roof-rail airbags distribute the force of the impact more evenly over the occupant's upper body.

Rollover capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the first and second rows. The rollover capable roof-rail airbags are designed to help reduce the risk of full or partial ejection in rollover events, although no system can prevent all such ejections.

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate? on page 3-34* for more information.

Airbags should never be regarded as anything more than a supplement to safety belts.

What Will You See After an Airbag Inflates?

After the frontal airbags and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realize an airbag inflated. Roof-rail airbags may still be at least partially inflated for some time after they deploy. Some components of the airbag module may be hot for several minutes. For location of the airbag modules, see *What Makes an Airbag Inflate? on page 3-36*.

The parts of the airbag that come into contact with you may be warm, but not too hot to touch. There may be some smoke and dust coming from the vents in the deflated airbags. Airbag inflation does not prevent the driver from seeing out of the windshield or being able to steer the vehicle, nor does it prevent people from leaving the vehicle.

⚠ WARNING

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone in the vehicle should get out as soon as it is safe to do so. If you have breathing problems but cannot get out of the vehicle after an airbag inflates, then get fresh air by opening a window or a door. If you experience breathing problems following an airbag deployment, you should seek medical attention.

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps and hazard warning flashers, and shut off the fuel system after the airbags inflate.

You can lock the doors, turn off the interior lamps and hazard warning flashers by using the controls for those features.

⚠ WARNING

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel system, brake and steering systems, etc. Even if the vehicle appears to be drivable after a moderate crash, there may be concealed damage that could make it difficult to safely operate the vehicle.

Use caution if you should attempt to restart the engine after a crash has occurred.

In many crashes severe enough to inflate the airbag, windshields are broken by vehicle deformation. Additional windshield breakage may also occur from the right front passenger airbag.

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for your vehicle covers the need to replace other parts.
- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy on page 13-18* and *Event Data Recorders on page 13-18*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

Passenger Sensing System

The vehicle has a passenger sensing system for the right front passenger position. The passenger airbag status indicator will be visible on the overhead console when the vehicle is started.

United States

Canada and Mexico

The words ON and OFF, or the symbol for on and off, are visible during the system check. If you are using remote start, if equipped, to start the vehicle from a distance, you may not see the system check. When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator on page 5-17*.

The passenger sensing system turns off the right front passenger frontal airbag and seat-mounted side impact airbag under certain conditions. The driver airbags and the roof-rail airbags are not affected by the passenger sensing system.

The passenger sensing system works with sensors that are part of the right front passenger seat.

The sensors are designed to detect the presence of a properly-seated occupant and determine if the right front passenger frontal airbag and seat-mounted side impact airbag should be enabled (may inflate) or not.

According to accident statistics, children are safer when properly secured in a rear seat in the correct child restraint for their weight and size.

We recommend that children be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

A label on the sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the right front passenger frontal airbag and seat-mounted side impact

(Continued)

WARNING (Continued)

airbag (if equipped), no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though the airbag(s) are off.

Secure rear-facing child restraints in a rear seat, even if the airbag(s) are off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

The passenger sensing system is designed to turn off the right front passenger airbag and seat-mounted side impact airbag if:

- The right front passenger seat is unoccupied.
- The system determines that an infant is present in a rear-facing infant seat.
- The system determines that a small child is present in a child restraint.
- The system determines that a small child is present in a booster seat.
- A right front passenger takes his/her weight off of the seat for a period of time.
- The right front passenger seat is occupied by a smaller person, such as a child who has outgrown child restraints.
- Or, if there is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the right front passenger frontal airbag and seat-mounted side impact airbag, the off indicator will light and stay lit to remind you that the airbags are off. See *Passenger Airbag Status Indicator on page 5-17*.

The passenger sensing system is designed to turn on (may inflate) the right front passenger frontal airbag and seat-mounted side impact airbag anytime the system senses that a person of adult size is sitting properly in the right front passenger seat.

When the passenger sensing system has allowed the airbags to be enabled, the on indicator will light and stay lit to remind you that the airbags are active.

For some children who have outgrown child restraints and for very small adults, the passenger sensing system may or may not turn off the right front passenger frontal airbag and seat-mounted side impact airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a safety belt properly — whether or not there is an airbag for that person.

⚠ WARNING

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 5-17* for more information, including important safety information.

If the On Indicator is Lit for a Child Restraint

If a child restraint has been installed and the on indicator is lit:

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to "Securing a Child Restraint in the Right Front Seat Position" under *Securing Child Restraints (Rear Seat) on page 3-63* or *Securing Child Restraints (Front Passenger Seat) on page 3-66*.

5. If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion.

   Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints on page 3-2*.

6. Restart the vehicle.

   If the on indicator is still lit, secure the child restraint in a rear seat position in the vehicle, and check with your dealer.

If no rear seat is available, do not install a child restraint in this vehicle.

If the Off Indicator is Lit for an Adult-Size Occupant

If a person of adult-size is sitting in the right front passenger seat, but the off indicator is lit, it could be because that person is not sitting properly in the seat. If this happens, use the following steps to allow the system to detect that person and enable the right front passenger frontal airbag and seat-mounted side impact airbag:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat massagers.
3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. Restart the vehicle and have the person remain in this position for two to three minutes after the on indicator is lit.

Additional Factors Affecting System Operation

Safety belts help keep the passenger in position on the seat during vehicle maneuvers and braking, which helps the passenger sensing system maintain the passenger airbag status. See "Safety Belts" and "Child Restraints" in the Index for additional information about the importance of proper restraint use.

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment except when approved by GM for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle on page 3-44* for more information about modifications that can affect how the system operates.

⚠ WARNING

Stowing of articles under the passenger seat or between the passenger seat cushion and seatback may interfere with the proper operation of the passenger sensing system.

Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the service manual have information about servicing the vehicle and the airbag system. To purchase a service manual, see *Service Publications Ordering Information on page 13-16*.

⚠ WARNING

For up to 10 seconds after the ignition is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.

Adding Equipment to the Airbag-Equipped Vehicle

Q: Is there anything I might add to or change about the vehicle that could keep the airbags from working properly?

A: Yes. If you add things that change the vehicle's frame, bumper system, height, front end or side sheet metal, they may keep the airbag system from working properly. Changing or moving any parts of the front seats, safety belts, the airbag sensing and diagnostic module, steering wheel, instrument panel, roof-rail airbag modules, ceiling headliner or pillar garnish trim, overhead console, front sensors, side impact sensors, rollover sensor module, airbag wiring, or cargo restraint system and convenience net can affect the operation of the airbag system.

In addition, the vehicle has a passenger sensing system for the right front passenger position, which includes sensors that are part of the passenger seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery or trim, or with GM covers, upholstery or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See *Passenger Sensing System on page 3-39.*

If you have questions, call Customer Assistance. The phone numbers and addresses for Customer Assistance are in Step Two of the Customer Satisfaction Procedure in this manual. See *Customer Satisfaction Procedure (U.S. and Canada) on page 13-1* or *Customer Satisfaction Procedure (Mexico) on page 13-3.*

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels on page 10-75* for additional important information.

Q: Because I have a disability, I have to get my vehicle modified. How can I find out whether this will affect my airbag system?

A: If you have questions, call Customer Assistance. The phone numbers and addresses for Customer Assistance are in Step Two of the Customer Satisfaction Procedure in this manual. See *Customer Satisfaction Procedure (U.S. and Canada) on page 13-1* or *Customer Satisfaction Procedure (Mexico) on page 13-3*.

In addition, your dealer and the service manual have information about the location of the airbag sensors, sensing and diagnostic module and airbag wiring.

Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See *Airbag Readiness Light on page 5-17* for more information.

Notice: **If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag covers, have the airbag covering and/or airbag module replaced. For the location of the airbag modules, see *What Makes an Airbag Inflate? on page 3-36*. See your dealer for service.**

Replacing Airbag System Parts After a Crash

⚠ WARNING

A crash can damage the airbag systems in the vehicle. A damaged airbag system may not work properly and may not protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See *Airbag Readiness Light on page 5-17* for more information.

Child Restraints

Older Children

Older children who have outgrown booster seats should wear the vehicle safety belts.

The manufacturer's instructions that come with the booster seat state the weight and height limitations for that booster. Use a booster seat with a lap-shoulder belt until the child passes the fit test below:

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide. See "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-24* for more information. If the shoulder belt still does not rest on the shoulder, then return to the booster seat.

- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.
- Can proper safety belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.

Q: What is the proper way to wear safety belts?

A: An older child should wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide. The shoulder belt should not cross the face or neck. The lap belt should fit snugly below the hips, just touching the top of the thighs. This applies belt force to the child's pelvic bones in a crash. It should never be worn over the abdomen, which could cause severe or even fatal internal injuries in a crash.

Also see "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-24*.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

In a crash, children who are not buckled up can strike other people who are buckled up, or can be thrown out of the vehicle. Older children need to use safety belts properly.

⚠ WARNING

Never do this.

Never allow two children to wear the same safety belt. The safety belt cannot properly spread the impact forces. In a crash, the two

(Continued)

WARNING (Continued)

children can be crushed together and seriously injured. A safety belt must be used by only one person at a time.

⚠ WARNING

Never do this.

Never allow a child to wear the safety belt with the shoulder belt behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt. The child could move too far forward increasing the chance of head and neck injury. The child might also slide under the lap belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance traveled nor the age and size of the traveler changes the need, for everyone, to use safety restraints. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

⚠ WARNING

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Never leave children unattended in a vehicle and never allow children to play with the safety belts.

Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints.

Children who are not restrained properly can strike other people, or can be thrown out of the vehicle.

⚠ WARNING

Never do this.

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash. For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's arms. An infant should be secured in an appropriate restraint.

⚠ WARNING

Never do this.

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Never put a rear-facing child restraint in the right front seat. Secure a rear-facing child restraint in a rear seat. It is also

(Continued)

WARNING (Continued)

better to secure a forward-facing child restraint in a rear seat. If you must secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go.

Q: What are the different types of add-on child restraints?

A: Add-on child restraints, which are purchased by the vehicle owner, are available in four basic types. Selection of a particular restraint should take into consideration not only the child's weight, height, and age but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.

For most basic types of child restraints, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle. If it is, the restraint will have a label saying that it meets federal motor vehicle safety standards.

The restraint manufacturer's instructions that come with the restraint state the weight and height limitations for a particular child restraint. In addition, there are many kinds of restraints available for children with special needs.

⚠ WARNING

To reduce the risk of neck and head injury during a crash, infants need complete support. This is because an infant's neck is not fully developed and its head weighs so much compared with the rest of its body. In a crash, an infant in a rear-facing child restraint settles into the restraint, so the crash forces can be distributed across the strongest part of an infant's body, the back and shoulders. Infants should always be secured in rear-facing child restraints.

⚠ WARNING

A young child's hip bones are still so small that the vehicle's regular safety belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's abdomen. In a crash, the belt would apply force on a body area that is unprotected by any bony structure. This alone could cause serious or fatal injuries. To reduce the risk of serious or fatal injuries during a crash, young children should always be secured in appropriate child restraints.

Child Restraint Systems

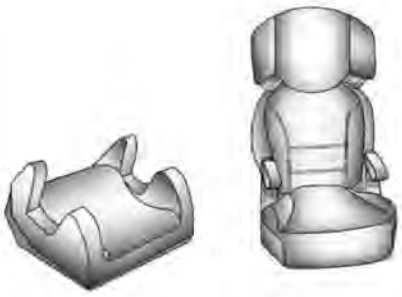
(A) Rear-Facing Infant Seat

A rear-facing infant seat (A) provides restraint with the seating surface against the back of the infant.

The harness system holds the infant in place and, in a crash, acts to keep the infant positioned in the restraint.

(B) Forward-Facing Child Seat

A forward-facing child seat (B) provides restraint for the child's body with the harness.



(C) Booster Seats

A booster seat (C) is a child restraint designed to improve the fit of the vehicle's safety belt system. A booster seat can also help a child to see out the window.

Securing an Add-On Child Restraint in the Vehicle

⚠ WARNING

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Secure the child restraint properly in the vehicle using the vehicle safety belt or LATCH system, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the LATCH system.

See *Lower Anchors and Tethers for Children (LATCH System) on page 3-55* for more information. Children can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, refer to the instructions that come with the restraint which may be on the restraint itself or in a booklet, or both, and to this manual. The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

In some areas of the United States and Canada, Certified Child Passenger Safety Technicians (CPSTs) are available to inspect and demonstrate how to correctly use and install child restraints. In the U.S., refer to the National Highway Traffic Safety Administration (NHTSA) website to locate the nearest child safety seat inspection station. For CPST availability in Canada, check with Transport Canada or the Provincial Ministry of Transportation office.

Securing the Child Within the Child Restraint

⚠ WARNING

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Secure the child properly following the instructions that came with that child restraint.

Where to Put the Restraint

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

We recommend that children and child restraints be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

A label on your sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the right front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

(Continued)

WARNING (Continued)

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-39* for additional information.

When securing a child restraint in a rear seating position, study the instructions that came with your child restraint to make sure it is compatible with this vehicle.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, we recommend that rear-facing child restraints not be transported in the vehicle, even if the airbag is off.

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others. Always make sure the child restraint is properly secured.

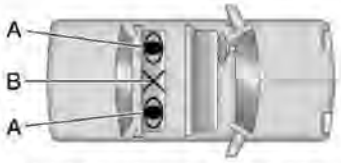
Depending on where you place the child restraint and the size of the child restraint, you may not be able to access adjacent safety belt assemblies or LATCH anchors for additional passengers or child restraints. Adjacent seating positions should not be used if the child restraint prevents access to or interferes with the routing of the safety belt.

Wherever you install a child restraint, be sure to secure the child restraint properly.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in your vehicle — even when no child is in it.

If you need to secure more than one child restraint in the rear seat, review the following illustrations.

Configurations for Use of Child Restraints



A. Child restraint using LATCH
B. Occupant prohibited

A. Child restraint using LATCH
B. Occupant prohibited
C. Child restraint or occupant using safety belt

A. Child restraint or occupant using safety belt

A. Child restraint or occupant using safety belt

B. Child restraint using LATCH

Lower Anchors and Tethers for Children (LATCH System)

The LATCH system holds a child restraint during driving or in a crash. This system is designed to make installation of a child restraint easier. The LATCH system uses anchors in the vehicle and attachments on the child restraint that are made for use with the LATCH system.

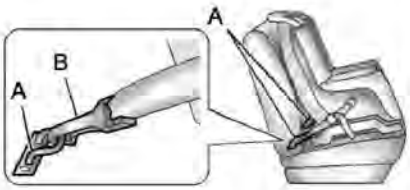
Make sure that a LATCH-compatible child restraint is properly installed using the anchors, or use the vehicle's safety belts to secure the restraint, following the instructions that came with that restraint, and also the instructions in this manual.

When installing a child restraint with a top tether, you must also use either the lower anchors or the safety belts to properly secure the child restraint. A child restraint must never be installed using only the top tether and anchor.

In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. The child restraint manufacturer will provide you with instructions on how to use the child restraint and its attachments. The following explains how to attach a child restraint with these attachments in your vehicle.

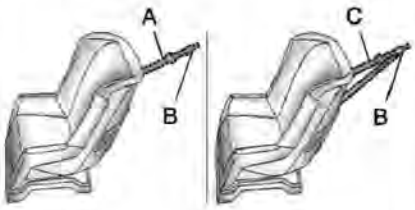
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

Lower Anchors



Lower anchors (A) are metal bars built into the vehicle. There are two lower anchors for each LATCH seating position that will accommodate a child restraint with lower attachments (B).

Top Tether Anchor

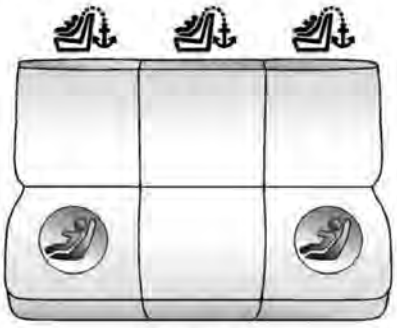


A top tether (A, C) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (B) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during driving or in a crash.

Your child restraint may have a single tether (A) or a dual tether (C). Either will have a single attachment (B) to secure the top tether to the anchor.

Some child restraints that have a top tether are designed for use with or without the top tether being attached. Others require the top tether always to be attached. In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached. Be sure to read and follow the instructions for your child restraint.

Lower Anchor and Top Tether Anchor Locations



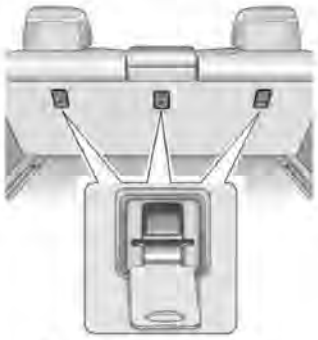
Rear Seat

(Top Tether Anchor): Seating positions with top tether anchors.

(Lower Anchor): Seating positions with two lower anchors.

To assist you in locating the lower anchors, each seating position with lower anchors has two labels, near the crease between the seatback and the seat cushion.

To assist you in locating the top tether anchors, the top tether anchor symbol is located on the cover.



Top Tether Anchors

The top tether anchors for each rear seating position are located under the covers, on the back of the rear seatback. Be sure to use an anchor located on the same side of the vehicle as the seating position where the child restraint will be placed.

Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether be attached, or if the instructions that come with the child restraint say that the top tether must be attached.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. See *Where to Put the Restraint on page 3-53* for additional information.

Securing a Child Restraint Designed for the LATCH System

⚠ WARNING

If a LATCH-type child restraint is not attached to anchors, the child restraint will not be able to protect the child correctly. In a crash, the child could be seriously injured or killed. Install a LATCH-type child restraint properly using the anchors, or use the vehicle safety belts to secure the restraint, following the instructions that came with the child restraint and the instructions in this manual.

⚠ WARNING

Do not attach more than one child restraint to a single anchor. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured. To reduce the risk of serious or fatal injuries during a crash, attach only one child restraint per anchor.

⚠ WARNING

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Buckle any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, if the vehicle has one, after the child restraint has been installed.

Notice: **Do not let the LATCH attachments rub against the vehicle's safety belts. This may damage these parts. If necessary, move buckled safety belts to avoid rubbing the LATCH attachments.**

Do not fold the empty rear seat with a safety belt buckled. This could damage the safety belt or the seat. Unbuckle and return the safety belt to its stowed position, before folding the seat.

Make sure to attach the child restraint at the proper anchor location.

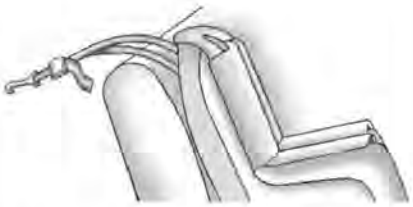
This system is designed to make installation of child restraints easier. When using lower anchors, do not use the vehicle's safety belts. Instead use the vehicle's anchors and child restraint attachments to secure the restraints. Some restraints also use another vehicle anchor to secure a top tether.

1. Attach and tighten the lower attachments to the lower anchors. If the child restraint does not have lower attachments or the desired seating position does not have lower anchors, secure the child restraint with the top tether and the safety belts. Refer to your child restraint manufacturer instructions and the instructions in this manual.
   1.1. Find the lower anchors for the desired seating position.
   1.2. Put the child restraint on the seat.

   For the outboard rear seating positions, if the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" at the end of this section.
   1.3. Attach and tighten the lower attachments on the child restraint to the lower anchors.
2. If the child restraint manufacturer recommends that the top tether be attached, attach and tighten the top tether to the top tether anchor, if equipped. Refer to the child restraint instructions and the following steps:
   2.1. Find the top tether anchor and open its cover to expose the anchor.

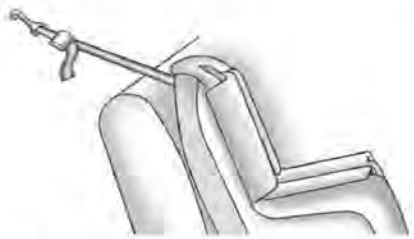
2.2. Route, attach, and tighten the top tether according to your child restraint instructions and the following instructions:

- If you are using a dual tether in the rear outboard seating position with an adjustable head restraint, route the dual tether around the head restraint.



- If you are using a dual tether in the rear outboard seating position and the head restraint has been removed, route the dual tether over the seatback.

- If you are using a single tether in the rear outboard seating position with an adjustable head restraint, route the single tether under the head restraint and in between the head restraint posts.



- If you are using a single tether in the rear outboard seating position and the head restraint has been removed, route the single tether over the seatback.

- If you are using a dual tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the dual tether over the headrest.

- If you are using a single tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the single tether over the headrest.

3. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the LATCH path and attempt to move it side-to-side and back-and-forth. There should be no more than 2.5 cm (1 in) of movement for proper installation.

Head Restraint Removal and Reinstallation

The rear outboard head restraints can be removed if they interfere with the proper installation of the child restraint. The headrest in the rear center seating position is not removable and should be lowered to the stowed position for child restraint installation.

To remove the head restraint:

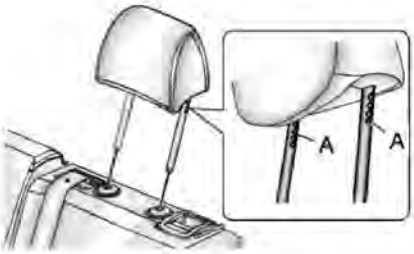
1. Partially fold the seatback forward. See *Rear Seats on page 3-12* for additional information.

2. Press both buttons on the head restraint posts at the same time, and pull up on the head restraint.
3. Store the head restraint in the cargo area of the vehicle.
4. When the child restraint is removed, reinstall the head restraint before the seating position is used.

⚠ WARNING

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

To reinstall the head restraint:



1. Insert the head restraint posts into the holes in the top of the seatback. The notches (A) on the posts must face the driver side of the vehicle.
2. Push the head restraint down.

   If necessary, press the height adjustment release button to further lower the head restraint. See *Head Restraints on page 3-2*.
3. Try to move the head restraint to make sure that it is locked in place.

Replacing LATCH System Parts After a Crash

⚠ WARNING

A crash can damage the LATCH system in the vehicle. A damaged LATCH system may not properly secure the child restraint, resulting in serious injury or even death in a crash. To help make sure the LATCH system is working properly after a crash, see your dealer to have the system inspected and any necessary replacements made as soon as possible.

If the vehicle has the LATCH system and it was being used during a crash, new LATCH system parts may be needed.

New parts and repairs may be necessary even if the LATCH system was not being used at the time of the crash.

Securing Child Restraints (Rear Seat)

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-55* for how and where to install the child restraint using LATCH. If a child restraint is secured in the vehicle using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-55* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

If the child restraint does not have the LATCH system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint on page 3-53*.

1. Put the child restraint on the seat.

   If the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-55*.

2. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

3. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 4 and 5.

6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-55* for more information.
7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it. If the head restraint was removed, reinstall it before the seating position is used. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-55* for additional information on installing the head restraint properly.

Securing Child Restraints (Front Passenger Seat)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint on page 3-53*.

In addition, the vehicle has a passenger sensing system which is designed to turn off the right front passenger frontal airbag under certain conditions. See *Passenger Sensing System on page 3-39* and *Passenger Airbag Status Indicator on page 5-17* for more information, including important safety information.

A label on the sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the right front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

(Continued)

WARNING (Continued)

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-39* for additional information.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-55* for how and where to install the child restraint using LATCH. If a child restraint is secured using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-55* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

1. Move the seat as far back as it will go before securing the forward-facing child restraint.

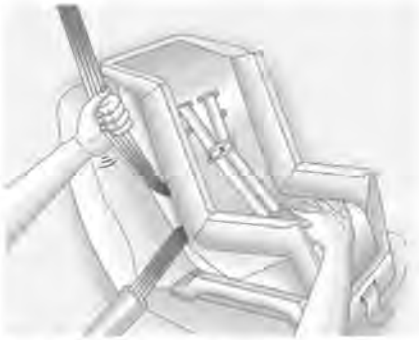
   When the passenger sensing system has turned off the right front passenger frontal airbag and seat-mounted side impact airbag, the off indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator on page 5-17*.

2. Put the child restraint on the seat.
3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

4. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle, so that the safety belt could be quickly unbuckled if necessary.

5. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.



6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 5 and 6.

If the vehicle does not have a rear seat and the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-55* for more information.

7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

If the airbags are off, the off indicator in the passenger airbag status indicator will come on and stay on when the vehicle is started.

If a child restraint has been installed and the on indicator is lit, see "If the On Indicator is Lit for a Child Restraint" under *Passenger Sensing System on page 3-39* for more information.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position.

✍ NOTES

Storage

Storage Compartments
Glove Box 4-1
Cupholders 4-1
Front Storage 4-2
Armrest Storage 4-2
Center Console Storage 4-2

Additional Storage Features
Cargo Cover 4-3
Cargo Tie-Downs 4-4
Cargo Management System 4-4
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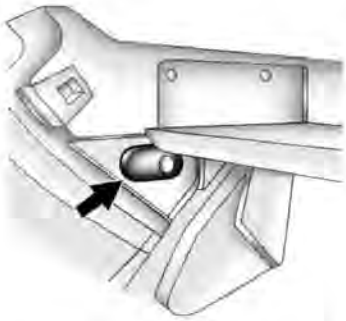
Convenience Net 4-10

Roof Rack System
Roof Rack System 4-11

Storage Compartments

Glove Box

Lift the glove box handle up to open it. Use the key to lock and unlock the glove box.



The glove box is air conditioned and can be used to store items at a lower temperature. The vehicle air conditioning must be turned on for the maximum cool air to enter the glove box. Move the slide control to allow cool air into the glove box. After opening the air flow, close the glove box door to keep the cold air from entering the vehicle.

Cupholders

This vehicle has a cupholder equipped with a divider that can be adjusted to accommodate large containers or small containers.

For large containers, push the button to move aside the divider and make the cupholder deeper. For small containers, push down on the top edge of the divider to lock it back in place to make the cupholder shorter.

Front Storage

A storage area is located in front of the shift lever. Push upward on the top of the door and release; the door automatically opens.

There is an accessory power outlet inside. See *Power Outlets on page 5-8.*

Armrest Storage

For vehicles with a rear seat armrest, pull the rear seat armrest forward to access cupholders with removable liners. For vehicles with a rear storage area, pull the lever to access.

Center Console Storage

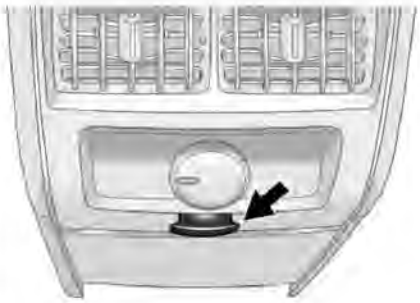
The center console has an armrest, upper storage tray, and a lower storage area.

The armrest can be adjusted to a rearward, middle, and forward position. Slide the top of the armrest to adjust to the desired position.

To access the storage, move the armrest to the full rearward position to access the storage compartment buttons.

Push the driver side button to access the upper storage tray. Push the passenger side button to access the lower storage area.

There is an accessory power outlet inside the center console. See *Power Outlets on page 5-8* for more information.

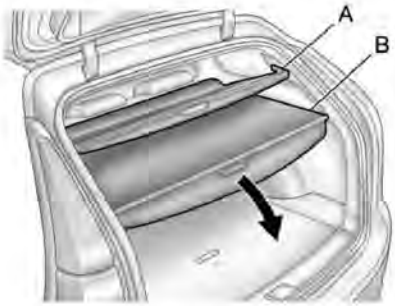


Push the button to open the storage area located at the rear of the center console.

Additional Storage Features

Cargo Cover

For vehicles with the dual position cargo cover, it can be used to cover items in the cargo area of the vehicle.

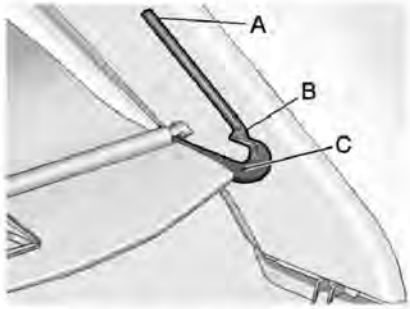


The shade can be set in two positions. It can be set in a halfway open (A) position for loading objects into the rear compartment, or the lower (B) position to conceal objects in the rear compartment.

Install the Cargo Cover

1. Hold the cartridge so that the pull-out shade faces the rear of the vehicle.

2. Align the cartridge over the pins on the trim panels of the vehicle.
3. Push down on the cartridge to snap it into place.
4. Unroll the shade toward the rear of the vehicle.



5. Insert the shade pins in the channels (C) on both sides.
6. Slide the shade to the lower (B) position, or the halfway open (A) position.

Remove the Cargo Cover

1. Remove the cover from the channels and carefully roll it back up.

2. Slide the button on the top to release the cartridge.
3. Pull up to remove the cartridge from the pins.

⚠ WARNING

An improperly stored cargo cover could be thrown about the vehicle during a collision or sudden maneuver. Someone could be injured. If the cover is removed, always store it in the proper storage location. When it is replaced, always be sure that it is securely reattached.

Cargo Tie-Downs

For vehicles equipped with cargo tie-downs, the four tie-downs are located in the rear compartment of the vehicle. Use the tie-downs to secure small loads.

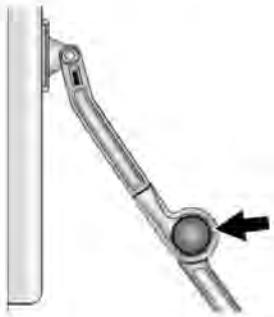
Cargo Management System

To open the cargo management system, press the handle to unlatch and then lift up.

A prop rod locks to hold the cover up when opened.

Four hooks are located on the inside cover and can be used for storing items.

There may be additional storage compartments on each side of the cargo management system. Lift the panel up to open.



Press the red button on the prop rod to close the cover.

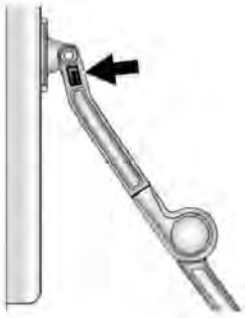
Rear Storage Area

⚠ WARNING

An improperly latched and closed cargo cover, or cargo cover left in the open position, could be thrown about the vehicle during a crash or sudden maneuver. Someone could be injured. Be sure to return the cover to the closed position and latch before driving. If the cover is removed, always store it outside of the vehicle. When it is replaced, always be sure that it is securely reattached.

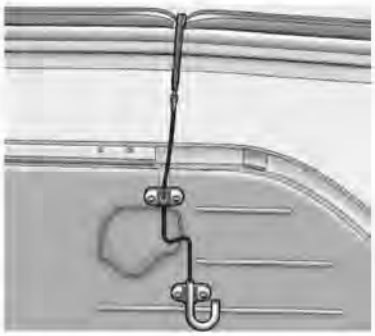
To access the rear storage areas of the cargo management system, and the tire sealant and compressor kit:

1. Remove the cargo cover, if equipped.
2. Open the cargo management system cover.



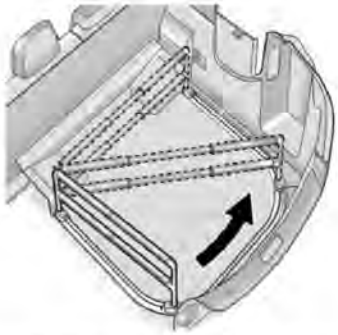
3. Release the prop rod from the inside cover by sliding the red clip down.

   Unhook the prop rod from the pin on the inside cover. Store the unhooked prop rod by folding it into the cargo management compartment.

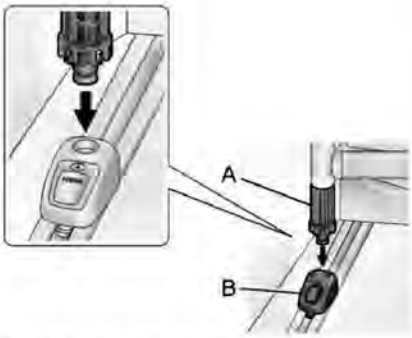


4. Store the cargo management system cover by hooking it onto the weatherstrip.

U-Rail



For vehicles with a u-rail system, the fence can be moved to different positions on the u-rail track to secure cargo.



Push both adapter buttons to move the adapters (B) on the straight part of the u-rail.

To move the fence around the u-rail, disconnect one side:

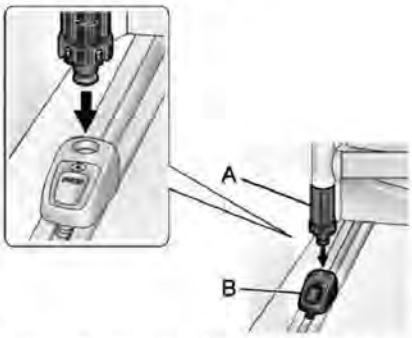
1. Unlock by turning the latch (A) to align 🔓 with the arrow on the adapter (B).
2. Push the adapter button to move the adapters (B) to the desired position.
3. Reinstall the fence and lock both latches (A) by turning to align 🔒 with the arrow on the adapter (B).

Use the fence to secure items in place.

Removing the Fence

Unlock by turning both latches (A) to align 🔓 with the arrow on the adapter (B). Lift and remove the fence.

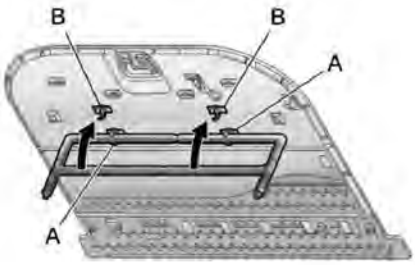
Installing the Fence



Insert the fence into the adapters and lock both latches (A) by turning to align 🔒 with the arrow on the adapter (B).

Storing the Fence

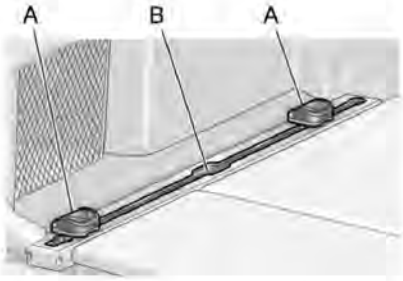
1. Lift the cargo management system cover.
2. Release the cover from the prop rod as described in the previous steps.



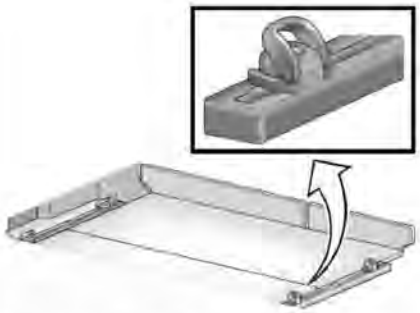
3. Insert the top of the fence into the lower two clips (A).
4. Turn the bottom of the fence up and insert it into the upper two clips (B).

D-Ring Sliders

For vehicles with a D-ring system, there are four D-ring sliders that move along rails. These can be used as tie-downs when storing cargo.



Insert the D-ring sliders (A) into the channel (B) located in the middle of the rail. Push the button to move the D-ring slider along the rail.



The loop of the D-ring slider must be facing inward toward the storage area and the ring must be in the up position for proper usage.

Cargo Net

⚠ WARNING

Do not stack items higher than the upper end of the cargo net or hang anything from the net. Avoid items that have sharp edges or that apply excessive force to the net. If items are not properly stored, damage to the net could occur and items can be thrown about the vehicle. You or others could be injured. Always store items behind the net.

For vehicles equipped with a cargo net, it can be used to store light loads, keeping them from falling over or being thrown into the cabin during heavy braking.

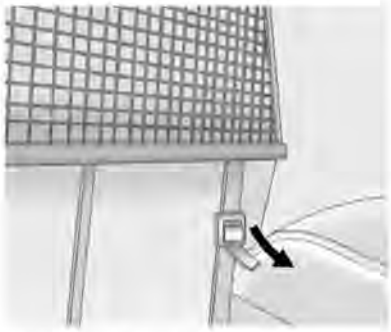
The net should not be overloaded or used to store heavy loads.

There are four openings in the headliner: two located behind the front seats and two behind the rear seats.

1. Insert the top corners of the cargo net into the large opening in the headliner and secure by sliding them into the small opening.
2. The rear seatbacks should be folded down when the net is installed in the headliner opening located behind the front seats.

3. Mount the cargo net to the rear seat tethers located on the back of the folded down rear seats and pull on the straps to tighten the net.
4. When the net is installed in the headliner opening located behind the rear seats, the rear seatbacks should be upright.

5. Mount the cargo net to the cargo tie-downs located on the lower side panels.



6. Pull on the straps to tighten the net.

Cargo Net Storage

The cargo net can be removed from the vehicle and stored in the cargo management system.

1. Disconnect the net from the roof openings and the tethers.
2. Press the red button on the center of the net to fold it in half.
3. Roll up the cargo net, storing it into the attached vinyl bag.
4. Open the cargo management system cover.
5. For vehicles with an inflator kit, store the cargo net in the available space next to the kit.

Convenience Net

This vehicle may have a convenience net located in the rear of the vehicle. Attach it to the cargo tie-downs for storing small loads.

Do not use the net to store heavy loads.

Roof Rack System

⚠ WARNING

If something is carried on top of the vehicle that is longer or wider than the roof rack — like paneling, plywood, or a mattress — the wind can catch it while the vehicle is being driven. The item being carried could be violently torn off, and this could cause a collision and damage the vehicle. Never carry something longer or wider than the roof rack on top of the vehicle unless using a GM certified accessory carrier.

For vehicles with a roof rack, the rack can be used to load items. For roof racks that do not have crossrails included, GM Certified crossrails can be purchased as an accessory. See your dealer for additional information.

Notice: **Loading cargo on the roof rack that weighs more than 100 kg (220 lbs) or hangs over the rear or sides of the vehicle may damage the vehicle. Load cargo so that it rests evenly between the crossrails, making sure to fasten cargo securely.**

To prevent damage or loss of cargo when driving, check to make sure crossrails and cargo are securely fastened. Loading cargo on the roof rack will make the vehicle's center of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt maneuvers; otherwise it may result in loss of control. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place. Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits on page 9-12.*

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Controls

Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Steering Wheel Controls

Use these controls, if equipped, to make audio adjustments at the steering wheel.

∧ ∨ : Press ∧ to select the next favorite radio station or next CD, DVD, if equipped, or MP3 track.

Press ∨ to select the previous favorite radio station or previous CD, DVD, if equipped, or MP3 track.

+ ◁ − (Volume): Press + to increase the volume; press − to decrease the volume.

(Push to Talk): For vehicles with an OnStar®, Bluetooth®, or navigation system, press to interact with those systems. See *Bluetooth (Overview) on page 7-50* or *Bluetooth (Infotainment Controls) on page 7-52* or *Bluetooth (Voice Recognition) on page 7-56*, the OnStar Owner's guide, or the separate navigation manual for more information.

(End Call/Mute): Press to silence the vehicle speakers only. Press again to turn the sound on. For vehicles with OnStar or Bluetooth systems, press to reject an incoming call, or end a current call.

SRCE: Press to select an audio source.

Horn

Press near the horn symbols or press on the steering wheel pad to sound the horn.

Windshield Wiper/Washer

The windshield wiper/washer lever is located on the right side of the steering column. With the ignition in ACC/ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

2: Use for fast wipes.

1: Use for slow wipes.

(Adjustable Interval Wipes): Turn the band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see following Rainsense information.

(Off): Use to turn the wipers off.

(Mist): For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Clear snow and ice from the wiper blades before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement on page 10-33*.

Heavy snow or ice can overload the wiper motor.

Wipe Parking

If the ignition is turned to LOCK/OFF while the wipers are on 1, 2, or ⛉, they will immediately stop.

If the windshield wiper lever is then moved to OFF before the driver door is opened or within 10 minutes, the wipers will restart and move to the base of the windshield.

If the ignition is turned to LOCK/OFF while the wipers are performing wipes due to windshield washing, the wipers continue to run until they reach the base of the windshield.

Rainsense™

For vehicles with Rainsense, a sensor located near the top center of the windshield detects the amount of water on the windshield and automatically controls the frequency of the windshield wiper.

Keep this area of the windshield clear of debris to allow for best system performance.

⛉ **(Rainsense Wipe Sensitivity Control):** Move the windshield wiper lever to ⛉. Turn the ⛉ band on the wiper lever to adjust the sensitivity.

Turn the band up for more sensitivity to moisture.

Turn the band down for less sensitivity to moisture.

To deactivate Rainsense, move the windshield wiper lever out of ⛉ position.

Wiper Arm Assembly Protection

When using an automatic car wash, move the windshield wiper lever to the off position. This disables the automatic Rainsense windshield wipers and/or rear wiper.

With Rainsense, if the transmission is in N (Neutral) and the vehicle speed is very slow, the wipers will automatically stop at the base of the windshield.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Windshield Washer

Pull the lever toward you to spray washer fluid on the windshield. The spray continues until the lever is released. The wipers will run a few times. See *Washer Fluid on page 10-26* for information on filling the windshield washer fluid reservoir.

⚠ WARNING

In freezing weather, do not use the washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.

Press the upper or lower portion of the button to control the rear wiper and rear wiper delay.

The system turns off when the button is returned to the middle position.

(Rear Wiper): Use for continuous rear window wipes.

(Rear Wiper Delay): Use to set a delay between wipes.

(Rear Washer): Push the windshield wiper lever forward to spray washer fluid on the rear window. The lever automatically returns to its original position when released.

Reverse Gear Wipes

If the rear wiper control is off, the rear wiper will automatically operate continuously when the shift lever is in R (Reverse), and the front windshield wiper is performing low or high speed wipes. If the rear wiper control is off, the shift lever is in R (Reverse) and the front windshield wiper is performing interval wipes, then the rear wiper automatically performs interval wipes.

The windshield washer reservoir is used for the windshield and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid on page 10-26*.

⚠ WARNING

In freezing weather, do not use the washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Headlamp Washer

For vehicles with headlamp washers, they are located to the side of the headlamps.

The headlamps must be on in order to use the headlamp washers. If the headlamps are not on, only the windshield will be washed.

Pull the wiper lever toward you and hold briefly to activate. The headlamp washers will spray once, pause, and spray again. The headlamp washer will spray again after five windshield wash cycles.

See *Washer Fluid on page 10-26* for information on filling the windshield washer fluid.

⚠ WARNING

In freezing weather, do not use the washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Compass

The vehicle may have a compass display on the Driver Information Center (DIC). The compass receives its heading and other information from the Global Positioning System (GPS) antenna, StabiliTrak, and vehicle speed information.

Avoid covering the GPS antenna for long periods of time with objects that may interfere with the antenna's ability to receive a satellite signal. See *Multi-Band Antenna on page 7-19* for the location of the vehicle's antenna. The compass system is designed to operate for a certain number of miles or degrees of turn before needing a signal from the GPS satellites. When the compass display shows CAL, drive the vehicle for a short distance in an open area where it can receive a GPS signal. The compass system will automatically determine when a GPS signal is restored and provide a heading again. See *Compass Messages on page 5-35* for more information on the messages that may be displayed for the compass.

Clock (Analog Clock)

The analog clock is located on the instrument panel above the radio. The clock is not connected with any other vehicle system and runs by itself. To adjust the clock:

1. Locate the adjustment buttons directly below the clock face.
2. Push and hold either adjustment button to advance or reverse the clock hands. Holding the buttons down will cause the clock to advance faster. Release the buttons before reaching the desired time.
3. Push and release the buttons to increase the time by one minute increments until the desired time is reached.

Clock (Digital Clock)

The infotainment system controls are used to access the time and date settings through the menu system. See *Operation on page 7-7* for information about how to use the menu system. See the separate navigation manual for instructions on how to operate the digital clock for the navigation system.

To turn the digital clock on or off:

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Clock Displayed.
4. Press MENU/SELECT to turn the clock on or off.

Setting the Time and Date

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Set Time or Set Date.
4. Turn the MENU/SELECT knob to adjust the highlighted value.
5. Press the MENU/SELECT knob to select the next value.
6. To save the time or date and return to the Time and Date Settings menu, press the BACK button at any time or press the MENU/SELECT knob after adjusting the minutes or year.

Setting the 12/24 Hour Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight 12/24 Hour Format.
4. Press the MENU/SELECT knob to select the 12 hour or 24 hour display format.

Setting the Month & Day Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Month & Day Format.
4. Press the MENU/SELECT knob to select MM/DD (month/day) or DD/MM (day/month).

Setting the Auto Time Adjust

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Auto Time Adjust.
4. Press the MENU/SELECT knob to turn Auto Time Adjust on or off.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle has four accessory power outlets. The power outlets located below the climate control system inside the front storage bin, inside the center floor console, and on the rear of the center floor console are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

There is a small cap that must be removed to access the accessory power outlet. When not using the outlet be sure to cover it with the protective cap.

Notice: **Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the battery. Power is always supplied to the rear cargo outlet. Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 ampere rating.**

Certain accessory power plugs may not be compatible with the accessory power outlet and could overload vehicle or adapter fuses. If a problem is experienced, see your dealer.

When adding electrical equipment, be sure to follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment on page 9-62*.

Notice: **Hanging heavy equipment from the power outlet can cause damage not covered by the vehicle warranty. The power outlets are designed for accessory power plugs only, such as cell phone charge cords.**

Cigarette Lighter

There may be a cigarette lighter located under the climate control system, inside the front storage bin.

To activate the cigarette lighter, push it into the heating element and let go. The lighter pops out when it is ready to be used.

Notice: **Holding a cigarette lighter in while it is heating does not let the lighter back away from the heating element when it is hot. Damage from overheating can occur to the lighter or heating element, or a fuse could be blown. Do not hold a cigarette lighter in while it is heating.**

Ashtrays

There may be an ashtray located under the climate control system on the instrument panel. Press the door to release the ashtray.

To empty the ashtray, remove it from the instrument panel by holding the edges and pulling straight out. To reinstall, push the tray back into place.

There may also be ashtrays located on the center floor console behind the shift lever and in the rear doors.

Notice: **If papers, pins, or other flammable items are put in the ashtray, hot cigarettes or other smoking materials could ignite them and possibly damage the vehicle. Never put flammable items in the ashtray.**

Warning Lights, Gauges, and Indicators

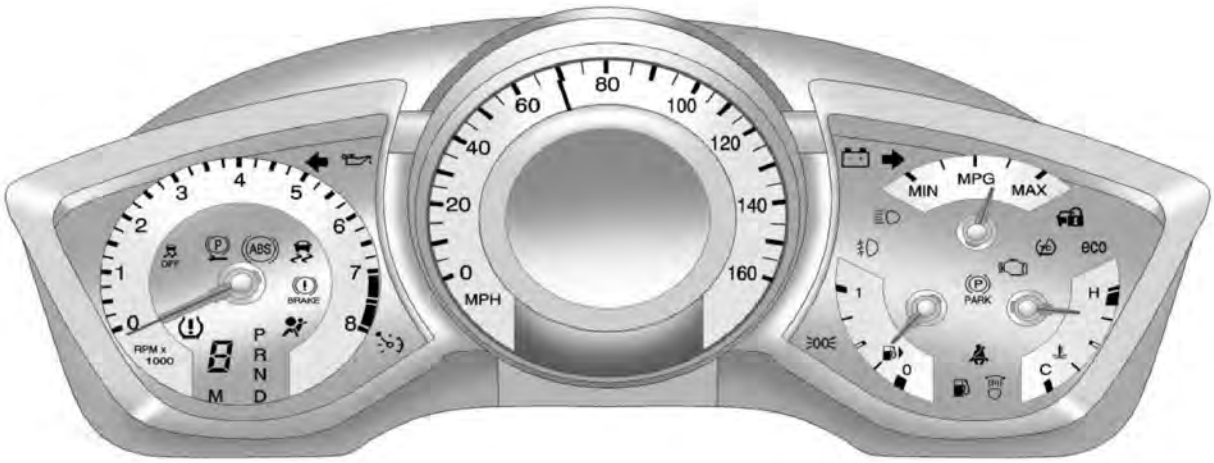
Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury.

Warning lights come on when there could be a problem with a vehicle function. Some warning lights come on briefly when the engine is started to indicate they are working.

Gauges can indicate when there could be a problem with a vehicle function. Often gauges and warning lights work together to indicate a problem with the vehicle.

When one of the warning lights comes on and stays on while driving, or when one of the gauges shows there may be a problem, check the section that explains what to do. Follow this manual's advice. Waiting to do repairs can be costly and even dangerous.

Instrument Cluster



English Shown, Metric Similar

Q8_000002554

Speedometer

The speedometer shows the vehicle's speed in either kilometers per hour (km/h) or miles per hour (mph).

Odometer

The odometer shows how far the vehicle has been driven, in either kilometers or miles.

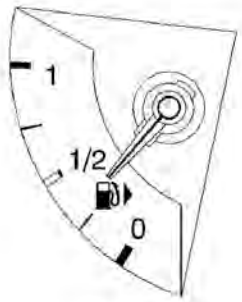
This vehicle has a tamper-resistant odometer. If the vehicle needs a new odometer installed, the new one is set to the mileage of the old odometer. If this is not possible, it is set at zero and a label is put on the driver door to show the old mileage reading.

Tachometer

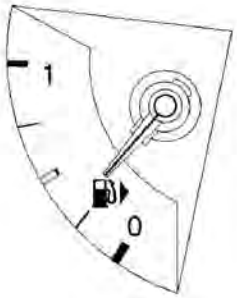
The tachometer displays the engine speed in revolutions per minute (rpm).

Notice: **If the engine is operated with the tachometer in the shaded warning area, the vehicle could be damaged, and the damages would not be covered by the vehicle warranty. Do not operate the engine with the tachometer in the shaded warning area.**

Fuel Gauge



Metric



English

When the ignition is on, the fuel gauge indicates about how much fuel is left in the tank.

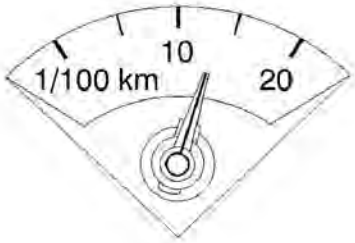
An arrow on the fuel gauge indicates the side of the vehicle the fuel door is on.

When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refueled soon.

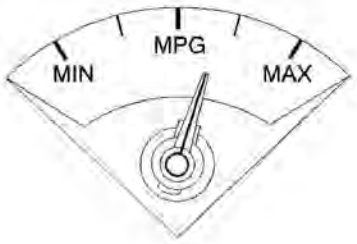
Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

- At the service station, the fuel pump shuts off before the gauge reads full.
- It takes a little more or less fuel to fill up than the gauge indicated. For example, the gauge may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gauge moves a little while turning a corner or speeding up.
- The gauge takes a few seconds to stabilize after the ignition is turned on, and goes back to empty when the ignition is turned off.

Fuel Economy Gauge (3.0L Only)



Metric



English

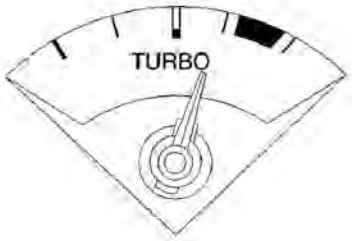
The gauge shows the fuel usage that the vehicle is currently achieving in MPG and in liters per 100 kilometers (l/100 km).

MIN/20: Is when the least efficient fuel economy usually occurs during acceleration or when idling.

MAX/l/100: Is when the best fuel economy is being achieved.

This gauge moves often as it is an instantaneous calculation based on current driving conditions.

Turbo Gauge (2.8L Only)



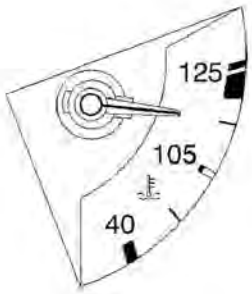
For vehicles with a turbo gauge, it indicates when the vehicle is using turbo power.

When the needle is at rest at the left of the gauge, turbo is not being used.

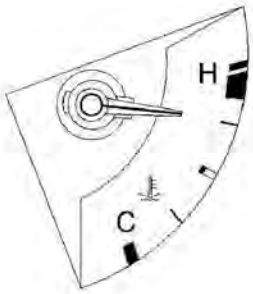
As the accelerator peddle is pressed the needle may move to the right. This is normal and means that the vehicle is using turbo power. Under normal conditions the needle will not display a reading in the red.

Once the driver eases off the accelerator pedal or the transmission shifts, the needle moves back into the left area of the gauge.

Engine Coolant Temperature Gauge



Metric



English

This gauge measures the temperature of the vehicle's engine.

If the indicator needle moves into the shaded area, the engine is too hot.

While driving under normal operating conditions, if the needle moves into the shaded area, the engine is too hot. Pull off the road, stop the vehicle and turn off the engine as soon as possible.

Safety Belt Reminders

Driver Safety Belt Reminder Light

There is a driver safety belt reminder light on the instrument panel cluster.

When the vehicle is started this light flashes and a chime comes on to remind drivers to fasten their safety belt. Then the light stays on solid until the belt is buckled.

This cycle may continue several times if the driver remains or becomes unbuckled during driving while the vehicle is moving.

If the driver safety belt is already buckled, neither the light nor chime comes on.

Passenger Safety Belt Reminder Light

When the vehicle is started this light flashes and a chime may come on to remind the front passenger to fasten their safety belt. Then the light stays on solid until the belt is buckled.

This cycle may continue several times if the passenger remains or becomes unbuckled while the vehicle is moving.

If the passenger safety belt is buckled, neither the chime nor the light comes on.

The front passenger safety belt warning light and chime may turn on if an object is put on the seat such as a briefcase, handbag, grocery bag, laptop, or other electronic device. To turn off the warning light and/or chime, remove the object from the seat or buckle the safety belt.

Second Row Passenger Belt Reminder Light

When the engine is started and the Trip/Fuel display is chosen, three gray safety belt symbols come on and stay on for several seconds on the top of the Driver information Center (DIC) to remind passengers to fasten their safety belts.

If the Vehicle Information is selected, a full page screen displays at start-up the three safety belt symbols.

Once the passenger safety belt is buckled, the corresponding safety belt symbol in the DIC turns green. There are no seat position sensors in the seat, nor safety belt reminder sensor pad. If a safety belt is not initially buckled, the cluster continues to show the gray safety belt icon.

While the vehicle is moving, if a second row passenger who was previously buckled becomes unbuckled, a full screen warning displays with the corresponding safety belt indicator flashing red. A chime may sound.

Acknowledge warning messages by pressing any of the DIC buttons.

Airbag Readiness Light

This light shows if there is an electrical problem. The system check includes the airbag sensor, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System on page 3-30*.

The airbag readiness light comes on and stays on for several seconds when the vehicle is started. Then the light goes out.

⚠ WARNING

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System on page 3-39* for important safety information. The overhead console has a passenger airbag status indicator.

United States

Canada and Mexico

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. If you are using remote start, if equipped, to start the vehicle from a distance you may not see the system check.

Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol to let you know the status of the right front passenger frontal and seat-mounted side impact airbag.

If the word ON or the on symbol is lit on the passenger airbag status indicator, it means that the right front passenger frontal airbag and seat-mounted side impact airbag are enabled (may inflate).

If the word OFF or the off symbol is lit on the passenger airbag status indicator, it means that the passenger sensing system has turned off the right front passenger frontal and seat-mounted side impact airbag.

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the passenger sensing system. See your dealer for service.

⚠ WARNING

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 5-17* for more information, including important safety information.

Charging System Light

The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. The light turns off when the engine is started. If it does not, have the vehicle serviced by your dealer.

If the light stays on, or comes on while driving, there may be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

When this light comes on, the Driver Information Center (DIC) also displays a message.

See *Battery Voltage and Charging Messages on page 5-34.*

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

Malfunction Indicator Lamp

A computer system called OBD II (On-Board Diagnostics-Second Generation) monitors operation of the fuel, ignition, and emission control systems. It ensures that emissions are at acceptable levels for the life of the vehicle, helping to produce a cleaner environment.

This light should come on when the ignition is on, but the engine is not running, as a check to show it is working. If it does not, have the vehicle serviced by your dealer.

If the malfunction indicator lamp comes on and stays on while the engine is running, this indicates that there is an OBD II problem and service is required.

Malfunctions often are indicated by the system before any problem is apparent. Being aware of the light can prevent more serious damage to the vehicle. This system assists the service technician in correctly diagnosing any malfunction.

Notice: **If the vehicle is continually driven with this light on the emission controls might not work as well, the vehicle fuel economy might not be as good, and the engine might not run as smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.**

Notice: **Modifications made to the engine, transmission, exhaust, intake, or fuel system of the vehicle or the replacement of the original tires with other than those of the same Tire Performance Criteria (TPC) can affect the vehicle's emission controls and can cause this light to come on. Modifications to these systems could lead to costly repairs not covered by the vehicle warranty. This could also result in a failure to pass a required Emission Inspection/Maintenance test. See *Accessories and Modifications on page 10-3.***

This light comes on during a malfunction in one of two ways:

Light Flashing: A misfire condition has been detected. A misfire increases vehicle emissions and could damage the emission control system on the vehicle. Diagnosis and service might be required.

To prevent more serious damage to the vehicle:

- Reduce vehicle speed.
- Avoid hard accelerations.
- Avoid steep uphill grades.
- If towing a trailer, reduce the amount of cargo being hauled as soon as it is possible.

If the light continues to flash, when it is safe to do so, stop the vehicle. Find a safe place to park the vehicle. Turn the vehicle off, wait at least 10 seconds, and restart the engine. If the light is still flashing, follow the previous steps and see your dealer for service as soon as possible.

Light On Steady: An emission control system malfunction has been detected on the vehicle. Diagnosis and service might be required.

The following may correct an emissions system malfunction:

- Make sure the fuel cap is fully installed. See *Filling the Tank on page 9-52*. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap allows fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn the light off.
- Make sure the electrical system is not wet. The system could be wet if the vehicle was driven through a deep puddle of water. The condition is usually corrected when the electrical system dries out. A few driving trips should turn the light off.
- Make sure to fuel the vehicle with quality fuel. Poor fuel quality causes the engine not to run as efficiently as designed and can cause: stalling after start-up, stalling when the vehicle is changed into gear, misfiring, hesitation on acceleration, or stumbling on acceleration. These conditions might go away once the engine is warmed up.

If one or more of these conditions occurs, change the fuel brand used. It will require at least one full tank of the proper fuel to turn the light off.

See *Recommended Fuel on page 9-48*.

If none of the above have made the light turn off, your dealer can check the vehicle. The dealer has the proper test equipment and diagnostic tools to fix any mechanical or electrical problems that might have developed.

Emissions Inspection and Maintenance Programs

Some state/provincial and local governments may have programs to inspect the on-vehicle emission control equipment. For the inspection, the emission system test equipment is connected to the vehicle's Data Link Connector (DLC).

The DLC is under the instrument panel to the left of the steering wheel. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The malfunction indicator lamp is on with the engine running, or if the light does not come on when the ignition is turned to ON/RUN while the engine is off.
- The critical emission control systems have not been completely diagnosed by the system. This can happen if the battery has recently been replaced or if the battery has run down. The diagnostic system evaluates critical emission control systems during normal driving. This can take several days of routine driving. If this has been done and the vehicle still does not pass the inspection, your dealer can prepare the vehicle for inspection.

Brake System Warning Light

The vehicle brake system consists of two hydraulic circuits. If one circuit is not working, the remaining circuit can still work to stop the vehicle. For normal braking performance, both circuits need to be working.

If the warning light comes on, there is a brake problem. Have the brake system inspected right away.

Metric

English

The brake indicator light should come on briefly as the engine is started. If it does not come on have the vehicle serviced by your dealer.

⚠ WARNING

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to a crash. If the light is still on after the vehicle has been pulled off the road and carefully stopped, have the vehicle towed for service.

If the light comes on while driving, a chime sounds. Pull off the road and stop. The pedal might be harder to push or go closer to the floor. It might also take longer to stop. If the light is still on, have the vehicle towed for service. See *Towing the Vehicle on page 10-101*.

Electric Parking Brake Light

Metric

English

For vehicles with the Electric Parking Brake (EPB), this light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

The parking brake status light comes on when the brake is applied. If the light continues flashing after the parking brake is released, or while driving, there is a problem with the Electric Parking Brake system. A SERVICE PARKING BRAKE message may also display in the Driver Information Center (DIC). See *Brake System Messages on page 5-34* for more information.

If the light does not come on, or remains flashing, see your dealer.

For vehicles with the EPB, the brake warning light should come on briefly when the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If this light comes on, there is a problem with a system on the vehicle that is causing the parking brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See *Parking Brake on page 9-31* for more information.

Antilock Brake System (ABS) Warning Light

For vehicles with the Antilock Brake System (ABS), this light comes on briefly when the engine is started.

If the light does not come on, have it fixed so it will be ready to warn if there is a problem.

If the ABS light comes on and stays on while driving, stop as soon as possible and turn the ignition off.

Start the engine again to reset the system. If the light stays on after driving at a speed above 20 km/h (13 mph), see your dealer for service. A chime may also sound when the light comes on steady.

If the regular brake system warning light is not on, the vehicle still has brakes, but not antilock brakes. If the regular brake system warning light is also on, the vehicle does not have antilock brakes and there is a problem with the regular brakes. See *Brake System Warning Light on page 5-22*.

See *Brake System Messages on page 5-34* for all brake-related DIC messages.

Traction Off Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

The traction off light comes on when the Traction Control System (TCS) has been turned off by pressing and releasing the traction control button.

This light and the StabiliTrak Off light come on when StabiliTrak is turned off.

If the Traction Control System (TCS) is off, wheelspin is not limited. Adjust driving accordingly.

See *Traction Control System (TCS) on page 9-34* and *StabiliTrak® System on page 9-36* for more information.

StabiliTrak® OFF Light

This light comes on when the StabiliTrak system is turned off by pressing the StabiliTrak/TCS button. If the Traction Control System (TCS) is off, wheel spin is not limited.

When the StabiliTrak system is off, the system does not assist in controlling the vehicle. Adjust driving accordingly.

The warning light goes off when traction control and the StabiliTrak system are enabled.

See *Traction Control System (TCS) on page 9-34* and *StabiliTrak® System on page 9-36* for more information

Traction Control System (TCS)/StabiliTrak® Light

The StabiliTrak system or the Traction Control System (TCS) indicator/warning light come on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by the dealer. If the system is working normally, the indicator light turns off.

If the light is on and not flashing, the TCS, and potentially the StabiliTrak system have been disabled. A DIC message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service.

If the indicator/warning light is on and flashing, the TCS and/or the StabiliTrak system is actively working.

See *StabiliTrak® System on page 9-36* and *Traction Control System (TCS) on page 9-34* for more information.

Tire Pressure Light

For vehicles with the Tire Pressure Monitor System (TPMS), this light comes on briefly when the engine is started. It provides information about tire pressures and the TPMS.

When the Light is On Steady

This indicates that one or more of the tires are significantly underinflated.

A tire pressure message can accompany the light. See *Tire Messages on page 5-41* for more information. Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information label. See *Tire Pressure on page 10-63* for more information.

When the Light Flashes First and Then is On Steady

This indicates that there may be a problem with the TPMS. The light flashes for about a minute and stays on steady for the remainder of the ignition cycle. This sequence repeats with every ignition cycle. See *Tire Pressure Monitor Operation on page 10-67* for more information.

Engine Oil Pressure Light

⚠ WARNING

Do not keep driving if the oil pressure is low. The engine can become so hot that it catches fire. Someone could be burned. Check the oil as soon as possible and have the vehicle serviced.

Notice: **Lack of proper engine oil maintenance can damage the engine. The repairs would not be covered by the vehicle warranty. Always follow the maintenance schedule for changing engine oil.**

The oil pressure light should come on briefly as the engine is started. If it does not come on have the vehicle serviced by your dealer.

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

Fuel Economy Light

For vehicles with the fuel economy mode light, it comes on when the eco (economy) switch, located next to the shift lever, is pressed. Press the switch again to turn off the light and exit the fuel saver mode. See *Driving for Better Fuel Economy on page 1-26* for more information.

Low Fuel Warning Light

This light is located near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

Security Light

This light flashes when the security system is activated.

For more information, see *Vehicle Security on page 2-18*.

High-Beam On Light

This light comes on when the high-beam headlamps are in use.

See *Headlamp High/Low-Beam Changer on page 6-2* for more information.

Adaptive Forward Lighting (AFL) Light

This light comes on solid when there is a problem with the Adaptive Forward Lighting system and flashes when the system is switching between lighting modes. See *Adaptive Forward Lighting (AFL) on page 6-3* for more information.

Front Fog Lamp Light

The fog lamp light comes on when the fog lamps are in use.

The light goes out when the fog lamps are turned off. See *Front Fog Lamps on page 6-6* for more information.

Lamps On Reminder

For vehicles with the lamps on reminder light, it comes on when the lights are in use.

Cruise Control Light

The cruise control light is white whenever the cruise control is set, and turns green when the cruise control is active.

The light turns off when the cruise control is turned off. See *Cruise Control on page 9-38* for more information.

Information Displays

Driver Information Center (DIC)

The DIC displays information about the vehicle. It also displays warning messages if a system problem is detected. See *Vehicle Messages on page 5-34* for more information. All messages appear in the DIC display located in the center of the instrument panel cluster.

The vehicle may also have features that can be customized through the controls on the radio. See *Vehicle Personalization on page 5-42* for more information.

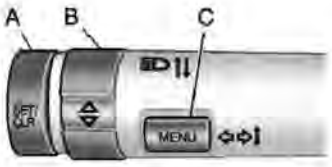
The DIC may display an indicator when the Rainsense wipers are active.

DIC Operation and Displays

The DIC has different displays which can be accessed by using the DIC buttons on the turn signal lever located on the left side of the steering wheel. The DIC displays trip, fuel, vehicle system information, and warning messages if a system problem is detected.

The bottom of the DIC display shows what position the shift lever is in and the odometer. The direction the vehicle is driving will be shown on the top of the display.

DIC Buttons



A. **SET/CLR (Set/Clear):** Use this button to set or clear the menu item when it is displayed.

B. △ ▽ **(Thumbwheel):** Use the thumbwheel to scroll through the items in each menu. A small marker will move up or down the side of the display as you scroll through the items. This shows where each item is in the menu.

C. **MENU:** Press this button to get to the Trip/Fuel Information Menu and the Vehicle Information Menu.

Trip/Fuel Information Menu Items

Press the MENU button on the turn signal lever until Trip/Fuel Information Menu is displayed. Use the thumbwheel to scroll through the following menu items:

- Trip
- Average Fuel Economy or Average Fuel Economy and Instantaneous Fuel Economy
- Fuel Range
- Fuel Used
- Average Vehicle Speed
- Timer
- Navigation Turn by Turn
- Speed and Curve Assist
- Digital Speedometer
- Blank

Trip

The Trip display shows the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset. The trip odometer can be reset to zero by pressing the trip reset stem or the SET/CLR button while the trip odometer display is showing.

Average Fuel Economy or Average Fuel Economy and Instantaneous Fuel Economy

The Average Fuel Economy display shows the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. The Average Fuel Economy can be reset by pressing SET/CLR while the Average Fuel Economy display is showing.

The Instantaneous Fuel Economy display shows the current fuel economy in either liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the fuel economy that the vehicle has right now and changes frequently as driving conditions change. Unlike average economy, this display cannot be reset.

Fuel Range

The Fuel Range display shows the approximate distance the vehicle can be driven without refueling. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank. Fuel range cannot be reset.

Fuel Used

The Fuel Used display shows the approximate liters (L) or gallons (gal) of fuel that have been used since last reset. The fuel used can be reset by pressing the SET/CLR button while the Fuel Used display is showing.

Average Vehicle Speed

The Average Vehicle Speed display shows the average speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. The average speed can be reset by pressing the SET/CLR button while the Average Vehicle Speed display is showing.

Timer

This display can be used as a timer. To start the timer, press SET/CLR while Timer is displayed. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press SET/CLR briefly while Elapsed Time is displayed. To reset the timer to zero, press and hold SET/CLR.

Turn-by-Turn

This display is used for the OnStar or Navigation System Turn-by-Turn guidance. See the OnStar Owner's Guide or the navigation manual, if the vehicle has navigation, for more information.

Speed and Curve Assist

This display will show the speed limit or the advised speed as determined by the information provided by the navigation system. The map database loaded in the navigation system may need to be updated periodically to display accurate information. See "Maps" in the navigation manual for information on updating the map database.

Digital Speedometer

The speedometer shows how fast the vehicle is moving in either kilometers per hour (km/h) or miles per hour (mph). The speedometer cannot be reset.

Blank Display

This display shows no information.

Vehicle Information Menu Items

Press the MENU button on the turn signal lever until Vehicle Information Menu is displayed. Use the thumbwheel to scroll through the following menu items:

- Tire Pressure
- Remaining Oil Life
- Battery Voltage
- Unit
- Blank

Tire Pressure

The display will show a vehicle with the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). See *Tire Pressure Monitor System on page 10-65* and *Tire Pressure Monitor Operation on page 10-67* for more information.

Remaining Oil Life

This display shows an estimate of the oil's remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-37*. The oil should be changed as soon as possible. See *Engine Oil on page 10-10*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule in this manual. See *Scheduled Maintenance on page 11-2* for more information.

Remember, the Oil Life display must be reset after each oil change. It will not reset itself. Also, be careful not to reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system, press the SET/CLR button while the Oil Life display is active. See *Engine Oil Life System on page 10-14*.

Battery Voltage

This display, available on some vehicles, shows the current battery voltage. If the voltage is in the normal range, the value will display. For example, the display may read BATTERY VOLTAGE 15.0 VOLTS. The vehicle's charging system regulates voltage based on the state of the battery. The battery voltage can fluctuate while viewing this information on the DIC. This is normal. See *Charging System Light on page 5-18* for more information. If there is a problem with the battery charging system, the DIC will display a message. See *Battery Voltage and Charging Messages on page 5-34*.

Unit

Move the thumbwheel up or down to switch between metric or English when the Unit display is active. Press SET/CLR to confirm the setting. This will change the displays on the cluster and DIC to either metric or English measurements.

Blank Display

This display shows no information.

Compass

The vehicle may have a compass display in the Driver Information Center (DIC). See *Compass on page 5-7*.

Vehicle Messages

Messages displayed on the DIC indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may display one after the other.

The messages that do not require immediate action can be acknowledged and cleared by pressing SET/CLR. The messages that require immediate action cannot be cleared until that action is performed. All messages should be taken seriously and clearing the messages does not correct the problem.

Battery Voltage and Charging Messages

BATTERY SAVER ACTIVE

This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing certain features of the vehicle that you may be able to notice. At the point that features are disabled, this message is displayed. It means that the vehicle is trying to save the charge in the battery. Turn off unnecessary accessories to allow the battery to recharge.

LOW BATTERY

This message is displayed when the battery voltage is low. See *Battery on page 10-30* for more information.

SERVICE BATTERY CHARGING SYSTEM

This message is displayed when there is a fault in the battery charging system. Take the vehicle to your dealer for service.

Brake System Messages

BRAKE FLUID LOW

This message is displayed when the brake fluid level is low. See *Brake Fluid on page 10-28*.

BRAKES OVERHEATED

This message is displayed when the brakes are becoming overheated. You may see this when driving on hills. Shift to a lower gear.

STEP ON BRAKE TO RELEASE PARK BRAKE

This message is displayed if you attempt to release the electric parking brake without the brake pedal applied. See *Parking Brake on page 9-31* for more information.

RELEASE PARKING BRAKE

This message is displayed if the electric parking brake is on while the vehicle is in motion. Release it before you attempt to drive. See *Parking Brake on page 9-31* for more information.

SERVICE BRAKE ASSIST

This message may be displayed when there is a problem with the brake boost assist system. When this message is displayed, the brake boost assist motor might be heard operating and you might notice pulsation in the brake pedal. This is normal under these conditions. Take the vehicle to your dealer for service.

SERVICE PARKING BRAKE

This message is displayed when there is a problem with the parking brake. Take the vehicle to your dealer for service.

Compass Messages

CAL

This message is displayed when the compass needs to be calibrated. See *Compass on page 5-7*.

– – –

Three dashes will be displayed if the compass needs service. See your dealer for service.

Cruise Control Messages

APPLY BRAKE BEFORE CRUISE

If this message displays when attempting to activate cruise control, apply the brake pedal and try again.

CRUISE SET TO XXX

This message displays when the cruise control is set and shows the speed it was set to. See *Cruise Control on page 9-38* for more information.

Door Ajar Messages

DOOR OPEN

A door open symbol will be displayed on the DIC showing which door is open. If the vehicle has been shifted out of P (Park), a DOOR OPEN message will also be displayed. Close the door completely.

HOOD OPEN

This message will display along with a hood open symbol when the hood is open. Close the hood completely.

POWER LIFTGATE UNAVAILABLE

This message will display if the power liftgate encounters multiple obstacles on the same power cycle. After removing the obstructions, the liftgate will resume normal power operation.

REAR ACCESS OPEN

This message will display along with a symbol when the liftgate is open. Close the liftgate completely.

Engine Cooling System Messages

A/C OFF DUE TO HIGH ENGINE TEMP

This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. You can continue to drive the vehicle.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

COOLANT LEVEL LOW ADD COOLANT

This message will display if the coolant is low. See *Engine Coolant on page 10-20*.

ENGINE OVERHEATED — IDLE ENGINE

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OVERHEATED — STOP ENGINE

This message displays and a continuous chime sounds if the engine cooling system reaches unsafe temperatures for operation. Stop and turn off the vehicle as soon as it is safe to do so to avoid severe damage. This message clears when the engine has cooled to a safe operating temperature.

HIGH COOLANT TEMPERATURE

This message displays if the coolant temperature is hot. See *Engine Overheating on page 10-24*.

Engine Oil Messages

CHANGE ENGINE OIL SOON

This message displays when the engine oil needs to be changed. When you change the engine oil, be sure to reset the Oil Life System. See *Engine Oil Life System on page 10-14* and *Driver Information Center (DIC) on page 5-29* for information on how to reset the system. See *Engine Oil on page 10-10* and *Scheduled Maintenance on page 11-2* for more information.

ENGINE OIL HOT, IDLE ENGINE

This message displays when the engine oil temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OIL LOW — ADD OIL

This message displays when the engine oil level is too low. Check the oil level. See *Engine Oil on page 10-10*.

OIL PRESSURE LOW — STOP ENGINE

This message displays if low oil pressure levels occur. Stop the vehicle as soon as safely possible and do not operate it until the cause of the low oil pressure has been corrected. Check the oil as soon as possible and have the vehicle serviced by your dealer.

Engine Power Messages

ENGINE POWER IS REDUCED

This message displays when the vehicle's engine power is reduced. Reduced engine power can affect the vehicle's ability to accelerate. If this message is on, but there is no reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven at a reduced speed while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer for service as soon as possible.

Fuel System Messages

FUEL LEVEL LOW

This message displays when the vehicle is low on fuel. Refuel as soon as possible

TIGHTEN GAS CAP

This message displays when the fuel cap is not on tight. Tighten the fuel cap.

Key and Lock Messages

NO REMOTE DETECTED

This message displays when trying to start the vehicle if an RKE transmitter is not detected. The transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 2-4*.

NO REMOTE PRESS BRAKE TO RESTART

This message is displayed if the remote is no longer detected in the vehicle. Press the brake pedal to restart the vehicle.

NUMBER OF KEYS PROGRAMMED

This message displays when programming new keys to the vehicle.

REMOTE LEFT IN VEHICLE

This message displays when leaving the vehicle with the RKE transmitter still inside.

REPLACE BATTERY IN REMOTE KEY

This message displays when the battery in the RKE transmitter needs to be replaced.

Lamp Messages

AFL (ADAPTIVE FORWARD LIGHTING) LAMPS NEED SERVICE

This message displays when the Adaptive Forward Lighting (AFL) system is disabled and needs service. See your dealer. See *Adaptive Forward Lighting (AFL) on page 6-3* for more information.

AUTOMATIC LIGHT CONTROL ON

This message is displayed when the exterior lamp control is in AUTO and the lights have turned on. See *Twilight Sentinel on page 6-4*.

AUTOMATIC LIGHT CONTROL OFF

This message is displayed when the exterior lamp control is in AUTO and the lights have turned off. See *Twilight Sentinel on page 6-4*.

XXX TURN INDICATOR FAILURE

When one of the turn signals is out, this message displays to show which bulb needs to be replaced. See *Bulb Replacement on page 10-38* and *Replacement Bulbs on page 10-47* for more information on the turn signal bulb replacement.

TURN SIGNAL ON

This message is displayed if the turn signal has been left on. Turn off the turn signal.

Object Detection System Messages

PARK ASSIST OFF

This message is displayed when the park assist system has been turned off. See *Ultrasonic Parking Assist on page 9-40*.

SERVICE PARK ASSIST

This message is displayed if there is a problem with the park assist system. Take the vehicle to your dealer for service.

Ride Control System Messages

SERVICE REAR AXLE

This message displays when there is a problem with the All-Wheel Drive (AWD) System. See your dealer for service.

SERVICE STABILITRAK

This message displays if there is a problem with the StabiliTrak® system. See *StabiliTrak® System on page 9-36*.

SERVICE SUSPENSION SYSTEM

This message displays if there is a problem with the selective ride control. See *Selective Ride Control on page 9-37*.

SERVICE TRACTION CONTROL

This message displays when there is a problem with the Traction Control System (TCS). See *Traction Control System (TCS) on page 9-34*.

SPORT MODE ON

This message displays when Sport Mode has been activated. See *Selective Ride Control on page 9-37* and *Manual Mode on page 9-28* for more information.

Airbag System Messages

SERVICE AIRBAG

This message displays if there is a problem with the airbag system. Take the vehicle to your dealer for service.

Safety Belt Messages

BUCKLE SEATBELT

This message displays as a reminder when the safety belt is not buckled.

Anti-Theft Alarm System Messages

THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

Service Vehicle Messages

SERVICE AC SYSTEM

This message is displayed if there is a problem with the air conditioning system. Take the vehicle to your dealer for service.

SERVICE POWER STEERING

This message is displayed if there is a problem with the power steering system. Take the vehicle to your dealer for service.

SERVICE VEHICLE SOON

This message is displayed if there is a problem with the vehicle. Take the vehicle to your dealer for service.

Starting the Vehicle Messages

PRESS BRAKE TO START VEHICLE

This message is displayed when attempting to start the vehicle without first pressing the brake pedal.

SERVICE KEYLESS START SYSTEM

This message is displayed if there is a problem with the keyless start system. Take the vehicle to your dealer for service.

Tire Messages

SERVICE TIRE MONITOR SYSTEM

This message displays if there is a problem with the Tire Pressure Monitor System (TPMS). See *Tire Pressure Monitor Operation on page 10-67* for more information.

TIRE LEARNING ACTIVE

This message displays when the system is learning new tires. See *Tire Pressure Monitor Operation on page 10-67* for more information.

TIRE LOW ADD AIR TO TIRE

This message displays when the pressure in one or more of the tires is low.

This message also displays LEFT FRONT, RIGHT FRONT, LEFT REAR, or RIGHT REAR to indicate the location of the low tire.

The low tire pressure warning light will also come on. See *Tire Pressure Light on page 5-25*.

If a tire pressure message appears on the DIC, stop as soon as you can. Inflate the tires by adding air until the tire pressure is equal to the values shown on the Tire and Loading Information label. See *Tires on page 10-56*, *Vehicle Load Limits on page 9-12*, and *Tire Pressure on page 10-63*.

You can receive more than one tire pressure message at a time. The DIC also shows the tire pressure values. See *Driver Information Center (DIC) on page 5-29*.

Transmission Messages

SERVICE TRANSMISSION

This message displays if there is a problem with the transmission. See your dealer.

SHIFT TO PARK

This message displays when the transmission needs to be shifted to P (Park). This may appear when attempting to remove the key if the vehicle is not in P (Park).

TRANSMISSION HOT — IDLE ENGINE

This message displays and a chime sounds if the transmission fluid in the vehicle gets hot. Driving with the transmission fluid temperature high can cause damage to the vehicle. Stop the vehicle and let it idle to allow the transmission to cool. This message clears when the fluid temperature reaches a safe level.

Vehicle Reminder Messages

ICE POSSIBLE DRIVE WITH CARE

This message is displayed when ice conditions are possible.

TURN WIPER CONTROL TO INTERMITTENT FIRST

This message is displayed when attempting to adjust the intermittent wiper speed without intermittent selected on the wiper control. See *Windshield Wiper/Washer on page 5-3*.

Washer Fluid Messages

WASHER FLUID LOW ADD FLUID

This message displays when the washer fluid level is low. For information on filling the washer fluid, see *Washer Fluid on page 10-26*.

Vehicle Personalization

The audio system controls are used to access the personalization menus for customizing vehicle features. Not all features are available on every vehicle. Only the features available on a particular vehicle will be displayed on that vehicle.

CONFIG (Configuration): Press to access the Configuration Settings Menu.

MENU/SELECT Knob: Press the center of this knob to enter the menus and select menu items. Turn the knob to scroll through the menus.

⇦ BACK or BACK ⇦ (depending on system): Press to exit or move backward in a menu.

Entering the Personalization Menus

1. Press CONFIG to access the Configuration Settings menu.
2. Turn the MENU/SELECT knob to highlight Vehicle Settings.
3. Press the center of the MENU/SELECT knob to select the Vehicle Settings menu.

The following list of menu items will be available:

- Climate and Air Quality
- Comfort and Convenience
- Language
- Lighting
- Power Door Locks
- Remote Locking, Unlocking, Starting
- Return to Factory Settings

Turn the MENU/SELECT knob to highlight the menu. Press the knob to select it. Each of the menus is detailed in the following information.

Climate and Air Quality

Select the Climate and Air Quality menu and the following will be displayed:

- Auto Fan Speed
- Air Quality Sensor
- Remote Start Auto Seat Cool
- Remote Start Auto Heated Seats
- Auto Defog
- Auto Rear Defog

Auto Fan Speed

This will allow you to select the automatic fan speed. This feature sets the climate control fan speed to maintain the interior temperature.

Press the MENU/SELECT knob when Auto Fan Speed is highlighted to open the menu. Turn the knob to highlight High, Medium, or Low. Press the knob to confirm the selection and move back to the last menu.

Air Quality Sensor

This will allow you to select whether the system will operate at high or low sensitivity. Only vehicles with the dual zone climate control will have this option.

Press the MENU/SELECT knob when Air Quality Sensor is highlighted to open the menu. Turn the knob to highlight High or Low Sensitivity. Press the knob to confirm the selection and move back to the last menu.

Remote Start Auto Seat Cool

When on, this feature will turn the vented seats on when using remote start on warm days.

Press the MENU/SELECT knob when Remote Start Auto Seat Cool is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Start Auto Heated Seats

When on, this feature will turn the heated seats on when using remote start on cold days.

Press the MENU/SELECT knob when Remote Start Auto Heated Seats is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Auto Defog

This will allow you to turn the auto defog on or off.

Press the MENU/SELECT knob when Auto Defog is highlighted to open the menu. Turn the knob to highlight On or Off. Press the knob to confirm the selection and move back to the last menu.

Auto Rear Defog

This will allow you to turn the auto rear defog on or off.

Press the MENU/SELECT knob when Auto Rear Defog is highlighted to open the menu. Turn the knob to highlight On or Off. Press the knob to confirm the selection and move back to the last menu.

Comfort and Convenience

Select the Comfort and Convenience menu and the following will be displayed:

- Easy Exit Driver Seat
- Chime Volume
- Reverse Tilt Mirror
- Auto Wipe in Reverse Gear

Easy Exit Driver Seat

This allows you to turn the easy exit driver seat feature on or off. When on, this feature will move the driver seat rearward upon turning the ignition off and the driver door opened. This may be performed to make it easier to exit the vehicle. See *Power Seat Adjustment on page 3-4* for more information.

Press the MENU/SELECT knob when Easy Exit Driver Seat is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Chime Volume

This allows the selection of the chime volume level.

Press the MENU/SELECT knob when Chime Volume is highlighted. Turn the knob to select Normal or High. Press the knob to confirm and go back to the last menu.

Reverse Tilt Mirror

This allows you to turn the reverse tilt mirror feature on or off. When on, both the driver and passenger mirrors will tilt downward when vehicle is shifted to R (Reverse) to improve visibility of the ground near the rear wheels. They will return to their previous driving position when the vehicle is shifted out of R (Reverse), the ignition is turned to OFF, or the vehicle is left in reverse.

Press the MENU/SELECT knob when Reverse Tilt Mirror is highlighted. Turn the knob to select Driver & Passenger or Off. Press the knob to confirm and go back to the last menu.

Auto Wipe in Reverse Gear

When on, and the front windshield wipers are on, the rear window wiper will turn on automatically when the vehicle is shifted into R (Reverse).

Press the MENU/SELECT knob when Auto Wipe in Reverse Gear is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Language

Select the Language menu and the following will be displayed:

- English
- French
- Spanish

Turn the MENU/SELECT knob to select the language. Press the knob to confirm and go back to the last menu.

Lighting

Select the Lighting menu and the following will be displayed:

- Vehicle Locator Lights
- Exit Lighting

Vehicle Locator Lights

This allows the vehicle locator lights to be turned on or off.

Press the MENU/SELECT knob when Vehicle Locator Lights is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Exit Lighting

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Press the MENU/SELECT knob when Exit Lighting is highlighted. Turn the knob to select Off, 30 Seconds, 1 Minute, or 2 Minutes. Press the knob to confirm and go back to the last menu.

Power Door Locks

Select Power Door Locks and the following will be displayed:

- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock

Unlocked Door Anti Lock Out

When on, this feature will keep the driver door from locking when the door is open. If Off is selected, the Delayed Door Lock menu will be available and the door will lock as programmed through this menu.

Press the MENU/SELECT knob when Auto Door Unlock is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Auto Door Unlock

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park).

Press the MENU/SELECT knob when Auto Door Unlock is highlighted. Turn the knob to select All Doors, Driver Door, or Off. Press the knob to confirm and go back to the last menu.

Delayed Door Lock

When on, this feature will delay the locking of the doors until five seconds after the last door is closed. You will hear three chimes to signal delayed locking is in use. Pressing either the power lock button or the lock button on the RKE transmitter twice will override the delayed locking feature and immediately lock all of the doors.

Press the MENU/SELECT knob when Delayed Door Lock is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Lock/Unlock/Start

Select Remote Lock/Unlock/Start and the following will be displayed:

- Unlock Feedback (Lights)
- Locking Feedback
- Door Unlock Options
- Passive Door Lock
- Passive Door Unlock
- Memory Remote Recall
- Remote Left in Vehicle Reminder

Unlock Feedback (Lights)

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Press the MENU/SELECT knob when Unlock Feedback (Lights) is highlighted. Turn the knob to select Flash Lights or Off. Press the knob to confirm and go back to the last menu.

Locking Feedback

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Press the MENU/SELECT knob when Locking Feedback is highlighted. Turn the knob to select Lights and Horn, Lights Only, Horn Only, or Off. Press the knob to confirm and go back to the last menu.

Door Unlock Options

This allows selection of which doors will unlock when pressing the unlock button on the RKE transmitter.

Press the MENU/SELECT knob when Door Unlock Options is highlighted. Turn the knob to select All Doors or Driver Door Only. When set to Driver Door Only, the driver door will unlock the first time the unlock button is pressed and all doors will unlock when the button is pressed a second time. When set to All Doors, all of the doors will unlock at the first press of the unlock button. Press the knob to confirm and go back to the last menu.

Passive Door Lock

If the vehicle has the Remote Keyless Entry (RKE) system, when enabled, this feature allows the doors to lock after several seconds if all doors are closed and at least one RKE transmitter has been removed from the interior of the vehicle. It does not matter how far away the RKE transmitter is from the vehicle. This feature can also be configured to chirp the horn when the doors are passively locked.

Press the MENU/SELECT knob when Passive Door Lock is highlighted. Turn the knob to select On With Chirp, On, or Off. Press the knob to confirm and go back to the last menu.

Passive Door Unlock

If the vehicle has the RKE system, this feature allows you to select which doors will automatically unlock when you open the driver door with the RKE transmitter present.

Press the MENU/SELECT knob when Passive Door Unlock is highlighted. Turn the knob to select All Doors or Driver Door. Press the knob to confirm and go back to the last menu.

Memory Remote Recall

This allows the Memory Remote Recall feature to be turned on or off.

Press the MENU/SELECT knob when Memory Remote Recall is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Left in Vehicle Reminder

This allows the Remote Left In Vehicle reminder feature to be turned on or off. If on, the horn will chirp if a remote is left in the vehicle.

Press the MENU/SELECT knob when Remote Left In Vehicle is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Return to Factory Settings

Select Return to Factory Settings to return all of the vehicle personalization to the default settings. Turn the knob to select Yes or No. Press the knob to confirm and go back to the last menu.

Universal Remote System

See *Radio Frequency Statement on page 13-20* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

Universal Remote System Programming

If the vehicle has this feature, you will see these buttons with one LED indicator next to them in the overhead console.

This system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Do not use the Universal Remote system with any garage door opener that does not have the stop and reverse feature. This includes any garage door opener model manufactured before April 1,1982.

Read the instructions completely before attempting to program the Universal Remote system. Because of the steps involved, it may be helpful to have another person available to assist with programming the Universal Remote system.

Keep the original hand-held transmitter for use in other vehicles as well as for future Universal Remote system programming. It is also recommended that upon the sale of the vehicle, the programmed Universal Remote system buttons be erased for security purposes. See "Erasing Universal Remote System Buttons" later in this section.

When programming a garage door, park outside of the garage. Park directly in line with and facing the garage door opener motor-head or gate motor-head. Be sure that people and objects are clear of the garage door or gate being programmed.

It is recommended that a new battery be installed in the hand-held transmitter for quicker and more accurate transmission of the radio-frequency signal.

Programming the Universal Remote System

For questions or help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com.

Programming a garage door opener involves time-sensitive actions, so read the entire procedure before starting. Otherwise, the device will time out and the procedure will have to be repeated.

To program up to three devices:

1. Hold the end of the hand-held transmitter about 3 to 8 cm (1 to 3 in) away from the Universal Remote system buttons while keeping the indicator light in view. The hand-held transmitter was supplied by the manufacturer of the garage door opener receiver (motor-head unit).
2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Remote system buttons to be used to operate the garage door. Do not release the Universal Remote system button or the hand-held transmitter button until the indicator light changes from a slowly to a rapidly flashing light. You now may release both buttons.

   Some entry gates and garage door openers may require substitution of Step 2 with the procedure noted in "Gate Operator and Canadian Programming" later in this section.

3. Press and hold for five seconds the newly trained Universal Remote system button (the button selected in Step 2) while observing the indicator light and garage door activation.
   - If the indicator light stays on continuously or the garage door starts to move when the Universal Remote system button is pressed and released, then the programming is complete. There is no need to continue programming Steps 4 through 6.
   - If the Universal Remote system indicator light blinks rapidly for two seconds, then turns to a constant light and the garage door does not move, continue with programming Steps 4 through 6.

   It may be helpful to have another person assist with the remaining Steps 4 through 6.

"Learn" or "Smart" Buttons

4. After Steps 1 through 3 have been completed, locate the "Learn" or "Smart" button inside the garage on the garage door opener receiver (motor-head unit). The name and color of the button may vary by manufacturer.
5. Firmly press and release the "Learn" or "Smart" button. After you press this button, you will have 30 seconds to complete Step 6.
6. Immediately return to the vehicle. Firmly press and hold for two seconds the Universal Remote system button, selected in Step 2 to control the garage door, and then release it. If the garage door does not move or the lamp on the garage door opener receiver (motor-head unit) does not flash, press and hold the same button a second time for two seconds, and then release it. Again, if the door does not move or the garage door lamp does not flash, press and hold the same button a third time for two seconds, and then release.

The Universal Remote system should now activate the garage door.

To program the remaining two Universal Remote system buttons, begin with Step 1 of "Programming the Universal Remote System."

Gate Operator and Canadian Programming

If you have questions or need help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com.

Canadian radio-frequency laws require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for the Universal Remote system to pick up the signal during programming. Similarly, some U.S. gate operators are manufactured to time out in the same manner.

If you live in Canada, or you are having difficulty programming a gate operator or garage door opener by using the "Programming the Universal Remote System" procedures, regardless of where you live, replace Step 2 under "Programming the Universal Remote System" with the following:

Continue to press and hold the Universal Remote system button while you press and release every two seconds (cycle) the hand-held transmitter button until the frequency signal has been successfully accepted by the Universal Remote system. The Universal Remote system indicator light will flash slowly at first and then rapidly. Proceed with Step 3 under "Programming the Universal Remote System" to complete.

Universal Remote System Operation

Using the Universal Remote System

Press and hold the appropriate Universal Remote system button for at least half of a second. The indicator light will come on while the signal is being transmitted.

Erasing Universal Remote System Buttons

All programmed buttons should be erased when the vehicle is sold or the lease ends.

To erase all programmed buttons on the Universal Remote system device:

1. Press and hold down the two outside buttons until the indicator light begins to flash. This should take about 10 seconds.
2. Release both buttons.

Reprogramming a Single Universal Remote System Button

To reprogram any of the three Universal Remote system buttons:

1. Press and hold the desired Universal Remote system button. Do not release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, proceed with Step 1 of the section "Programming the Universal Remote System."

If you have questions or need help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com. You may also call the customer assistance phone number under *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-6*.

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Exterior Lighting

Exterior Lamp Controls

The exterior lamps control is located on the instrument panel to the left of the steering column.

It controls the following systems:

- Headlamps
- Taillamps
- Parking Lamps
- License Plate Lamps
- Instrument Panel Lights
- Fog Lamps

The exterior lamps control has four positions:

⏻ **(Off):** Briefly turn to this position to turn the automatic light control off or on again.

AUTO (Automatic): Turns the headlamps on automatically at normal brightness, together with the following:

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Parking Lamps): Turns the parking lamps on together with the following:

- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Headlamps): Turns the headlamps on together with the lamps listed below. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Front Fog Lamps): For vehicles with fog lamps, press to turn the lamps on or off.

See *Front Fog Lamps on page 6-6*.

Headlamp High/Low-Beam Changer

Push the turn signal/lane change lever away from you to turn the high beams on.

Pull the lever toward you to return to low beams.

This indicator light turns on in the instrument panel cluster when the high beam headlamps are on.

Flash-to-Pass

The flash-to-pass feature works with the low beams or Daytime Running Lamps (DRL) on or off.

To flash the high beams, pull the turn signal/lane change lever all the way toward you, then release it.

Daytime Running Lamps (DRL)

Daytime Running Lamps (DRL) can make it easier for others to see the front of your vehicle during the day. Fully functional daytime running lamps are required on all vehicles first sold in Canada.

A light sensor on top of the instrument panel makes the DRL work, so be sure it is not covered.

The DRL system makes the low-beam headlamps come on at a reduced brightness or for vehicles with High Intensity Discharge (HID) headlamps, the DRL lights will come on when the following conditions are met:

- The ignition is in the ON/RUN mode.
- The exterior lamps control is in AUTO.
- The engine is running.

When the DRL are on, only the low-beam headlamps, at a reduced level of brightness, will be on. The high-beam headlamps, taillamps, sidemarker, instrument panel lamps, and other lamps will not be on.

The headlamps automatically change from DRL to the regular headlamps depending on the darkness of the surroundings. The other lamps that come on with the headlamps will also come on.

When it is bright enough outside, the headlamps go off and the DRL come on.

To turn the DRL lamps off or on again, turn the exterior lamps control to the off position and then release. For vehicles first sold in Canada, the DRL cannot be turned off.

Adaptive Forward Lighting (AFL)

For vehicles with Xenon headlamps, the Adaptive Forward Lighting System (AFL) adjusts the headlamps to provide greater road illumination in various driving conditions.

To enable AFL, set the exterior lamp control to the AUTO position. Moving the control out of the AUTO position will deactivate the system. AFL will operate when the vehicle speed is greater than 3 km/h (2 mph). AFL will not operate when the transmission is in R (Reverse). AFL is not immediately operable after starting the vehicle; driving a short distance is required to calibrate the AFL. See *Exterior Lamp Controls on page 6-1*.

Curve Lighting

The Xenon light beam pivots based on the steering wheel position and vehicle speed of at least 10 km/h (6 mph). The headlamps shine at an angle of up to 15 degrees to the right or left of the direction of travel.

Highway Lighting

If the vehicle is traveling straight continuously at high speeds, the light beam automatically raises slightly to increase the headlamp range.

City Lighting

If the vehicle speed is less than 50 km/h (31 mph), the headlamp range is automatically reduced.

Twilight Sentinel

This feature automatically turns the lamps on and off. A light sensor on top of the instrument panel makes the Twilight Sentinel® work, so be sure it is not covered.

With Twilight Sentinel the following will happen:

- When it is dark enough outside, and the exterior lamps control is in the AUTO position, the Daytime Running Lamps (DRL) go off, and the headlamps and parking lamps come on. The other lamps that come on with the headlamps also come on.
- When it is bright enough outside, the headlamps go off, and the DRL come on, as long as the exterior lamp switch is in the AUTO position. See *Exterior Lamp Controls on page 6-1*.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlamp system changes to the DRL. During that delay, the instrument panel cluster may not be as bright as usual. Make sure the instrument panel brightness control is in full bright position. See *Instrument Panel Illumination Control on page 6-7* for more information.

The vehicle can be idled with the lamps off, even when it is dark outside. After starting the vehicle, turn the exterior lamp control to off, then release it. The lamps will remain off until the control is turned to off again.

Twilight Sentinel also provides exterior illumination as you leave the vehicle. If Twilight Sentinel has turned on the lamps when the ignition is turned off, the lamps remain on until one of the following occurs:

- The exterior lamp control is moved from ⏻ to the parking lamp position.
- The delay time selected has elapsed.

See *Vehicle Personalization on page 5-42* to select the delay time. You can also select no delay time.

If the ignition is turned off with the exterior lamp control in the parking lamp or headlamp position, the Twilight Sentinel delay will not occur. The lamps will turn off as soon as the control is turned off.

The regular headlamp system should be turned on when needed.

Hazard Warning Flashers

⚠ **(Hazard Warning Flasher):** Press this button located on the instrument panel near the audio system, to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble. Press again to turn the flashers off.

Turn and Lane-Change Signals

An arrow on the instrument panel cluster will flash in the direction of the turn or lane change.

Move the lever all the way up or down to signal a turn.

Raise or lower the lever until the arrow starts to flash to signal a lane change. The turn signal flashes three times.

The lever returns to its starting position when it is released.

If after signaling a turn or lane change the arrow flashes rapidly or does not come on, a signal bulb may be burned out.

Have the bulbs replaced. If the bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers on page 10-48* for more information.

Front Fog Lamps

The front fog lamp button is located on the exterior lamp control, on the outboard side of the steering wheel.

The ignition and the low-beam headlamps must be on to turn on the fog lamps.

: Press to turn the fog lamps on or off. An indicator light on the instrument panel cluster comes on when the fog lamps are on.

The fog lamps come on together with the parking lamps.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Interior Lighting

Instrument Panel Illumination Control

This feature controls the brightness of the instrument panel lights.

(Instrument Panel Brightness): Turn the thumbwheel up or down to brighten or dim the instrument panel lights.

Cargo Lamp

The cargo lamp is located over the rear compartment and is controlled by the dome lamp. See *Dome Lamps on page 6-7*.

Courtesy Lamps

The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.

Dome Lamps

The dome lamp controls are located in the overhead console.

To change the dome lamp settings, press the following:

(Dome Lamp Override): Turns the lamp off, even when a door is open.

(Door): The lamp comes on automatically when a door is opened.

(On): Turns the dome lamp on.

Reading Lamps

There are reading lamps located on the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

- Press or next to each overhead console reading lamp.
- Press the lamp lens on the rear passenger reading lamps.

Lighting Features

Entry Lighting

The headlamps, taillamps, license plate lamps, back-up lamps, dome lamps, and most of the interior lights turn on briefly, when the Remote Keyless Entry (RKE) is pressed, or when the door handle is pulled. After about 30 seconds the exterior lamps turn off, and then the dome and remaining interior lights dim to off. The entry lighting can be manually turned off, by changing the ignition out of the off position, or by pressing the (RKE) button.

This feature can be changed. See *Vehicle Personalization on page 5-42*.

Exit Lighting

The headlamps, taillamps, parking lamps, back-up lamps, and license plate lamps come on at night, or in areas with limited lighting, when a door is opened after the ignition is turned off. The dome lamps also come on when a door is opened after the ignition is changed to the off position.

The exterior lights and dome lamp remain on after the door is closed for a set amount of time, then automatically turn off.

The exterior lights turn off immediately by turning the exterior lamps control to OFF.

This feature can be changed. See *Vehicle Personalization on page 5-42*.

Battery Load Management

The vehicle has Electric Power Management (EPM) that estimates the battery's temperature and state of charge. It then adjusts the voltage for best performance and extended life of the battery.

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltmeter gauge or a voltage display on the Driver Information Center (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all of the power needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, fog lamps, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action, this action may be noticeable to the driver. If so, a DIC message might be displayed, such as BATTERY SAVER ACTIVE, BATTERY VOLTAGE LOW, or LOW BATTERY. If one of these messages displays, it is recommended that the driver reduce the electrical loads as much as possible. See *Driver Information Center (DIC) on page 5-29*.

✍ NOTES

Infotainment System

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Introduction

Infotainment

Read the following pages to become familiar with the audio system's features.

⚠ WARNING

Taking your eyes off the road for extended periods could cause a crash resulting in injury or death to you or others. Do not give extended attention to entertainment tasks while driving.

This system provides access to many audio and non-audio listings.

To minimize taking your eyes off the road while driving, do the following while the vehicle is parked:

- Become familiar with the operation and controls of the audio system.
- Set up the tone, speaker adjustments, and preset radio stations.

For more information, see *Defensive Driving on page 9-2*.

This vehicle's infotainment system may be equipped with a noise reduction system which can work improperly if the audio amplifier, engine calibrations, exhaust system, microphones, radio, or speakers are modified or replaced. This could result in more noticeable engine noise at certain speeds.

***Notice:* Contact your dealer before adding any equipment.**

Adding audio or communication equipment could interfere with the operation of the engine, radio, or other systems, and could damage them. Follow federal rules covering mobile radio and telephone equipment.

The vehicle has Retained Accessory Power (RAP). With RAP, the audio system can be played even after the ignition is turned off. See *Retained Accessory Power (RAP) on page 9-22* for more information.

Navigation System

For vehicles with a navigation system, see the separate navigation manual.

Theft-Deterrent Feature

The theft-deterrent feature works by learning a portion of the Vehicle Identification Number (VIN) to the infotainment system. The infotainment system does not operate if it is stolen or moved to a different vehicle.

Overview (Radio with CD)

A. VOL/ ⏻
- Turns the system on or off and adjusts the volume.

B. Buttons 1 to 6
- Radio: Saves and selects favorite stations.

C. TUNE
- Radio: Manually selects radio stations.
- CD: Selects tracks.

D. FAV
- Radio: Opens the favorites list.

E. ⏭ SEEK
- Radio: Seeks the next station.
- CD: Selects the next track or fast forwards within a track.

F. ⏮ SEEK
- Radio: Seeks the previous station.
- CD: Selects the previous track or rewinds within a track.

G. ⏏ (CD Eject)
- Removes a disc from the CD slot.

H. CD
- Selects the CD player when listening to a different audio source.

I. RADIO/BAND
- Changes the band while listening to the radio.
- Selects the radio when listening to a different audio source.

J. ⏵/⏸
- CD: Pauses the CD.

K. CD Slot
- Insert a CD.

L. MENU/SELECT
- Press: Selects menu items.
- Turn: Opens menus, highlights menu items, or sets numeric values while in a menu.

M. BACK ⮌
- Menu: Moves one level back.
- Character Input: Deletes the last character.

N. CONFIG
- Opens the settings menu.

O. PHONE
- Opens the phone main menu.
- Mutes the audio system.

P. TONE
- Opens the tone menu.

Q. AUX
- Selects a connected external audio source.

R. INFO
- Radio: Shows available information about the current station.
- CD: Shows available information about the current track.

Overview (Radio with CD/DVD and MEM)

A. VOL/ ⏻
- Turns the system on or off and adjusts the volume.

B. Buttons 1 to 6
- Radio: Saves and selects favorite stations.
- MEM: Saves and selects favorite tracks and playlists.

C. TUNE/INFO
- Radio: Manually selects radio stations and shows available information about the current station.
- CD: Selects tracks and shows available information about the current track.
- MEM: Selects tracks and shows available information about the current track.

D. FAV
- Radio: Opens the favorites list.
- MEM: Opens the favorites list.

E. ⏭ SEEK
- Radio: Seeks the next station.
- CD/DVD: Selects the next track or fast forwards within a track.
- MEM: Selects the next track or fast forwards within a track.

F. ⏮ SEEK
- Radio: Seeks the previous station.
- CD/DVD: Selects the previous track or rewinds within a track.
- MEM: Selects the previous track or rewinds within a track.

G. ⏏ (CD Eject)
- Removes a disc from the CD slot.

H. RADIO/BAND
- Changes the band while listening to the radio.
- Selects the radio when listening to a different audio source.

I. MEM/CD/AUX
- Selects MEM, CD/DVD, USB, or a connected auxiliary audio or auxiliary audio/video source.

J. ⏵/⏸
- Radio: Pauses time shifted content.
- CD/DVD: Pauses CD/DVD-A and DVD-V playback.
- MEM: Pauses MEM playback.

K. CD/DVD Slot
- Insert a disc.

L. MENU/SELECT
- Press: Selects menu items.
- Turn: Open menus, highlights menu items, or sets numeric values while in a menu.

M. TONE
- Opens the tone menu.

N. ⇦ BACK
- Menu: Moves one level back.
- Character Input: Deletes the last character.

O. CONFIG
- Opens the settings menu.

P. DEL
- MEM: Deletes the current track from MEM.

Q. ○ REC

- CD/DVD: Records content from audio CDs and MP3/WMA CDs.
- AUX: Records content from USB mass storage devices.

R. PHONE

- Opens the phone main menu.
- Mutes the audio system.

Operation

Controls

The infotainment system is operated by using the pushbuttons, multifunction knobs, menus shown on the display, and steering wheel controls, if equipped.

Turning the System On or Off

VOL/ ⏻ (Volume/Power): Press to turn the system on and off.

Automatic Switch-Off

If the infotainment system has been turned on after the ignition is turned off, the system will turn off automatically after 10 minutes.

Volume Control

VOL/ ⏻ (Volume/Power): Turn to adjust the volume.

PHONE: For vehicles with OnStar, press and hold PHONE to mute the infotainment system. Press and hold PHONE again, or turn the VOL/ ⏻ knob to cancel mute.

For vehicles without OnStar®, press PHONE to mute the infotainment system. Press PHONE again, or turn the VOL/ ⏻ knob to cancel mute.

Menu System

Controls

The MENU/SELECT knob and the BACK ⇦ button are used to navigate the menu system.

MENU/SELECT: Press to:

- Select or activate the highlighted menu option.
- Confirm a set value.
- Turn a system setting on or off.

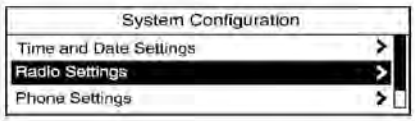
Turn to:

- Enter the menu system.
- Highlight a menu option.
- Select a value.

BACK ⇦ : Press to:

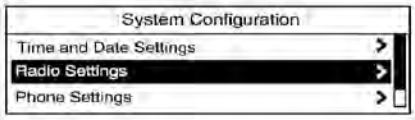
- Exit a menu.
- Return from a submenu screen to the previous menu screen.
- Delete the last character in a sequence.

Selecting a Menu Option



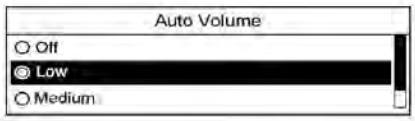
1. Turn the MENU/SELECT knob to move the highlighted bar.
2. Press the MENU/SELECT button to select the highlighted option.

Submenus



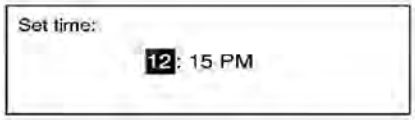
An arrow on the right-hand edge of the menu indicates that it has a submenu with other options.

Activating a Setting



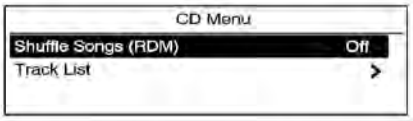
1. Turn the MENU/SELECT knob to highlight the setting.
2. Press the MENU/SELECT button to activate the setting.

Setting a Value



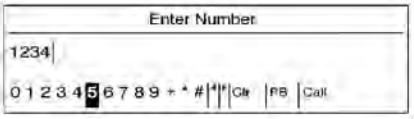
1. Turn the MENU/SELECT knob to change the current value of the setting.
2. Press the MENU/SELECT button to confirm the setting.

Turning a Function On or Off



1. Turn the MENU/SELECT knob to highlight the function.
2. Press the MENU/SELECT button to turn the function on or off.

Entering a Character Sequence



1. Turn the MENU/SELECT knob to highlight the character.
2. Press the MENU/SELECT button to select the character.

Press the BACK ⇦ button to delete the last character in the sequence or press and hold to delete the entire character sequence.

Audio Settings

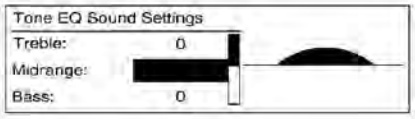
The audio settings can be set for each radio band and each audio player source.

To quickly reset an audio setting value to 0:

1. Press the TONE button.
2. Select the audio setting.
3. Press and hold the MENU/SELECT button until the value changes to 0.

Press the BACK ⇦ button to go back to the Tone Settings menu.

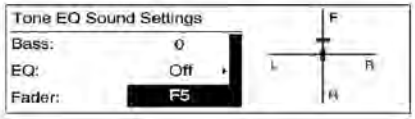
Adjusting the Treble, Midrange, and Bass



1. Press the TONE button.
2. Select Treble, Midrange, or Bass.
3. Select the value.

Press the BACK ⇦ button to go back to the Tone Settings menu.

Adjusting the Fader and Balance



1. Press the TONE button.
2. Select Fader or Balance.
3. Select the value.

Press the BACK ⇦ button to go back to the Tone Settings menu.

Adjusting the EQ (Equalizer)

For vehicles that have an equalizer:

1. Press the TONE button.
2. Select EQ.
3. Select the setting.

Press the BACK ⇦ button to go back to the Tone Settings menu.

DSP (Digital Signal Processing) Settings

For vehicles with DSP, it is used to provide a choice of different listening experiences.

- *2.0 Normal* - Select this setting to adjust the audio for normal mode. This provides the best sound quality for all seating positions.
- *Centerpoint* - Centerpoint® signal processing circuitry. This setting creates a surround sound listening experience from stereo CDs and satellite radio.

  For more information on Bose® Centerpoint® signal processing circuitry, please visit www. bose.com/centerpoint.
- *5.1 Surround* - The infotainment system used in conjunction with the Bose® 5.1 Cabin Surround® sound system for the vehicle includes digital 5.1 decoding. This technology unlocks the full benefit of digital 5.1 recordings, so digitally encoded music and movie soundtracks can be presented faithfully and accurately. If the video screens or Rear Seat Audio (RSA) are on, 5.1 Surround is not available.

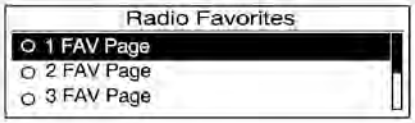
To adjust the DSP settings:

1. Press the TONE button.
2. Select DSP.
3. Select the setting.

Press the BACK ⇦ button to go back to the Tone Settings menu.

System Settings

Configuring the Number of Favorite Pages



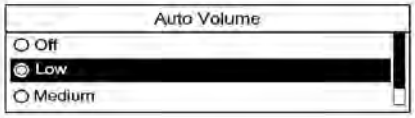
To configure the number of available favorite pages:

1. Press the CONFIG button.
2. Select Radio Settings.
3. Select Radio Favorites.
4. Select the number of available favorite pages.
5. Press the BACK ⇦ button to go back to the System Configuration menu.

Auto Volume

The auto volume feature automatically adjusts the radio volume to compensate for road and wind noise as the vehicle speeds up or slows down, so that the volume level is consistent.

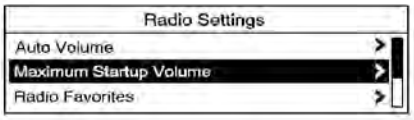
The level of volume compensation can be selected, or the auto volume feature can be turned off.



1. Press the CONFIG button.
2. Select Radio Settings.
3. Select Auto Volume.
4. Select the setting.
5. Press the BACK ⇦ button to go back to the System Configuration menu.

Maximum Startup Volume

The maximum volume played when the radio is first turned on can be set.



1. Press the CONFIG button.
2. Select Radio Settings.
3. Select Maximum Startup Volume.
4. Select the setting.
5. Press the BACK ⇦ button to go back to the System Configuration menu.

Radio

AM-FM Radio

Control Buttons

The buttons used to control the radio are:

RADIO/BAND: Press to turn the radio on and choose between AM, FM, and XM™, if equipped.

MENU/SELECT: Press and turn to navigate the available menus.

TUNE: Turn to search for stations.

INFO: Press to display additional information that may be available for the current song.

⏭ SEEK/ ⏮ SEEK: Press to search for stations.

FAV: Press to open the favorites list.

1 to 6: Press to select preset stations.

⏵/⏸ (Play/Pause): Press to pause time shifted content, if equipped.

RDS (Radio Data System)

The radio may have RDS. The RDS feature is available for use only on FM stations that broadcast RDS information. This feature only works when the information from the radio station is available. In rare cases, a radio station could broadcast incorrect information that causes the radio features to work improperly. If this happens, contact the radio station.

While the radio is tuned to an FM-RDS station, the station name or call letters display.

Radio Menus

Radio menus are available for AM and FM.

Turn the MENU/SELECT knob to open the main radio menu for that frequency.

Selecting a Band

Press the RADIO/BAND button to choose AM, FM, or XM, if equipped. The last station that was playing starts playing again.

Selecting a Station

Seek Tuning (Radio with CD)

If the radio station is not known:

Briefly press ⏮ SEEK or ⏭ SEEK to automatically search for the next available station. If a station is not found, the radio switches to a more sensitive search level. If a station still is not found, the frequency that was last active begins to play.

If the radio station is known:

Press and hold ⏮ SEEK or ⏭ SEEK until the station on the display is reached, then release the button.

Seek Tuning (Radio with CD/DVD and MEM)

Briefly press ⏮ SEEK or ⏭ SEEK, to automatically search for the next available station. If a station is not found, the radio switches to a more sensitive search level. If a station still is not found, the frequency that was last active begins to play.

Manual Tuning

Turn the TUNE knob to select the frequency on the display.

Favorites List

1. Turn the MENU/SELECT knob.
2. Select Favorites List.
3. Select the station.

Station Lists

1. Turn the MENU/SELECT knob.
2. Select AM or FM Station List. All receivable stations in the current reception area are displayed. If a station list has not been created, an automatic station search is done.
3. Select the station.

Category Lists

Most stations that broadcast an RDS program type code specify the type of programming transmitted. Some stations change the program type code depending on the content. The system stores the RDS stations sorted by program type in the FM category list.

To search for a programming type determined by station:

1. Turn the MENU/SELECT knob.
2. Select FM category list. A list of all programing types available displays.
3. Select the programming type. A list of stations that transmit programming of the selected type displays.
4. Select the station.

   The category lists are updated when the station lists are updated.

Updating Station & Category Lists

If stations stored in the station list can no longer be received:

1. Turn the MENU/SELECT knob.
2. Select Update AM or FM Station List, if the stations stored in the station list are no longer received. A station search will be completed and the first station in the updated list will play.

To cancel the station search, press the MENU/SELECT knob.

Storing a Station as a Favorite

Stations from all bands can be stored in any order in the favorite pages.

Up to six stations can be stored in each favorite page and the number of available favorite pages can be set.

Storing Stations

To store the station to a position in the list, press the corresponding button 1 to 6 until a beep is heard.

Retrieving Stations

Press the FAV button to open a favorite page or to switch to another favorite page. Briefly press one of the 1 to 6 buttons to retrieve the station.

Time Shifting (Radio with CD/DVD and MEM)

The radio with MEM time shift feature can rewind 20 minutes of FM/AM content. While listening to the radio, the content from the current station is always being buffered.

Press ▶/II to pause the radio. The radio displays the time shift status bar. The status bar shows the amount of content stored in the buffer and the current pause point.

To resume playback from the current pause point, press ▶/II again. The radio is no longer live, but played from the time shift buffer. A status bar displays below the station number.

Press and hold ⏮ SEEK or ⏭ SEEK to fast forward or rewind through the time shift buffer. Hold ⏭ SEEK until the end of the recorded buffer resumes live playback.

Press and release ⏮ SEEK or ⏭ SEEK to jump forward or back 30 seconds in the time shift buffer.

When the radio station is changed, the buffer is cleared and automatically restarted for the current station. Content from a previously tuned station is no longer available.

The time shift feature is not available while recording or with other sources of playback.

Pausing AM/FM with the Vehicle Turned Off

If AM/FM is paused when the vehicle is turned off, the radio continues to buffer the current radio station for up to 20 minutes. If the vehicle is turned back on within 20 minutes, the radio resumes playback from the paused point.

Satellite Radio

Vehicles with an XM™ Satellite Radio tuner and a valid XM Satellite Radio subscription can receive XM programming.

XM Satellite Radio Service

XM is a satellite radio service based in the 48 contiguous United States and 10 Canadian provinces. XM Satellite Radio has a wide variety of programming and commercial-free music, coast to coast, and in digital-quality sound. If XM service needs to be reactivated, the radio will display "No Subscription Please Renew on channel XM1." A service fee is required to receive the XM service. For more information, contact XM at www.xmradio.com or 1-800-929-2100 in the U.S. and www.xmradio.ca or 1-877-438-9677 in Canada.

Control Buttons

The buttons used to control the XM radio are:

RADIO/BAND: Press to turn the radio on and choose between AM, FM, and XM, if equipped.

⏮ SEEK / ⏭ SEEK: Press to go to the previous or next channel.

FAV: Press to open the favorites list.

1-6: Press to select a favorite.

TUNE: Turn to select a channel.

INFO: Press to display additional information that may be available about the current song.

⏵/⏸ (Play/Pause): Press to pause time shifted content, if equipped.

Selecting the XM Band

Press the RADIO/BAND button to choose between the AM, FM and XM bands. The last channel played in that band begins to play when that band is selected.

XM Categories

XM channels are organized in categories.

Removing or Adding Categories

Channels in a category that have been removed can still be accessed by using the ⏮ SEEK or ⏭ SEEK buttons, or the TUNE knob.

To add or remove categories:

1. Press the CONFIG button.
2. Select Radio Settings.
3. Select XM Categories.
4. Turn the MENU/SELECT knob to highlight the category.
5. Press the MENU/SELECT knob to remove or add the category.

Selecting an XM Channel

XM channels can be selected by using ⏮ SEEK, ⏭ SEEK, the TUNE knob, or the menu system.

Selecting a Channel Using ⏮ SEEK or ⏭ SEEK (Radio with CD)

- Press and release ⏮ SEEK or ⏭ SEEK to go to the previous or next channel.
- Press and hold ⏮ SEEK or ⏭ SEEK to scroll through the previous or next channel until the channel is reached.

Selecting a Channel Using ⏮ SEEK or ⏭ SEEK (Radio with CD/DVD and MEM)

Press and release ⏮ SEEK or ⏭ SEEK to go to the previous or next channel.

Selecting a Channel Using the TUNE Knob

To select an XM channel using the TUNE knob:

Turn the TUNE knob to highlight an XM channel; the channel is selected after a short delay.

To select a channel using the menu:

1. Turn the MENU/Select knob and select Channel List.
2. Select the desired channel.

Selecting a Channel Using the Menu System

1. Turn the MENU/SELECT knob.
2. Select XM Category List.
3. Select the category.
4. Select the channel.

Storing an XM Channel as a Favorite

Channels from all bands can be stored in any order in the favorite pages.

Up to six channels can be stored in each favorite page and the number of available favorite pages can be set.

Storing a Channel as a Favorite

To store the channel to a position in the list, press and hold the corresponding 1 to 6 button until the channel can be heard again.

Retrieving Channels

Press the FAV button to open a favorite page or to change to another favorite page. Briefly press one of the 1 to 6 buttons to retrieve the channel.

Time Shifting (Radio with CD/DVD and MEM)

The radio with the MEM time shift feature can rewind 20 minutes of XM content. While listening to the radio, the content from the current channel is always being buffered.

Press ▶/II to pause the radio. The radio displays the time shift status bar. The status bar shows the amount of content stored in the buffer and the current pause point.

To resume playback from the current pause point, press ▶/II again. The radio is no longer live, but played from the time shift buffer. A status bar displays below the channel number.

Press and hold ⏮ SEEK or ⏭ SEEK to fast forward or rewind through the time shift buffer.

Hold ⏭ SEEK until the end of the recorded buffer resumes live playback.

Press and release ⏮ SEEK or ⏭ SEEK to go to the next or previous song in the time shift buffer.

When the channel is changed, the buffer is cleared and automatically restarted for the current channel. Content from a previously tuned station is no longer available.

The time shift feature is not available while recording or with other sources of playback.

Pausing XM with the Vehicle Turned Off

If XM is paused when the vehicle is turned off, the radio continues to buffer the current radio station for up to 20 minutes. If the vehicle is turned back on within 20 minutes, the radio resumes playback from the paused point.

XM Messages

XL (Explicit Language Channels): These channels, or any others, can be blocked by request, by calling 1-800-929-2100 in the U.S. and 1-877-438-9677 in Canada.

XM Updating: The encryption code in the receiver is being updated, no action is required. This process should take no longer than 30 seconds.

Loading XM: The audio system is acquiring and processing audio and text data, no action is needed. This message should disappear shortly.

Channel Off Air: This channel is not currently in service. Tune in to another channel.

Channel Unauth: This channel is blocked or cannot be received with your XM Subscription package.

Channel Unavailable: This previously assigned channel is no longer assigned. Tune to another station.

No Artist Info: The system is working properly. No artist information is available at this time on this channel.

No Title Info: The system is working properly. No song title information is available at this time on this channel.

No CAT Info: The system is working properly. No category information is available at this time on this channel.

No Information: The system is working properly. No text or informational messages are available at this time on this channel.

No Subscription Please Renew: XM subscription needs to be reactivated. Contact XM at www.xmradio.com or call 1-800-929-2100 in the U.S. and www.xmradio.ca or call 1-877-438-9677 in Canada.

No XM Signal: The system is working properly. The vehicle may be in a location where the XM signal is being blocked. When the vehicle is moved into an open area, the signal should return.

CAT Not Found: The system is working properly. There are no channels available for the selected category.

XM Radio ID: If tuned to channel 0, this message alternates with the XM Radio eight-digit radio ID label. This label is needed to activate the service.

Unknown: If this message is received when tuned to channel 0, there could be a receiver fault. Consult with your dealer.

Check Antenna: If this message does not clear within a short period of time, the receiver could have a fault. Consult with your dealer.

XM Not Available: If this message does not clear within a short period of time, the receiver could have a fault. Consult with your dealer.

Radio Reception

Frequency interference and static can occur during normal radio reception if items such as cell phone chargers, vehicle convenience accessories, and external electronic devices are plugged into the accessory power outlet. If there is interference or static, unplug the item from the accessory power outlet.

FM

FM signals only reach about 16 to 65 km (10 to 40 mi). Although the radio has a built-in electronic circuit that automatically works to reduce interference, some static can occur, especially around tall buildings or hills, causing the sound to fade in and out.

AM

The range for most AM stations is greater than for FM, especially at night. The longer range can cause station frequencies to interfere with each other. Static can occur when things like storms and power lines interfere with radio reception. When this happens, try reducing the treble on the radio.

XM™ Satellite Radio Service

XM Satellite Radio Service gives digital radio reception from coast to coast in the 48 contiguous United States, and in Canada. Just as with FM, tall buildings or hills can interfere with satellite radio signals, causing the sound to fade in and out. In addition, traveling or standing under heavy foliage, bridges, garages, or tunnels may cause loss of the XM signal for a period of time.

Cellular Phone Usage

Cellular phone usage can cause interference with the vehicle's radio.

Multi-Band Antenna

The multi-band antenna is on the roof of the vehicle. The antenna is used for the AM-FM radio, OnStar, the XM Satellite Radio Service System, and GPS (Global Positioning System), if the vehicle has these features. Keep the antenna clear of obstructions for clear reception.

Audio Players

CD Player (Radio with CD)

The CD player can play audio CDs and MP3 CDs.

The CD player will not play 8 cm (3 in) CDs.

Care of CDs

Sound quality can be reduced due to disc quality, recording method, quality of the music recorded, and how the disc has been handled. Handle discs carefully and store them in their original cases or other protective cases away from direct sunlight and dust. If the bottom surface of a disc is damaged, the disc may not play properly or at all.

Do not touch the bottom surface of a disc while handling it; this could damage the surface. Pick up discs by grasping the outer edges or the edge of the hole and the outer edge.

If the bottom surface of a disc is dirty, take a soft lint-free cloth, or dampen a clean soft cloth in a mild neutral detergent solution mixed with water, and clean it. Wipe the disc from the center to the outer edge.

Care of the CD Player

Do not add a label to a disc, as it could get caught in the CD player. If a label is needed, label the top of the recorded disc with a marking pen.

Do not use disc lens cleaners because they could contaminate the lens of the disc optics and damage the CD player.

Notice: **If a label is added to a CD, more than one CD is inserted into the slot at a time, or an attempt is made to play scratched or damaged CDs, the CD player could be damaged. While using the CD player, use only CDs in good condition without any label, load one CD at a time, and keep the CD player and the loading slot free of foreign materials, liquids, and debris.**

Control Buttons

The buttons used to control the CD player are:

CD: Press to use the CD player.

⏭ **SEEK/** ⏮ **SEEK:** Press to select tracks or to fast forward or rewind within a track.

INFO: Press to display additional information about the current track that may be available.

TUNE: Turn to select tracks.

MENU/SELECT: Turn to enter the menu; press to select an item.

⏏ **(Eject):** Press to eject the disc.

⏯ **(Play/Pause):** Press to pause a CD or MP3 track, press again to resume playback.

Inserting a CD

With the printed side facing up, insert a disc into the CD slot until it is drawn in.

Removing a CD

Press ⏏.

The disc is pushed out of the CD slot.

If the disc is not removed after it is ejected, it is pulled back in after a few seconds.

Playing a CD or MP3 CD

Press the CD button. If there is a disc in the player, it begins playing.

Information about the disc and current track is shown on the display depending on the data stored.

Selecting a CD Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob.

Using the CD Menu:

1. Turn the MENU/SELECT knob.
2. Select Tracks list.
3. Select the track.

Playing Tracks in Random Order

Turn the MENU/SELECT knob and set Shuffle Songs to On.

Fast Forward and Rewind

Press and hold ⏭ SEEK or ⏮ SEEK to fast forward or rewind within the current track.

Selecting an MP3 Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob.

Using the CD Menu:

1. Turn the MENU/SELECT knob.
2. Select Playlists/Folders.
3. Select the playlist or folder.
4. Select the track.

Searching for MP3 Tracks

The search feature may take some time to display the information after reading the disc due to the amount of information stored on the disc. FM automatically plays while the disc is being read.

Tracks can be searched by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres
- Folder View

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Genres, or Folder View.
4. Select the track.

CD/DVD Player

The CD/DVD player can play CDs, DVD-As, MP3/WMA CDs, MP3/WMA DVDs, and DVD-Vs.

The CD/DVD player will not play 8 cm (3 in) discs.

Care of CDs and DVDs

Sound quality can be reduced due to disc quality, recording method, quality of the music recorded, and how the disc has been handled. Handle discs carefully and store them in their original cases or other protective cases away from direct sunlight and dust. If the bottom surface of a disc is damaged, the disc may not play properly or at all. Do not touch the bottom surface of a disc while handling it; this could damage the surface. Pick up discs by grasping the outer edges or the edge of the hole and the outer edge.

If the bottom surface of a disc is dirty, take a soft lint-free cloth, or dampen a clean soft cloth in a mild neutral detergent solution mixed with water, and clean it. Wipe the disc from the center to the outer edge.

Care of the CD/DVD Player

Do not add a label to a disc, as it could get caught in the CD/DVD player. If a label is needed, label the top of the recorded disc with a marking pen.

Do not use disc lens cleaners because they could contaminate the lens of the disc optics and damage the CD/DVD player.

Notice: **If a label is added to a CD, more than one CD is inserted into the slot at a time, or an attempt is made to play scratched or damaged CDs, the CD player could be damaged. While using the CD player, use only CDs in good condition without any label, load one CD at a time, and keep the CD player and the loading slot free of foreign materials, liquids, and debris.**

Control Buttons

The buttons used to control the CD/DVD player are:

MEM/CD/AUX: Press to choose between the MEM, CD/DVD, and AUX.

⏭ **SEEK/** ⏮ **SEEK:** Press to select tracks or to fast forward or rewind within a track.

INFO: Press to display additional information about the disc that may be available.

TUNE: Turn to select tracks.

MENU/SELECT: Turn to enter the menu and press to select an item.

⏏ **(Eject):** Press to eject the disc.

⏵/⏸ **(Play/Pause):** Press to pause a CD, DVD-A, or DVD-V. Press again to resume playback. Press and hold to stop a DVD-V disc.

Inserting a CD or DVD

With the printed side facing up, insert a disc into the slot until it is drawn in.

Removing a CD or DVD

Press ⏏

The disc is pushed out of the CD/DVD slot.

If the disc is not removed after it is ejected, it is pulled back in after a few seconds.

Playing a CD or DVD-A Disc

Press the MEM/CD/AUX button. If there is a disc in the player, it begins playing.

Information about the disc and current track is shown on the display depending on the data stored.

Selecting CD or DVD-A Tracks

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob.

Using the menu:

1. Turn the MENU/SELECT knob.
2. Select Tracks List.
3. Select the track.

Pausing a CD or DVD-A Track

Press ⏵/⏸ to pause a CD or DVD-A track. Press ⏵/⏸ again to continue playing the track.

Playing CD or DVD-A Tracks in Random Order

Turn the MENU/SELECT knob and then set Shuffle Songs to On.

Fast Forward and Rewind

Press and hold ⏭ SEEK or ⏮ SEEK to fast forward or rewind within the current track.

Playing an MP3 CD or DVD

Files that are not stored in folders are displayed in the root directory (disc).

The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Selecting an MP3 Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob.

Using the CD or DVD Menu:

1. Turn the MENU/SELECT knob.
2. Select Folder List.
3. Select the folder.
4. Select the track.

Searching for MP3s on a CD or DVD

It is normal for the search feature to take some time to display the information after reading the disc due to the amount of information stored on the disc. The infotainment system automatically switches to FM while the disc is being read.

Files that do not have any meta data stored in the ID3 tag display as Unknown.

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, or Genres.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Playing MP3 Tracks in Random Order

Turn the MENU/SELECT knob and set Shuffle Songs to On.

Recording an Audio or MP3 CD to MEM

See *Mass Storage Media (MEM) on page 7-25* for more information.

Playing a DVD-V

See *Rear Seat Entertainment (RSE) System on page 7-37* for information about how to control a Video DVD using the wireless remote control.

Selecting a Chapter

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next chapter.
- Turn the TUNE knob.

Using the DVD Menu:

1. Turn the MENU/SELECT knob.
2. Select Chapter List.
3. Select the chapter.

Selecting a Title

1. Turn the MENU/SELECT knob.
2. Select Title List.
3. Select the title.

Changing the Audio Stream

1. Turn the MENU/SELECT knob.
2. Select Audio Stream.
3. Select Change Audio Stream.
4. Press MENU/SELECT to change the selection.

Select Cancel to exit the menu.

Pausing a DVD

1. Turn the MENU/SELECT knob.
2. Select Pause to pause the disc. Select unpause to start playback.

Navigating the DVD-V Disc Menu

Use the following actions to navigate the title menu on a DVD-V Disc.

- Select/Enter
- Cursor UP
- Cursor DOWN
- Cursor RIGHT
- Cursor LEFT
- Up Menu

Use the following actions to navigate the menu on a DVD-V Disc while playing chapters.

- Pause (Play)
- Chapter List
- Title List
- DVD/DVD — DVD on both video screens
- DVD/AUX — Left video screen/Right AUX input
- AUX/DVD — Left AUX input/Right video screen
- AUX/AUX — AUX input on both video screens

To navigate the menu:

1. Turn the MENU/SELECT knob.
2. Select the action.

Mass Storage Media (MEM)

Infotainment systems with MEM storage are able to record up to 1.1 GB (gigabyte) of music from Audio CDs, MP3/WMA/AAC discs, and USB storage devices. The MEM player can also time shift audio from AM, FM, and XM radio.

Music or content stored in MEM that you did not create, or have the right to distribute, must be deleted before the sale or end of lease of the vehicle.

Control Buttons

The buttons used to control the MEM player are:

MEM/CD/AUX: Press to select the MEM player.

⏭ SEEK/ ⏮ SEEK: Press to select tracks or to fast forward or rewind within a track.

INFO: Press to display additional information about the MEM track that may be available. Turn to select tracks.

▶/II (Play/Pause): Press to pause the track currently playing; press again to resume playback.

○ REC: Press to record music from a CD or USB drive.

DEL: Press to delete the current track from MEM.

FAV (Favorites): Press to display MEM favorites.

1 to 6: Press to select a track or playlist stored in that numeric position.

Recording from Audio CDs

The infotainment system can record the current song playing or all songs from an audio CD to MEM. A status bar appears on the top of the display when the recording process starts and disappears when the process has ended. Copy protected CDs cannot be recorded to MEM.

Recording to MEM

Press ○ REC, then select "Record Current Song" or "Record All Songs on Disc." If the track has started playing, the system will restart the track and begin recording from the beginning of the track. When the song recording is completed, the message "Song Recorded to MEM" displays, and there may be a slight pause.

Songs recorded to MEM are stored as the current date, disc, and track number.

Re-recording a Previously Recorded Disc

If the disc or track has already been recorded to MEM, the message "The Song(s) is Already Recorded" displays.

Stopping the Recording

Press the ○ REC button while recording from an audio CD to display the stop recording option. Select "Stop Recording Song to MEM."

Renaming Recorded Discs

Discs that have been recorded to MEM can be renamed.

1. Turn the MENU/SELECT knob.
2. Select Rename Recorded Discs.
3. Select the disc.
4. Select Album or Artist to rename either one.
5. Use the MENU/SELECT knob to enter the character sequence. See *Operation on page 7-7* for more information.

Recording from MP3/WMA Discs or USB Storage Devices

USB Host Support

The USB connector uses the USB standards, 1.1 and 2.0.

USB-Supported Devices

- USB Flash Drives
- Portable USB Hard Drives

Recording to MEM

Press ○ REC, then select "Record Current Song" or " Record All Songs on Disc."

The information stored by MEM is titled according to the ID3 tag associated with it.

Re-recording a Previously Recorded Disc

If the disc or track has already been recorded to MEM, the message "The Song(s) is Already Recorded" displays.

Stopping the Recording

Press the ○ REC button while recording from an MP3/WMA CD or USB storage device to display the stop recording option. Select "Stop Recording Song to MEM"

Deleting Tracks from MEM

Individual tracks and all tracks can be deleted from MEM.

To delete individual tracks, press and release the DEL button while the track is playing.

To delete all tracks from MEM, press and hold the DEL button while a track is playing.

Playing from MEM

Playing Back a Previously Recorded CD

Turn the TUNE knob to select a track if MEM is already playing from the previously recorded disc.

1. Select Recorded Disc List.
2. Select the disc.
3. Select the track.

Searching for a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, or Genres.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Shuffle Songs

Select the Shuffle Songs option from the MEM menu to randomly play back tracks stored in MEM.

Configuring MEM Favorites

During MEM playback, press the FAV button to change between favorite categories. The favorite categories are:

- Playlists
- Artists
- Albums
- Genres

To remove MEM favorites categories:

1. Press the CONFIG button.
2. Select Radio Settings.
3. Select MEM Favorites.
4. Remove the checkmark from the box to remove that MEM favorites category.

Replace the checkmark to re-add the removed category.

Saving MEM Tracks as Favorites

Favorites can be saved by pressing and holding one of the 1 to 6 buttons. Favorites can be stored according to the following list:

Playlist: Adds the currently playing track to the playlist selected.

Artist: Saves the artist associated with the currently playing track in the indicated favorites position.

Album: Saves the album associated with the currently playing track in the indicated favorites position.

Genre: Saves the genre associated with the currently playing track in the indicated favorites position.

Creating Playlists

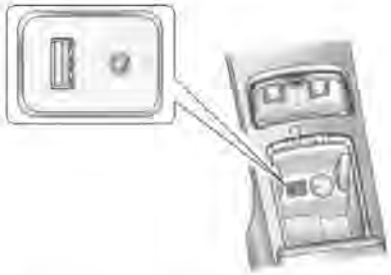
To create a playlist using tracks stored in MEM:

1. Select Playlist from the MEM favorites.
2. Select the track to be stored in the playlist.
3. Press and hold one of the 1 to 6 buttons until the track can be heard again to store the track.
4. Repeat Steps 1 though 3 to store additional tracks in the playlist.

Auxiliary Devices (Radio with CD)

The optional AUX input allows portable devices to connect to the vehicle using the 3.5 mm (1/8 in) input jack, the USB port, or Bluetooth® wireless technology, if equipped.

Portable devices are controlled by using the menu system described in *Operation on page 7-7*.



The AUX input is located in the center console.

3.5 mm Auxiliary Input Jack

Connect a 3.5 mm (1/8 in) cable to the 3.5 mm auxiliary input jack to use a portable audio player.

Playback of an audio device that is connected to the 3.5 mm auxiliary input jack can only be controlled using the controls on the device.

Adjusting the Volume

Turn the VOL/ ⏻ knob to adjust the volume of the infotainment system after the volume level has been set on the portable audio device.

USB Port

For vehicles with a USB port, the following devices may be connected and controlled by the infotainment system.

- iPods®
- PlaysForSure Devices (PFD)
- USB Drives
- Zunes

Not all iPods, PFDs, USB Drives, and Zunes are compatible with the infotainment system.

Connecting and Controlling an iPod®

Not all iPods can be controlled by the infotainment system.

Connecting an iPod

Connect the iPod to the USB port.

Searching for a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Podcasts
- Genres
- Audiobooks
- Composers

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Podcasts, Genres, Audiobooks, or Composers.
4. Select the track.

Shuffle

Turn the MENU/SELECT knob and set Shuffle Songs (Random) to On or Off, then press the BACK button to return to the main screen.

On: Plays tracks in the current folder in random order.

Off: Plays tracks in the current folder in sequential order.

Repeat

Turn the MENU/SELECT knob and set Repeat to On or Off, then press the BACK button to return to the main screen.

On: Repeats the current track.

Off: Playback starts from the beginning of the current track after the last track finishes.

Connecting and Controlling a PlaysForSure Device (PFD) or Zune™

Connecting a PFD or Zune

Connect the PFD or Zune to the USB port.

Searching for a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Podcasts
- Genres

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Podcasts, or Genres.
4. Select the track.

Shuffle Functionality

Turn the MENU/SELECT knob and set Shuffle Songs (Random) to On or Off.

On: Plays current tracks in random order.

Off: Plays current tracks in sequential order.

Repeat Functionality

Turn the MENU/SELECT knob and set Repeat to On or Off.

Repeat On: Repeats the current track.

Repeat Off: Playback starts from the beginning of the current track after the last track finishes.

Connecting and Controlling a USB Drive

The infotainment system can only play back .mp3 and .wma files from a USB drive.

Only the first 10,000 songs are recognized on the device.

When a device is not supported, the message "No supported data found. You can safely disconnect the device" appears.

Connecting a USB Drive

Connect the USB drive to the USB port.

Searching for a Track

It is normal for the search feature to take some time to display the information after reading the device due to the amount of information stored.

Files that do not have any meta data stored in the ID3 tag display as Unknown.

Tracks can be searched for by:

- Playlists*
- Artists
- Albums
- Song Titles
- Genres
- Folder View

*This only displays if a playlist is found on the device.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Genres, or Folder View.
4. Select the track.

Shuffle Functionality

Turn the MENU/SELECT knob and set Shuffle Songs (Random) to On or Off.

On: Plays current tracks in random order.

Off: Plays current tracks in sequential order.

Repeat Functionality

Turn the MENU/SELECT knob and set Repeat to On or Off.

Repeat On: Repeats the current track.

Repeat Off: Playback starts from the beginning of the current track after the last track finishes.

Connecting a Bluetooth® Device

Before a Bluetooth device can be connected to the infotainment system, it must first be paired to the system. Not all Bluetooth devices can be paired to the infotainment system. Before pairing the Bluetooth device, become familiar with its user guide for Bluetooth functions. The system only connects to Bluetooth devices that support A2DP (Advanced Audio Distribution Profile) version 1.2.

A Bluetooth phone with MP3 capability cannot be paired to the vehicle as a phone and an MP3 player at the same time.

Pairing Information:

- Up to five devices can be paired to the system.
- The pairing process is disabled when the vehicle is moving.
- The infotainment system automatically links with the first available paired device in the order the device was paired.
- Only one paired device can be connected to the infotainment system at a time.
- Pairing should only need to be completed once, unless changes to the pairing information have been made or the device is deleted.

Bluetooth Setup Menu

The Bluetooth Setup menu can be accessed with or without a device attached to the USB port.

To select the Bluetooth Setup menu when a device is attached to the USB port and active:

1. Turn the MENU/SELECT knob while in the iPod, Zune, PFD, or USB device main menu.
2. Select Bluetooth Music Setup.

To select the Bluetooth Music Setup menu when a device is not attached to the USB port, or when a device is attached to the USB port but not active:

1. Press the AUX button until AUX is the active source.
2. Turn the MENU/SELECT knob.
3. Select Bluetooth Music Setup.

To select the Bluetooth Music Setup menu when a Bluetooth device is connected and active:

1. Turn the MENU/SELECT knob.
2. Select Bluetooth Music Setup.

Pairing a Device

1. Select Connect To New Device from the Bluetooth Music Setup menu.
2. The system asks a series of Yes/No questions to determine what type of device is being paired.
3. After the system determines what type of Bluetooth device is being paired, the Bluetooth device will need to be put into discovery mode.
4. Some devices may require a Personal Identification Number (PIN) in order to complete the pairing process. Locate the device named "GMusicConnect" in the list on the Bluetooth device and follow the instructions on the device to enter the four-digit PIN provided by the infotainment system.

Connecting to a Device

Once a device is paired to the infotainment system, it can be connected to the infotainment system.

To connect a paired device when no other device is connected to the infotainment system:

1. Select the Select Device option from the Bluetooth Music Setup menu.
2. Select the new device.

To connect a paired device when another device is connected to the infotainment system:

1. Select the Select Device option from the Bluetooth Music Setup menu.
2. Select the new device.
3. The active device is disconnected from the system and the new device is connected.

Removing a Device

1. Select Remove Device from the Bluetooth Music Setup menu.
2. Select the device.
3. The device is removed from the system.

Before connecting to the removed device again, it will need to paired to the infotainment system.

Changing the Default PIN

To change the default PIN:

1. Select Change Default PIN from the Bluetooth Music Setup menu.
2. Select one of the pre-defined PIN, or select Other to create a PIN.

To create a PIN:

1. Select the length of the PIN.
2. Enter the character sequence.

Messages

The following messages may appear on the infotainment screen.

Poor Bluetooth Signal Quality: This message displays when the Bluetooth signal strength is low.

This Feature is Unavailable While Vehicle is Moving: This message displays when an action is not allowed while the vehicle is moving.

Controlling a Bluetooth® Device

Bluetooth devices that support AVRCP (Audio/Video Remote Control Profile) version 1.0 may be able to be controlled by the infotainment system.

Press and release ⏮ SEEK / ⏭ SEEK to skip tracks.

Other Information

The Bluetooth® word mark and logos are owned by the Bluetooth® SIG, Inc. and any use of such marks by General Motors is under license. Other trademarks and trade names are those of their respective owners.

See *Radio Frequency Statement on page 13-20* for FCC information.

Auxiliary Devices (Radio with CD/DVD and MEM)

The optional AUX input allows portable devices to be connected using the 3.5 mm (1/8 in) input jack or the USB port.

Portable devices are controlled by using the menu system described in *Operation on page 7-7*.

The AUX input is located in the center console.

3.5 mm Auxiliary Input Jack

Connect a 3.5 mm (1/8 in) cable to the 3.5 mm auxiliary input jack to use a portable audio player.

Playback of an audio device that is connected to the 3.5 mm auxiliary input jack can only be controlled using the controls on the device.

Adjusting the Volume

Turn the VOL/ ⏻ knob to adjust the volume of the infotainment system after the volume level has been set on the portable audio device.

USB Port

The following devices may be connected to the USB port and controlled by the infotainment system.

- iPods
- USB Mass Storage Devices

Not all iPods or USB Mass Storage Devices are compatible with the infotainment system.

Connecting and Controlling an iPod®

Not all iPods can be controlled by the infotainment system.

Connecting an iPod

Connect the iPod to the USB port.

Selecting a Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob to select a track in the current submenu. The track will start to play.

Playing Tracks in Random Order

Turn the MENU/SELECT knob and set Shuffle Songs to On or Off.

Shuffle On: Plays current tracks in random order.

Shuffle Off: Plays current tracks in sequential order.

Searching for a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres
- Composers
- Audiobooks

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Genres, Composers, or Audiobooks.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Connecting and Controlling a USB Drive

Files that are not stored in folders are displayed in the root directory (USB).

Connecting a USB Drive

Connect the USB drive to the USB port.

Disconnecting a USB Drive

A USB drive should be ejected from the USB port before disconnecting it. To eject a USB drive:

1. Turn the MENU/SELECT knob.
2. Select USB Eject.

Playing Tracks in Random Order

Turn the MENU/SELECT knob and then set Shuffle Songs to On.

Selecting a Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob to select a track in the current submenu. The track will start to play.

Selecting a track in a different folder:

1. Turn the MENU/SELECT knob.
2. Select Folder List.
3. Select the folder.
4. Select the track.

Searching for Tracks

It is normal for the search feature to take some time to display the information after reading the device due to the amount of information stored.

Files that do not have any meta data stored in the ID3 tag display as Unknown.

Tracks can be searched by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, or Genres.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Recording Tracks to MEM

See *Mass Storage Media (MEM) on page 7-25* for more information.

Rear Seat Infotainment

Rear Seat Entertainment (RSE) System

The vehicle may have a DVD Rear Seat Entertainment (RSE) system. The RSE system works with the vehicle's infotainment system. The DVD player is part of the front radio. The RSE system includes a radio with a DVD player, two rear seat video display screens, audio/video jacks, two wireless headphones, and a remote control. See *CD/DVD Player on page 7-22* or the separate navigation manual for more information on the vehicle's DVD system.

Before Driving

The RSE is for rear seat passengers only. The driver cannot safely view the video screen while driving.

In severe or extreme weather conditions the RSE system may not work until the temperature is within the operating range. The operating range is above −20°C (−4°F) and below 60°C (140°F). If the temperature is outside of this range, heat or cool the vehicle until it is within the operating range.

Global Off

Depending on the infotainment system, the RSE system may have a Global Off feature. The Global Off feature disables all RSE system features. Press and hold the radio power button for more than three seconds for Global Off to disable the RSE features. A padlock icon may display on the infotainment screen when the Global Off feature is on. On some infotainment systems, the Global Off feature can be turned off by performing one of the following:

- Press and hold the radio power button for more than three seconds.
- Insert or eject any disc.
- Insert a DVD video disc.
- Press the Remote Control power button.
- Press the MEM/CD/AUX button or the ▶/II button when a DVD video disc is in the player.
- Press the SRC button on the steering wheel when a DVD video disc is in the player.
- Cycle the ignition.

Headphones

A. Battery cover
B. Channel 1 or 2 switch
C. Power button
D. Volume control
E. Power indicator light

RSE includes two 2-channel wireless headphones. Channel 1 is dedicated to the DVD player, and Channel 2 is dedicated to RSA selections. The headphones are used to listen to various multi-media. If the vehicle is not equipped with RSA, then Channel 2 is dedicated to any external auxiliary device connected to the rear A/V jacks. The wireless headphones have an On/Off button, Channel 1 or 2 switch, and a volume control. Turn the headphones off when not in use.

Push the On/Off button to turn on the headphones. A light on the headphones comes on. If the light does not come on, check the batteries. Intermittent sound or static can also indicate weak batteries. See "Battery Replacement" later in this section for more information.

Infrared transmitters are on the top of the left seatback video screen. The headphones shut off automatically to save the battery power if the RSE system and RSA are shut off or if the headphones are out of range of the transmitters for more than three minutes. Moving too far forward or stepping out of the vehicle can cause the headphones to lose the signal or have static.

To adjust the volume on the headphones, use the volume control.

For best audio performance, the headphones must be worn correctly, with the headband over the top of the head. L (Left) and R (Right) are above the ear pads and are indicators as to how the headphones should be placed on the head.

Notice: **Do not store the headphones in heat or direct sunlight. This could damage the headphones and repairs will not be covered by the warranty. Storage in extreme cold can weaken the batteries. Keep the headphones stored in a cool, dry place.**

If the foam ear pads attached to the headphones become worn or damaged, the pads can be replaced separately from the headphone set. To purchase replacement ear pads, call 1-888-293-3332, then prompt zero (0), or contact your dealer.

Battery Replacement

To change the batteries:

1. Loosen the screw to the battery door located on the left side of the headphones.
2. Slide the battery door open.
3. Replace the two AAA batteries.
4. Replace the battery door and tighten the screw.

Remove the batteries if the headphones are not going to be used for a long period of time.

Audio/Video (A/V) Jacks

The A/V jacks may be located on the rear of the floor console. They allow audio or video cables to be connected from an auxiliary device such as a camcorder or a video game system.

The A/V jacks are color coded:

- Yellow for video input.
- White for left audio input.
- Red for right audio input.

Power for auxiliary devices is not supplied by the radio system.

To use the auxiliary inputs of the RSE system:

1. Connect the auxiliary device cables to the A/V jacks.
2. Power on both the auxiliary device and the RSE video screen.

Changing the Source on the Video Display Screens

The image from the auxiliary device can be switched between the video display screens.

To change the display:

1. Press the AUX button on the remote control to change the source of both video screens from the DVD player to the auxiliary device.
2. Press the AUX button a second time to change the left video screen source to the DVD player and the right video screen to the auxiliary device.

3. Press the AUX button a third time to change the left video screen source to the auxiliary device and the right video screen to the DVD player.
4. Press the AUX button a fourth time to change the source of both video screens to the DVD player.

Changing the RSE Video Screen Settings

The screen display mode, brightness, and language can be changed from the setup menu using the remote control. To change a setting:

1. Press ☐.
2. Use ▲, ▼, ◀, ▶, and ◀┘ to select the settings.
3. Press ☐ again to exit the setup menu.

Audio Output

Audio from the DVD player or auxiliary inputs can be heard through the following:

- Wireless headphones
- Vehicle speakers
- Vehicle wired headphone jacks on the rear seat audio system, if the vehicle has this feature.

The RSE system transmits the audio signal to the wireless headphones if an audio signal is available. See "Headphones" earlier in this section for more information.

Audio can be heard from the wired headphone jacks on the RSA system by selecting the desired source from the RSA system, if the vehicle has this feature.

The front seat passengers are able to listen to playback from the A/V jacks through the vehicle speakers by selecting Rear A/V as the source on the radio.

Video Screens

The video screens are located in the back of the driver and front passenger seats.

To use the video screen:

1. Push the release button located on the seatback console.
2. Move the screen to the desired viewing position.

Push the video screen down into its locked position when it is not in use. The screen turns off automatically.

Only the left RSE seatback console contains the infrared transmitters for the wireless headphones. They may be visible as eight illuminated LEDs. These LEDs are not on the right video screen. Both seatback consoles contain an infrared receiver for the remote control. They are located at the top of each console.

Notice: **Avoid directly touching the video screen, as damage may occur. See "Cleaning the Video Screen" later in this section for more information.**

Video Screen Input Jack

Each video screen is equipped with a video input jack to allow video cables to be connected from an auxiliary device such as a camcorder or a video game system. This signal will override any video provided by the RSE system; either the DVD or Auxiliary A/V jack source. The RSE system must be on for this input to operate.

Remote Control

To use the remote control, aim it at the transmitter window at either seatback console and press the button. Direct sunlight or very bright light could affect the ability of the RSE transmitter to receive signals from the remote control. Check the batteries if the remote control does not seem to be working. See "Battery Replacement" later in this section. Objects blocking the line of sight could also affect the function of the remote control.

If a CD, DVD, or MP3 disc is in the Radio DVD slot, the remote control ⏻ button can be used to turn on the video screen display and start the disc. The infotainment system can also turn on the video screen display. See *CD/DVD Player on page 7-22* or the separate navigation manual for more information.

Notice: **Storing the remote control in a hot area or in direct sunlight can damage it, and the repairs will not be covered by the warranty. Storage in extreme cold can weaken the batteries. Keep the remote control stored in a cool, dry place.**

Remote Control Buttons

⏻ **(Power):** Press to turn the video screens on and off.

☼ **(Illumination):** Press to turn the remote control backlight on. The backlight times out after several seconds if no other button is pressed.

(Title): Press to return to the main menu of the DVD. This function could vary for each disc.

(Main Menu): Press to access the DVD menu. The DVD menu is different on every DVD. Use the navigation arrows to move the cursor. After making a selection press the enter button. This button only operates when using a DVD.

▲, ▼, ◀, ▶ **(Menu Navigation Arrows):** Use the arrow buttons to navigate through a menu.

(Enter): Press to select the highlighted choice in any menu.

(Display Menu): Press to adjust the brightness and screen display mode, and display the language menu.

(Return): Press to exit the current active menu and return to the previous menu. This button operates only when the display menu or a DVD menu is active.

(Stop): Press to stop playing, rewinding, or fast forwarding a DVD. Press twice to return to the beginning of the DVD.

(Play/Pause): Press to start playing a DVD. Press to pause a DVD while it is playing. Press again to continue playing.

Depending on the infotainment system in the vehicle, DVD playback may be slowed down by pressing ► ‖ then ►►. Reverse slow play by pressing ► ‖ then ◄◄. Press ► ‖ again to cancel slow play.

(Previous Track/Chapter): Press to go to the start of the current track or chapter. Press again to go to the previous track or chapter. This button may not work when the DVD is playing the copyright information or the previews.

(Next Track/Chapter): Press to go to the beginning of the next chapter or track. This button might not work when the DVD is playing the copyright information or the previews.

(Fast Reverse): Press to quickly reverse the DVD or CD. To stop fast reversing a DVD video, press ► ‖. To stop fast reversing a DVD audio or CD, release ◄◄. This button might not work when the DVD is playing the copyright information or the previews.

(Fast Forward): Press to fast forward the DVD or CD. To stop fast forwarding a DVD video, press ► ‖. To stop fast forwarding a DVD audio or CD, release ►►. This button might not work when the DVD is playing the copyright information or the previews.

(Audio): Press to change audio tracks on DVDs that have this feature when the DVD is playing.

(Subtitles): Press to turn ON/OFF subtitles and to move through subtitle options when a DVD is playing.

AUX (Auxiliary): Press to switch the video displays between the DVD player and an auxiliary source.

The AUX button also controls the source display between the left and right video screens as described in the table below:

Aux Button Press	Left Screen	Right Screen
Default State (No Press)	DVD Media	DVD Media
First Press	Aux Video Source	Aux Video Source
Second Press	DVD Media	Aux Video Source
Third Press	Aux Video Source	DVD Media
Fourth Press	Return to Default State	Return to Default State

(Camera): Press to change the camera angle on DVDs that have this feature when the DVD is playing.

(Clear) (If Available): Press this button within three seconds after inputting a numeric selection, to clear all numeric inputs.

≧10 (Double Digit Entries) (If Available): Press this button to select chapter or track numbers greater than 9. Press this button before inputting the number.

1 through 0 (Numeric Keypad): The numbered keypad provides the capability of direct chapter or track number selection.

Replacing the Remote Control

If the remote control becomes lost or damaged, a new universal remote control can be purchased. Use a Toshiba® code set for replacement universal remote controls.

Battery Replacement

To change the remote control batteries:

1. Slide back the rear cover on the remote control.
2. Replace the two batteries in the compartment.
3. Replace the battery cover.

Remove the batteries from the remote control if unused for an extended period of time.

Tips and Troubleshooting Chart

Problem	Recommended Action
No power.	The ignition might not be turned to ON/RUN or ACC/ACCESSORY.
The picture does not fill the screen. There are black borders on the top and bottom or on both sides or it looks stretched out.	Check the display mode settings in the setup menu by pressing the display menu button on the remote control.
In auxiliary mode, the picture moves or scrolls.	Check the auxiliary input connections at both devices.
The remote control does not work.	Check to make sure there is no obstruction between the remote control and the transmitter window. Check the batteries to make sure they are not dead or installed incorrectly.
After stopping the player, I push Play but sometimes the DVD starts where I left off and sometimes at the beginning.	If the stop button was pressed one time, the DVD player resumes playing where the DVD was stopped. If the stop button was pressed two times, the DVD player begins to play from the beginning of the DVD.

Tips and Troubleshooting Chart (cont.)

Problem	Recommended Action
The auxiliary source is running but there is no picture or sound.	Check that the RSE video screen is in the auxiliary source mode by pressing the AUX button on the remote control. Check the auxiliary input connections at both devices.
Sometimes the wireless headphone audio cuts out or buzzes.	Check for obstructions, low batteries, reception range, and interference from cellular telephone towers or by using a cellular telephone in the vehicle. Check that the headphones are on correctly using the L (left) and R (right) on the headphones. Check that the headphones are positioned properly with the headband across the top of the head.
I lost the remote and/or the headphones.	See your dealer for assistance.
The DVD is playing, but there is no picture or sound.	Check that the RSE video screen is sourced to the DVD player by pressing the AUX button on the remote control.

DVD Display Error Messages

The DVD display error message depends on which radio the vehicle has. The video screen may display one of the following:

Disc Load/Eject Error or Mechanical Error: There are disc load or eject problems.

Disc Format Error or Unknown Format: The disc is inserted with the disc label wrong side up, or the disc is damaged.

Disc Region Error or Disc Error: The disc is not from a correct region.

No Disc Inserted: No disc is present when the ⏏ or MEM/CD/AUX button is pressed on the radio.

DVD Distortion

Video distortion can occur when operating cellular phones, scanners, CB radios, Global Position Systems (GPSs)*, two-way radios, mobile faxes, or walkie talkies.

It might be necessary to turn off the DVD player when operating one of these devices in or near the vehicle.

*Excludes the OnStar® System.

Cleaning the RSE Seatback Console

Use only a clean cloth dampened with clean water to clean the RSE seatback console surface.

Cleaning the Video Screens

Use only a clean cloth dampened with clean water. Use care when touching or cleaning the screens as damage could result.

Rear Seat Audio (RSA) System

Vehicles with this feature allow the rear seat passengers to listen to and control any of the music sources: radio, CDs, DVDs, or other auxiliary sources. RSA can only control music sources that the front seat passengers are not listening to, except on radios where dual control is allowed.

RSA can function when the front radio is off. 🎧 displays on the infotainment system when RSA is on.

Audio can be heard through wired headphones (not included) plugged into the jacks on the RSA. If the vehicle has a Rear Seat Entertainment system with wireless headphones, audio can also be heard on Channel 2 of the wireless headphones.

To listen to a portable audio device through the RSA, attach the portable audio device to either the front or rear auxiliary input, if available. Turn the device on, then choose the front auxiliary input with the RSA SRCE button.

⏻ **(Power):** Press to turn the RSA on or off.

Volume: Turn to increase or decrease the volume of the wired headphones. The left knob controls the left headphones and the right knob controls the right. Use the volume control on the headphones for wireless headphones.

SRCE (Source): Press to select between the radio, CD, and if these features are available: DVD, front or rear auxiliary, HDD, USB. The front radio may override the rear selection as required.

⏮ ⏭ **(Seek):** While listening to the radio, press to go to the previous or to the next station and stay there. If the front seat passengers are listening to the radio, this function may be inactive on some radios.

Press and hold ⏮ or ⏭ until "Tune" displays. Continue to press ⏮ or ⏭ to tune to an individual station. Tune stays active until ⏮ or ⏭ has not been pressed for several seconds. If the front seat passengers are listening to the radio, this function may be inactive on some radios.

While listening to a disc, press ⏭ to go to the next track or chapter on the disc. Press ⏮ to go back to the start of the current track or chapter if more than ten seconds have played. If the front seat passengers are listening to a disc, this function may be inactive on some radios. Press and hold ⏮ or ⏭ to fast reverse or fast forward.

When a DVD video menu is being displayed, press ⏮ or ⏭ to cursor up or down on the menu. Hold ⏮ or ⏭ to cursor left or right on the menu.

PROG (Program): Press to go to the next preset radio station or channel set on the main radio. If the front seat passengers are listening to the radio, this function may be inactive on some radios.

When a CD or DVD audio disc is playing, press PROG to go to the beginning of the disc or display disc info. If the front seat passengers are listening to a disc, this function may be inactive on some radios.

When a disc is playing in the CD or DVD changer, press and hold PROG to select the next disc, if multiple discs are loaded. If the front seat passengers are listening to a disc, this function may be inactive on some radios.

The PROG button may be used to access the menu of an MP3. Once in the menu, use ⏮ or ⏭ to make selections.

When a DVD video menu is displayed, press PROG, or press and hold PROG to perform the menu function, then press ENTER.

Phone

Bluetooth (Overview)

For vehicles equipped with Bluetooth capability, the system can interact with many cell phones, allowing:

- Placement and receipt of calls in a hands-free mode.
- Sharing of the cell phone's address book or contact list with the vehicle.

To minimize driver distraction, before driving, and with the vehicle parked:

- Become familiar with the features of the cell phone. Organize the phone book and contact lists clearly and delete duplicate or rarely used entries. If possible, program speed dial or other shortcuts.
- Review the controls and operation of the infotainment system.
- Pair cell phone(s) to the vehicle. The system may not work with all cell phones. See "Pairing a Phone" in this section for more information.
- If the cell phone has voice dialing capability, learn to use that feature to access the address book or contact list. See "Voice Pass-Thru" in this section for more information.
- See "Storing and Deleting Phone Numbers" in this section for more information.

⚠ WARNING

When using a cell phone, it can be distracting to look too long or too often at the screen of the phone or the infotainment (navigation) system. Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Vehicles with a Bluetooth system can use a Bluetooth-capable cell phone with a Hands-Free Profile to make and receive phone calls. The infotainment system and voice recognition are used to control the system. The system can be used while in ON/RUN or ACC/ACCESSORY. The range of the Bluetooth system can be up to 9.1 m (30 ft). Not all phones support all functions and not all phones work with the Bluetooth system. See www.gm.com/bluetooth for more information about compatible phones.

Bluetooth Controls

Use the buttons located on the infotainment system and the steering wheel to operate the Bluetooth system.

Steering Wheel Controls

(Push To Talk): Press to answer incoming calls, confirm system information, and start voice recognition.

(End Call/Mute): Press to end a call, reject a call, or cancel an operation.

Infotainment System Controls

For information about how to navigate the menu system using the infotainment controls, see *Operation on page 7-7*.

/ PHONE: Press to enter the Phone main menu.

Voice Recognition

The voice recognition system uses commands to control the system and dial phone numbers.

Noise: The system may not recognize voice commands if there is too much background noise.

When to Speak: A tone sounds to indicate that the system is ready for a voice command. Wait for the tone and then speak.

How to Speak: Speak clearly in a calm and natural voice.

Audio System

When using the Bluetooth system, sound comes through the vehicle's front audio system speakers and overrides the audio system.

Use the VOL/ knob during a call to change the volume level. The adjusted volume level remains in memory for later calls. The system maintains a minimum volume level.

Other Information

The Bluetooth® word mark and logos are owned by the Bluetooth® SIG, Inc. and any use of such marks by General Motors is under license. Other trademarks and trade names are those of their respective owners.

See *Radio Frequency Statement on page 13-20* for Federal Communications Commission and Industry Canada Standards information.

Bluetooth (Infotainment Controls)

For information about how to navigate the menu system using the infotainment controls, see *Operation on page 7-7*.

Pairing

A Bluetooth-enabled cell phone must be paired to the Bluetooth system first and then connected to the vehicle before it can be used. See the cell phone manufacturer's user guide for Bluetooth functions before pairing the cell phone. If a Bluetooth phone is not connected, calls will be made using OnStar Hands-Free Calling, if available. Refer to the OnStar Owner's Guide for more information.

A Bluetooth phone with MP3 capability cannot be connected to the vehicle as a phone and an MP3 player at the same time.

The pairing process can be started by using the voice recognition system or the controls on the infotainment system.

Pairing Information:

- Up to five cell phones can be paired to the Bluetooth system.
- The pairing process is disabled when the vehicle is moving.
- The Bluetooth system links with the first available paired cell phone in the order the phone was paired.
- Only one paired cell phone can be connected to the Bluetooth system at a time.
- Pairing should only need to be completed once, unless changes to the pairing information have been made or the phone is deleted.

To link to a different paired phone, see "Linking to a Different Phone" later in this section.

Pairing a Phone

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Pair Device (Phone). A four-digit Personal Identification Number (PIN) appears on the display.
5. Start the pairing process on the cell phone that will be paired to the vehicle. Reference the cell phone manufacturer's user guide for information on this process.

   Locate the device named "Your Vehicle" in the list on the cell phone and follow the instructions on the cell phone to enter the PIN provided by the system.
6. The system prompts for a name for the phone and confirms the name provided. This name is used to indicate which phone is connected.

7. The system responds with "<Phone name> has been successfully paired" after the pairing process is complete.
8. Repeat Steps 1 through 7 to pair additional phones.

Listing All Paired and Connected Phones

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Device List.

Deleting a Paired Phone

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Device List.
5. Select the phone to delete and follow the on screen prompts.

Linking to a Different Phone

To link to a different phone, the new phone must be in the vehicle and available to be connected to the Bluetooth system before the process is started.

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Device List.
5. Select the new phone to link to and follow the on screen prompts.

   If delete is selected, the highlighted phone will be deleted.

Making a Call Using Phone Book

For cell phones that support the phone book feature, the Bluetooth system can use the contacts stored on your cell phone to make calls. See your cell phone's owner's guide or contact your wireless provider to find out if this feature is supported by your phone.

When a cell phone supports the phone book feature, the Phone Book and Call Lists menus are automatically available.

The Phone Book menu allows you to access the phone book stored in the cell phone to make a call.

The Call Lists menu allows you to access the phone numbers from the Incoming Calls, Outgoing Calls, and Missed Calls menus on your cell phone to make a call.

Radio with CD

To make a call using the Phone Book menu:

1. Press the ✆ / ⊠ button twice.
2. Select Phone Book.
3. Search through the list by selecting the letter group the phone book entry begins with, or press the SELECT button to scroll through the entire list of names/numbers in the phone book.
4. Select the name or number you want to call.

To make a call using the Call Lists menu:

1. Press the ✆ / ⊠ button twice.
2. Select Call Lists.
3. Select the Incoming Calls, Outgoing Calls, or Missed Calls list.
4. Select the name or number you want to call.

Radio with CD/DVD and MEM

1. Press the ✆ / ⊠ button.
2. Select Phone Book.
3. Search through the list by selecting the letter group the phone book entry begins with, or press the SELECT button to scroll through the entire list of names/numbers in the phone book.
4. Select the name or number you want to call.

To make a call using the Call Lists menu:

1. Press the ✆ / ⊠ button.
2. Select Call Lists.
3. Select the Incoming Calls, Outgoing Calls, or Missed Calls list.
4. Select the name or number you want to call.

Making a Call

Radio with CD

1. Press the ✆ / ⊠ button twice.
2. Enter the character sequence. See "Entering a Character Sequence" in *Operation on page 7-7* for more information.
3. Select Call to start dialing the number.

Radio with CD/DVD and MEM

1. Press the ✆ / ⊠ button.
2. Select Enter number.
3. Enter the character sequence. See "Entering a Character Sequence" in *Operation on page 7-7* for more information.
4. Select Call to start dialing the number.

Accepting or Declining a Call

When an incoming call is received, the infotainment system mutes and a ring tone is heard in the vehicle.

Accepting a Call

Turn the MENU/SELECT knob to "Answer" and press the MENU/SELECT knob to accept the call.

Declining a Call

Turn the MENU/SELECT knob to "Decline" and press the MENU/SELECT knob to decline the call.

Call Waiting

Call waiting must be supported on the Bluetooth phone and enabled by the wireless service carrier to work.

Accepting a Call

Turn the MENU/SELECT knob to "Answer" and press the MENU/SELECT knob to accept the call.

Declining a Call

Turn the MENU/SELECT knob to "Decline" and press the MENU/SELECT knob to decline the call.

Switching Between Calls (Call Waiting Calls Only)

To switch between calls:

1. Turn or press the MENU/SELECT knob.
2. Select Switch Call from the menu.

Conference Calling

Conference calling and three-way calling must be supported on the Bluetooth phone and enabled by the wireless service carrier to work.

To start a conference while in a current call:

1. Turn or press the MENU/SELECT knob.
2. Select Enter Number.
3. Enter the character sequence then select Call. See "Entering a Character Sequence" in *Operation on page 7-7* for more information.
4. After the call has been placed, turn or press the MENU/SELECT knob and choose Merge Calls.
5. To add more callers to the conference call, repeat Steps 1 through 4. The number of callers that can be added is limited by your wireless service carrier.

Ending a Call

Turn or press the MENU/SELECT knob and select Hang Up.

Muting a Call

To Mute a Call

Turn or press the MENU/SELECT knob and select Mute Call.

To Cancel Mute

Turn or press the MENU/SELECT knob and select Mute Call.

Dual Tone Multi-Frequency (DTMF) Tones

The in-vehicle Bluetooth system can send numbers during a call. This is used when calling a menu-driven phone system.

1. Turn or press the MENU/SELECT knob and select Enter Number.
2. Enter the character sequence. See "Entering a Character Sequence" in *Operation on page 7-7* for more information.

Bluetooth (Voice Recognition)

Using Voice Recognition

To use voice recognition, press the button located on the steering wheel. The system responds differently depending on what kind of infotainment system the vehicle has.

For vehicles without a navigation system, the system responds "Ready," followed by a tone. After the tone, say a command.

For vehicles with a navigation system, the system responds with a tone. After the tone say "Hands Free" to use the Bluetooth voice recognition system. The system then responds with "Ready," followed by a tone. After the tone, say a command.

For additional information say "Help" while you are in a voice recognition menu.

Pairing

A Bluetooth cell phone must be paired to the Bluetooth system and then connected to the vehicle before it can be used. See your cell phone manufacturer's user guide for Bluetooth functions before pairing the cell phone. If a Bluetooth phone is not connected, calls will be made using OnStar Hands-Free Calling, if available. Refer to the OnStar Owner's Guide for more information.

Pairing Information

A Bluetooth phone with MP3 capability cannot be paired to the vehicle as a phone and an MP3 player at the same time.

- Up to five cell phones can be paired to the Bluetooth system.
- The pairing process is disabled when the vehicle is moving.
- Pairing only needs to be completed once, unless the pairing information on the cell phone changes or the cell phone is deleted from the system.

- Only one paired cell phone can be connected to the Bluetooth system at a time.
- If multiple paired cell phones are within range of the system, the system connects to the first available paired cell phone in the order that they were first paired to the system. To link to a different paired phone, see "Linking to a Different Phone" later in this section.

Pairing a Phone

1. Press . For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Bluetooth."
3. Say "Pair." The system responds with instructions and a four-digit Personal Identification Number (PIN). The PIN is used in Step 5.
4. Start the pairing process on the cell phone that you want to pair. For help with this process, see your cell phone manufacturer's user guide.
5. Locate the device named "Your Vehicle" in the list on the cell phone. Follow the instructions on the cell phone to enter the PIN that was provided in Step 3. After the PIN is successfully entered, the system prompts you to provide a name for the paired cell phone. This name will be used to indicate which phones are paired and connected to the vehicle. See "Listing All Paired and Connected Phones" later in this section for more information.
6. Repeat Steps 1 through 5 to pair additional phones.

Listing All Paired and Connected Phones

The system can list all cell phones paired to it. If a paired cell phone is also connected to the vehicle, the system responds with "is connected" after that phone name.

1. Press . For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Bluetooth."
3. Say "List."

Deleting a Paired Phone

If the phone name you want to delete is unknown, see "Listing All Paired and Connected Phones."

1. Press . For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Bluetooth."
3. Say "Delete." The system asks for which phone to delete.
4. Say the name of the phone you want to delete.

Connecting to a Different Phone

To connect to a different cell phone, the Bluetooth system looks for the next available cell phone in the order in which all the available cell phones were paired. Depending on which cell phone you want to connect to, you may have to use this command several times.

1. Press ☎ 🎤. For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Bluetooth."
3. Say "Change phone."
   - If another cell phone is found, the response will be "<Phone name> is now connected."
   - If another cell phone is not found, the original phone remains connected.

Storing and Deleting Phone Numbers

The system can store up to 30 phone numbers as name tags in the Hands-Free Directory that is shared between the Bluetooth and OnStar systems.

The following commands are used delete and store phone numbers.

Store: This command will store a phone number, or a group of numbers as a name tag.

Digit Store: This command allows a phone number to be stored as a name tag by entering the digits one at a time.

Delete: This command is used to delete individual name tags.

Delete All Name Tags: This command deletes all stored name tags in the Hands-Free Calling Directory and the Destinations Directory.

Using the "Store" Command

1. Press ☎ 🎤. For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Store."
3. Say the phone number or group of numbers you want to store all at once with no pauses, then follow the directions given by the system to save a name tag for this number.

Using the "Digit Store" Command

If an unwanted number is recognized by the system, say "Clear" at any time to clear the last number.

To hear all of the numbers recognized by the system, say "Verify" at any time.

1. Press ☎ 🎤. For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Digit Store."

3. Say each digit, one at a time, that you want to store. After each digit is entered, the system repeats back the digit it heard followed by a tone. After the last digit has been entered, say "Store," and then follow the directions given by the system to save a name tag for this number.

Using the "Delete" Command

1. Press . For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Delete."
3. Say the name tag you want to delete.

Using the "Delete All Name Tags" Command

This command deletes all stored name tags in the Hands Free Calling Directory and the Destinations Directory.

To delete all name tags:

1. Press . For vehicles with a navigation system, say "Hands-Free," after the tone.
2. Say "Delete all name tags."

Listing Stored Numbers

The list command will list all the stored numbers and name tags.

Using the "List" Command

1. Press . For vehicles with a navigation system, say "Hands-Free," after the tone.
2. Say "Directory."
3. Say "Hands Free Calling."
4. Say "List."

Making a Call

Calls can be made using the following commands.

Dial or Call: The dial or call command can be used interchangeably to dial a phone number or a stored name tag.

Digit Dial: This command allows a phone number to be dialed by entering the digits one at a time.

Re-dial: This command is used to dial the last number used on the cell phone.

Using the "Dial" or "Call" Command

1. Press . For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Dial" or "Call."
3. Say the entire number without pausing or say the name tag.

Once connected, the person called will be heard through the audio speakers.

Using the "Digit Dial" Command

The digit dial command allows a phone number to be dialed by entering the digits one at a time. After each digit is entered, the system repeats back the digit it heard followed by a tone.

If an unwanted number is recognized by the system, say "Clear" at any time to clear the last number.

To hear all of the numbers recognized by the system, say "Verify" at any time.

1. Press . For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Digit Dial."
3. Say each digit, one at a time, that you want to dial. After each digit is entered, the system repeats back the digit it heard followed by a tone. After the last digit has been entered, say "Dial."

Once connected, the person called will be heard through the audio speakers.

Using the "Re-dial" Command

1. Press . For vehicles with a navigation system, say "Hands Free," after the tone.
2. After the tone, say "Re-dial."

Once connected, the person called will be heard through the audio speakers.

Receiving a Call

When an incoming call is received, the audio system mutes and a ring tone is heard in the vehicle.

- Press to answer the call.
- Press to ignore a call.

Call Waiting

Call waiting must be supported on the cell phone and enabled by the wireless service carrier.

- Press to answer an incoming call when another call is active. The original call is placed on hold.
- Press again to return to the original call.
- To ignore the incoming call, no action is required.
- Press to disconnect the current call and switch to the call on hold.

Three-Way Calling

Three-way calling must be supported on the cell phone and enabled by the wireless service carrier.

1. While on a call, press .
2. Say "Three-way call."
3. Use the dial or call command to dial the number of the third party to be called.
4. Once the call is connected, press to link all callers together.

Ending a Call

Press to end a call.

Muting a Call

During a call, all sounds from inside the vehicle can be muted so that the person on the other end of the call cannot hear them.

To mute a call, press , and then say "Mute Call."

To cancel mute, press , and then say "Un-mute Call."

Transferring a Call

Audio can be transferred between the Bluetooth system and the cell phone.

The cell phone must be paired and connected with the Bluetooth system before a call can be transferred. The connection process can take up to two minutes after the ignition is turned to ON/RUN.

To Transfer Audio from the Bluetooth System to a Cell Phone

During a call with the audio in the vehicle:

1. Press .
2. Say "Transfer Call."

To Transfer Audio to the Bluetooth System from a Cell Phone

During a call with the audio on the cell phone, press . The audio transfers to the vehicle. If the audio does not transfer to the vehicle, use the audio transfer feature on the cell phone. See your cell phone manufacturer's user guide for more information.

Voice Pass-Thru

Voice pass-thru allows access to the voice recognition commands on the cell phone. See your cell phone manufacturer's user guide to see if the cell phone supports this feature.

To access contacts stored in the cell phone:

1. Press . For vehicles with a navigation system, say "Hands Free," after the tone.
2. Say "Bluetooth." The system responds "Bluetooth ready," followed by a tone.
3. Say "Voice." The system responds "OK, accessing <phone name>."

The cell phone's normal prompt messages will go through their cycle according to the phone's operating.

Dual Tone Multi-Frequency (DTMF) Tones

The Bluetooth system can send numbers and the numbers stored as name tags during a call. You can use this feature when calling a menu-driven phone system. Account numbers can also be stored for use.

Sending a Number or Name Tag During a Call

1. Press . The system responds "Ready," followed by a tone.
2. Say "Dial."
3. Say the number or name tag to send.

Clearing the System

Unless information is deleted out of the in-vehicle Bluetooth system, it will be retained indefinitely. This includes all saved name tags in the phone book and phone pairing information. For information on how to delete this information, see the previous sections on "Deleting a Paired Phone" and "Deleting Name Tags."

Climate Controls

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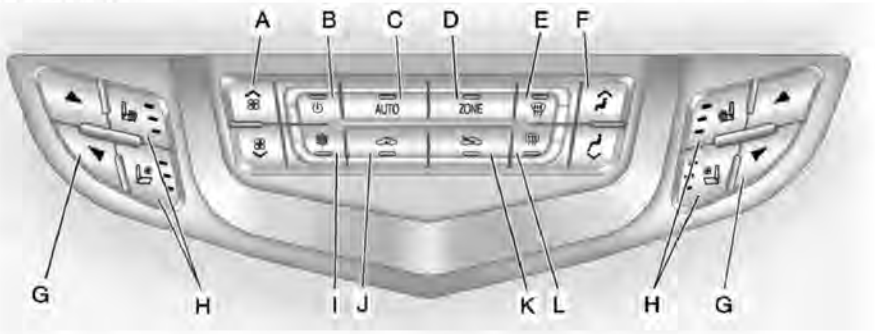
Climate Control Systems

Dual Automatic Climate Control System

The heating, cooling, and ventilation for the vehicle can be controlled with this system.



A. Fan Control
B. Power
C. AUTO (Automatic Operation)
D. ZONE
E. Defrost
F. Air Delivery Mode Control
G. Driver and Passenger Temperature Controls
H. Driver and Passenger Heated and Ventilated Seats
I. Air Conditioning
J. Recirculation
K. Outside Air
L. Rear Window Defogger

Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning and recirculation in order to heat or cool the vehicle to the desired temperature.

When the indicator light is on, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and displays will show the selected settings.

To place the system in automatic mode do the following:

1. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Then adjust the temperature as needed for best comfort.

English units can be changed to metric units through the Driver Information Center (DIC). See *Vehicle Personalization on page 5-42*.

▲ / ▼ (Driver and Passenger Temperature Controls): The temperature can be adjusted separately for the driver and the passenger. Press to increase or decrease the temperature.

ZONE: Press to link all climate zone settings to the driver settings. The ZONE indicator light turns off. When the passenger settings are adjusted, the ZONE indicator light is on.

Manual Operation

⏻ (Power): Press to turn the climate control system on or off.

(Fan Control): Press to increase or decrease the fan speed. Pressing either button cancels automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

(Air Delivery Mode Control): Press to change the direction of the airflow. The current mode appears in the display screen. Changing the mode cancels the automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

To change the current mode, select one of the following:

(Vent): Air is directed to the instrument panel outlets.

(Bi-Level): Air is divided between the instrument panel outlets and the floor outlets.

(Tri-Level): Air is divided between the windshield, instrument panel, and floor outlets.

(Floor): Air is directed to the floor outlets.

(Defog): Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.

(Upper): Air is directed to the windshield outlets.

(Hi-Level): Air is divided between the windshield and instrument panel outlets.

(Defrost): Clears the windshield of fog or frost more quickly. Air is directed to the windshield.

(Air Conditioning): Press to turn the automatic air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed. When the indicator light is on, the air conditioner runs automatically to cool the air inside the vehicle or to dry the air needed to defog the windshield faster.

(Recirculation): Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or prevent outside air and odors from entering.

Automatic Air Recirculation: When the AUTO indicator light is on, the air is automatically recirculated as needed to help quickly cool the inside of the vehicle.

The climate control system may have a sensor to detect air pollution. In auto recirculation control, the Air Quality Control system may operate. To adjust the sensitivity of the Air Quality Control, see "Climate and Air Quality" under *Vehicle Personalization on page 5-42*.

Auto Defog: The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. If the climate control system does not detect possible window fogging, it returns to normal operation. To turn Auto Defog off or on, see "Climate and Air Quality" under *Vehicle Personalization on page 5-42*.

(Outside Air): Press to turn on outside air. An indicator light comes on. Outside air is circulated through the vehicle.

Rear Window Defogger

(Rear Window Defogger): Press to turn the rear window defogger on or off.

The rear window defogger turns off automatically after about 10 minutes. If turned on again it runs for about five minutes before turning off. At higher speeds, the rear window defogger may stay on continuously.

The rear window defogger can be set to automatic operation. See "Climate and Air Quality" under *Vehicle Personalization on page 5-42*. When Auto Rear Defog is selected, the rear window defogger turns on automatically when the interior temperature is cold and the outside temperature is about 40°F and below. The auto rear defogger turns off automatically after about 10 minutes. At higher speeds, the rear window defogger may stay on continuously.

The heated outside rearview mirrors turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirrors. See *Heated Mirrors on page 2-22*.

Notice: **Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect your radio's ability to pick up stations clearly. The repairs wouldn't be covered by your warranty.**

Heated and Ventilated Seats: Press to heat or ventilate the seat. See *Heated and Ventilated Front Seats on page 3-11*.

Remote Start Climate Control Operation: For vehicles with the remote vehicle start feature, the climate control system may run when the vehicle is started remotely. The system uses the driver's previous settings to heat or cool the inside of the vehicle. See *Remote Vehicle Start on page 2-10*.

The rear window defogger turns on if it is cold outside.

Sensors

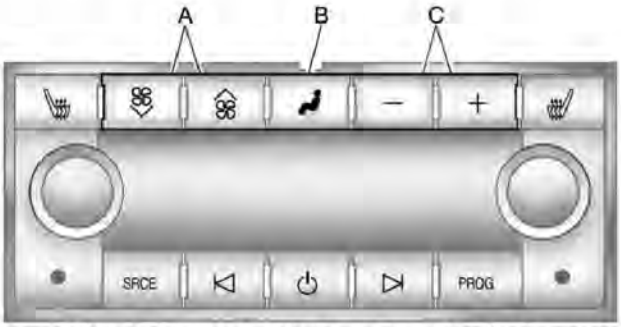
The solar sensor, located on top of the instrument panel near the windshield, monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

Rear Climate Control System

For vehicles with the rear heat and air conditioning controls, they are integrated with the rear seat audio controls located in the center console.



Rear Climate Control with Rear Seat Audio Controls

A. Fan Control
B. Air Delivery Mode Control
C. Temperature Control

ZONE: When the rear climate control is turned on from the rear, the ZONE indicator light will turn on.

Press the ZONE button on the front climate control system to turn off the rear blower and match the rear settings to the front. The ZONE indicator light and rear climate control display will turn off.

The rear climate control can be turned off by pressing .

Independent Mode: This mode directs rear seating airflow according to the settings of the rear controls.

The front climate control system must be on for the rear climate control to work. To turn on the rear climate control from rear seating, press any rear climate control button.

The rear climate control will not work if the front climate control system is in defrost.

Automatic Operation

AUTO: Press ↝ until the AUTO setting is selected to control the rear temperature, air delivery, and fan speed automatically.

Manual Operation

(Fan Control): Press these buttons on the rear seat audio control panel to increase or decrease the airflow.

Pressing when the system is off will turn the system on. The air delivery mode remains in its previous setting.

−/+ (Temperature Control): Press these buttons to adjust the temperature of the air flowing into the passenger area. Press + for warmer air and press − for cooler air.

(Air Delivery Mode Control): Press the mode button to change the direction of the airflow. Multiple presses will cycle through the delivery selections.

Air Vents

Move the sliding knob on the air outlets up and down or left and right to direct the airflow. Use the thumbwheels near the air outlets to open or close off the airflow.

Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windshield that could block the flow of air into the vehicle.
- Keep the path under the front seats clear of objects to help circulate the air inside the vehicle more effectively.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.

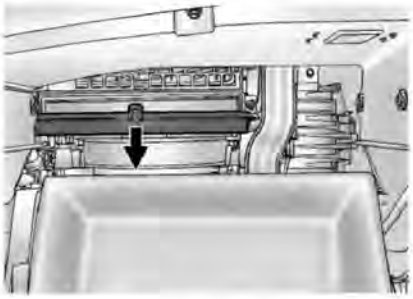
Maintenance

Passenger Compartment Air Filter

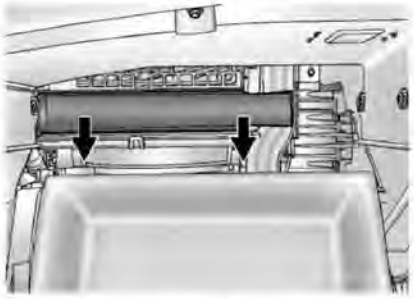
The filter removes dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle.

The filter should be replaced as part of routine scheduled maintenance. To find out what type of filter to use, see *Maintenance Replacement Parts on page 11-9*.

1. Open the glove box completely and remove the four screws along the upper portion of the glove box.
2. When released, lower the upper portion of the glove box.
3. Locate the service door for the passenger compartment air filter.



4. Release the two latches holding the service door. Lower the service door.



5. Remove the old air filter.
6. Install the new air filter.
7. Close the service door and latches.
8. Reinstall the upper portion of the glove box.

See your dealer if additional assistance is needed.

✍ NOTES

Driving and Operating

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Driving Information

Defensive Driving

Defensive driving means "always expect the unexpected." The first step in driving defensively is to wear the safety belt. See *Safety Belts on page 3-15.*

⚠ WARNING

Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready. In addition:

- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

(Continued)

WARNING (Continued)

Driver distraction can cause collisions resulting in injury or possible death. These simple defensive driving techniques could save your life.

Drunk Driving

⚠ WARNING

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking.

Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

Death and injury associated with drinking and driving is a global tragedy.

Alcohol affects four things that anyone needs to drive a vehicle: judgment, muscular coordination, vision, and attentiveness.

Police records show that almost 40 percent of all motor vehicle-related deaths involve alcohol. In most cases, these deaths are the result of someone who was drinking and driving. In recent years, more than 17,000 annual motor vehicle-related deaths have been associated with the use of alcohol, with about 250,000 people injured.

For persons under 21, it is against the law in every U.S. state to drink alcohol. There are good medical, psychological, and developmental reasons for these laws.

The obvious way to eliminate the leading highway safety problem is for people never to drink alcohol and then drive.

Medical research shows that alcohol in a person's system can make crash injuries worse, especially injuries to the brain, spinal cord, or heart. This means that when anyone who has been drinking — driver or passenger — is in a crash, that person's chance of being killed or permanently disabled is higher than if the person had not been drinking.

Control of a Vehicle

The following three systems help to control the vehicle while driving — brakes, steering, and accelerator. At times, as when driving on snow or ice, it is easy to ask more of those control systems than the tires and road can provide. Meaning, you can lose control of the vehicle. See *Traction Control System (TCS) on page 9-34* and *StabiliTrak® System on page 9-36*.

Adding non-dealer accessories can affect vehicle performance. See *Accessories and Modifications on page 10-3*.

Braking

See *Brake System Warning Light on page 5-22*.

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average reaction time is about three-fourths of a second. But that is only an average. It might be less with one driver and as long as two or three seconds or more with another. Age, physical condition, alertness, coordination, and eyesight all play a part. So do alcohol, drugs, and frustration. But even in three-fourths of a second, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft). That could be a lot of distance in an emergency, so keeping enough space between the vehicle and others is important.

And, of course, actual stopping distances vary greatly with the surface of the road, whether it is pavement or gravel; the condition of the road, whether it is wet, dry, or icy; tire tread; the condition of the brakes; the weight of the vehicle; and the amount of brake force applied.

Avoid needless heavy braking. Some people drive in spurts — heavy acceleration followed by heavy braking — rather than keeping pace with traffic. This is a mistake. The brakes might not have time to cool between hard stops. The brakes will wear out much faster with a lot of heavy braking. Keeping pace with the traffic and allowing realistic following distances eliminates a lot of unnecessary braking. That means better braking and longer brake life.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. If the brakes are pumped, the pedal could get harder to push down. If the engine stops, there will still be some power brake assist but it will be used when the brake is applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

Adding non-dealer accessories can affect vehicle performance. See *Accessories and Modifications on page 10-3*.

Steering

Power Steering

If power steering assist is lost because the engine stops or the power steering system is not functioning, the vehicle can be steered but it will take more effort.

Steering Tips

It is important to take curves at a reasonable speed.

Traction in a curve depends on the condition of the tires and the road surface, the angle at which the curve is banked, and vehicle speed. While in a curve, speed is the one factor that can be controlled.

If there is a need to reduce speed, do it before entering the curve, while the front wheels are straight.

Try to adjust the speed so you can drive through the curve. Maintain a reasonable, steady speed. Wait to accelerate until out of the curve, and then accelerate gently into the straightaway.

Steering in Emergencies

There are times when steering can be more effective than braking. For example, you come over a hill and find a truck stopped in your lane, or a car suddenly pulls out from nowhere, or a child darts out from between parked cars and stops right in front of you. These problems can be avoided by braking — if you can stop in time. But sometimes you cannot stop in time because there is no room. That is the time for evasive action — steering around the problem.

The vehicle can perform very well in emergencies like these. First apply the brakes. See *Braking on page 9-4*. It is better to remove as much speed as possible from a collision. Then steer around the problem, to the left or right depending on the space available.

An emergency like this requires close attention and a quick decision. If holding the steering wheel at the recommended 9 and 3 o'clock positions, it can be turned a full 180 degrees very quickly without removing either hand. But you have to act fast, steer quickly, and just as quickly straighten the wheel once you have avoided the object.

The fact that such emergency situations are always possible is a good reason to practice defensive driving at all times and wear safety belts properly.

Off-Road Recovery

The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving.

If the level of the shoulder is only slightly below the pavement, recovery should be fairly easy. Ease off the accelerator and then, if there is nothing in the way, steer so that the vehicle straddles the edge of the pavement. Turn the steering wheel 8 to 13 cm (3 to 5 in), about one-eighth turn, until the right front tire contacts the pavement edge. Then turn the steering wheel to go straight down the roadway.

Loss of Control

Let us review what driving experts say about what happens when the three control systems — brakes, steering, and acceleration — do not have enough friction where the tires meet the road to do what the driver has asked.

In any emergency, do not give up. Keep trying to steer and constantly seek an escape route or area of less danger.

Skidding

In a skid, a driver can lose control of the vehicle. Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

The three types of skids correspond to the vehicle's three control systems. In the braking skid, the wheels are not rolling. In the steering or cornering skid, too much speed or steering in a curve causes tires to slip and lose cornering force. And in the acceleration skid, too much throttle causes the driving wheels to spin.

If the vehicle starts to slide, ease your foot off the accelerator pedal and quickly steer the way you want the vehicle to go. If you start steering quickly enough, the vehicle may straighten out. Always be ready for a second skid if it occurs.

Of course, traction is reduced when water, snow, ice, gravel, or other material is on the road. For safety, slow down and adjust your driving to these conditions. It is important to slow down on slippery surfaces because stopping distance is longer and vehicle control more limited.

While driving on a surface with reduced traction, try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide. You might not realize the surface is slippery until the vehicle is skidding. Learn to recognize warning clues — such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.

Remember: Antilock brakes help avoid only the braking skid.

Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

⚠ WARNING

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

(Continued)

WARNING (Continued)

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

Hydroplaning

Hydroplaning is dangerous. Water can build up under the vehicle's tires so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When the vehicle is hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. The best advice is to slow down when the road is wet.

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires on page 10-56*.
- Turn off cruise control.

Highway Hypnosis

Always be alert and pay attention to your surroundings while driving. If you become tired or sleepy, find a safe place to park the vehicle and rest.

Other driving tips include:

- Keep the vehicle well ventilated.
- Keep interior temperature cool.
- Keep your eyes moving — scan the road ahead and to the sides.
- Check the rearview mirror and vehicle instruments often.

Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips for driving in these conditions include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

⚠ WARNING

If you do not shift down, the brakes could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Shift down to let the engine assist the brakes on a steep downhill slope.

⚠ WARNING

Coasting downhill in N (Neutral) or with the ignition off is dangerous. The brakes will have to do all the work of slowing down and they could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Always have the engine running and the vehicle in gear when going downhill.

- Stay in your own lane. Do not swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- Top of hills: Be alert — something could be in your lane (stalled car, accident).
- Pay attention to special road signs (falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Drive carefully when there is snow or ice between the tires and the road, creating less traction or grip. Wet ice can occur at about 0°C (32°F) when freezing rain begins to fall, resulting in even less traction. Avoid driving on wet ice or in freezing rain until roads can be treated with salt or sand.

Drive with caution, whatever the condition. Accelerate gently so traction is not lost. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick, so there is even less traction.

Try not to break the fragile traction. If you accelerate too fast, the drive wheels will spin and polish the surface under the tires even more.

The *Antilock Brake System (ABS) on page 9-30* improves vehicle stability during hard stops on slippery roads, but apply the brakes sooner than when on dry pavement.

Allow greater following distance on any slippery road and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.

Turn off cruise control, if equipped, on slippery surfaces.

Blizzard Conditions

Being stuck in snow can be a serious situation. Stay with the vehicle unless there is help nearby. If possible, use the *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-11*. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to an outside mirror.

⚠ WARNING

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

(Continued)

WARNING (Continued)

If the vehicle is stuck in the snow:

- Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust pipe.
- Check again from time to time to be sure snow does not collect there.
- Open a window about 5 cm (2 in) on the side of the vehicle that is away from the wind to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that circulates the air inside the vehicle and set the fan speed to the highest setting. See Climate Control System in the Index.

(Continued)

WARNING (Continued)

For more information about carbon monoxide, see *Engine Exhaust on page 9-24*.

Snow can trap exhaust gases under your vehicle. This can cause deadly CO (Carbon Monoxide) gas to get inside. CO could overcome you and kill you. You cannot see it or smell it, so you might not know it is in your vehicle. Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust.

Run the engine for short periods only as needed to keep warm, but be careful.

To save fuel, run the engine for only short periods as needed to warm the vehicle and then shut the engine off and close the window most of the way to save heat. Repeat this until help arrives but only when you feel really uncomfortable from the cold. Moving about to keep warm also helps.

If it takes some time for help to arrive, now and then when you run the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible to save fuel.

If the Vehicle is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method.

⚠ WARNING

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 55 km/h (35 mph).

For information about using tire chains on the vehicle, see *Tire Chains on page 10-79*.

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see *Towing the Vehicle on page 10-101*.

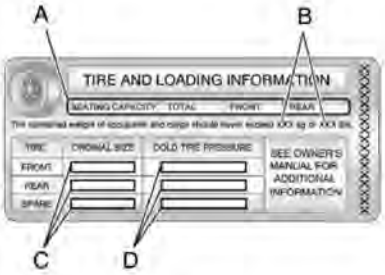
Vehicle Load Limits

It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo and all nonfactory-installed options. Two labels on the vehicle show how much weight it may properly carry, the Tire and Loading Information label and the Certification label.

⚠ WARNING

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Tire and Loading Information Label



Label Example

A vehicle-specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar). With the driver door open, the label is attached near the door lock post.

The Tire and Loading Information label shows the number of occupant seating positions (A), and the maximum vehicle capacity weight (B) in kilograms and pounds.

The Tire and Loading Information label also shows the tire size of the original equipment tires (C) and the recommended cold tire inflation pressures (D). For more information on tires and inflation see *Tires on page 10-56* and *Tire Pressure on page 10-63*.

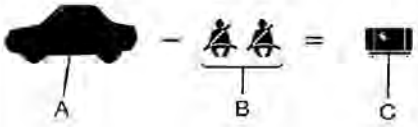
There is also important loading information on the Certification label. It tells you the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification Label" later in this section.

Steps for Determining Correct Load Limit

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs" on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs (1400 − 750 (5 x 150) = 650 lbs).
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.

6. If your vehicle will be towing a trailer, the load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

See *Trailer Towing on page 9-58* for important information on towing a trailer, towing safety rules and trailering tips.

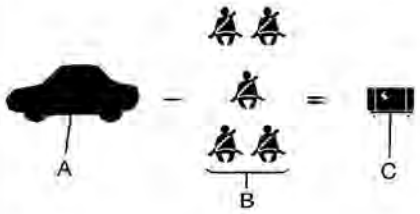


Example 1

A. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).

B. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).

C. Available Occupant and Cargo Weight = 317 kg (700 lbs).

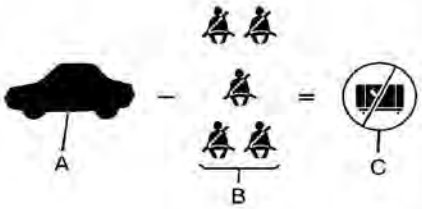


Example 2

A. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).

B. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).

C. Available Cargo Weight = 113 kg (250 lbs).



Example 3

A. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).

B. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).

C. Available Cargo Weight = 0 kg (0 lbs).

Refer to the vehicle's Tire and Loading Information label for specific information about the vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's capacity weight.

Certification Label

Label Example

A vehicle-specific Certification/ Tire label is attached to the rear edge of the driver's door.

The label shows the size of the vehicle's original tires and the inflation pressures needed to obtain the gross weight capacity of the vehicle. This is called Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tire label also tells you the maximum weights for the front and rear axles, called Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, you need to go to a weigh station and weigh the vehicle. Your dealer can help you with this. Be sure to spread out the load equally on both sides of the center line.

Never exceed the GVWR for the vehicle, or the GAWR for either the front or rear axle.

If the vehicle is carrying a heavy load, it should be spread out. See "Steps for Determining Correct Load Limit" earlier in this section.

⚠ WARNING

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Your warranty does not cover parts or components that fail because of overloading.

The label will help you decide how much cargo and installed equipment your vehicle can carry.

Using heavier suspension components to get added durability might not change your weight ratings. Ask your dealer to help you load your vehicle the right way.

If you put things inside your vehicle – like suitcases, tools, packages, or anything else – they will go as fast as the vehicle goes. If you have to stop or turn quickly, or if there is a crash, they will keep going.

⚠ WARNING

Things inside the vehicle can strike and injure people in a sudden stop or turn, or in a crash.

- Put things in the cargo area of the vehicle. In the cargo area, put them as far forward as possible. Try to spread the weight evenly.

(Continued)

WARNING (Continued)

- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.
- Do not leave an unsecured child restraint in the vehicle.
- Secure loose items in the vehicle.
- Do not leave a seat folded down unless needed.

Starting and Operating

New Vehicle Break-In

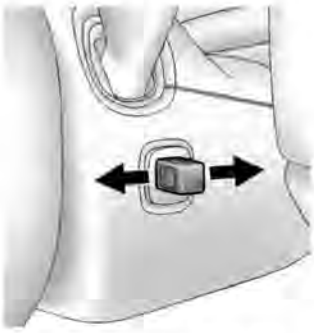
Notice: **The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:**

- **Do not drive at any one constant speed, fast or slow, for the first 805 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.**
- **During the first 1 000 km (600 mi), avoid using more than moderate acceleration in lower gears and avoid vehicle speeds above 110 km/h (68 mph).**
- **Between the first 1 000 km (600 mi) and 5 000 km (3,000 mi), heavy acceleration in lower gears can be used. Vehicle speeds above 110 km/h (68 mph) should be limited to five minutes per use.**
- **Avoid making hard stops for the first 322 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this breaking-in guideline every time you get new brake linings.**
- **Do not tow a trailer during break-in. See *Driving Characteristics and Towing Tips on page 9-54* for the trailer towing capabilities of your vehicle and more information.**

Following break-in, engine speed and load can be gradually increased.

Adjustable Throttle and Brake Pedal

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.



The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

Adjust the throttle and brake pedals while the vehicle is in P (Park) without pressing on the pedals. The pedals cannot be adjusted while the vehicle is in R (Reverse) or when cruise control is engaged. The throttle and brake pedals can also be adjusted while driving.

Ignition Positions

The vehicle has an electronic keyless ignition with pushbutton start.

Pressing the button cycles it through three modes, ACC/ACCESSORY, ON/RUN/START and STOPPING THE ENGINE/OFF.

If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the keyless entry system. See *Driver Information Center (DIC) on page 5-29* for more information.

To shift out of P (Park), the vehicle must be in ACC/ACCESSORY or ON/RUN mode and the brake pedal must be applied.

STOPPING THE ENGINE/OFF (No LED Lights): When the vehicle is stopped, press the engine START/STOP button once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 9-22* for more information.

If the vehicle is not in P (Park), the ignition will return to ACC/ ACCESSORY and display the message SHIFT TO PARK in the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 5-29* for more information. When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

In an emergency, if the vehicle must be shut off while driving:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop, shift to P (Park), and turn the ignition to OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the OFF position.
4. Set the parking brake. See *Parking Brake on page 9-31*.

⚠ WARNING

Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

5. If the vehicle must be shut off while driving, switch the ignition to ACC/ACCESSORY.

ACC/ACCESSORY (Amber LED Light): This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied, will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ACCESSORY to OFF after ten minutes to prevent battery run down.

ON/RUN/START (Green LED Light): This mode is for driving and starting. With the ignition off, and the brake pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Gasoline Engine on page 9-20* for more information. The ignition will then remain in ON/RUN.

Starting the Gasoline Engine

Place the transmission in the proper gear by moving the shift lever to P (Park) or N (Neutral). To restart the engine when the vehicle is already moving, use N (Neutral).

Notice: **Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.**

The keyless access transmitter must be inside the vehicle for the ignition to work.

Cell phone chargers can interfere with the operation of the Keyless Access System. Battery chargers should not be plugged in when starting or turning off the engine.

To start the vehicle:

Starting Procedure

1. With the brake pedal applied, press the START button located on the instrument panel. See *Ignition Positions on page 9-18*.
2. When the engine begins cranking, let go of the button and the engine cranks automatically until it starts.

   If the transmitter is not in the vehicle or something is interfering with the transmitter, the Driver Information Center (DIC) will display NO REMOTE DETECTED. See *Driver Information Center (DIC) on page 5-29* for more information.

   If the battery in the keyless access transmitter needs replacing, the DIC displays REPLACE BATTERY IN REMOTE KEY. The vehicle can still be driven.

See *Remote Keyless Entry (RKE) System Operation on page 2-4* for more information.

3. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.
4. If the engine does not start and no DIC message is displayed, wait 15 seconds before trying again to let the cranking motor cool down.

   If the engine does not start after 5-10 seconds, especially in very cold weather (below −18°C or 0°F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor while cranking for up to 15 seconds.

Notice: **Cranking the engine for long periods of time, by pressing the START button immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to allow the cranking motor to cool down.**

When the engine starts, let go of the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine.

The vehicle has a Computer-Controlled Cranking System. This feature assists in starting the engine and protects components. Once cranking has been initiated, the engine continues cranking for a few seconds or until the vehicle starts. If the engine does not start, cranking automatically stops after 15 seconds to prevent cranking motor damage. To prevent gear damage, this system also prevents cranking if the engine is already running.

Notice: **The engine is designed to work with the electronics in the vehicle. If you add electrical parts or accessories, you could change the way the engine operates. Before adding electrical equipment, check with your dealer. If you do not, the engine might not perform properly. Any resulting damage would not be covered by the vehicle warranty.**

Engine Heater

The engine coolant heater, if available, can help in cold weather conditions at or below −18°C (0°F) for easier starting and better fuel economy during engine warm-up. Plug in the coolant heater at least four hours before starting the vehicle. An internal thermostat in the plug end of the cord will prevent engine coolant heater operation at temperatures above −18°C (0°F).

To Use the Engine Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. The cord is located near the air cleaner.
3. Plug it into a normal, grounded 110-volt AC outlet.

⚠ WARNING

Plugging the cord into an ungrounded outlet could cause an electrical shock. Also, the wrong kind of extension cord could overheat and cause a fire. You could be seriously injured. Plug the cord into a properly grounded three-prong 110-volt AC outlet. If the cord will not reach, use a heavy-duty three-prong extension cord rated for at least 15 amps.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts. If you do not it could be damaged.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

Retained Accessory Power (RAP)

These accessories can be used after the engine is turned off:

- Audio system (up to 10 minutes or driver door is opened).
- Power windows, sunroof (if equipped), and power outlets (up to 10 minutes or any door is opened).

Shifting Into Park

⚠ WARNING

It can be dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, use the steps that follow.

1. Hold the brake pedal down and set the parking brake.

   See *Parking Brake on page 9-31* for more information.

2. Move the shift lever into P (Park) by pushing the lever all the way toward the front of the vehicle.
3. Turn the ignition off.

Leaving the Vehicle with the Engine Running

⚠ WARNING

It can be dangerous to leave the vehicle with the engine running. The vehicle could move suddenly if the shift lever is not fully in P (Park) with the parking brake firmly set. And, if you leave the vehicle with the engine running, it could overheat and even catch fire. You or others could be injured. Do not leave the vehicle with the engine running.

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is firmly set before you leave it. After you have moved the shift lever into P (Park), hold down the regular brake pedal. See if you can move the shift lever away from P (Park) without first pulling it toward you. If you can, it means that the shift lever was not fully locked into P (Park).

Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see "Shifting Into P (Park)" listed previously.

If torque lock does occur, your vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 9-54*.

Shifting Out of Park

This vehicle is equipped with an electronic shift lock release system. The shift lock release is designed to prevent movement of the shift lever out of P (Park), unless the ignition is in ON/RUN or ACC/ACCESSORY and the brake pedal is applied

The shift lock release is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting on page 10-96*.

To shift out of P (Park):

1. Apply the brake pedal.
2. Press the shift lever button.
3. Move the shift lever to the desired position.

If you still are unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.
3. Move the shift lever to the desired position.

If you still cannot move the shift lever from P (Park), consult your dealer or a professional towing service.

Parking Over Things That Burn

⚠ WARNING

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Engine Exhaust

⚠ WARNING

Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or tail pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.
- The vehicle exhaust system has been modified, damaged or improperly repaired.

(Continued)

WARNING (Continued)

- There are holes or openings in the vehicle body from damage or after market modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

Running the Vehicle While Parked

It is better not to park with the engine running. But if you ever have to, here are some things to know.

⚠ WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 9-24*.

⚠ WARNING

It can be dangerous to get out of the vehicle if the automatic transmission shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. Do not leave the vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park).

Follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park on page 9-23*.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-54*.

Automatic Transmission

The shift lever is located on the center console between the front seats.

There are several different positions for the shift lever.

P (Park): This position locks the front wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

⚠ WARNING

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 9-23*. If you are pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-54*.

Make sure the shift lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. You must fully apply the regular brakes first and then press the shift lever button before you can shift from P (Park) when the ignition is in ON/RUN. If you cannot shift out of P (Park), ease pressure on the shift lever and push the shift lever all the way into P (Park) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See *Shifting Out of Park on page 9-24*.

Notice: **Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.**

R (Reverse): Use this gear to back up.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging your transmission. See *If the Vehicle is Stuck on page 9-11* for additional information.

N (Neutral): In this position, the engine does not connect with the wheels. To restart when the vehicle is already moving, use N (Neutral) only. You can also use N (Neutral) when the vehicle is being towed.

⚠ WARNING

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

Notice: **Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.**

D (Drive): This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Going less than 35 mph (55 km/h), push the accelerator pedal about halfway down.
- Going about 35 mph (55 km/h) or more, push the accelerator all the way down.

  The transmission will shift down to a lower gear and have more power.

Downshifting the transmission in slippery road conditions could result in skidding, see "Skidding" under *Loss of Control on page 9-6*

Notice: **Spinning the tires or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. If you are stuck, do not spin the tires. When stopping on a hill, use the brakes to hold the vehicle in place.**

Manual Mode

Driver Shift Control (DSC)

Notice: **If you drive the vehicle at a high rpm without upshifting while using Driver Shift Control (DSC), you could damage the vehicle. Always upshift when necessary while using DSC.**

Driver Shift Control (DSC) allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).

   If you do not move the shift lever forward or rearward, the vehicle will be in Sport Mode. When you are in Sport Mode the vehicle will still shift automatically. The transmission may remain in a gear longer than it would in the normal driving mode based on braking, throttle input, and vehicle lateral acceleration.

   SPORT MODE ON will be displayed in the DIC. See *Ride Control System Messages on page 5-39*. The word "sport" will display below the odometer. The gear position will also be indicated in the tachometer.

   Within Sport Mode there is a further performance feature called Performance Mode Lift Foot (PMLF) Mode. The feature is activated automatically when sports oriented driving is detected, based on cornering and on/off throttle application. PMLF allows the transmission to hold the current gear instead of upshifting when the throttle is lifted.

2. To enter M (Manual Mode), press the shift lever forward to upshift or rearward to downshift.

   An M will be displayed in the DIC.

3. To return to Sport Mode from M (Manual Mode), press and briefly hold the shift lever forward.

The tachometer display on the instrument panel cluster will show which gear the vehicle is in. The number indicates the requested gear range when moving the shift lever forward or rearward. See *Tachometer on page 5-12* for more information.

While using the DSC feature, the vehicle will have firmer, quicker shifting. You can use this for sport driving or when climbing or descending hills, to stay in gear longer, or to downshift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine revolutions per minute (rpm). The transmission will not automatically shift to the next lower gear if the engine rpm is too high, nor to the next higher gear when the maximum engine rpm is reached.

If shifting is prevented for any reason, the currently selected gear will flash multiple times, indicating that the transmission has not shifted gears.

While in the DSC mode, the transmission will automatically downshift when the vehicle comes to a stop. This will allow for more power during take-off.

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into second gear. A higher gear ratio allows you to gain more traction on slippery surfaces.

Fuel Economy Mode

The vehicle may have a fuel economy mode. When engaged, fuel economy mode can improve the vehicle's fuel economy.

Pressing the eco button by the shift lever will engage fuel economy mode. When activated, the eco light in the instrument cluster will come on. See *Fuel Economy Light on page 5-27*. Pressing the button a second time will turn fuel economy mode off.

When fuel economy mode is on:

- The transmission will upshift sooner, and downshift later.
- The torque converter will lock up sooner, and stay on longer.
- The gas pedal will be less sensitive.
- The vehicle's computers will more aggressively shut off fuel to the engine under deceleration.

Drive Systems

All-Wheel Drive

Vehicles with this feature always send engine power to all four wheels. It is fully automatic, and adjusts itself as needed for road conditions.

When using a compact spare tire on an AWD vehicle, the system automatically detects the compact spare and disables AWD. To restore AWD operation and prevent excessive wear on the system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire on page 10-96* for more information.

Brakes

Antilock Brake System (ABS)

This vehicle has the Antilock Brake System (ABS), an advanced electronic braking system that helps prevent a braking skid.

When the engine is started and the vehicle begins to drive away, ABS checks itself. A momentary motor or clicking noise might be heard while this test is going on, and it might even be noticed that the brake pedal moves a little. This is normal.

If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light on page 5-23*.

If driving safely on a wet road and it becomes necessary to slam on the brakes and continue braking to avoid a sudden obstacle, a computer senses that the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help the driver steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance. If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

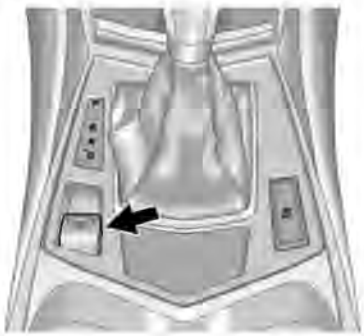
Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You might hear the ABS pump or motor operating and feel the brake pedal pulsate, but this is normal.

Braking in Emergencies

ABS allows the driver to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

Parking Brake



The vehicle has an Electric Parking Brake (EPB). The switch for the EPB is in the center console. The EPB can always be activated, even if the ignition is off. To avoid draining the battery, do not cycle the EPB too often without the engine running. The EPB can be left applied while the vehicle is parked.

The system has a parking brake status light and a parking brake warning light. See *Brake System Warning Light on page 5-22*. There are also three Driver Information Center (DIC) messages. See *Driver Information Center (DIC) on page 5-29* for more information. In case of insufficient electrical power, the EPB cannot be applied or released.

Before leaving the vehicle, check the parking brake status light to ensure the parking brake is applied.

EPB Apply

The EPB can be applied any time the vehicle is stopped. The EPB is applied by momentarily lifting up on the EPB switch. Once fully applied, the parking brake status light will be on. While the brake is being applied, the status light will flash until full apply is reached. If the light does not come on, or remains flashing, you need to have the vehicle serviced. Do not drive the vehicle if the parking brake status light is flashing. See your dealer. See *Brake System Warning Light on page 5-22* for more information.

If the EPB is applied while the vehicle is in motion, a chime will sound, and the DIC message RELEASE PARKING BRAKE will be displayed. The vehicle will decelerate as long as the switch is held in the up position. Releasing the EPB switch during the deceleration will release the parking brake. If the switch is held in the up position until the vehicle comes to a stop, the EPB will remain applied.

If the parking brake status light flashes continuously, the EPB is only partially applied or released, or there is a problem with the EPB. The DIC message SERVICE PARKING BRAKE will be displayed. If this light flashes continuously, release the EPB, and attempt to apply it again. If this light continues to flash, do not drive the vehicle. See your dealer.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To apply the EPB when this light is on, lift up on the EPB switch and hold it in the up position. Full application of the parking brake by the EPB system may take a longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light remains on. If the parking brake warning light is on, see your dealer.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

EPB Release

To release the EPB, place the ignition in the ON/RUN position, apply and hold the brake pedal, and push down momentarily on the EPB switch. If you attempt to release the EPB without the brake pedal applied, a chime will sound, and the DIC message STEP ON BRAKE TO RELEASE PARK BRAKE will be displayed. The EPB is released when the parking brake status light is off.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To release the EPB when this light is on, push down on the EPB switch and hold it in the down position. EPB release may take a longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light is off. If the light is on, see your dealer.

Notice: **Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.**

Automatic EPB Release

The EPB will automatically release if the vehicle is running, placed into gear, and an attempt is made to drive away. Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 9-54* for more information.

Brake Assist

This vehicle has a brake assist feature designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature uses the stability system hydraulic brake control module to supplement the power brake system under conditions where the driver has quickly and forcefully applied the brake pedal in an attempt to quickly stop or slow down the vehicle. The stability system hydraulic brake control module increases brake pressure at each corner of the vehicle until the ABS activates. Minor brake pedal pulsation or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates. The brake assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

Hill Start Assist (HSA)

This vehicle has a Hill Start Assist (HSA) feature, which may be useful when the vehicle is stopped on a grade. This feature is designed to prevent the vehicle from rolling, either forward or rearward, during vehicle drive off. After the driver completely stops and holds the vehicle in a complete standstill on a grade, HSA will be automatically activated. During the transition period between when the driver releases the brake pedal and starts to accelerate to drive off on a grade, HSA holds the braking pressure to ensure that there is no rolling. The brakes will automatically release when the accelerator pedal is applied within the two-second window. It will not activate if the vehicle is in a drive gear and facing downhill or if the vehicle is facing uphill and in R (Reverse).

Ride Control Systems

Traction Control System (TCS)

The vehicle has a Traction Control System (TCS) that limits wheel spin. On a front-wheel-drive vehicle, the system operates if it senses that one or both of the front wheels are spinning or beginning to lose traction. On an All-Wheel-Drive (AWD) vehicle, the system will operate if it senses that any of the wheels are spinning or beginning to lose traction. When this happens, the system brakes the spinning wheel(s) and/or reduces engine power to limit wheel spin.

The system may be heard or felt while it is working, but this is normal.

TCS is on whenever the vehicle is started. To limit wheel spin, especially in slippery road conditions, the system should always be left on. But, TCS can be turned off if needed.

flashes to indicate that the traction control system is active.

If there is a problem detected with TCS, SERVICE TRACTION CONTROL and SERVICE STABILITRAK may be displayed on the Driver Information Center (DIC) and will be on. See *Ride Control System Messages on page 5-39*. When this message is displayed and comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly.

Notice: **Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle's driveline could be damaged.**

If comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If still comes on and stays on at a speed above 20 km/h (13 mph), see your dealer for service.

A chime may also sound when the light comes on steady.

The is located on the console.

The TCS off light comes on and TRACTION CONTROL OFF is displayed on the Driver Information Center (DIC) to indicate that the traction control system has been turned off. See *Ride Control System Messages on page 5-39*.

TCS can be turned off by pressing and releasing . When TCS is turned off, comes on and the system will not limit wheel spin. Driving should be adjusted accordingly. Press and release again to turn the system back on.

When TCS is turned off on AWD vehicles, the system may still make noise. This is normal and necessary with AWD hardware.

It may be necessary to turn the system off if the vehicle ever gets stuck in sand, mud, or snow and rocking the vehicle is required. See *If the Vehicle is Stuck on page 9-11* for more information. See also *Winter Driving on page 9-9* for information on using TCS when driving in snowy or icy conditions.

If cruise control is being used when TCS activates, cruise control will automatically disengage. Press the cruise control button to re-engage when road conditions allow. See *Cruise Control on page 9-38*.

Adding non-GM accessories can affect the vehicle's performance. See *Accessories and Modifications on page 10-3* for more information.

StabiliTrak® System

The vehicle has a vehicle stability enhancement system called StabiliTrak. It is an advanced computer controlled system that assists with directional control of the vehicle in difficult driving conditions.

StabiliTrak activates when the computer senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak selectively applies braking pressure to the vehicle's brakes to help steer the vehicle in the intended direction.

StabiliTrak is on automatically whenever the vehicle is started. To assist with directional control of the vehicle, the system should always be left on.

When the stability control system activates, the Traction Control System (TCS)/StabiliTrak light will flash on the instrument panel. This also occurs when traction control is activated. A noise may be heard or vibration may be felt in the brake pedal. This is normal. Continue to steer the vehicle in the intended direction.

If there is a problem detected with StabiliTrak, SERVICE STABILITRAK is displayed on the Driver Information Center (DIC) and will stay on. See *Vehicle Messages on page 5-34*. When this message is displayed and/or comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly. See *Ride Control System Messages on page 5-39*.

If comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If still comes on and stays on at a speed above 20 km/h (13 mph), see your dealer for service.

OFF

is located on the console.

Both StabiliTrak and Traction Control can be turned off if needed by pressing and holding until and come on the instrument panel. When StabiliTrak is turned off, the system will not assist with directional control of the vehicle or limit wheel spin. Driving should be adjusted accordingly. Press and release again to turn the system back on.

If cruise control is being used when StabiliTrak activates, the cruise control will automatically disengage. Press the cruise control button to re-engage when road conditions allow. See *Cruise Control on page 9-38* for more information.

Limited-Slip Rear Axle

Vehicles with a limited-slip rear axle can give more traction on snow, mud, ice, sand, or gravel. When traction is low, this feature allows the drive wheel with the most traction to move the vehicle. The limited-slip rear axle also gives the driver enhanced control when cornering hard or completing a maneuver, such as a lane change.

Selective Ride Control

The vehicle may have a ride control system called Selective Ride Control. The setting can be changed at any time. Based on road conditions, steering wheel angle, and the vehicle speed, the system automatically adjusts to provide the best handling while providing a smooth ride. The Tour and Sport modes will feel similar on a smooth road.

To switch from TOUR to SPORT mode, move the shift lever to the left while the transmission is in D (Drive).

TOUR: Use for normal city and highway driving. This setting provides a smooth, soft ride.

SPORT: Use where road conditions or personal preference demand more control. This setting provides more "feel," or response to road conditions through increased steering effort and suspension control. Transmission shift points and shift firmness are also enhanced. See *Manual Mode on page 9-28* under Automatic Transmission.

If there is a problem detected with Selective Ride Control, SERVICE SUSPENSION SYSTEM displays on the Driver Information Center (DIC). See *Ride Control System Messages on page 5-39*. Driving should be adjusted accordingly.

Cruise Control

⚠ WARNING

Cruise control can be dangerous where you cannot drive safely at a steady speed. So, do not use the cruise control on winding roads or in heavy traffic.

Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

With cruise control, a speed of about 40 km/h (25 mph) or more can be maintained without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

If the brakes are applied, the cruise control shuts off.

If the vehicle has the StabiliTrak® system and begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *StabiliTrak® System on page 9-36* or *Traction Control System (TCS) on page 9-34*. When road conditions allow the cruise control to be safely used, you can apply the cruise control again.

Cruise Control

(On/Off): Press to turn the system on and off.

+ RES (Resume/Accelerate): Press briefly to make the vehicle resume to a previously set speed or press and hold to accelerate.

−SET (Set/Coast): Press to set the speed and activate cruise control or make the vehicle decelerate.

⊗ (Cancel): Press to disengage cruise control without erasing the set speed from memory.

Setting Cruise Control

If the cruise button is on when not in use, it could get bumped and go into cruise when not desired. Keep the cruise control switch off when cruise is not being used.

The cruise control light on the instrument panel cluster comes on after the cruise control has been set to the desired speed.

1. Press .
2. Get up to the desired speed.
3. Press and release the −SET button located on the steering wheel.
4. Take your foot off the accelerator.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle speed reaches about 40 km/h (25 mph) or more, press the +RES button on the steering wheel. The vehicle returns to the previous set speed and stays there.

Increasing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated,

- Press and hold the +RES button on the steering wheel until the desired speed is reached, then release it.
- To increase vehicle speed in small amounts, press the +RES button. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) faster.

Reducing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated,

- Press and hold the −SET button on the steering wheel until the desired lower speed is reached, then release it.
- To slow down in small amounts, press the −SET button on the steering wheel briefly. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) slower.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previous set cruise speed.

Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed. When going downhill, you might have to brake or shift to a lower gear to keep the vehicle speed down. If the brake is applied the cruise control disengages.

Ending Cruise Control

There are three ways to end cruise control:

- Step lightly on the brake pedal.
- Press the ⊗ button on the steering wheel.
- Press the button on the steering wheel.

Erasing Speed Memory

The cruise control set speed is erased from memory by pressing the button or if the ignition is turned off.

Object Detection Systems

Ultrasonic Parking Assist

For vehicles with the Ultrasonic Front and Rear Parking Assist (UFRPA) system, it assists the driver with parking and avoiding objects. UFRPA operates at speeds less than 8 km/h (5 mph), and the sensors on the front and rear bumper detect objects up to 1.2 m (4 ft) in front of the vehicle and 2.5 m (8 ft) behind the vehicle, and at least 25.4 cm (10 in) off the ground.

⚠ WARNING

The Ultrasonic Front and Rear Parking Assist (UFRPA) system does not replace driver vision. It cannot detect:

- Objects that are below the bumper, underneath the vehicle, or if they are too close or far from the vehicle.
- Children, pedestrians, bicyclists, or pets.

If you do not use proper care before moving forward and while backing; vehicle damage, injury, or death could occur. Even with UFRPA, always check in front of the vehicle before moving forward and behind the vehicle before backing up. While moving forward and backing, be sure to look for objects and check the vehicle mirrors.

How the System Works

When the vehicle is shifted into R (Reverse) the front and rear sensors are automatically turned on. After the vehicle is shifted out of R (Reverse), the rear sensors are turned off and the front sensors stay on until the vehicle is above a certain speed. The front sensors may also be turned on by pressing the park assist button located next to the shift lever without shifting into R (Reverse) while the vehicle is traveling at a low speed. See "Turning the System On and Off" later in this section.

When the vehicle is in N (Neutral), the system may be active. If the vehicle is in a car wash, the sensors may detect objects in the car wash. See "Turning the System On and Off" later in this section to turn the system off.

High-toned beeps heard from the front speakers are for objects detected near the front bumper. Low-toned beeps heard from the rear speakers are for objects detected near the rear bumper.

When an object is detected, high or low-tone beeps are heard. As the vehicle gets closer to an object, the time between the beeps becomes shorter. When the distance is less than 30 cm (11.8 in), beeping is continuous. The distance may be less during warmer or humid weather.

PARK ASSIST OFF displays on the Driver Information Center (DIC) to indicate that UFRPA is off. The message disappears after a short period of time.

Front Display

The front display is located in the instrument panel in the center of the speedometer and has four bars to provide distance and system information.

The following describes how the UFRPA front display lights appear as the vehicle gets closer to a detected object:

Description	Metric	English
one amber bar	1.2 m	4 ft
two amber bars	1.0 m	40 in
three amber bars	0.6 m	23 in
three amber bars and one red bar	0.3 m	1 ft

Turning the System On and Off

The UFRPA system can be turned on and off by pressing the park assist button located next to the shift lever.

The park assist button lights up when the system is on and turns off when it has been disabled.

When the System Does Not Seem to Work Properly

If UFRPA does not turn on due to a temporary condition, the message PARK ASSIST OFF displays on the DIC, and the light on the park assist button turns off. This can occur under the following conditions:

- The ultrasonic sensors are not clean. Keep the vehicle's bumpers free of mud, dirt, snow, ice and slush. For cleaning instructions, see *Exterior Care on page 10-105*.
- A trailer was attached to the vehicle, or an object was hanging out of the liftgate during the last drive cycle. Once the attached object is removed, UFRPA will return to normal operation.
- An object is attached to the front of the vehicle.
- A tow bar is attached to the vehicle.
- The vehicle's bumper is damaged. Take the vehicle to your dealer to repair the system.
- Other conditions may affect system performance, such as vibrations from a jackhammer or the compression of air brakes on a very large truck.

Rear Vision Camera (RVC)

The vehicle may have a Rear Vision Camera (RVC) system. Read this entire section before using it.

The RVC system can assist the driver when backing up by displaying a view of the area behind the vehicle.

⚠ WARNING

The Rear Vision Camera (RVC) system does not replace driver vision. RVC does not:

- Detect objects that are outside the camera's field of view, below the bumper, or underneath the vehicle.
- Detect children, pedestrians, bicyclists, or pets.

(Continued)

WARNING (Continued)

Do not back the vehicle by only looking at the RVC screen, or use the screen during longer, higher speed backing maneuvers or where there could be cross-traffic. Your judged distances using the screen will differ from actual distances.

If you do not use proper care before backing up, you could hit a vehicle, child, pedestrian, bicyclist, or pet, resulting in vehicle damage, injury, or death. Even though the vehicle has the RVC system, always check carefully before backing up by checking behind and around the vehicle.

Vehicles Without a Navigation System

When the vehicle is on and the driver shifts into R (Reverse), the video image automatically appears on the inside rearview mirror. Once the driver shifts out of R (Reverse), the video image automatically disappears from the inside rearview mirror.

Turning the Rear Vision Camera System Off or On

To turn off the RVC system, press and hold ⏻, located on the inside rearview mirror, until the left indicator light turns off. The RVC display is now disabled.

To turn the RVC system on again, press and hold ⏻ until the left indicator light illuminates. The RVC system display is now enabled and the display will appear in the mirror normally.

Vehicles With a Navigation System

An image appears on the navigation screen with the message "Check Surroundings for Safety" when the vehicle is shifted into R (Reverse). The navigation screen goes to the previous screen after approximately 10 seconds once the vehicle is shifted out of R (Reverse).

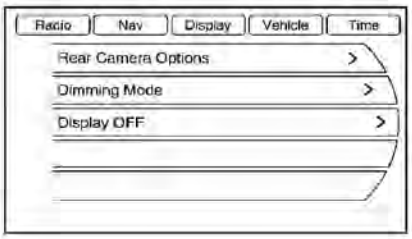
To cancel the delay, do one of the following:

- Press a hard key on the navigation system.
- Shift into P (Park).
- Reach a vehicle speed of 8 km/h (5 mph).

Turning the Rear Vision Camera System On or Off

To turn the rear vision camera system on or off:

1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.



4. Select Camera. When a checkmark appears next to the Camera option, the RVC system is on.

Symbols

The navigation system may have a feature that lets the driver view symbols on the navigation screen while using the rear vision camera. The Ultrasonic Front and Rear Parking Assist (UFRPA) system must not be disabled to use the caution symbols. The error message "Rear Parking Assist Symbols Unavailable" may display if UFRPA has been disabled and the symbols have been turned on. See *Ultrasonic Parking Assist on page 9-40*.

The symbols appear and may cover an object when viewing the navigation screen when an object is detected by the UFRPA system.

To turn the symbols on or off:

1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.
4. Select Symbols. When a checkmark appears next to the Symbols option, symbols will appear.

Guidelines

The RVC system has a guideline overlay that can help the driver align the vehicle when backing into a parking spot.

To turn the guidelines on or off:

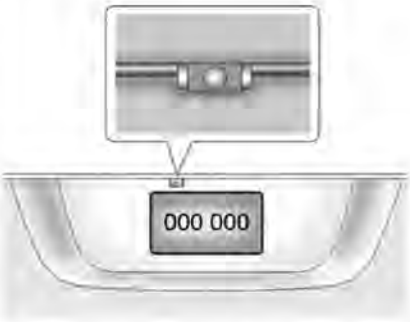
1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.
4. Select Guidelines. When a checkmark appears next to the Guidelines option, guidelines will appear.

Rear Vision Camera Error Messages

SERVICE REAR VISION CAMERA SYSTEM: This message can display when the system is not receiving information it requires from other vehicle systems.

If any other problem occurs or if a problem persists, see your dealer.

Rear Vision Camera Location

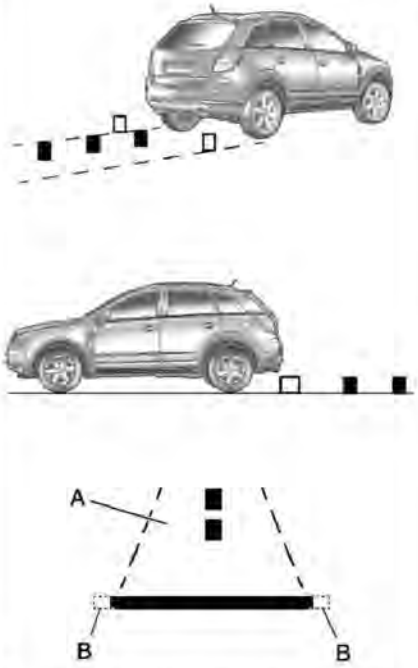


The camera is located above the license plate.

The area displayed by the camera is limited.

It does not display objects that are close to either corner or under the bumper and can vary depending on vehicle orientation or road conditions. The distance of the image that appears on the screen is different from the actual distance.

The following illustration shows the field of view that the camera provides.



A. View displayed by the camera.
B. Corner of the rear bumper.

When the System Does Not Seem to Work Properly

The rear vision camera system may not work properly or display a clear image if:

- The RVC is turned off. See "Turning the Rear Vision Camera System On or Off" earlier in this section.
- It is dark.
- The sun or the beam of headlamps is shining directly into the camera lens.
- Ice, snow, mud, or anything else builds up on the camera lens. Clean the lens, rinse it with water, and wipe it with a soft cloth.
- The back of the vehicle is in an accident. The position and mounting angle of the camera can change or the camera can be affected. Be sure to have the camera and its position and mounting angle checked at your dealer.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of this vehicle. To help keep the engine clean and maintain optimum vehicle performance, we recommend the use of gasoline advertised as TOP TIER Detergent Gasoline.

Look for the TOP TIER label on the fuel pump to ensure gasoline meets enhanced detergency standards developed by auto companies. A list of marketers providing TOP TIER Detergent Gasoline can be found at www.toptiergas.com.

TOP TIER
Detergent Gasoline

CATEGORIE SUPERIEURE
Essences Détergentes

The eighth digit of the Vehicle Identification Number (VIN) shows the code letter or number that identifies the vehicle's engine.

The VIN is at the top left of the instrument panel. See *Vehicle Identification Number (VIN) on page 12-1*.

Vehicles that have a FlexFuel badge and a yellow fuel cap can use either unleaded gasoline or ethanol fuel containing up to 85% ethanol (E85). See *Fuel E85 (85% Ethanol) on page 9-50*. For all other vehicles, use only the unleaded gasoline described under *Recommended Fuel on page 9-48*.

Recommended Fuel

If the vehicle has the 3.0L V6 engine (VIN Code Y), use regular unleaded gasoline with a posted octane rating of 87 or higher. If the octane rating is less than 87, an audible knocking noise, commonly referred to as spark knock, might be heard when driving. If this occurs, use a gasoline rated at 87 octane or higher as soon as possible. If heavy knocking is heard when using gasoline rated at 87 octane or higher, the engine needs service.

If the vehicle has the 2.8L V6 engine (VIN Code 6), use premium unleaded gasoline with a posted octane rating of 91 or higher. For best performance, use premium unleaded gasoline with a posted octane rating of 93. In an emergency, you can use regular unleaded gasoline with an octane rating of 87 or higher. If 87 octane fuel is used, do not perform any aggressive driving maneuvers such as wide open throttle applications. You might also hear audible spark knock during acceleration. Refill the tank with premium fuel as soon as possible to avoid damaging the engine. If heavy knocking is heard when using gasoline rated at 91octane or higher, the engine needs service.

Gasoline Specifications (U.S. and Canada Only)

At a minimum, gasoline should meet ASTM specification D 4814 in the United States or CAN/CGSB-3.5 or 3.511 in Canada. Some gasolines contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). We recommend against the use of gasolines containing MMT. See *Fuel Additives on page 9-49* for additional information.

California Fuel Requirements

If the vehicle is certified to meet California Emissions Standards, it is designed to operate on fuels that meet California specifications. See the underhood emission control label. If this fuel is not available in states adopting California Emissions Standards, the vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system performance might be affected. The malfunction indicator lamp could turn on and the vehicle might fail a smog-check test. See *Malfunction Indicator Lamp on page 5-19*. If this occurs, return to your authorized dealer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs might not be covered by the vehicle warranty.

Fuels in Foreign Countries

Never use leaded gasoline or any other fuel not recommended in the previous text on fuel. Costly repairs caused by use of improper fuel would not be covered by the vehicle warranty.

To check the fuel availability, ask an auto club, or contact a major oil company that does business in the country where you will be driving.

Fuel Additives

To provide cleaner air, all gasolines in the United States are now required to contain additives that help prevent engine and fuel system deposits from forming, allowing the emission control system to work properly. In most cases, nothing should have to be added to the fuel. However, some gasolines contain only the minimum amount of additive required to meet U.S. Environmental Protection Agency regulations. To help keep fuel injectors and intake valves clean and avoid problems due to dirty injectors or valves, look for gasoline that is advertised as TOP TIER Detergent Gasoline. Look for the TOP TIER label on the fuel pump to ensure gasoline meets enhanced detergency standards developed by the auto companies. A list of marketers providing TOP TIER Detergent Gasoline can be found at www.toptiergas.com.

For customers who do not use TOP TIER Detergent Gasoline regularly, one bottle of GM Fuel System Treatment PLUS, added to the fuel tank at every engine oil change, can help clean deposits from fuel injectors and intake valves. GM Fuel System Treatment PLUS is the only gasoline additive recommended by General Motors. It is available at your dealer.

Gasolines containing oxygenates, such as ethers and ethanol, and reformulated gasolines might be available in your area. We recommend that you use these gasolines, if they comply with the specifications described earlier. However, E85 (85% ethanol) and other fuels containing more than 10% ethanol must not be used in vehicles that were not designed for those fuels.

Notice: **This vehicle was not designed for fuel that contains methanol. Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.**

Some gasolines that are not reformulated for low emissions can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT); ask the attendant where you buy gasoline whether the fuel contains MMT. We recommend against the use of such gasolines. Fuels containing MMT can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp might turn on. If this occurs, return to your dealer for service.

Fuel E85 (85% Ethanol)

Vehicles that have a FlexFuel badge and a yellow fuel cap can use either unleaded gasoline or ethanol fuel containing up to 85% ethanol (E85). For all other vehicles, use only the unleaded gasoline described under *Recommended Fuel on page 9-48*.

We encourage the use of E85 in vehicles that are designed to use it. The ethanol in E85 is a "renewable" fuel, meaning it is made from renewable sources such as corn and other crops.

Many service stations will not have an 85% ethanol fuel (E85) pump available. The U.S. Department of Energy has an alternative fuels website (www.afdc.energy.gov/afdc/locator/stations/) that can help you find E85 fuel. Those stations that do have E85 should have a label indicating ethanol content. Do not use the fuel if the ethanol content is greater than 85%.

At a minimum, E85 should meet ASTM Specification D 5798. By definition, this means that fuel labeled E85 will have an ethanol content between 70% and 85%. Filling the fuel tank with fuel mixtures that do not meet ASTM specifications can affect driveability and could cause the malfunction indicator lamp to come on.

To ensure quick starts in the wintertime, the E85 fuel must be formulated properly for your climate according to ASTM specification D 5798. If you have trouble starting on E85, it could be because the E85 fuel is not properly formulated for your climate. If this happens, switching to gasoline or adding gasoline to the fuel tank can improve starting. For good starting and heater efficiency below 0°C (32°F), the fuel mix in the fuel tank should contain no more than 70% ethanol. It is best not to alternate repeatedly between gasoline and E85. If you do switch fuels, it is recommended that you add as much fuel as possible — do not add less than 11 L (3 gal) when refueling. You should drive the vehicle immediately after refueling for at least 11 km (7 mi) to allow the vehicle to adapt to the change in ethanol concentration.

E85 has less energy per liter (gallon) than gasoline, so you will need to refill the fuel tank more often when using E85 than when you are using gasoline. See *Filling the Tank on page 9-52*.

Notice: **Some additives are not compatible with E85 fuel and can harm the vehicle's fuel system. Do not add anything to E85. Damage caused by additives would not be covered by the vehicle warranty.**

Notice: **This vehicle was not designed for fuel that contains methanol. Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.**

Filling the Tank

⚠ WARNING

Fuel vapor burns violently and a fuel fire can cause bad injuries. To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island. Turn off the engine when refueling. Do not smoke near fuel or when refueling the vehicle. Do not use cellular phones. Keep sparks, flames, and smoking materials away from fuel. Do not leave the fuel pump unattended when refueling the vehicle. This is against the law in some places. Do not re-enter the vehicle while pumping fuel. Keep children away from the fuel pump; never let children pump fuel.

The tethered fuel cap is located behind a hinged fuel door on the passenger side of the vehicle.

To open the fuel door, push the rearward center edge in and release and it will open.

To remove the fuel cap, turn it slowly counterclockwise.

While refueling, hang the tethered fuel cap from the hook on the fuel door.

When reinstalling the cap, turn it clockwise until it clicks once, otherwise the Malfunction Indicator Lamp could turn on. See *Malfunction Indicator Lamp on page 5-19*.

⚠ WARNING

Fuel can spray out on you if you open the fuel cap too quickly. If you spill fuel and then something ignites it, you could be badly burned. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop. Then unscrew the cap all the way.

Be careful not to spill fuel. Do not top off or overfill the tank and wait a few seconds after you have finished pumping before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care on page 10-105*.

When replacing the fuel cap, turn it clockwise until it clicks once. Make sure the cap is fully installed.

The diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See *Malfunction Indicator Lamp on page 5-19*.

⚠ WARNING

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

Notice: **If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap might not fit properly, might cause the malfunction indicator lamp to light, and could damage the fuel tank and emissions system. See *Malfunction Indicator Lamp on page 5-19*.**

Filling a Portable Fuel Container

⚠ WARNING

Never fill a portable fuel container while it is in the vehicle. Static electricity discharge from the container can ignite the fuel vapor. You can be badly burned and the vehicle damaged if this occurs. To help avoid injury to you and others:

- Dispense fuel only into approved containers.
- Do not fill a container while it is inside a vehicle, in a vehicle's trunk, pickup bed, or on any surface other than the ground.

(Continued)

WARNING (Continued)

- Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Contact should be maintained until the filling is complete.
- Do not smoke while pumping fuel.
- Do not use a cellular phone while pumping fuel.

Towing

General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer.

See the following trailer towing information in this section:

- For information on driving while towing a trailer, see "Driving Characteristics and Towing Tips."
- For maximum vehicle and trailer weights, see "Trailer Towing."
- For information on equipment to tow a trailer, see "Towing Equipment."

For information on towing a disabled vehicle, see *Towing the Vehicle on page 10-101*. For information on towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing on page 10-101*.

Driving Characteristics and Towing Tips

⚠ WARNING

The driver can lose control when pulling a trailer if the correct equipment is not used or the vehicle is not driven properly. For example, if the trailer is too heavy, the brakes may not work well — or even at all. The driver and passengers could be seriously injured. The vehicle may also be damaged; the resulting repairs would not be covered by the vehicle warranty. Pull a trailer only if all the steps in this section have been followed. Ask your dealer for advice and information about towing a trailer with the vehicle.

The vehicle can tow a trailer when equipped with the proper trailer towing equipment. For trailering capacity, see *Trailer Towing on page 9-58*. Trailering changes handling, acceleration, braking, durability and fuel economy. With the added weight, the engine, transmission, wheel assemblies and tires are forced to work harder and under greater loads. The trailer also adds wind resistance, increasing the pulling requirements. For safe trailering, correctly use the proper trailering equipment.

The following information has important trailering tips and rules for your safety and that of your passengers. Read this section carefully before pulling a trailer.

Pulling a Trailer

Here are some important points:

- There are many laws, including speed limit restrictions that apply to trailering. Check for legal requirements.
- Do not tow a trailer at all during the first 1 600 km (1,000 miles) the new vehicle is driven. The engine, axle or other parts could be damaged.
- During the first 800 km (500 miles) that a trailer is towed, do not drive over 80 km/h (50 mph) and do not make starts at full throttle. This reduces wear on the vehicle.
- The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.
- Do not use the Fuel Economy Mode when towing.
- Obey speed limit restrictions. Do not drive faster than the maximum posted speed for trailers, or no more than 90 km/h (55 mph), to reduce wear on the vehicle.

Driving with a Trailer

Towing a trailer requires experience. Get familiar with handling and braking with the added trailer weight. The vehicle is now longer and not as responsive as the vehicle is by itself.

Check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tires and mirror adjustments. If the trailer has electric brakes, start the vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working.

During the trip, check regularly to be sure that the load is secure, and the lamps and trailer brakes are working properly.

Towing with a Stability Control System

When towing, the sound of the stability control system might be heard. The system is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid situations that require heavy braking and sudden turns.

Passing

More passing distance is needed when towing a trailer. Because the rig is longer, it is necessary to go farther beyond the passed vehicle before returning to the lane.

Backing Up

Hold the bottom of the steering wheel with one hand. To move the trailer to the left, move that hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

Making Turns

Notice: **Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.**

When turning with a trailer, make wider turns than normal so the trailer will not strike soft shoulders, curbs, road signs, trees or other objects. Use the turn signal well in advance and avoid jerky or sudden maneuvers.

Turn Signals When Towing a Trailer

The turn signal indicators on the instrument panel flash whenever signaling a turn or lane change. Properly hooked up, the trailer lamps also flash, telling other drivers the vehicle is turning, changing lanes or stopping.

When towing a trailer, the arrows on the instrument panel flash for turns even if the bulbs on the trailer are burned out. Check occasionally to be sure the trailer bulbs are still working.

Driving on Grades

Reduce speed and shift to a lower gear before starting down a long or steep downgrade. If the transmission is not shifted down, the brakes might have to be used so much that they would get hot and no longer work well.

The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.

When towing at high altitude on steep uphill grades, engine coolant boils at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle could show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating on page 10-24*.

Parking on Hills

⚠ WARNING

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the brake pedal until the chocks absorb the load.

4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
5. Release the brake pedal.

Leaving After Parking on a Hill

1. Apply and hold the brake pedal while you:
   - Start the engine.
   - Shift into a gear.
   - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance When Trailer Towing

The vehicle needs service more often when pulling a trailer. See this manual's Maintenance Schedule or index for more information. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system and brake system. Inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Engine Cooling When Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating on page 10-24*.

Trailer Towing

Before pulling a trailer, there are three important considerations that have to do with weight:

- The weight of the trailer
- The weight of the trailer tongue
- The total weight on the vehicle's tires

Weight of the Trailer

How heavy can a trailer safely be?

It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature and how much the vehicle is used to pull a trailer are all important. It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry. See "Weight of the Trailer Tongue" later in this section for more information.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Use the following chart to determine how much the vehicle can weigh, based upon the vehicle model and options.

Vehicle	Maximum Trailer Weight	GCWR*	Maximum Tongue Weight
2.8L Engine, AWD	1 588 kg (3,500 lbs)	3 725 kg (8,212 lbs)	159 kg (350 lbs)
3.0L Engine, FWD without Trailering Package	1 134 kg (2,500 lbs)	3 185 kg (7,022 lbs)	113 kg (250 lbs)
3.0L Engine, FWD with Trailering Package	1 588 kg (3,500 lbs)	3 640 kg (8,025 lbs)	159 kg (350 lbs)
3.0L Engine, AWD without Trailering Package	1 134 kg (2,500 lbs)	3 270 kg (7,209 lbs)	159 kg (350 lbs)
3.0L Engine, AWD with Trailering Package	1 588 kg (3,500 lbs)	3 725 kg (8,212 lbs)	159 kg (350 lbs)
*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversions. The GCWR for the vehicle should not be exceeded.			

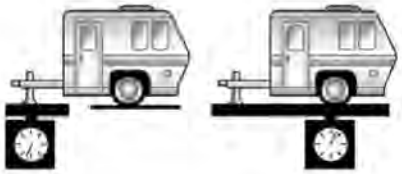
Ask your dealer for trailering information or advice.
See *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-6* for more information.

Weight of the Trailer Tongue

The tongue load (A) of any trailer is an important weight to measure because it affects the total gross weight of the vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo carried in it, and the people who will be riding in the vehicle.

If there are a lot of options, equipment, passengers or cargo in the vehicle, it will reduce the tongue weight the vehicle can carry, which will also reduce the trailer weight the vehicle can tow. If towing a trailer, the tongue load must be added to the GVW because the vehicle will be carrying that weight, too.

See *Vehicle Load Limits on page 9-12* for more information about the vehicle's maximum load capacity.



A B

If a weight-carrying hitch or a weight-distributing hitch is being used, the trailer tongue (A) should weigh 10-15 percent of the total loaded trailer weight (B).

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

Trailering may be limited by the vehicle's ability to carry tongue weight. Tongue weight cannot cause the vehicle to exceed the GVWR (Gross Vehicle Weight Rating) or the RGAWR (Rear Gross Axle Weight Rating). The effect of additional weight may reduce the trailering capacity more than the total of the additional weight.

It is important that the vehicle does not exceed any of its ratings — GCWR, GVWR, RGAWR, Maximum Trailer Rating or Tongue Weight. The only way to be sure it is not exceeding any of these ratings is to weigh the vehicle and trailer.

Total Weight on the Vehicle's Tires

Be sure the vehicle's tires are inflated to the upper limit for cold tires. These numbers can be found on the Certification label or see *Vehicle Load Limits on page 9-12* for more information. Make sure not to go over the GVW limit for the vehicle, or the GAWR, including the weight of the trailer tongue. If using a weight distributing hitch, make sure not to go over the rear axle limit before applying the weight distribution spring bars.

Towing Equipment

Hitches

It is important to have the correct hitch equipment. Crosswinds, large trucks going by and rough roads are a few reasons why the right hitch is needed.

- The rear bumper on the vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will any holes be made in the body of the vehicle when the trailer hitch is installed? If there are, then be sure to seal the holes later when the hitch is removed. If the holes are not sealed, dirt, water, and deadly carbon monoxide (CO) from the exhaust can get into the vehicle. See *Engine Exhaust on page 9-24*.

Hitch Cover

The vehicle may have a hitch cover. To remove the hitch cover:

1. Turn the fasteners on the lower tabs 90 degrees counterclockwise.
2. Lift the lower edge of the cover about 45 degrees.
3. Pull the cover downward to disengage the upper attachments.

To reinstall the hitch cover:

1. Hold the cover at a 45 degree angle to the vehicle and push the upper tabs in the hitch cover into the slots in the fascia.
2. Move the bottom of the cover forward until the lower tabs line up with the lower fascia slots.
3. Snap the hitch cover into place by pushing the upper corners forward.
4. Turn the fasteners on the lower tabs 90 degrees clockwise to lock the cover in place.

Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Always leave just enough slack so the rig can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

A loaded trailer that weighs more than 450 kg (1,000 lbs) needs to have its own brake system that is adequate for the weight of the trailer. Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted and maintained properly.

Because the vehicle has anti-lock brakes, do not tap into the vehicle's brake system. If you do, both brake systems will not work well, or at all.

Trailer Wiring Harness

All of the electrical circuits required for the trailer lighting system can be accessed at a connector mounted to the frame, behind the rear bumper cover.

Trailer Sway Control (TSC)

The vehicle has a Trailer Sway Control (TSC) feature as part of the StabiliTrak system. If TSC detects that the trailer is swaying, the vehicle's brakes are automatically applied.

When TSC is applying the brakes, the TCS/StabiliTrak indicator light flashes to notify the driver to reduce speed. See *Traction Control System (TCS)/StabiliTrak® Light on page 5-25*. If the trailer continues to sway, StabiliTrak will reduce engine torque to help slow the vehicle.

TSC will not function if StabiliTrak is turned off.

Conversions and Add-Ons

Add-On Electrical Equipment

Notice: **Do not add anything electrical to the vehicle unless you check with your dealer first. Some electrical equipment can damage the vehicle and the damage would not be covered by the vehicle's warranty. Some add-on electrical equipment can keep other components from working as they should.**

Add-on equipment can drain the vehicle's 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see *Servicing the Airbag-Equipped Vehicle on page 3-43* and *Adding Equipment to the Airbag-Equipped Vehicle on page 3-44*.

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General Information

For service and parts needs, visit your dealer. You will receive genuine GM parts and GM-trained and supported service people.

Genuine GM parts have one of these marks:

ACDelco.

Genuine GM Parts

Goodwrench.

GM Accessories

California Proposition 65 Warning

Most motor vehicles, including this one, contain and/or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems, many fluids, and some component wear by-products contain and/or emit these chemicals.

California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, seat belt pretensioners, and lithium batteries contained in Remote Keyless Entry transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.

Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. Your GM dealer can accessorize the vehicle using genuine GM Accessories. When you go to your GM dealer and ask for GM Accessories, you will know that GM-trained and supported service technicians will perform the work using genuine GM Accessories.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle on page 3-44.*

Vehicle Checks

Doing Your Own Service Work

⚠ WARNING

You can be injured and the vehicle could be damaged if you try to do service work on a vehicle without knowing enough about it.

- Be sure you have sufficient knowledge, experience, the proper replacement parts, and tools before attempting any vehicle maintenance task.

(Continued)

WARNING (Continued)

- Be sure to use the proper nuts, bolts, and other fasteners. Metric and English fasteners can be easily confused. If the wrong fasteners are used, parts can later break or fall off. You could be hurt.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can. To order the proper service manual, see *Service Publications Ordering Information on page 13-16.*

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle on page 3-43*.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records on page 11-10*.

Hood

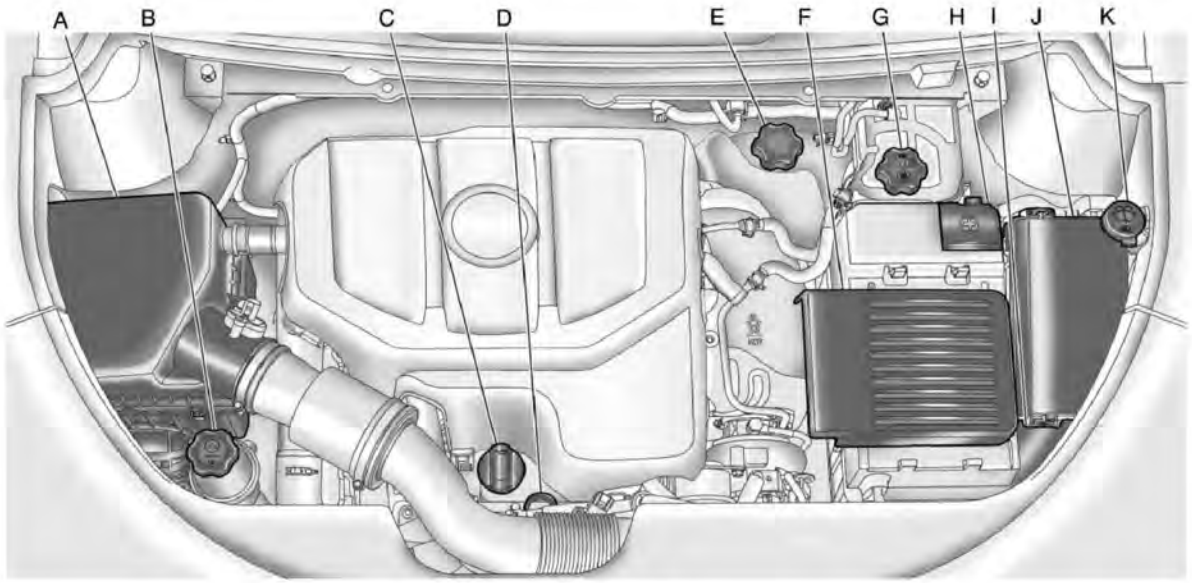
To open the hood:

1. Pull the release handle with the above symbol on it. It is located below the instrument panel to the left of the steering wheel.

2. Move the secondary hood release lever up to release the striker. The lever is located near the middle of the hood.
3. Lift the hood.

Before closing the hood, be sure all the filler caps are on properly.

Engine Compartment Overview



2.8 L V6 Engine

A. *Engine Air Cleaner/Filter on page 10-16.*

B. Power Steering Reservoir and Cap. See *Power Steering Fluid on page 10-26.*

C. Engine Oil Fill Cap. See *Engine Oil on page 10-10.*

D. Engine Oil Dipstick. See *Engine Oil on page 10-10.*

E. Brake Master Cylinder Reservoir. See *Brakes on page 10-27.*

F. Battery (Out of View). See *Battery on page 10-30.*

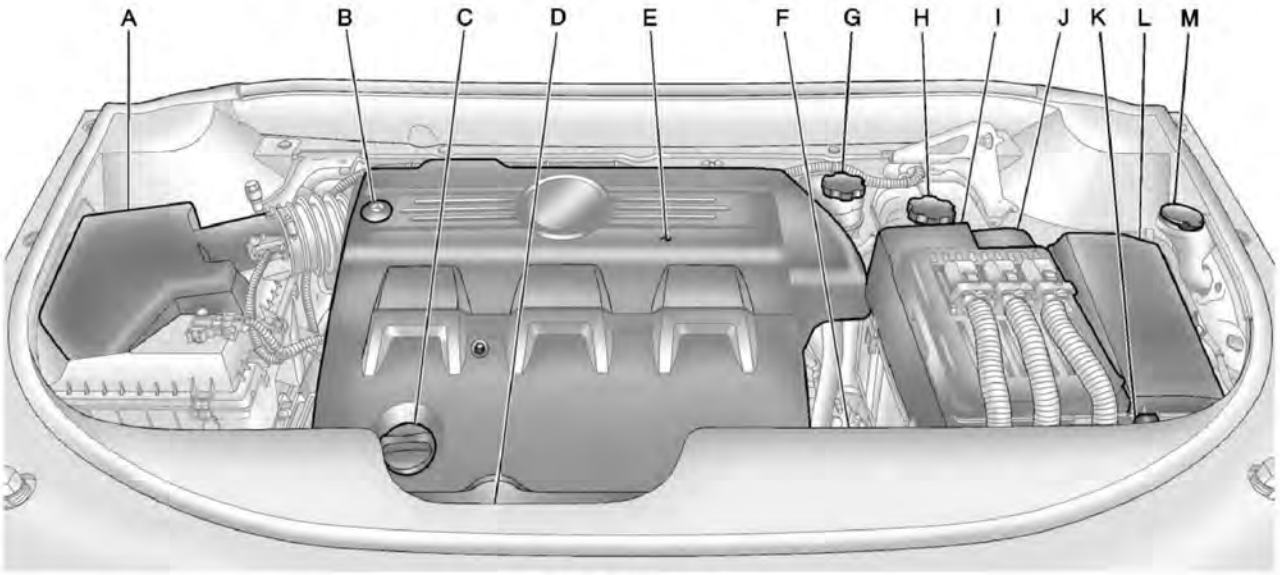
G. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 10-20.*

H. Remote Positive (+) Terminal. See *Jump Starting on page 10-96.*

I. Remote Negative (−) Terminal (Out of View). See *Jump Starting on page 10-96.*

J. *Engine Compartment Fuse Block on page 10-48.*

K. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 10-26.*



3.0 L V6 Engine

Q8_000002745

A. *Engine Air Cleaner/Filter on page 10-16.*

B. Power Steering Reservoir and Cap (Under Engine Cover). See *Power Steering Fluid on page 10-26.*

C. Engine Oil Fill Cap. See *Engine Oil on page 10-10.*

D. Engine Oil Dipstick (Out of View). See *Engine Oil on page 10-10.*

E. *Engine Cover on page 10-10.*

F. Transmission Fluid Cap and Dipstick (Out of View). See *Automatic Transmission Fluid on page 10-16.*

G. Brake Master Cylinder Reservoir. See *Brakes on page 10-27.*

H. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 10-20.*

I. Battery (Out of View). See *Battery on page 10-30.*

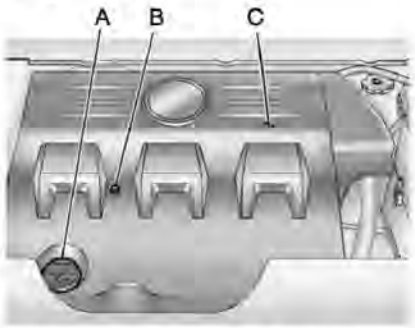
J. Remote Positive (+) Terminal. See *Jump Starting on page 10-96.*

K. Remote Negative (−) Terminal (Out of View). See *Jump Starting on page 10-96.*

L. *Engine Compartment Fuse Block on page 10-48.*

M. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 10-26.*

Engine Cover



Engine Cover (3.0 L V6)

A. Oil Fill Cap
B. Engine Cover Bolt
C. Engine Cover

To remove:

1. Remove the oil fill cap (A).
2. Remove the engine cover bolt (B).
3. Raise the engine cover (C) to release from the retainers.
4. Lift and remove the engine cover.
5. Reverse Steps 1 through 4 to reinstall engine cover.

Engine Oil

To ensure proper engine performance and long life, careful attention must be paid to engine oil. Following these simple, but important steps will help protect your investment:

- Always use engine oil approved to the proper specification and of the proper viscosity grade. See "Selecting the Right Engine Oil" in this section.
- Check the engine oil level regularly and maintain the proper oil level. See "Checking Engine Oil" and "When to Add Engine Oil" in this section.
- Change the engine oil at the appropriate time. See *Engine Oil Life System on page 10-14*.
- Always dispose of engine oil properly. See "What to Do with Used Oil" in this section.

Checking Engine Oil

It is a good idea to check the engine oil level at each fuel fill. In order to get an accurate reading, the vehicle must be on level ground. The engine oil dipstick handle is a yellow loop. See *Engine Compartment Overview on page 10-6* for the location of the engine oil dipstick.

1. If the engine has been running recently, turn off the engine and allow several minutes for the oil to drain back into the oil pan. Checking the oil level too soon after engine shutoff will not provide an accurate oil level reading.
2. Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

When to Add Engine Oil

If the oil is below the cross-hatched area at the tip of the dipstick, add 1 L (1 qt) of the recommended oil and then recheck the level. See "Selecting the Right Engine Oil" in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications on page 12-2*.

Notice: **Do not add too much oil. Oil levels above or below the acceptable operating range shown on the dipstick are harmful to the engine. If you find that you have an oil level above the operating range, i.e., the engine has so much oil that the oil level gets above the cross-hatched area that shows the proper operating range, the engine could be damaged. You should drain out the excess oil or limit driving of the vehicle and seek a service professional to remove the excess amount of oil.**

See *Engine Compartment Overview on page 10-6* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when through.

Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade:

Specification (3.0L V6 Engine)

Use and ask for engine oils with the dexos™ certification mark. Oils meeting the requirements of the vehicle should have the dexos certification mark on the container. This certification mark indicates that the oil has been approved to the dexos specification.

This vehicle was filled at the factory with dexos-approved engine oil.

Notice: **Use only engine oil that is approved to the dexos specification or an equivalent engine oil of the appropriate viscosity grade. Engine oils approved to the dexos specification will show the dexos symbol on the container. Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty. If you are unsure whether the oil is approved to the dexos specification, ask your service provider.**

Use of Substitute Engine Oils if dexos is unavailable: In the event that dexos-approved engine oil is not available at an oil change or for maintaining proper oil level, you may use substitute engine oil displaying the API Starburst symbol and of SAE 5W-30 viscosity grade. Use of oils that do not meet the dexos specification, however, may result in reduced performance under certain circumstances.

Specification (2.8L V6 Engine)

Use and ask for engine oils with the dexos certification mark. Oils meeting the requirements of the vehicle should have the dexos certification mark on the container. This certification mark indicates that the oil has been approved to the dexos specification.

This vehicle was filled at the factory with dexos-approved engine oil.

Notice: **Use only engine oil that is approved to the dexos specification or an equivalent engine oil of the appropriate viscosity grade. Engine oils approved to the dexos specification will show the dexos symbol on the container. Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty. If you are unsure whether the oil is approved to the dexos specification, ask your service provider.**

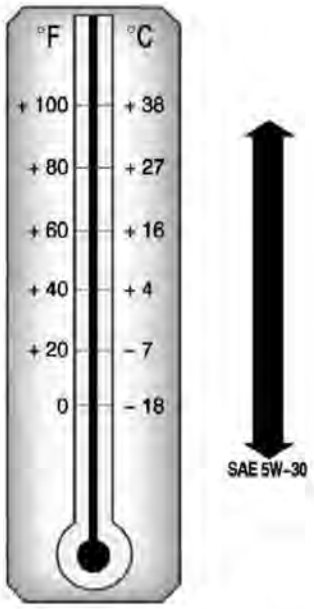
Use of Substitute Engine Oils if dexos is unavailable for top-up only: Engine oil not meeting the dexos specification or equivalent should not be used for an oil change. In the event that dexos-approved engine oil is not available for maintaining proper oil level, however, you may use substitute engine oil displaying the API Starburst symbol and of SAE 5W-30 viscosity grade.

Extensive use of oils that do not meet the dexos specification, however, may result in reduced performance or engine damage under certain circumstances.

Maintaining the proper oil level is very important. However, if you use a substitute oil for any reason, we recommend that you perform a complete oil change back to dexos as soon as possible to protect the engine and maintain the engine's peak performance.

Viscosity Grade

SAE 5W-30 is the best viscosity grade for the vehicle. Do not use other viscosity oils such as SAE 10W-30, 10W-40, or 20W-50.



Cold Temperature Operation: In an area of extreme cold, where the temperature falls below −29°C (−20°F), an SAE 0W-30 oil should be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, be sure to always select an oil that meets the required specification, dexos. See "Specification" earlier in this section for more information.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils with the dexos specification and displaying the dexos certification mark are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Engine Oil Life System

When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on engine revolutions and engine temperature, and not on mileage. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on. See *Engine Oil Messages on page 5-37*. Change the oil as soon as possible within the next 1 000 km (600 mi).

It is possible that, if driving under the best conditions, the oil life system might indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. To reset the system:

1. Using the DIC MENU button and thumbwheel on the turn signal lever, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-29* and *Engine Oil Messages on page 5-37*.
2. Press the SET/CLR button to reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

The system is reset when the CHANGE ENGINE OIL SOON message is off.

If the CHANGE ENGINE OIL SOON message comes back on when the vehicle is started, the engine oil life system has not been reset. Repeat the procedure.

Automatic Transmission Fluid

How to Check Automatic Transmission Fluid

It is not necessary to check the transmission fluid level. A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer service department and have it repaired as soon as possible.

There is a special procedure for checking and changing the transmission fluid. Because this procedure is difficult, you should have this done at your dealer service department. Contact your dealer for additional information or the procedure can be found in the service manual. To purchase a service manual, see *Service Publications Ordering Information on page 13-16*.

Change the fluid and filter at the intervals listed in *Scheduled Maintenance on page 11-2*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants on page 11-7*.

Engine Air Cleaner/Filter

See *Engine Compartment Overview on page 10-6* for the location of the engine air cleaner/filter.

When to Inspect the Engine Air Cleaner/Filter

Inspect the air cleaner/filter at the scheduled maintenance intervals and replace it at the first oil change after each 80 000 km (50,000 mi) interval. See *Scheduled Maintenance on page 11-2* for more information. If driving in dusty/dirty conditions, inspect the filter at each engine oil change.

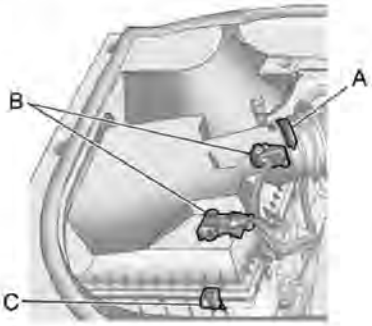
How to Inspect the Engine Air Cleaner/Filter

To inspect the air cleaner/filter, remove the filter from the vehicle and lightly shake the filter to release loose dust and dirt. If the filter remains covered with dirt, a new filter is required. Never use compressed air to clean the filter.

To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood on page 10-5*.
2. Locate the air filter housing on the front of the passenger side of the engine compartment. See *Engine Compartment Overview on page 10-6*.

3.0 L V6 Shown, 2.8 L V6 Similar



A. Air Duct Clamp
B. Electrical Connectors
C. Retaining Clips

3. Disconnect the outlet duct by loosening the air duct clamp (A).
4. Disconnect the electrical connectors (B).
5. Lift the retaining clips (C) on the air filter housing.
6. Turn and tilt cover slightly upwards and slide cover away from outside edge of vehicle. Remove the air filter.

A. Cover Cut Outs
B. Air Filter Tabs

7. To install the air filter, place filter inside box where the pleats fit in between the tabs located inside the lower box. Ensure that the cover cut outs (A) on both sides match the air filter tabs (B) on both sides.
8. Replace air cleaner cover by inserting tabs appropriately into slots. Lower cover to meet bottom of box. Place clips on retention features and clip closed.
9. Retighten the air duct clamp.
10. Reconnect the electrical connectors.

⚠ WARNING

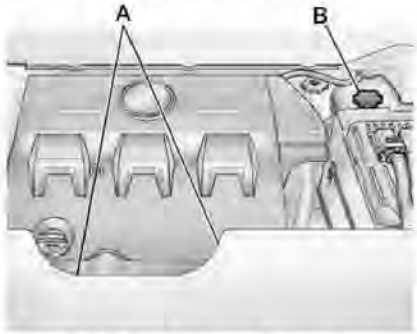
Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

Notice: **If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when you are driving.**

Notice: **Installing an air cleaner different than the one recommended in Maintenance Replacement Parts may cause engine damage not covered by the vehicle warranty.**

Cooling System

When it is safe to lift the hood:



3.0 L V6 Engine Shown, 2.8 L V6 Engine Similar

A. Engine Cooling Fan (Out of View)

B. Engine Coolant Surge Tank and Pressure Cap

⚠ WARNING

An electric engine cooling fan under the hood can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood electric fan.

If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. The vehicle should be parked on a level surface.

The coolant level should be between the MIN and MAX lines. If it is not, the vehicle may have a leak at the radiator hoses, heater hoses, radiator, water pump, or somewhere else in the cooling system.

⚠ WARNING

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.

If there seems to be no leak, with the engine on, check to see if the electric engine cooling fan is running. If the engine is overheating, the fan should be running. If it is not, the vehicle needs service. Turn off the engine.

Notice: **Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner, at 50 000 km (30,000 mi) or 24 months, whichever occurs first. Any repairs would not be covered by the vehicle warranty. Always use DEX-COOL (silicate-free) coolant in the vehicle.**

Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL® engine coolant. This coolant is designed to remain in the vehicle for 5 years or 240 000 km (150,000 mi), whichever occurs first.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating on page 10-24*.

What to Use

⚠ WARNING

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. If using this mixture, nothing else needs to be added. This mixture:

- Gives freezing protection down to −37°C (−34°F), outside temperature.
- Gives boiling protection up to 129°C (265°F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminum parts.
- Helps keep the proper engine temperature.

Notice: **If an improper coolant mixture is used, the engine could overheat and be badly damaged. The repair cost would not be covered by the vehicle warranty. Too much water in the mixture can freeze and crack the engine, radiator, heater core, and other parts.**

Never dispose of engine coolant by putting it in the trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

Checking Coolant

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. If coolant is visible but the coolant level is not at the indicated mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system is cool before this is done. See *Engine Overheating on page 10-24* for more information.

The coolant surge tank is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview on page 10-6* for more information on location.

How to Add Coolant to the Coolant Surge Tank

***Notice:* This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.**

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.

⚠ WARNING

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. They are under pressure, and if you turn the coolant surge tank pressure cap — even a little — they can come out at high speed. Never turn the cap when the cooling system, including the coolant surge tank pressure cap, is hot. Wait for the cooling system and coolant surge tank pressure cap to cool if you ever have to turn the pressure cap.

⚠ WARNING

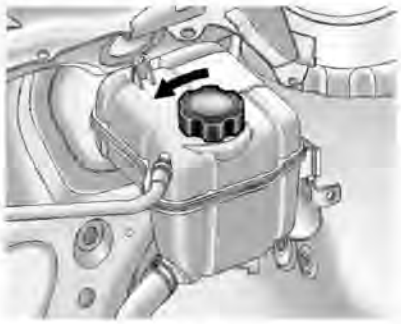
Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Notice: **In cold weather, water can freeze and crack the engine, radiator, heater core and other parts. Use the recommended coolant and the proper coolant mixture.**

⚠ WARNING

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.

2.8 L V6 Engine



3.0 L V6 Engine

1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This will allow any pressure still left to be vented out the discharge hose.

2. Then keep turning the pressure cap slowly and remove it.
3. Fill the coolant surge tank with the proper DEX-COOL coolant mixture to the indicated level mark.
4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper DEX-COOL® coolant mixture to the coolant surge tank until the level reaches the indicated level mark.
5. Then replace the pressure cap. Be sure the pressure cap is hand-tight.

Check the level in the coolant surge tank when the cooling system has cooled down. If the coolant is not at the proper level, repeat Steps 1 through 3 and reinstall the pressure cap. If the coolant still is not at the proper level when the system cools down again, see your dealer.

Engine Overheating

The vehicle has an indicator to warn of engine overheating.

There is an engine coolant temperature warning light on the vehicle's instrument panel. See *Engine Coolant Temperature Gauge on page 5-15*.

If the decision is made not to lift the hood when this warning appears, but instead get service help right away. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-11*.

If the decision is made to lift the hood, make sure the vehicle is parked on a level surface.

Then check to see if the engine cooling fans are running. If the engine is overheating, both fans should be running. If they are not, do not continue to run the engine and have the vehicle serviced.

Notice: **Engine damage from running the engine without coolant is not covered by the warranty.**

Notice: **If the engine catches fire because of being driven with no coolant, the vehicle can be badly damaged. The costly repairs would not be covered by the vehicle warranty.**

If Steam Is Coming from the Engine Compartment

⚠ WARNING

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down. Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when the engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop the engine if it overheats, and get out of the vehicle until the engine is cool.

If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day
- Stops after high-speed driving
- Idles for long periods in traffic
- Tows a trailer

If the overheat warning displays with no sign of steam:

1. Turn the air off.
2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
3. In heavy traffic, let the engine idle in N (Neutral) while stopped. If it is safe to do so, pull off the road, shift to P (Park) or N (Neutral) and let the engine idle.

If the temperature overheat gauge is no longer in the overheat zone or an overheat warning no longer displays, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe vehicle distance from the vehicle in front. If the warning does not come back on, continue to drive normally.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

Power Steering Fluid

See *Engine Compartment Overview on page 10-6* for reservoir location.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless a leak is suspected in the system or unusual noise is heard. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

To check the power steering fluid:

1. Turn the engine off and let the engine compartment cool down.
2. Remove the engine cover, if required. See *Engine Cover on page 10-10*.
3. Wipe the cap and the top of the reservoir clean.
4. Unscrew the cap and wipe the dipstick with a clean rag.
5. Replace the cap and completely tighten it.
6. Remove the cap again and look at the fluid level on the dipstick.

The level should be within the HOT mark. If necessary, add only enough fluid to bring the level within the mark.

What to Use

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants on page 11-7*. Always use the proper fluid.

Washer Fluid

What to Use

When windshield washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid

The WASHER FLUID LOW ADD FLUID message appears on the Driver Information Center (DIC) when the fluid level is low.

Open the cap with the washer symbol on it. Add washer fluid up to the fill mark. See *Engine Compartment Overview on page 10-6* for reservoir location.

Notice

- **When using concentrated washer fluid, follow the manufacturer's instructions for adding water.**
- **Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system. Also, water does not clean as well as washer fluid.**
- **Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.**
- **Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.**

Brakes

This vehicle has disc brakes. Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or be heard all the time the vehicle is moving, except when applying the brake pedal firmly.

⚠ WARNING

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

Notice: **Continuing to drive with worn-out brake pads could result in costly brake repair.**

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications in *Capacities and Specifications on page 12-2*.

Brake linings should always be replaced as complete axle sets.

Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service might be required.

Brake Adjustment

Every time the brakes are applied, with or without the vehicle moving, the brakes adjust for wear.

Replacing Brake System Parts

The braking system on a vehicle is complex. Its many parts have to be of top quality and work well together if the vehicle is to have really good braking. The vehicle was designed and tested with top-quality brake parts. When parts of the braking system are replaced, be sure to get new, approved replacement parts. If this is not done, the brakes might not work properly. For example, installing disc brake pads that are wrong for the vehicle, can change the balance between the front and rear brakes — for the worse. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed.

Brake Fluid

The brake master cylinder reservoir is filled with DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview on page 10-6* for the location of the reservoir.

There are only two reasons why the brake fluid level in the reservoir might go down:

- The brake fluid level goes down because of normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake hydraulic system can also cause a low fluid level. Have the brake hydraulic system fixed, since a leak means that sooner or later the brakes will not work well.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove brake fluid, as necessary, only when work is done on the brake hydraulic system.

⚠ WARNING

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light on page 5-22*.

What to Add

Use only new DOT 3 brake fluid from a sealed container. See *Recommended Fluids and Lubricants on page 11-7*.

Always clean the brake fluid reservoir cap and the area around the cap before removing it. This helps keep dirt from entering the reservoir.

⚠ WARNING

With the wrong kind of fluid in the brake hydraulic system, the brakes might not work well. This could cause a crash. Always use the proper brake fluid.

Notice

- **Using the wrong fluid can badly damage brake hydraulic system parts. For example, just a few drops of mineral-based oil, such as engine oil, in the brake hydraulic system can damage brake hydraulic system parts so badly that they will have to be replaced. Do not let someone put in the wrong kind of fluid.**
- **If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on the vehicle. If you do, wash it off immediately.**

Battery

Refer to the replacement number shown on the original battery label when a new battery is needed. See *Engine Compartment Overview on page 10-6* for battery location.

⚠ DANGER

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Vehicle Storage

⚠ WARNING

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. See *Jump Starting on page 10-96* for tips on working around a battery without getting hurt.

Infrequent Usage: Remove the black, negative (−) cable from the battery to keep the battery from running down.

Extended Storage: Remove the black, negative (−) cable from the battery or use a battery trickle charger.

All-Wheel Drive

Transfer Case

When to Check and Change Lubricant

The transfer case is filled with oil during manufacture, which then does not require changing. It is not necessary to regularly check the transfer case fluid unless there is a leak suspected or an unusual noise is heard. A fluid loss could indicate a problem. It is recommended to have the transfer case serviced at your dealer by trained service technicians.

Starter Switch Check

⚠ WARNING

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.
2. Firmly apply both the parking brake and the regular brake. See *Parking Brake on page 9-31*.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

Automatic Transmission Shift Lock Control Function Check

⚠ WARNING

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.
2. Firmly apply the parking brake. See *Parking Brake on page 9-31*.

   Be ready to apply the regular brake immediately if the vehicle begins to move.
3. With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the shift lever out of P (Park) with normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

Ignition Transmission Lock Check

While parked, and with the parking brake set, try to turn the ignition to LOCK/OFF in each shift lever position.

- The ignition should turn to LOCK/OFF only when the shift lever is in P (Park).

Contact your dealer if service is required.

Park Brake and P (Park) Mechanism Check

⚠ WARNING

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

Wiper Blade Replacement

Windshield wiper blades should be inspected for wear or cracking. See *Scheduled Maintenance on page 11-2* for more information.

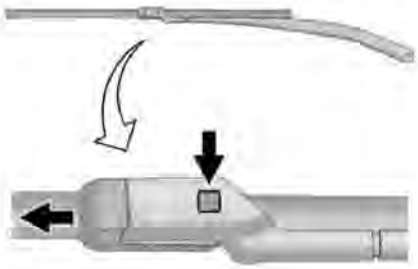
It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn. For proper windshield wiper blade length and type, see *Maintenance Replacement Parts on page 11-9*.

Notice: **Allowing the wiper blade arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that occurs would not be covered by your warranty. Do not allow the wiper blade arm to touch the windshield.**

Front Wiper Blade Replacement

To replace the wiper blade assembly:

1. Pull the windshield wiper assembly away from the windshield.



2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
3. Remove the wiper blade.
4. Reverse steps 1 through 3 for wiper blade replacement.

Rear Wiper Blade Replacement

The rear wiper blade and wiper arm have a cover for protection. The cover must be removed before the wiper blade can be replaced.

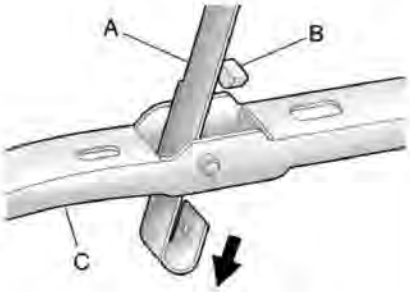
To remove the cover:

1. Slide a plastic tool under cover and push upward to unsnap.
2. Slide cover towards wiper blade tip to unhook from blade assembly.

3. Remove the cover.
4. After wiper blade replacement, ensure that cover hook slides into slot in blade assembly.
5. Snap cover down to secure.

To remove the wiper blade:

1. Lift the wiper arm away from the windshield.



A. Wiper Arm
B. Release Lever
C. Blade Assembly

2. Push the release lever (B) to disengage the hook and push the wiper arm (A) out of the blade assembly (C).
3. Push the new blade assembly securely on the wiper arm until the release lever clicks into place.
4. Replace wiper cover.

Headlamp Aiming

The headlamp aiming system has been preset at the factory.

If the vehicle is damaged in an accident, the aim of the headlamps can be affected and adjustment could be necessary.

It is recommended that a dealer adjust the headlamps. To re-aim the headlamps yourself, use the following procedure.

The vehicle should be properly prepared as follows:

- The vehicle should be placed so the headlamps are 7.6 m (25 ft) from a light-colored wall.
- The vehicle must have all four tires on a level surface which is level all the way to the wall.
- The vehicle should be placed so it is perpendicular to the wall.
- The vehicle should not have any snow, ice, or mud on it.
- The vehicle should be fully assembled and all other work stopped while headlamp aiming is being performed.
- The vehicle should be normally loaded with a full tank of fuel and one person or 75 kg (160 lbs) sitting on the driver seat.
- Tires should be properly inflated.

Headlamp aiming is done with the vehicle's low-beam headlamps. The high-beam headlamps will be correctly aimed if the low-beam headlamps are aimed properly.

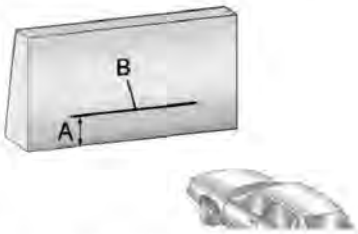
To adjust the vertical aim:

1. Open the hood. See *Hood on page 10-5* for more information.

Base Vehicle

Up-level Vehicle

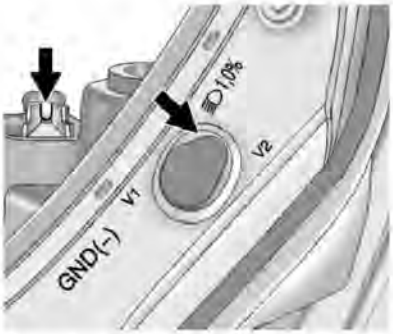
2. Locate the aim point at the center inner projector condensing lens of the low-beam headlamp, not the outer lens.
3. Measure the distance from the ground to the aim dot on the low-beam headlamp. Record the distance.



4. At the wall, measure from the ground upward (A) to the recorded distance from Step 3 and mark it.
5. Draw or tape a horizontal line (B) on the wall the width of the vehicle at the height of the mark in Step 4.

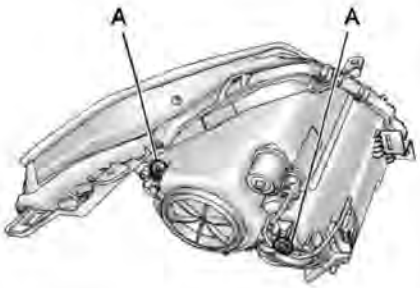
Notice: **Do not cover a headlamp to improve beam cut-off when aiming. Covering a headlamp may cause excessive heat build-up which may cause damage to the headlamp.**

6. Turn on the low-beam headlamps and place a piece of cardboard or equivalent in front of the headlamp not being adjusted. This allows only the beam of light from the headlamp being adjusted to be seen on the flat surface.



7. Locate the vertical headlamp adjusters, which are under the hood near each headlamp assembly.

   For the vehicle equipped with a base level lamp (halogen bulb), there will be one vertical headlamp adjuster (V1).

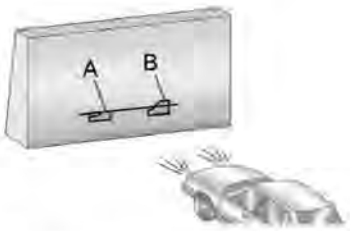


For the vehicle equipped with an up-level headlamp (HID), there will be two vertical headlamp adjusters (V1 and V2).

Some vehicles have funnel-shaped caps on the adjusters for easier access of a Number 2 Phillips screwdriver to turn the adjusters.

8. For the base vehicle, turn the vertical adjuster (V1) until the headlamp beam is aimed to the horizontal tape line. Turn it clockwise or counterclockwise to raise or lower the angle of the beam.

   For the up-level vehicle, turn the vertical adjusters (V1 and V2) simultaneously until the headlamp beam is aimed to the horizontal tape line. Turn them clockwise or counterclockwise to raise or lower the angle of the beam.



9. Make sure that the light from the headlamp is positioned at the bottom edge of the horizontal tape line. The lamp on the left (A) shows the correct headlamp aim. The lamp on the right (B) shows the incorrect headlamp aim.
10. Repeat Steps 7 through 9 for the opposite headlamp.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs on page 10-47*.

For any bulb changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

⚠ WARNING

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

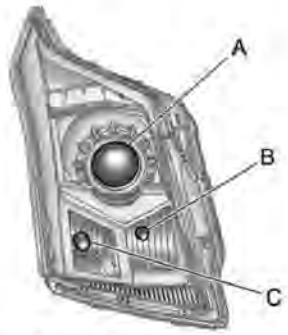
High Intensity Discharge (HID) Lighting

⚠ WARNING

The low beam high intensity discharge lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.

After an HID headlamp bulb has been replaced, the beam might be a slightly different shade than it was originally. This is normal.

Headlamps

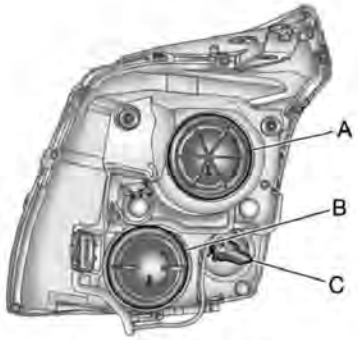


Base Headlamp Assembly (Front View Passenger Side)

A. Low-Beam Headlamp/Daytime Running Lamp (DRL)

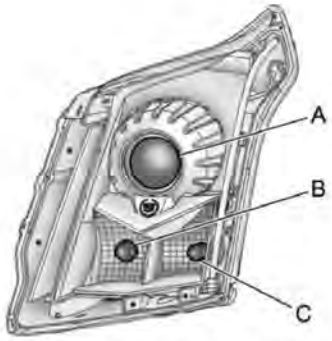
B. High-Beam Headlamp

C. Turn Signal Lamp



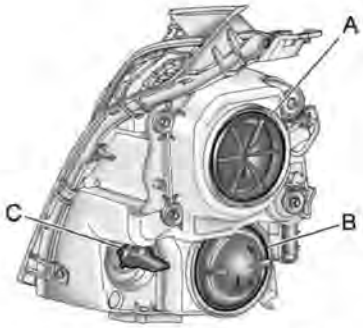
Base Headlamp Assembly (Rear View Passenger Side)

A. Low-Beam Headlamp/Daytime Running Lamp (DRL)
B. High-Beam Headlamp
C. Turn Signal Lamp



Up–Level Headlamp Assembly (Front View Driver Side)

A. High/Low-Beam Headlamp (To be replaced at dealer only)
B. Daytime Running Lamp (DRL)
C. Turn Signal Lamp



Up–Level Headlamp Assembly (Rear View Driver Side)

A. High/Low-Beam Headlamp (To be replaced at dealer only)
B. Daytime Running Lamp (DRL)
C. Turn Signal Lamp

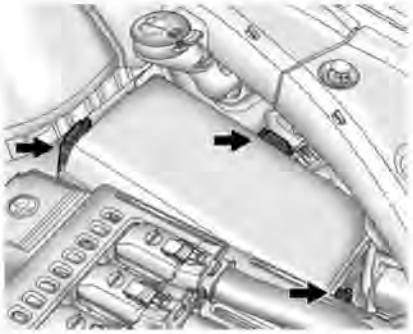
Driver Side

The removal of the underhood electrical center is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-5*.

⚠ WARNING

Liquids from environment or spillage and/or tools placed on top of or used in the underhood electrical center while the cover is removed can pose a risk of electrical shock/burn to anyone in the vicinity. These conditions can also cause damage to electrical components on the vehicle. Keep liquids and tools away from the underhood electrical center when the cover is removed.



2. Unlatch three clips and lift up the underhood electrical center cover to remove.

Passenger Side

The removal of the air filter/cleaner assembly and base is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-5*.

A. Air Duct Clamp
B. Connector Lock
C. Sensor Connectors
D. Retaining Clips

2. Disconnect the outlet duct by loosening the air duct clamp (A).
3. Remove the connector lock (B) located at the bottom of the sensor connector (C).
4. Press on the top and bottom of the sensor connectors (C) and remove.

5. Lift the three retaining clips (D) on the air filter housing.
6. Turn and tilt cover slightly upwards and slide cover away from outside edge of vehicle. Lift the cover away from base.

7. Lift the air cleaner/filter base to disengage from three pins.

Low-Beam Headlamps/ Daytime Running Lamps (DRL), High-Beam Headlamps (Base)

1. From the back side of the headlamp assembly, remove the top cap to replace the low-beam headlamp/DRL bulb.

2. From the back side of the headlamp assembly, remove the bottom cap to replace the high-beam headlamp bulb.
3. Disconnect electrical connector.
4. Remove the bulb socket from the headlamp assembly.
5. Replace the bulb in the bulb socket.

6. Install the bulb socket in the headlamp assembly.
7. Connect the electrical connector.
8. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
9. For driver side, reinstall the underhood electrical center cover by latching three clips.
10. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

High/Low-Beam Headlamps (Up-Level)

The high/low beam headlamps on the up-level are High Intensity Discharge (HID) and should be replaced at the dealer.

Daytime Running Lamp (DRL) (Up-Level)

1. From the back side of the headlamp assembly, remove the bottom cap to replace the DRL bulb.
2. Disconnect electrical connector.
3. Remove the DRL bulb socket from the headlamp assembly.
4. Replace the bulb in the bulb socket.
5. Install the bulb socket in the headlamp assembly.
6. Connect the electrical connector.
7. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
8. For driver side, reinstall the underhood electrical center cover by latching three clips.
9. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

Front Turn Signal Lamp (Base and Up-Level)

To replace the Front Turn Signal Lamp:

1. Remove the turn signal lamp bulb socket from the headlamp assembly.
2. Remove the turn signal lamp bulb from the socket.
3. Replace the bulb in the bulb socket.
4. Install the bulb socket in the headlamp assembly.
5. For driver side, reinstall the underhood electrical center cover by latching three clips.
6. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

Fog Lamps

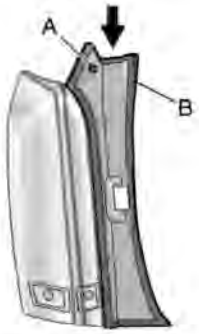
To replace the fog lamp bulb:

1. Locate the bulb assembly under the front fascia.
2. Disconnect the electrical connector from the bulb assembly.
3. Remove the bulb by turning it counterclockwise and pulling it straight out of the assembly.
4. Install the new bulb by turning it clockwise into the assembly.
5. Reconnect the electrical connector to the bulb assembly.

Turn Signal Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-14*.



A. Push Pin

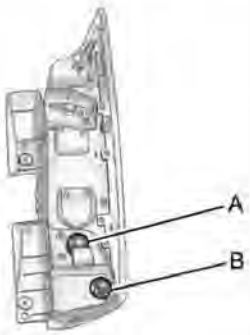
B. Taillamp Cover

2. Pull on push pin (A) to release the taillamp cover (B).

3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from snap tabs.

4. Remove the two screws from the taillamp assembly.

5. Pull the taillamp assembly straight back to remove.



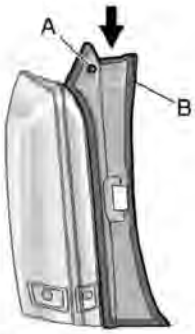
A. Turn Signal Lamp
B. Back-Up Bulb/Socket

6. Turn the turn signal lamp (A) bulb socket counterclockwise to remove it from the taillamp assembly.
7. Pull the bulb straight out from the socket.
8. Press a new bulb into the socket, insert it into the taillamp assembly and turn the bulb socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

Back-Up Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-14*.

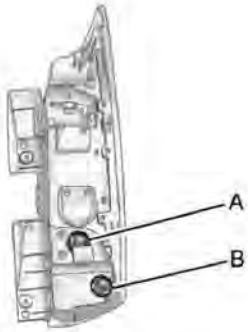


A. Push Pin

B. Taillamp Cover

2. Pull on push pin (A) to release the taillamp cover (B).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.



A. Turn Signal Lamp

B. Back–Up Bulb/Socket

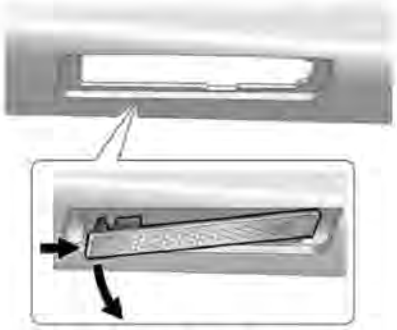
6. Disconnect the wire harness from the back–up bulb/socket (B).
7. Turn the back–up bulb socket counterclockwise to remove it from the taillamp assembly.

8. Press a new bulb/socket into the taillamp assembly and turn the bulb/socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

License Plate Lamp

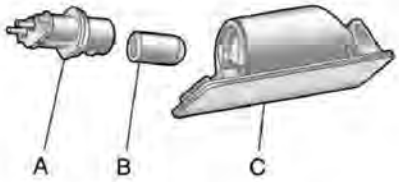
To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-14* for more information.



Passenger side shown, driver side similar

2. Push the left end of the lamp assembly towards the right.
3. Turn the lamp assembly down to remove from liftgate.



A. Bulb Socket
B. Bulb
C. Lamp Assembly

4. Turn the bulb socket (A) counterclockwise to remove from lamp assembly (C).
5. Pull the bulb (B) straight out of the bulb socket.
6. Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install into lamp assembly.

7. Turn the lamp assembly into the liftgate engaging the clip side first.
8. Push on the lamp side opposite the clip until the lamp assembly snaps into place.

Replacement Bulbs

Exterior Lamp	Bulb Number
Daytime Running Lamp	7443
Fog Lamp	H10
Headlamp High-Beam	9005
Headlamp Low-Beam	H10
License Plate Lamp	194LL
Turn Signal Front	7440
Tail/Turn Signal Rear	7440

For replacement bulbs not listed here, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect the following in the vehicle:

- Headlamp Wiring
- Windshield Wiper Motor
- Power Windows and Other Power Accessories

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

Windshield Wipers

If the wiper motor overheats due to heavy snow or ice, the windshield wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windshield before using the windshield wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

Fuses and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit breakers. This greatly reduces the chance of damage caused by electrical problems.

To check a fuse, look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating.

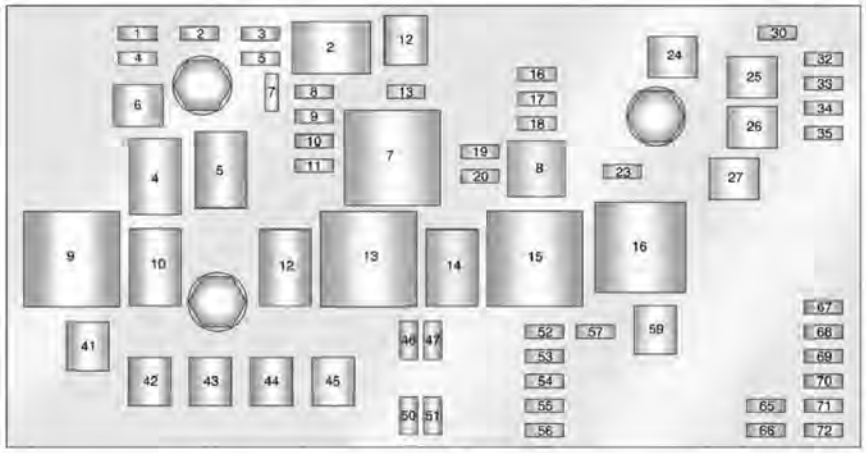
Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as you can.

To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse Block on page 10-48* and *Rear Compartment Fuse Block on page 10-53*.

Engine Compartment Fuse Block

To remove the fuse block cover, press the clips on the cover and lift it straight up.

Notice: **Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.**



Engine Compartment Fuse Block

The vehicle may not be equipped with all of the fuses, relays, and features shown.

J-Case Fuses	Usage
6	Wiper
12	Vacuum Pump

J-Case Fuses	Usage
24	Antilock Brake System Pump
25	Rear Electrical Center 1
26	Rear Electrical Center 2
27	Not Used
41	Cooling Fan 2 (LF1)
42	Starter
43	Not Used
44	Not Used
45	Cooling Fan 1 (LF1)
59	Secondary AIR Pump

Mini Fuses	Usage
1	Engine Control Module Battery
2	Transmission Control Module Battery
3	Mass Air Flow Sensor
4	Afterboil Pump
5	Engine Control Module Run Crank
7	Post–Catalytic Converter O2 Sensor
8	Pre–Catalytic Converter O2 Sensor
9	Engine Control Module Powertrain
10	Fuel Injectors–Even
11	Fuel Injectors-Odd
13	Washer

Mini Fuses	Usage
16	Instrument Panel Cluster/Malfunction Indicator Lamp/ Ignition
17	Air Quality Sensor
18	Headlamp Washer
19	Transmission Control Module Run Crank
20	Rear Electrical Center Run Crank
23	Heater Motor
30	Switch Back Light
32	Battery Sense (Regulated Voltage Control)
33	Adaptive Forward Lighting/Adaptive Headlamp Leveling Module
34	Body Control Module 7

Mini Fuses	Usage
35	Electronic Brake Control Module
46	Low-Beam Headlamp-Right
47	Low-Beam Headlamp-Left
50	Front Fog Lamps
51	Horn
52	Fuel System Control Module
53	Headlamp Level
54	Sensing Diagnostic Module Ignition
55	High-Beam Headlamp-Right
56	High-Beam Headlamp-Left
57	Ignition Steering Column Lock
65	Trailer Right Stoplamp

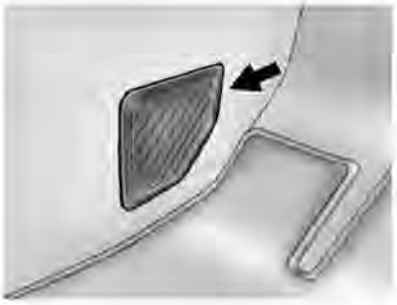
Mini Fuses	Usage
66	Trailer Left Stoplamp
67	Spare
68	Spare
69	Spare
70	Spare
71	Spare
72	Spare

Mini Relays	Usage
7	Powertrain
9	Cooling Fan 2 (LF1)
13	Cooling Fan 1 (LF1)
15	Run/Crank
16	Secondary AIR Pump

Micro Relays	Usage
2	Vacuum Pump
4	Wiper Control
5	Wiper Speed
10	Starter
12	Cool Fan 3 (LF1)
14	Low Beam/HID

U Micro Relays	Usage
8	Headlamp Washer

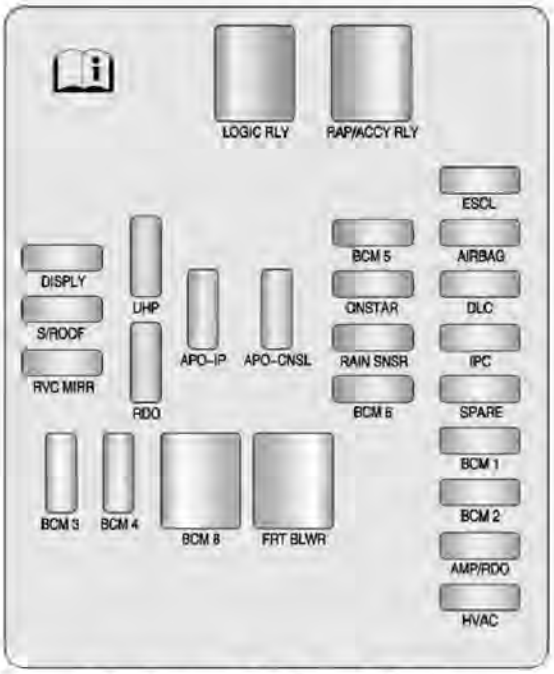
Instrument Panel Fuse Block



The instrument panel fuse block is located in the center console between the driver and passenger seats. To access the fuses, open the fuse panel door from the passenger side by pulling it out.

To reinstall the door, push the door back into its original location.

The vehicle may not be equipped with all of the fuses, relays and features shown.



Instrument Panel Fuse Block

Mini Fuses	Usage
DISPLY	Display
S/ROOF	Sun Roof
RVC MIRR	Rear Vision Camera Mirror
UHP	Universal Handsfree Phone
RDO	Radio
APO - IP	Auxiliary Power Outlet - Instrument Panel
APO - CNSL	Auxiliary Power Outlet - Floor Console
BCM 3	Body Control Module 3
BCM 4	Body Control Module 4
BCM 5	Body Control Module 5
ONSTAR	OnStar® System (If Equipped)

Mini Fuses	Usage
RAIN SNSR	Rain Sensor
BCM 6	Body Control Module 6
ESCL	Electronic Steering Column Lock
AIRBAG	Sensing and Diagnostic Module
DLC	Data Link Connection
IPC	Instrument Panel Cluster
SPARE	Not Used
BCM 1	Body Control Module 1
BCM 2	Body Control Module 2
AMP/RDO	Amplifier/Radio
HVAC	Heating Ventilation & Air Conditioning

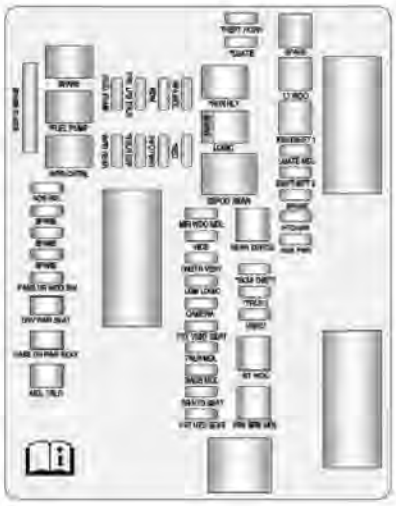
J—Case Fuses	Usage
BCM 8	Body Control Module 8
FRT BLWR	Front Blower

Relays	Usage
LOGIC RLY	Logistics Relay
RAP/ ACCY RLY	Retained Accessory Power/ Accessory Relay

Rear Compartment Fuse Block

The rear compartment fuse block is located in the cargo area, on the driver side of the vehicle behind the lower trim panel. To open, turn the latch with a flat bladed tool and pull the trim panel from the edges to fold it down.

The vehicle may not be equipped with all of the fuses, relays, and features shown.



Rear Compartment Fuse Block

Fuses	Usage
SPARE FUSES	Spare Fuses
AOS MDL	Automatic Occupant Sensing Module
SPARE	Not Used
SPARE	Not Used
SPARE	Not Used
PASS DR WDO SW	Passenger Door Window Switch
DRV PWR SEAT	Driver Power Seat
PASS DR PWR SEAT	Passenge/Driver Power Seats
MDL TRLR	Trailer Module
RPA MDL	Rear Parking Assist Module
RDM	Rear Drive Module
PRK LPS TRLR	Trailer Park Lamps
FUEL PUMP	Fuel Pump

Fuses	Usage
* SEC	Security
INFOTMNT	Infotainment
* TRLR EXP	Trailer Export
WPR REAR	Rear Wiper
MIR WDO MDL	Mirror Window Module
VICS	Vehicle Information Communications System (Export)
CNSTR VENT	Canister Vent
LGM LOGIC	Lift Gate Module Logic
CAMERA	Rear Vision Camera
FRT VENT SEAT	Front Ventilated Seats
TRLR MDL	Trailer Module
SADS MDL	Semi Active Damping System Module

Fuses	Usage
RR HTD SEAT	Rear Heated Seats
FRT HTD SEAT	Front Heated Seats
THEFT HORN	Theft Horn
*LGATE	Liftgate
SHUNT	Shunt
REAR DEFOG	Rear Defog
*BCM THEFT	Body Control Module Theft
*TRLR 2	Trailer 2
UGDO	Universal Garage Door Opener

Fuses	Usage
RT WDO	Right Window
PRK BRK MDL	Park Brake Module
SPARE	Not Used
LT WDO	Left Window
IGN/ THEFT 1	Ignition/Theft 1
LGATE MDL	Liftgate Module
IGN/ THEFT 2	Ignition/Theft 2
SPARE	Not Used
HTD MIR	Heated Mirror
AUX PWR	Auxiliary Power Outlet

Relays	Usage
SPARE	Not Used
*FUEL PUMP	Fuel Pump
WPR CONTRL	Wiper Control
*RUN RLY	Run Relay
LOGIC	Logistic Relay (Export)
DEFOG REAR	Rear Window Defogger

*-Denotes up-level content.

Wheels and Tires

Tires

Every new GM vehicle has high-quality tires made by a leading tire manufacturer. See the warranty manual for information regarding the tire warranty and where to get service. For additional information refer to the tire manufacturer.

⚠ WARNING

- Poorly maintained and improperly used tires are dangerous.
- Overloading the tires can cause overheating as a result of too much flexing. There could be a blowout and a serious crash. See *Vehicle Load Limits on page 9-12*.

(Continued)

WARNING (Continued)

- Underinflated tires pose the same danger as overloaded tires. The resulting crash could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when the tires are cold.
- Overinflated tires are more likely to be cut, punctured, or broken by a sudden impact — such as when hitting a pothole. Keep tires at the recommended pressure.
- Worn or old tires can cause a crash. If the tread is badly worn, replace them.
- Replace any tires that have been damaged by impacts with potholes, curbs, etc.

(Continued)

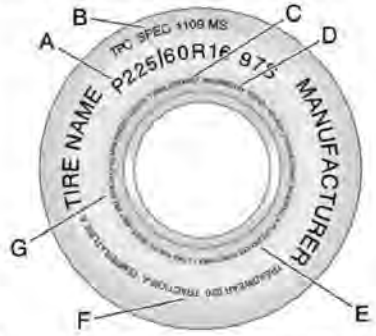
WARNING (Continued)

- Improperly repaired tires can cause a crash. Only the dealer or an authorized tire service center should repair, replace, dismount, and mount the tires.
- Do not spin the tires in excess of 55 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tires to explode.

See *Tire Pressure for High-Speed Operation on page 10-65* for inflation pressure adjustment for high-speed driving.

Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples show a typical passenger vehicle tire and a compact spare tire sidewall.



Passenger (P-Metric) Tire Example

(A) Tire Size: The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type, and service description. See the "Tire Size" illustration later in this section for more detail.

(B) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

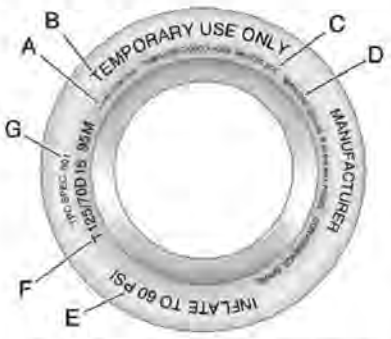
(C) DOT (Department of Transportation): The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

(D) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(E) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(F) Uniform Tire Quality Grading (UTQG): Tire manufacturers are required to grade tires based on three performance factors: treadwear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading on page 10-76*.

(G) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.



Compact Spare Tire Example

(A) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(B) Temporary Use Only: The compact spare tire or temporary use tire has a tread life of approximately 5 000 km (3,000 mi) and should not be driven at speeds over 105 km/h (65 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If the vehicle has a compact spare tire, see *Compact Spare Tire on page 10-96* and *If a Tire Goes Flat on page 10-79*.

(C) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code is the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(D) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.

(E) Tire Inflation: The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure on page 10-63*.

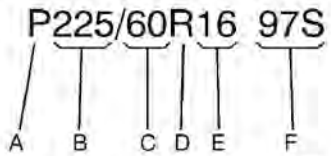
(F) Tire Size: A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(G) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

Tire Designations

Tire Size

The following is an example of a typical passenger vehicle tire size.



(A) Passenger (P-Metric) Tire: The United States version of a metric tire sizing system. The letter P as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

(B) Tire Width: The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(C) Aspect Ratio: A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item C of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(D) Construction Code: A letter code is used to indicate the type of ply construction in the tire. The letter R means radial ply construction; the letter D means diagonal or bias ply construction; and the letter B means belted-bias ply construction.

(E) Rim Diameter: Diameter of the wheel in inches.

(F) Service Description: These characters represent the load index and speed rating of the tire. The load index represents the load carrying capacity a tire is certified to carry. The speed rating is the maximum speed a tire is certified to carry a load.

Tire Terminology and Definitions

Air Pressure: The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in kPa (kilopascal) or psi (pounds per square inch).

Accessory Weight: The combined weight of optional accessories. Some examples of optional accessories are automatic transmission, power steering, power brakes, power windows, power seats, and air conditioning.

Aspect Ratio: The relationship of a tire's height to its width.

Belt: A rubber coated layer of cords that is located between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead: The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire: A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure: The amount of air pressure in a tire, measured in kPa (kilopascal) or psi (pounds per square inch) before a tire has built up heat from driving. See *Tire Pressure on page 10-63*.

Curb Weight: The weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil, and coolant, but without passengers and cargo.

DOT Markings: A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation (DOT) Motor Vehicle Safety Standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand, and date of production.

GVWR: Gross Vehicle Weight Rating. See *Vehicle Load Limits on page 9-12*.

GAWR FRT: Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits on page 9-12*.

GAWR RR: Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits on page 9-12*.

Intended Outboard Sidewall: The side of an asymmetrical tire, that must always face outward when mounted on a vehicle.

Kilopascal (kPa): The metric unit for air pressure.

Light Truck (LT-Metric) Tire: A tire used on light duty trucks and some multipurpose passenger vehicles.

Load Index: An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

Maximum Inflation Pressure: The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.

Maximum Load Rating: The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum Loaded Vehicle Weight: The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Normal Occupant Weight: The number of occupants a vehicle is designed to seat multiplied by 68 kg (150 lbs). See *Vehicle Load Limits on page 9-12*.

Occupant Distribution: Designated seating positions.

Outward Facing Sidewall: The side of an asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The side of the tire that contains a whitewall, bears white lettering, or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the other sidewall of the tire.

Passenger (P-Metric) Tire: A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

Recommended Inflation Pressure: Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Tire Pressure on page 10-63* and *Vehicle Load Limits on page 9-12*.

Radial Ply Tire: A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

Rim: A metal support for a tire and upon which the tire beads are seated.

Sidewall: The portion of a tire between the tread and the bead.

Speed Rating: An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

Traction: The friction between the tire and the road surface. The amount of grip provided.

Tread: The portion of a tire that comes into contact with the road.

Treadwear Indicators: Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1.6 mm (1/16 in) of tread remains. See *When It Is Time for New Tires on page 10-72*.

UTQGS (Uniform Tire Quality Grading Standards): A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading on page 10-76*.

Vehicle Capacity Weight: The number of designated seating positions multiplied by 68 kg (150 lbs) plus the rated cargo load. See *Vehicle Load Limits on page 9-12*.

Vehicle Maximum Load on the Tire: Load on an individual tire due to curb weight, accessory weight, occupant weight, and cargo weight.

Vehicle Placard: A label permanently attached to a vehicle showing the vehicle capacity weight and the original equipment tire size and recommended inflation pressure. See "Tire and Loading Information Label" under *Vehicle Load Limits on page 9-12.*

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

Notice: **Neither tire underinflation nor overinflation is good. Underinflated tires, or tires that do not have enough air, can result in:**

- **Tire overloading and over-heating which could lead to a blowout.**
- **Premature or irregular wear.**
- **Poor handling.**
- **Reduced fuel economy.**

Overinflated tires, or tires that have too much air, can result in:

- **Unusual wear.**
- **Poor handling.**
- **Rough ride.**
- **Needless damage from road hazards.**

The Tire and Loading Information label on the vehicle indicates the original equipment tires and the correct cold tire inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity.

For additional information regarding how much weight the vehicle can carry, and an example of the Tire and Loading Information label, see *Vehicle Load Limits on page 9-12*. How the vehicle is loaded affects vehicle handling and ride comfort. Never load the vehicle with more weight than it was designed to carry.

When to Check

Check the tires once a month or more. Do not forget the compact spare tire, if the vehicle has one. The compact spare should be at 420 kPa (60 psi). For additional information regarding the compact spare tire, see *Compact Spare Tire on page 10-96*.

How to Check

Use a good quality pocket-type gauge to check tire pressure. Proper tire inflation cannot be determined by looking at the tire. Check the tire inflation pressure when the tires are cold, meaning the vehicle has not been driven for at least three hours or no more than 1.6 km (1 mi).

Remove the valve cap from the tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement. If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until the recommended pressure is reached. If the inflation pressure is high, press on the metal stem in the center of the tire valve to release air.

Re-check the tire pressure with the tire gauge.

Return the valve caps on the valve stems to prevent leaks and keep out dirt and moisture.

Tire Pressure for High-Speed Operation

⚠ WARNING

Driving at high speeds, 160 km/h (100 mph) or higher, puts an additional strain on tires. Sustained high-speed driving causes excessive heat build up and can cause sudden tire failure. You could have a crash and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for high speed operation. When speed limits and road conditions are such that a vehicle can be driven at high speeds, make sure the tires are rated for high speed operation, in excellent condition, and set to the correct cold tire inflation pressure for the vehicle load.

Vehicles with P235/65R18, P235/55R20, or 235/55R20 size tires require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold inflation pressure to the maximum inflation pressure shown on the tire sidewall, or 260 kPa (38 psi), whichever is lower. Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See *Vehicle Load Limits on page 9-12* and *Tire Pressure on page 10-63*.

The maximum load and inflation pressure is molded on the tire sidewall, in small letters, near the rim flange. It will read something like this: Maximum load 690 kg (1521 lbs) 300 kPa (44 psi) Max. Press.

Tire Pressure Monitor System

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS sensors monitor the air pressure in your tires and transmit tire pressure readings to a receiver located in the vehicle.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated.

Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly.

Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

See *Tire Pressure Monitor Operation on page 10-67* for additional information.

Federal Communications Commission (FCC) and Industry Canada

See *Radio Frequency Statement on page 13-20* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-210/220/310.

Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the tires and transmit the tire pressure readings to a receiver located in the vehicle.

When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light located on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the tire loading information label. See *Vehicle Load Limits on page 9-12*.

A message to check the pressure displays in the Driver Information Center (DIC). The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure. Using the DIC, tire pressure levels can be viewed. For additional information and details about the DIC operation and displays see *Driver Information Center (DIC) on page 5-29*.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tire and Loading Information label shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See *Vehicle Load Limits on page 9-12*, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure on page 10-63*.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection on page 10-71*, *Tire Rotation on page 10-71* and *Tires on page 10-56*.

Notice: **Tire sealant materials are not all the same. A non-approved tire sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tire sealant is not covered by the vehicle warranty. Always use only the GM-approved tire sealant available through your dealer or included in the vehicle.**

Factory-installed Tire Inflator Kits use a GM approved liquid tire sealant. Using non-approved tire sealants could damage the TPMS sensors. See *Tire Sealant and Compressor Kit on page 10-81* for information regarding the inflator kit materials and instructions.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tire pressure warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and the DIC message should go off after the road tire is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.

- The TPMS sensor matching process was not done or not completed successfully after rotating the tires. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.
- Replacement tires or wheels do not match the original equipment tires or wheels. Tires and wheels other than those recommended could prevent the TPMS from functioning properly. See *Buying New Tires on page 10-73*.
- Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning properly, it cannot detect or signal a low tire condition. See your dealer for service if the TPMS malfunction light and DIC message come on and stay on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the vehicle's tires or replacing one or more of the TPMS sensors. Also, the TPMS sensor matching process should be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message should go off at the next ignition cycle. The sensors are matched to the tire/wheel positions, using a TPMS relearn tool, in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear. See your dealer for service or to purchase a relearn tool.

There are two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is:

1. Set the parking brake.
2. Place the vehicle power mode in ON/RUN/START. See *Ignition Positions on page 9-18*.
3. Select the vehicle information menu using the menu button.
4. Select the tire pressure screen using the up/down thumbwheel.
5. Press and hold SET to begin the sensor matching process.
6. Press SET to confirm selection. The horn sounds twice to signal the receiver is in relearn mode and TIRE LEARNING ACTIVE message displays on the DIC screen.
7. Start with the driver side front tire.
8. Place the relearn tool against the tire sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tire and wheel position.
9. Proceed to the passenger side front tire, and repeat the procedure in Step 8.
10. Proceed to the passenger side rear tire, and repeat the procedure in Step 8.
11. Proceed to the driver side rear tire, and repeat the procedure in Step 8. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
12. Press STOP to turn the ignition off.
13. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

Tire Inspection

GM recommends that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

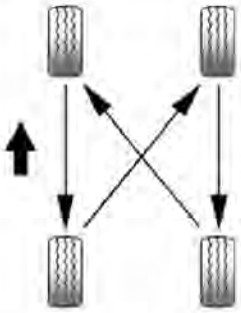
- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Tire Rotation

Tires should be rotated every 12 000 km (7,500 mi). See *Scheduled Maintenance on page 11-2*.

The purpose of a regular tire rotation is to achieve a uniform wear for all tires on the vehicle. This will ensure that the vehicle continues to perform most like it did when the tires were new.

Any time you notice unusual wear, rotate the tires as soon as possible and check wheel alignment. Also check for damaged tires or wheels. See *When It Is Time for New Tires on page 10-72* and *Wheel Replacement on page 10-78*.



When rotating the vehicle's tires, always use the correct rotation pattern shown here.

Do not include the compact spare tire in the tire rotation.

After the tires have been rotated, adjust the front and rear inflation pressures as shown on the Tire and Loading Information label. See *Tire Pressure on page 10-63* and *Vehicle Load Limits on page 9-12*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 10-67*.

Make certain that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications on page 12-2*.

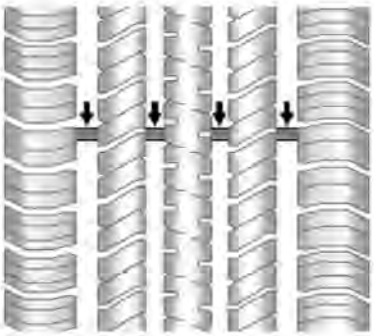
⚠ WARNING

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, use a cloth or a paper towel to do this; but be sure to use a scraper or wire brush later, if needed, to get all the rust or dirt off. See *If a Tire Goes Flat on page 10-79*.

Lightly coat the center of the wheel hub with wheel bearing grease after a wheel change or tire rotation to prevent corrosion or rust build-up. Do not get grease on the flat wheel mounting surface or on the wheel nuts or bolts.

When It Is Time for New Tires

Factors such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tires.



Treadwear indicators are one way to tell when it is time for new tires. Treadwear indicators appear when the tires have only 1.6 mm (1/16 in) or less of tread remaining. See *Tire Inspection on page 10-71* and *Tire Rotation on page 10-71* for more information.

The rubber in tires ages over time. This also applies for the spare tire, if the vehicle has one, even if it is never used. Multiple conditions including temperatures, loading conditions, and inflation pressure maintenance affect how fast aging takes place. Tires will typically need to be replaced due to wear before they may need to be replaced due to age. Consult the tire manufacturer for more information on when tires should be replaced.

Vehicle Storage

Tires age when stored normally mounted on a parked vehicle. Park a vehicle that will be stored for at least a month in a cool, dry, clean area away from direct sunlight to slow aging. This area should be free of grease, gasoline, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tires that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tires or raise the vehicle to reduce the weight from the tires.

Buying New Tires

GM has developed and matched specific tires for the vehicle. The original equipment tires installed on the vehicle, when it was new, were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. If you need replacement tires, GM strongly recommends that you get tires with the same TPC Spec rating. This way, the vehicle will continue to have tires that are designed to give the same performance and vehicle safety, during normal use, as the original tires.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of the vehicle, including brake system performance, ride and handling, traction control, and tire pressure monitoring performance. GM's TPC Spec number is molded onto the tire's sidewall near the tire size. If the tires have an all-season tread design, the TPC Spec number will be followed by an MS for mud and snow. See *Tire Sidewall Labeling on page 10-57* for additional information.

GM recommends replacing tires in sets of four. This is because uniform tread depth on all tires will help keep the vehicle performing most like it did when the tires were new. Replacing less than a full set of tires can affect the braking and handling performance of the vehicle. See *Tire Inspection on page 10-71* and *Tire Rotation on page 10-71* for information on proper tire rotation.

⚠ WARNING

Tires could explode during improper service. Attempting to mount or dismount a tire could cause injury or death. Only your dealer or authorized tire service center should mount or dismount the tires.

⚠ WARNING

Mixing tires could cause you to lose control while driving. If you mix tires of different sizes, brands, or types (radial and bias-belted tires), the vehicle may not handle properly, and you could have a crash. Using tires of different sizes, brands, or types may also cause damage to the vehicle. Be sure to use the correct size, brand, and type of tires on all wheels. It is all right to drive with the compact spare temporarily, as it was developed for use on the vehicle. See *Compact Spare Tire on page 10-96*.

⚠ WARNING

Using bias-ply tires on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tire and/or wheel could fail suddenly and cause a crash. Use only radial-ply tires with the wheels on the vehicle.

If you must replace the vehicle's tires with those that do not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction type (radial and bias-belted tires) as the vehicle's original tires.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed on the vehicle. Non-TPC Spec rated tires may give a low-pressure warning that is higher or lower than the proper warning level you would get with TPC Spec rated tires. See *Tire Pressure Monitor System on page 10-65*.

The vehicle's original equipment tires are listed on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-12* for more information about the Tire and Loading Information label and its location on the vehicle.

Different Size Tires and Wheels

If wheels or tires are installed that are a different size than the original equipment wheels and tires, vehicle performance, including its braking, ride and handling characteristics, stability, and resistance to rollover may be affected. If the vehicle has electronic systems such as antilock brakes, rollover airbags, traction control, and electronic stability control, the performance of these systems can also be affected.

⚠ WARNING

If different sized wheels are used, there may not be an acceptable level of performance and safety if tires not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tire systems developed for the vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires on page 10-73* and *Accessories and Modifications on page 10-3* for additional information.

Uniform Tire Quality Grading

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States. The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter-type snow tires, space-saver, or temporary use spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and a half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

Traction – AA, A, B, C

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature – A, B, C

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

Wheel Alignment and Tire Balance

The tires and wheels were aligned and balanced at the factory to provide the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing will not be necessary on a regular basis. However, check the alignment if there is unusual tire wear or if the vehicle is pulling to one side or the other. If the vehicle vibrates when driving on a smooth road, the tires and wheels might need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it. Some aluminum wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

⚠ WARNING

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tires can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

Notice: **The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tire or tire chain clearance to the body and chassis.**

See *If a Tire Goes Flat on page 10-79* for more information.

Used Replacement Wheels

⚠ WARNING

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

Tire Chains

⚠ WARNING

Do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes,

(Continued)

WARNING (Continued)

suspension, or other vehicle parts. The area damaged by the tire chains could cause loss of control and a crash.

Use another type of traction device only if its manufacturer recommends it for the vehicle's tire size combination and road conditions. Follow that manufacturer's instructions. To avoid vehicle damage, drive slow and readjust or remove the traction device if it contacts the vehicle. Do not spin the wheels. If traction devices are used, install them on the front tires.

If a Tire Goes Flat

It is unusual for a tire to blowout, especially if the tires are maintained properly. See Tires. If air goes out of a tire, it is much more likely to leak out slowly. But if there is ever a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

⚠ WARNING

Driving on a flat tire will cause permanent damage to the tire. Re-inflating a tire after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tire that has been driven on while severely underinflated or flat. Have your dealer or an authorized tire service center repair or replace the flat tire as soon as possible.

⚠ WARNING

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-5.*

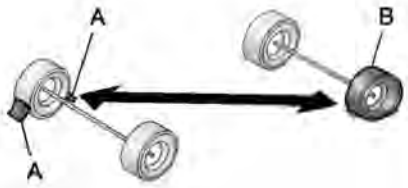
⚠ WARNING

Changing a tire can be dangerous. The vehicle can slip off the jack and roll over or fall causing injury or death. Find a level place to change the tire. To help prevent the vehicle from moving:

1. Set the parking brake firmly.
2. Put an automatic transmission shift lever in P (Park), or shift a manual transmission to 1 (First) or R (Reverse).
3. Turn off the engine and do not restart while the vehicle is raised.
4. Do not allow passengers to remain in the vehicle.
5. Place wheel blocks on both sides of the tire at the opposite corner of the tire being changed.

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. To use the jacking equipment to change a spare tire safely, follow the instructions below. Then see *Tire Changing on page 10-89*. To use the tire sealant and compressor kit, see *Tire Sealant and Compressor Kit on page 10-81*.

When the vehicle has a flat tire (B), use the following example as a guide to assist you in the placement of wheel blocks (A).



A. Wheel Block

B. Flat Tire

The following information explains how to repair or change a tire.

Tire Sealant and Compressor Kit

⚠ WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 9-24*.

⚠ WARNING

Overinflating a tire could cause the tire to rupture and you or others could be injured. Be sure to read and follow the tire sealant and compressor kit instructions and inflate the tire to its recommended pressure. Do not exceed the recommended pressure.

⚠ WARNING

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

If this vehicle has a tire sealant and compressor kit, there may not be a spare tire, tire changing equipment, and on some vehicles there may not be a place to store a tire.

The tire sealant and compressor can be used to temporarily seal punctures up to 6 mm (¼ in) in the tread area of the tire. It can also be used to inflate an under inflated tire.

If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-11*.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:

A. Selector Switch (Sealant/Air or Air Only)
B. On/Off Button
C. Pressure Gauge
D. Pressure Deflation Button
E. Tire Sealant Canister
F. Sealant/Air Hose (Clear)
G. Air Only Hose (Black)
H. Power Plug

Tire Sealant

Read and follow the safe handling instructions on the label adhered to the sealant canister.

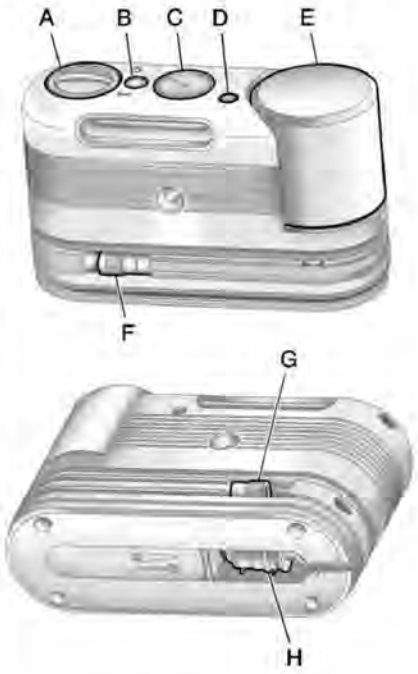
Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date.

Replacement sealant canisters are available at your local dealer. See "Removal and Installation of the Sealant Canister" following.

There is only enough sealant to seal one tire. After usage, the sealant canister and sealant/air hose assembly must be replaced. See "Removal and Installation of the Sealant Canister" following.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.



When using the tire sealant and compressor kit during cold temperatures, warm the kit in a

heated environment for five minutes. This will help to inflate the tire faster.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-5*.

See *If a Tire Goes Flat on page 10-79* for other important safety warnings.

Do not remove any objects that have penetrated the tire.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-89*.
2. Unwrap the sealant/air hose (F) and the power plug (H).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the sealant/air hose (F) onto the tire valve stem. Turn it clockwise until it is tight.
6. Plug the power plug (H) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-8*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Turn the selector switch (A) counterclockwise to the Sealant + Air position.
9. Press the on/off (B) button to turn the tire sealant and compressor kit on.

   The compressor will inject sealant and air into the tire.

   The pressure gauge (C) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.

10. Inflate the tire to the recommended inflation pressure using the pressure gauge (C). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-63*.

    The pressure gauge (C) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

Notice: **If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tire is too severely damaged and the tire sealant and compressor kit cannot inflate the tire. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-11*.**

11. Press the on/off button (B) to turn the tire sealant and compressor kit off.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire, therefore, Steps 12 through 18 must be done immediately after Step 11.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (H) from the accessory power outlet in the vehicle.

13. Turn the sealant/air hose (F) counterclockwise to remove it from the tire valve stem.

14. Replace the tire valve stem cap.

15. Replace the sealant/air hose (F), and the power plug (H) back in their original location.

16. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (E) and place it in a highly visible location. Do not exceed the speed on this label until the damaged tire is repaired or replaced.

17. Return the equipment to its original storage location in the vehicle.
18. Immediately drive the vehicle 8 km (5 miles) to distribute the sealant in the tire.
19. Stop at a safe location and check the tire pressure. Refer to Steps 1 through 11 under "Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)."

    If the tire pressure has fallen more than 68 kPa (10 psi) below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant cannot seal the tire. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-11*.

    If the tire pressure has not dropped more than 68 kPa (10 psi) from the recommended inflation pressure, inflate the tire to the recommended inflation pressure.
20. Wipe off any sealant from the wheel, tire, and vehicle.
21. Dispose of the used sealant canister (E) and sealant/air hose (F) assembly at a local dealer or in accordance with local state codes and practices.
22. Replace it with a new canister available from your dealer.
23. After temporarily sealing the tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within 161 km (100 miles) of driving to have the tire repaired or replaced.

Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-5*.

See *If a Tire Goes Flat on page 10-79* for other important safety warnings.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-89*.
2. Unwrap the air only hose (G) and the power plug (H).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the tire valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the air only hose (G) onto the tire valve stem by turning it clockwise until it is tight.
6. Plug the power plug (H) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-8*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Turn the selector switch (A) clockwise to the Air Only position.
9. Press the on/off (B) button to turn the compressor on.

   The compressor will inflate the tire with air only.

10. Inflate the tire to the recommended inflation pressure using the pressure gauge (C). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-63.*

    The pressure gauge (C) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on/off until the correct pressure is reached.

    If you inflate the tire higher than the recommended pressure you can adjust the excess pressure by pressing the pressure deflation button (D) until the proper pressure reading is reached. This option is only functional when using the air only hose (G).

11. Press the on/off button (B) to turn the tire sealant and compressor kit off.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (H) from the accessory power outlet in the vehicle.

13. Disconnect the air only hose (G) from the tire valve stem, by turning it counterclockwise, and replace the tire valve stem cap.

14. Replace the air only hose (G) and the power plug (H) and cord back in its original location.

15. Place the equipment in the original storage location in the vehicle.

The tire sealant and compressor kit has an accessory adapter located in a compartment on the bottom of its housing that may be used to inflate air mattresses, balls, etc.

Removal and Installation of the Sealant Canister

To remove the sealant canister:

1. Unwrap the sealant hose.
2. Press the canister release button.
3. Pull up and remove the canister.
4. Replace with a new canister which is available from your dealer.
5. Push the new canister into place.

Storing the Tire Sealant and Compressor Kit

This vehicle may have a tire sealant and compressor kit in place of a jack or spare tire. It is located in a foam container in the rear compartment storage area. If the vehicle has a cargo cover, see *Cargo Management System on page 4-4* for instructions on how to access the tire sealant and compressor kit.

Tire Changing

Removing the Spare Tire and Tools

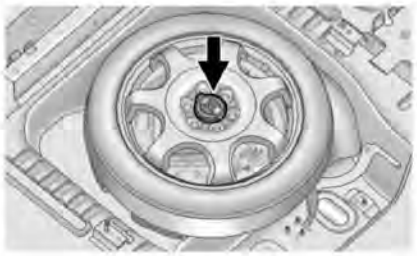
To access the spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-14.*

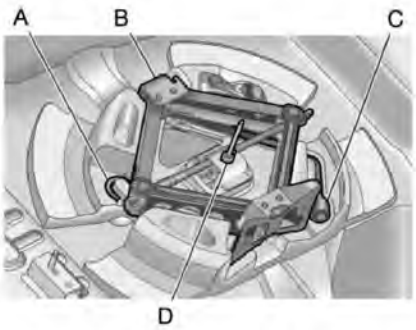
2. Press on the bottom of the handle assembly to unlatch it and lift up on the handle.

   The prop rod locks into place when open.

3. Remove the spare tire cover.



4. Remove the nut retaining the spare tire.
5. Remove the spare tire and place it next to the tire being changed.



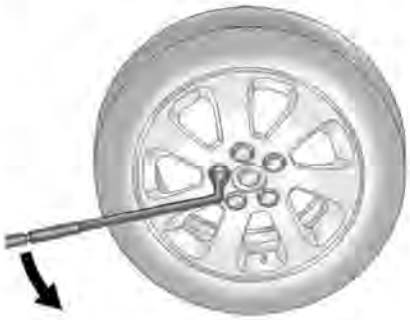
6. Remove the wing nut (D).
7. Remove the extension (A), jack (B) and wheel wrench (C) and place them near the tire being changed.

Removing the Flat Tire and Installing the Spare Tire

Take off the wheel cover or center cap, if the vehicle has one, to reach the wheel bolts.

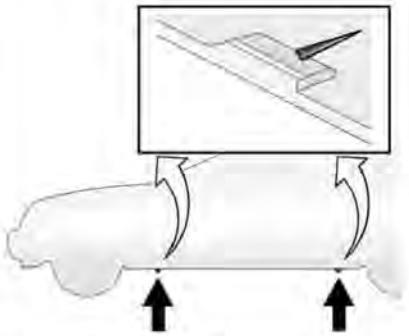
1. Do a safety check before proceeding. See *If a Tire Goes Flat on page 10-79* for more information.
2. Turn the wheel wrench counterclockwise to loosen and remove the wheel nut caps.

   Do not try to remove plastic caps from the cover or center cap.
3. Pull the cover or center cap away from the wheel. Store the wheel cover in the cargo area until you have the flat tire repaired or replaced.



4. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
5. Place the jack near the flat tire.

Notice: **Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.**



6. Position the jack lift head at the jack location nearest the flat tire.

   The jacking location is indicated by a V-shaped notch in the plastic molding. The jack must not be used in any other position.

7. Insert the hooked end of the extension handle through the jack and the flat end through the wheel wrench.

⚠ WARNING

Getting under a vehicle when it is jacked up is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

⚠ WARNING

Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

⚠ WARNING

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

8. Turn the extension with the wheel wrench clockwise to raise the jack lift head until the jack just fits under the vehicle.

9. Raise the vehicle by turning the wheel wrench clockwise until the slots in the jack head fit into the metal flange located behind the triangle on the plastic moulding.

Notice: **Using a jack to raise the vehicle without positioning it correctly could damage your vehicle. When raising your vehicle on a jack, be sure to position it correctly under the frame and avoid contact with the plastic molding.**

10. Put the compact spare tire near you.

Remove all of the wheel nuts.

11. Remove the flat tire.

⚠ WARNING

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, use a cloth or a paper towel to do this; but be sure to use a scraper or wire brush later, if needed, to get all the rust or dirt off. See *If a Tire Goes Flat on page 10-79*.

12. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
13. Place the compact spare tire on the wheel-mounting surface.

⚠ WARNING

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

14. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
15. Lower the vehicle by turning the jack handle counterclockwise.

⚠ WARNING

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench to the proper torque specification after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications on page 12-2* for original equipment wheel nut torque specifications.

***Notice:* Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications on page 12-2* for the wheel nut torque specification.**

16. Tighten the wheel nuts firmly in a crisscross sequence, as shown.
17. Lower the jack all the way and remove the jack from under the vehicle.
18. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or center cap on the full-size tire, tighten all five plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

***Notice:* Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.**

Storing a Flat or Spare Tire and Tools

⚠ WARNING

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

To store the flat or spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-14* for more information.
2. Put back all tools as they were stored in the rear storage compartment and put the compartment cover back on. For more information, see "Storing the Compact Spare Tire and Tools" next in this section.
3. Install the cargo cover. For more information, see *Cargo Management System on page 4-4*.
4. Place the tire, lying flat, in the rear storage compartment.

5. Attach the strap to the cargo tie-down in the rear of the vehicle.

6. Route the strap through the wheel, as shown.
7. Attach the strap to the other cargo tie-down in the rear of the vehicle.
8. Tighten the strap.

The compact spare is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can.

Compact Spare Tire

⚠ WARNING

Driving with more than one compact spare tire at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tire at a time.

If this vehicle has a compact spare tire, it was fully inflated when the vehicle was new; however, it can lose air after a time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

After installing the compact spare on the vehicle, stop as soon as possible and make sure the spare tire is correctly inflated. The compact spare is made to perform well at speeds up to 105 km/h (65 mph) for distances up to 5 000 km (3,000 mi), so you can finish your trip and have the full-size tire repaired or replaced at your convenience. Of course, it is best to replace the spare with a full-size tire as soon as possible. The spare tire will last longer and be in good shape in case it is needed again.

Notice: **When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tire, wheel and other parts of the vehicle.**

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

Notice: **Tire chains will not fit the compact spare. Using them can damage the vehicle and can damage the chains too. Do not use tire chains on the compact spare.**

Jump Starting

For more information about the vehicle battery, see *Battery on page 10-30.*

If the vehicle battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠ WARNING

Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

Notice: **Ignoring these steps could result in costly damage to the vehicle that would not be covered by the warranty.**

Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

Notice: **Only use a vehicle that has a 12-volt system with a negative ground for jump starting. If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be damaged.**

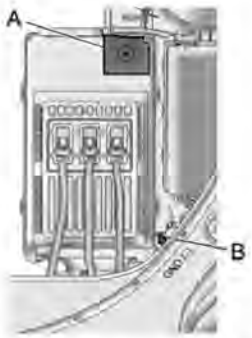
2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start your vehicle, and the bad grounding could damage the electrical systems.

   To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the transmission in P (Park) before setting the parking brake.

Notice: **If the radio or other accessories are left on during the jump starting procedure, they could be damaged. The repairs would not be covered by the warranty. Always turn off the radio and other accessories when jump starting the vehicle.**

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or the accessory power outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks, helping save both batteries and the radio.
4. Open the hood on the other vehicle and locate the positive (+) and negative (−) terminal locations on that vehicle.

   Open the hood on your vehicle and find the remote positive (+) and remote negative (−) jump starting terminals.



Your vehicle is equipped with a remote positive (+) terminal (A) and a remote negative (−) terminal (B). The remote positive (+) terminal is located in the engine compartment on the driver side of the vehicle, above the rear of the battery. The remote negative (−) terminal is a stud located in the engine compartment on the driver side of the vehicle, on the front tie bar. See *Engine Compartment Overview on page 10-6* for more information on location.

To uncover the remote positive (+) terminal, lift open the access panel on the battery cover indicated by the (+) sign.

⚠ WARNING

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.

⚠ WARNING

Using an open flame near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.

Be sure the battery has enough water. You do not need to add water to the battery installed in

(Continued)

WARNING (Continued)

your new vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you do not, explosive gas could be present.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

⚠ WARNING

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could also be damaged.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the vehicle has one. Negative (−) will go to a heavy, unpainted metal engine part or to a remote negative (−) terminal if the vehicle has one.

   Do not connect positive (+) to negative (−) or you will get a short that would damage the battery and maybe other parts. Do not connect the negative (−) cable to the negative (−) terminal on the dead battery because this can cause sparks.

6. Connect the red positive (+) cable to the positive (+) terminal on the vehicle with the dead battery. Use a remote positive (+) terminal if the vehicle has one.
7. Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.
8. Now connect the black negative (−) cable to the negative (−) terminal of the good battery. Use a remote negative (−) terminal if the vehicle has one.

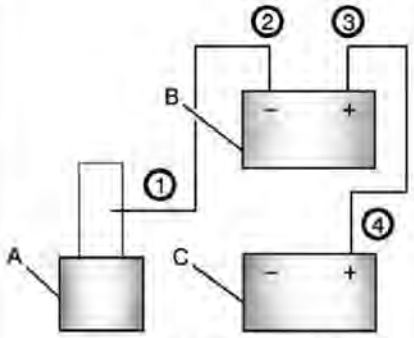
   Do not let the other end touch anything until the next step. The other end of the negative (−) cable does not go to the dead battery. It goes to a heavy, unpainted metal engine part or to a remote negative (−) terminal on the vehicle with the dead battery.

9. Connect the other end of the negative (−) cable away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, and the chance of sparks getting back to the battery is much less.

   Your vehicle has a remote (−) terminal for this purpose.

10. Now start the vehicle with the good battery and run the engine for a while.
11. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

Notice: **If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.**



Jumper Cable Removal

A. Heavy, Unpainted Metal Engine Part or Remote Negative (−) Terminal

B. Good Battery or Remote Positive (+) and Remote Negative (−) Terminals

C. Dead Battery or Remote Positive (+) Terminal

To disconnect the jumper cables from both vehicles, do the following:

1. Disconnect the black negative (−) cable from the vehicle that had the dead battery.
2. Disconnect the black negative (−) cable from the vehicle with the good battery.
3. Disconnect the red positive (+) cable from the vehicle with the good battery.
4. Disconnect the red positive (+) cable from the other vehicle.
5. Close the access panel on the battery cover, if applicable.

Towing

Towing the Vehicle

***Notice:* To avoid damage, the disabled vehicle should be towed with all four wheels off the ground. Care must be taken with vehicles that have low ground clearance and/or special equipment. Always flatbed on a car carrier.**

Consult your dealer or a professional towing service if the disabled vehicle must be towed. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-11*.

To tow the vehicle behind another vehicle for recreational purposes, such as behind a motor home, see "Recreational Vehicle Towing" in this section.

Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle – such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

- What is the towing capacity of the towing vehicle? Be sure to read the tow vehicle manufacturer's recommendations.
- What is the distance that will be travelled? Some vehicles have restrictions on how far and how long they can tow.
- Is the proper towing equipment going to be used? See your dealer or trailering professional for additional advice and equipment recommendations.
- Is the vehicle ready to be towed? Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

Dinghy Towing

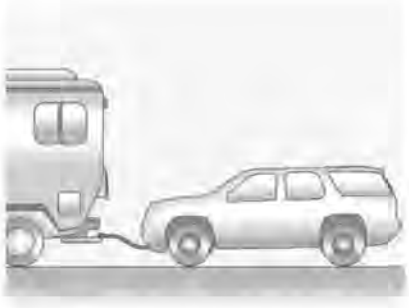
Front-wheel-drive and all-wheel-drive vehicles may be dinghy towed from the front. These vehicles can also be towed by placing them on a platform trailer with all four wheels off of the ground. For other towing options, see "Dolly Towing" following in this section.

Vehicles with an 2.8 L V 6 engine can be dinghy towed only for service and are restricted to a maximum distance of 100 km (60 miles) and not to exceed 80 km/h (50 mph).

Vehicles with the 3.0 L V 6 engine can be dinghy towed without distance restrictions.

Notice: **If 105 km/h (65 mph) is exceeded while towing the vehicle, it could be damaged. Never exceed 105 km/h (65 mph) while towing the vehicle.**

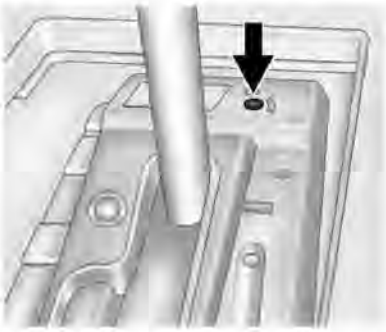
For vehicles being dinghy towed, the vehicle should be run at the beginning of each day and at each RV fuel stop for about five minutes. This will ensure proper lubrication of transmission components.



To tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle that will be towed and secure it to the towing vehicle.

2. Remove the shift lever boot by pulling up on the rear of the trim plate.



3. Use a small screw driver or tool to press and hold the manual release button on the front right.
4. Put the vehicle in N (Neutral).

Notice: **If the vehicle is towed without performing each of the steps listed under "Dinghy Towing," the automatic transmission could be damaged. Be sure to follow all steps of the dinghy towing procedure prior to and after towing the vehicle.**

Once the destination has been reached:

1. Shift the vehicle to P (Park).
2. Reinstall the shift lever boot by inserting the front edge and pressing the rear of the trim plate until it snaps into place.
3. Start the engine and let it idle for more than three minutes before driving the vehicle.

Notice: **Too much or too little fluid can damage the transmission. Be sure that the transmission fluid is at the proper level before towing with all four wheels on the ground.**

Notice: **Do not tow a vehicle with the front drive wheels on the ground if one of the front tires is a compact spare tire. Towing with two different tire sizes on the front of the vehicle can cause severe damage to the transmission.**

Dolly Towing (All-Wheel-Drive Vehicles)

All-wheel-drive vehicles should not be towed with two wheels on the ground. To properly tow these vehicles, they should be placed on a platform trailer with all four wheels off of the ground or dinghy towed from the front. See Dinghy Towing earlier in this section.

Dolly Towing (Front-Wheel-Drive Vehicles)

To tow the vehicle from the front with the rear wheels on the ground, do the following:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park). See *Shifting Into Park on page 9-23*.
3. Set the parking brake.
4. Secure the vehicle to the dolly.
5. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.
6. Release the parking brake.

Towing the Vehicle From the Rear

Notice: **Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.**

Appearance Care

Exterior Care

Cleaning Exterior Lamps/Lenses

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps and lenses. Follow instructions under "Washing the Vehicle" later in this section.

Finish Care

Occasional waxing or mild polishing of the vehicle by hand may be necessary to remove residue from the paint finish. Approved cleaning products can be obtained from your dealer.

If the vehicle has a basecoat/clearcoat paint finish, the clearcoat gives more depth and gloss to the colored basecoat. Always use waxes and polishes that are non-abrasive and made for a basecoat/clearcoat paint finish.

Notice: **Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/clearcoat paint finish on the vehicle.**

Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Exterior painted surfaces are subject to aging, weather, and chemical fallout that can take their toll over a period of years. To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Parts

Bright metal parts should be cleaned regularly to keep their luster. Wash with water or use chrome polish on chrome or stainless steel trim, if necessary.

Use special care with aluminum trim. To avoid damaging protective trim, never use auto or chrome polish, steam, or caustic soap to clean aluminum. A coating of wax, rubbed to high polish, is recommended for all bright metal parts.

Washing the Vehicle

To preserve the vehicle's finish, keep it clean by washing it often.

Do not wash the vehicle in direct sunlight and use a car washing soap.

Notice: **Do not use cleaning agents that are petroleum based or that contain acid or abrasives, as they can damage the paint, metal, or plastic on the vehicle. Approved cleaning products can be obtained from your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product. Certain cleaners contain chemicals that can damage the emblems or nameplates on the vehicle. Check the cleaning product label. If it states that it should not be used on plastic parts, do not use it on the vehicle or damage may occur and it would not be covered by the warranty.**

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

High pressure car washes could cause water to enter the vehicle. Avoid using high pressure washes closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.

Notice: **Conveyor systems on some automatic car washes could damage the vehicle. There may not be enough clearance for the undercarriage. Check with the car wash manager before using the automatic car wash.**

Weatherstrips

Silicone grease on weatherstrips will make them last longer, seal better, and not stick or squeak. Apply silicone grease with a clean cloth. During very cold, damp weather frequent application may be required. See *Recommended Fluids and Lubricants on page 11-7*.

Wheels and Trim — Aluminum or Chrome

The vehicle may have either aluminum or chrome-plated wheels.

Keep the wheels clean using a soft, clean cloth with mild soap and water. Rinse with clean water. After rinsing thoroughly, dry with a soft, clean towel. A wax may then be applied.

Notice: **Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.**

Notice: **Do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels, because the surface could be damaged. The repairs would not be covered by the vehicle warranty. Use only approved cleaners on aluminum or chrome-plated wheels.**

Notice: **Never drive a vehicle that has aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning brushes, as this could cause damage. The repairs would not be covered by the vehicle warranty.**

Notice: **Driving the vehicle through an automatic car wash that has silicone carbide tire cleaning brushes, could damage the aluminum or chrome-plated wheels. The repairs would not be covered by the vehicle warranty. Never drive a vehicle that has aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning brushes.**

Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean the rubber blades using a lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking. Replace the wiper blades if they are worn or damaged.

Wipers can be damaged by:

- Extreme dusty conditions
- Sand and salt
- Heat and sun
- Snow and ice, without proper removal

Tires

Use a stiff brush with tire cleaner to clean the tires.

Notice: **Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on the vehicle.**

Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

Finish Damage

Any stone chips, fractures, or deep scratches in the finish should be repaired right away. Bare metal will corrode quickly and may develop into major repair expense.

Minor chips and scratches can be repaired with touch-up materials available from your dealer. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

Underbody Maintenance

Chemicals used for ice and snow removal and dust control can collect on the underbody. If these are not removed, corrosion and rust can develop on the underbody parts such as fuel lines, frame, floor pan, and exhaust system even though they have corrosion protection.

At least every spring, flush these materials from the underbody with plain water. Clean any areas where mud and debris can collect. Dirt packed in close areas of the frame should be loosened before being flushed. Your dealer or an underbody car washing system can do this.

Chemical Paint Spotting

Some weather and atmospheric conditions can create a chemical fallout. Airborne pollutants can fall upon and attack painted surfaces on the vehicle. This damage can take two forms: blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface.

Interior Care

The interior will continue to look its best if it is cleaned often. Dust and dirt can accumulate on the upholstery and cause damage to the carpet, fabric, leather, and plastic surfaces. Stains should be removed quickly as extreme heat could cause them to set rapidly.

Lighter colored interiors may require more frequent cleaning. Newspapers and garments that can transfer color to home furnishings can also transfer color to the interior.

Remove dust from small buttons and knobs with a small brush with soft bristles.

Your dealer has products for cleaning the interior. When cleaning the interior, only use cleaners specifically designed for the surfaces that are being cleaned. Permanent damage can result from using cleaners on surfaces for which they were not intended. Apply the cleaner directly to the cleaning cloth to prevent over-spray. Remove any accidental over-spray from other surfaces immediately.

Notice: **Using abrasive cleaners when cleaning glass surfaces on the vehicle, could scratch the glass and/or cause damage to the rear window defogger. When cleaning the glass on the vehicle, use only a soft cloth and glass cleaner.**

Cleaners can contain solvents that can become concentrated in the interior. Before using cleaners, read and adhere to all safety instructions on the label. While cleaning the interior, maintain adequate ventilation by opening the doors and windows.

Do not clean the interior using the following cleaners or techniques:

- Never use a knife or any other sharp object to remove a soil from any interior surface.
- Never use a stiff brush. It can cause damage.
- Never apply heavy pressure or rub aggressively with a cleaning cloth. Use of heavy pressure can damage the interior and does not improve the effectiveness of soil removal.

- Avoid laundry detergents or dishwashing soaps with degreasers. Using too much soap will leave a residue that leaves streaks and attracts dirt. For liquid cleaners, about 20 drops per 3.78 L (1 gal) of water is a good guide. Use only mild, neutral-pH soaps.
- Do not heavily saturate the upholstery while cleaning.
- Cleaners that contain solvents can damage the interior.

Fabric/Carpet

Use a vacuum cleaner with a soft brush attachment to remove dust and loose dirt. A canister vacuum with rotating brushes in the nozzle may only be used on floor carpet and carpeted floor mats. For soils, always try to remove them first with plain water or club soda. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- For liquids: gently blot the remaining soil with a paper towel. Allow the soil to absorb into the paper towel until no more can be removed.
- For solid dry soils: remove as much as possible and then vacuum.

To clean:

1. Saturate a lint-free, clean white cloth with water or club soda.
2. Remove excess moisture.
3. Start on the outside edge of the soil and gently rub toward the center. Continue cleaning, using a clean area of the cloth each time it becomes soiled.
4. Continue to gently rub the soiled area.
5. If the soil is not completely removed, use a mild soap solution and repeat the cleaning process with plain water.

If any of the soil remains, a commercial fabric cleaner or spot lifter may be necessary. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If the locally cleaned area gives any impression that a ring formation may result, clean the entire surface.

A paper towel can be used to blot excess moisture from the fabric or carpet after the cleaning process.

Leather

Leather, and lighter colored leather in particular, will need more frequent cleaning to prevent the buildup of dust, dirt, and colors transferred from other items so that these do not become permanent stains.

To remove dust, a soft cloth dampened with water can be used. If a more thorough cleaning is necessary, a soft cloth dampened with a mild soap solution can be used. Your dealer has a GM approved leather cleaner available that provides superior cleaning performance when used regularly on finished automotive leathers. Allow the leather to dry naturally. Do not use heat, steam, spot lifters or spot removers, or shoe polish on leather. Many commercial leather cleaners and coatings that are sold to preserve and protect leather may permanently change the appearance and feel of the leather and are not recommended. Do not use silicone or wax-based products, or those containing organic solvents to clean the interior because they can alter the appearance by increasing the gloss in a non-uniform manner.

Instrument Panel, Vinyl, and Other Plastic Surfaces

To remove dust, a soft cloth dampened with water can be used. If a more thorough cleaning is necessary, a clean soft cloth dampened with a mild soap solution can be used to gently remove dust and dirt. Never use spot lifters or removers on plastic surfaces. Many commercial cleaners and coatings that are sold to preserve and protect soft plastic surfaces may permanently change the appearance and feel of the interior and are not recommended. Do not use silicone or wax-based products, or those containing organic solvents to clean the interior because they can alter the appearance by increasing the gloss in a non-uniform manner.

Some commercial products may increase gloss on the instrument panel. The increase in gloss may cause annoying reflections in the windshield and even make it difficult to see through the windshield under certain conditions.

Notice: **Air fresheners contain solvents that may cause damage to plastics and painted surfaces. Follow the manufacturer's instructions when using air fresheners in the vehicle. If air freshener comes in contact with paint or a plastic surface, blot immediately with a soft cloth. Damage caused by using air fresheners would not be covered by the vehicle warranty.**

Care of Safety Belts

Keep belts clean and dry.

⚠ WARNING

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Floor Mats

⚠ WARNING

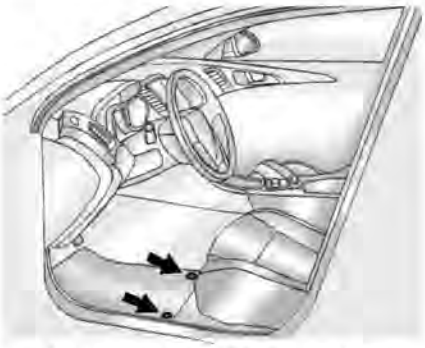
If a floor mat is the wrong size or is not properly installed, it can interfere with the accelerator pedal and/or brake pedal. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the accelerator or brake pedal.

Use the following guidelines for proper floor mat usage:

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that GM certified floor mats be purchased. Non-GM floor mats may not fit properly and may interfere with the accelerator or brake pedal. Always check that the floor mats do not interfere with the pedals.
- Use the floor mat with the correct side up. Do not turn it over.
- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

Removing and Replacing the Floor Mats

The drivers side floor mat is held in place by two button-type retainers. The passenger side floor mat is held in place by one button-type retainer.



1. Pull up on the rear of the floor mat to unlock each retainer and remove.
2. Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.
3. Make sure the floor mat is properly secured and verify that it does not interfere with the accelerator or brake pedal.

✍ NOTES

Service and Maintenance

General Information
General Information 11-1

Scheduled Maintenance
Scheduled Maintenance 11-2

Recommended Fluids, Lubricants, and Parts
Recommended Fluids and Lubricants 11-7
Maintenance Replacement Parts 11-9

Maintenance Records
Maintenance Records 11-10

General Information

Notice: **Maintenance intervals, checks, inspections, recommended fluids, and lubricants are necessary to keep this vehicle in good working condition. Damage caused by failure to follow scheduled maintenance might not be covered by the vehicle warranty.**

As the vehicle owner, you are responsible for the scheduled maintenance in this section. We recommend having your dealer perform these services. Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions for better air quality.

Because of all the different ways people use vehicles, maintenance needs vary. The vehicle might need more frequent checks and services. Please read the information under Scheduled Maintenance. To keep the vehicle in good condition, see your dealer.

The maintenance schedule is for vehicles that:

- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-12*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Recommended Fuel on page 9-48*.

⚠ WARNING

Performing maintenance work can be dangerous. Some jobs can cause serious injury. Perform maintenance work only if you have the required know-how and the proper tools and equipment. If in doubt, see your dealer to have a qualified technician do the work. See *Doing Your Own Service Work on page 10-4*.

At your dealer, you can be certain that you will receive the highest level of service available. Your dealer has specially trained service technicians, uses genuine replacement parts, as well as, up-to-date tools and equipment to ensure fast and accurate diagnostics.

The proper replacement parts, fluids, and lubricants to use are listed in *Recommended Fluids and Lubricants on page 11-7* and *Maintenance Replacement Parts on page 11-9*. We recommend the use of genuine parts from your dealer.

Rotation of New Tires

To maintain ride, handling, and performance of the vehicle, it is important that the first rotation service for new tires be performed. Tires should be rotated every 12 000 km/7,500 miles. See *Tire Rotation on page 10-71*.

Scheduled Maintenance

When the Change Engine Oil Soon Message Displays

Change engine oil and filter. See *Engine Oil on page 10-10*. *An Emission Control Service.*

When the CHANGE ENGINE OIL SOON message displays, service is required for the vehicle as soon as possible, within the next 1 000 km/600 miles. If driving under the best conditions, the engine oil life system might not indicate the need for vehicle service for more than a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your dealer has trained service technicians who will perform this work and reset the system.

If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 miles since the last service. Reset the oil life system whenever the oil is changed. See *Engine Oil Life System on page 10-14.*

Every Engine Oil Change

- Change engine oil and filter. Reset oil life system. See *Engine Oil on page 10-10* and *Engine Oil Life System on page 10-14. An Emission Control Service.*
- Engine coolant level check. See *Engine Coolant on page 10-20.*
- Engine cooling system inspection. Visual inspection of hoses, pipes, fittings, and clamps and replacement, if needed.
- Windshield washer fluid level check. See *Washer Fluid on page 10-26.*
- Windshield wiper blade inspection for wear, cracking, or contamination and windshield and wiper blade cleaning, if contaminated. See *Exterior Care on page 10-105.* Worn or damaged wiper blade replacement. See *Wiper Blade Replacement on page 10-33.*
- Tire inflation pressures check. See *Tire Pressure on page 10-63.*
- Tire wear inspection. See *Tire Inspection on page 10-71.*
- Rotate tires if necessary. See *Tire Rotation on page 10-71.*
- Fluids visual leak check (or every 12 months, whichever occurs first). A leak in any system must be repaired and the fluid level checked.
- Engine air cleaner filter inspection. See *Engine Air Cleaner/Filter on page 10-16.*
- Brake system inspection (or every 12 months, whichever occurs first).
- Steering and suspension inspection. Visual inspection for damaged, loose, or missing parts or signs of wear.

- Body hinges and latches, key lock cylinders, folding seat hardware, and sunroof (if equipped) lubrication. See *Recommended Fluids and Lubricants on page 11-7*. More frequent lubrication may be required when the vehicle is exposed to a corrosive environment. Applying silicone grease on weatherstrips with a clean cloth makes them last longer, seal better, and not stick or squeak.
- Restraint system component check. See *Safety System Check on page 3-29*.
- Fuel system inspection for damage or leaks.
- Exhaust system and nearby heat shields inspection for loose or damaged components.

Additional Required Services

Every 12 000 km/7,500 Miles

- Rotate tires. Tires should be rotated every 12 000 km/ 7,500 miles. See *Tire Rotation on page 10-71*.

At Each Fuel Stop

- Engine oil level check. See *Engine Oil on page 10-10*.
- Engine coolant level check. See *Engine Coolant on page 10-20*.
- Windshield washer fluid level check. See *Washer Fluid on page 10-26*.

Once a Month

- Tire inflation check. See *Tire Pressure on page 10-63*.
- Tire wear inspection. See *Tire Inspection on page 10-71*.
- Sunroof track and seal inspection, if equipped. See *Sunroof on page 2-27*.

Once a Year

- See *Starter Switch Check on page 10-31*.
- See *Automatic Transmission Shift Lock Control Function Check on page 10-31*.
- See *Ignition Transmission Lock Check on page 10-32*.
- See *Park Brake and P (Park) Mechanism Check on page 10-32*.
- Accelerator pedal check for damage, high effort, or binding. Replace if needed.
- If the vehicle has a Tire Sealant and Compressor Kit, check the sealant expiration date printed on the instruction label of the kit. See *Tire Sealant and Compressor Kit on page 10-81*.

- Underbody flushing service.
- Hood/Decklid/Liftgate/Liftglass Support Gas Strut Service: Visually inspect gas strut, if equipped, for signs of wear, cracks, or other damage. Check the hold open ability of the gas strut. Contact your dealer if service is required.

First Engine Oil Change After Every 40 000 km/25,000 Miles

- Passenger compartment air filter replacement (or every 24 months, whichever occurs first). More frequent replacement may be needed if you drive in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if you notice reduced air flow, windows fogging up, or odors. Your dealer can help you determine when it is the right time to replace the filter.

First Engine Oil Change After Every 80 000 km/50,000 Miles

- Engine air cleaner filter replacement. See *Engine Air Cleaner/Filter on page 10-16*.
- Automatic transmission fluid change (severe service) for vehicles mainly driven in heavy city traffic in hot weather, in hilly or mountainous terrain, when frequently towing a trailer, or used for taxi, police, or delivery service. See *Automatic Transmission Fluid on page 10-16*.
- All-wheel drive only: Transfer case fluid change (severe service) for vehicles mainly driven when frequently towing a trailer, or used for taxi, police, or delivery service. Check vent hose at transfer case for kinks and proper installation. Check to be sure vent hose is unobstructed, clear, and free of debris. During any maintenance, if a power washer is used to clean mud and dirt from the underbody, care should be taken to not directly spray the transfer case output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and should be replaced.

- Evaporative control system inspection. Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition. Check that the purge valve, if the vehicle has one, works properly. Replace as needed. *An Emission Control Service. The U.S. Environmental Protection Agency or the California Air Resources Board has determined that the failure to perform this maintenance item will not nullify the emission warranty or limit recall liability prior to the completion of the vehicle's useful life. We, however, urge that all recommended maintenance services be performed at the indicated intervals and the maintenance be recorded.*

First Engine Oil Change After Every 160 000 km/100,000 Miles

- Automatic transmission fluid change (normal service). See *Automatic Transmission Fluid on page 10-16.*
- All-wheel drive only: Transfer case fluid change (normal service). Check vent hose at transfer case for kinks and proper installation. Check to be sure vent hose is unobstructed, clear, and free of debris. During any maintenance, if a power washer is used to clean mud and dirt from the underbody, care should be taken to not directly spray the transfer case output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and should be replaced.
- Spark plug replacement and spark plug wires inspection. *An Emission Control Service.*

First Engine Oil Change After Every 240 000 km/150,000 Miles

- Engine cooling system drain, flush, and refill (or every five years, whichever occurs first). See *Cooling System on page 10-19. An Emission Control Service.*
- Engine drive belts inspection for fraying, excessive cracks, or obvious damage (or every 10 years, whichever occurs first). Replace, if needed.

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Usage	Fluid/Lubricant
Engine Oil	The engine requires engine oil approved to the dexos specification. Oils meeting this specification can be identified with the dexos certification mark. Look for and use only an engine oil that displays the dexos certification mark of the proper viscosity grade. See *Engine Oil on page 10-10*.
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL Coolant. See *Engine Coolant on page 10-20*.
Hydraulic Brake System	DOT 3 Hydraulic Brake Fluid (GM Part No. 88863461, in Canada 88863462).
Windshield Washer	Optikleen® Washer Solvent.
Hydraulic Power Steering System	DEXRON®-VI Automatic Transmission Fluid.
Automatic Transmission (3.0L V6 Engine)	DEXRON®-VI Automatic Transmission Fluid.

Usage	Fluid/Lubricant
Automatic Transmission (2.8L V6 Engine)	AW-1 Automatic Transmission Fluid (GM Part No. 19256039, in Canada 19256040).
Chassis Lubrication	Chassis Lubricant (GM Part No. 12377985, in Canada 88901242) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Key Lock Cylinders	Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).
Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl	Lubriplate Lubricant Aerosol (GM Part No. 12346293, in Canada 992723) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Hood, Door, and Folding Seat Hinges	Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).
Power Liftgate Actuator Ball Joint	Multi-Purpose Lubricant (GM Part No. 89021668, in Canada 89021674).
Weatherstrip Conditioning	Weatherstrip Lubricant (GM Part No. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. 12345579, in Canada 992887).

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

Part	GM Part Number	ACDelco Part Number
Engine Air Cleaner/Filter	20897358	A3147C
Engine Oil Filter		
2.8L V6 Engine	12593333	PF457G
3.0L V6 Engine	89017525	PF63
Passenger Compartment Air Filter Element	13271191	CF176
Spark Plugs		
2.8L V6 Engine	12622561	41–109
3.0L V6 Engine	12622561	41–109
Wiper Blades		
Driver Side – 65.0 cm (25.6 in)	25979378	—
Passenger Side – 42.5 cm (16.7 in)	25979379	—
Rear – 30.0 cm (11.8 in)	20825882	—

Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

Maintenance Record

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Maintenance Record (cont.)

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Maintenance Record (cont.)

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Technical Data

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Service Parts Identification Label 12-1

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Vehicle Identification

Vehicle Identification Number (VIN)

This legal identifier is in the front corner of the instrument panel, on the left side of the vehicle. It can be seen through the windshield from outside. The VIN also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under *Capacities and Specifications on page 12-2* for the vehicle's engine code.

Service Parts Identification Label

This label, on the inside of the rear side cargo management cover, has the following information:

- Vehicle Identification Number (VIN).
- Model designation.
- Paint information.
- Production options and special equipment.

Do not remove this label from the vehicle.

Vehicle Data

Capacities and Specifications

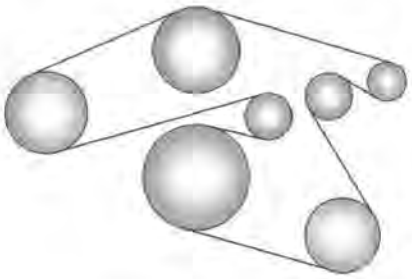
Application	Capacities	
	Metric	English
Air Conditioning Refrigerant R134a	For the air conditioning system refrigerant charge amount, see the refrigerant label located under the hood. See your dealer for more information.	
Engine Cooling System		
2.8L V6 Engine	12.4 L	13.1 qt
3.0L V6 Engine	11.9 L	12.6 qt
Engine Oil with Filter		
2.8L V6 Engine	5.7 L	6.0 qt
3.0L V6 Engine	5.7 L	6.0 qt
Fuel Tank	79.5 L	21.0 gal

Application	Capacities	
	Metric	English
Transmission Fluid		
2.8L V6 6–Speed Automatic (Transmission Requires No Fluid Replacement)	—	—
3.0L V6 6–Speed Automatic* (Drain and Refill)	9.0 L	9.5 qt
Wheel Nut Torque	150 N•m	110 ft lb
*See *Automatic Transmission Fluid on page 10-16* for information on checking fluid level.		
All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.		

Engine Specifications

Engine	VIN Code	Transmission	Spark Plug Gap
2.8L V6 (LAU)	6	Automatic	1.10 mm (0.043 in)
3.0L V6 (LF1)	Y	Automatic	1.10 mm (0.043 in)

Engine Drive Belt Routing



2.8L, 3.0L V6 Engines

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Customer Information

Customer Satisfaction Procedure (U.S. and Canada)

Your satisfaction and goodwill are important to the dealer and to Cadillac. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by the dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

STEP ONE: Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service or parts manager, contact the owner of the dealership or the general manager.

STEP TWO: If after contacting a member of dealership management, it appears your concern cannot be resolved by the dealership without further help, in the U.S., call the Cadillac Customer Assistance Center at 1-800-458-8006. In Canada, call the Canadian Cadillac Customer Communication Centre at 1-888-446-2000.

We encourage you to call the toll-free number in order to give your inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Cadillac, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

STEP THREE — U.S. Owners: Both General Motors and the dealer are committed to making sure you are completely satisfied with the new vehicle. However, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you can file with the Better Business Bureau (BBB) Auto Line® Program to enforce your rights.

The BBB Auto Line Program is an out-of-court program administered by the Council of Better Business Bureaus to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you.

You may contact the BBB Auto Line Program using the toll-free telephone number or write them at the following address:

BBB Auto Line Program
Council of Better Business Bureaus, Inc.
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203-1838

Telephone: 1-800-955-5100
www.dr.bbb.org/goauto

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

STEP THREE — Canadian Owners: In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps One and Two, General Motors of Canada Limited wants you to be aware of its participation in a no-charge mediation/arbitration program. General Motors of Canada Limited has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in approximately 70 days. We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call the General Motors Customer Communication Centre, 1-800-263-3777 (English), 1-800-263-7854 (French), or write to:

Mediation/Arbitration Program
c/o Customer Communication Centre
General Motors of Canada Limited
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

The inquiry should be accompanied by the Vehicle Identification Number (VIN).

Customer Satisfaction Procedure (Mexico)

Did you get the Warranty Extension Plan? This plan is recommended by General Motors to supplement the warranty included with the new vehicle purchase.

See your dealer for details.

Customer Assistance Procedure

Owner satisfaction and goodwill are very important to your dealer and General Motors.

Normally, any problem with the transaction, sale, or usage of the vehicle must be handled by your dealer sales or service departments. However, we recognize that despite the good intentions of all parties involved, sometimes a misunderstanding may occur.

If you have a problem that has not been satisfactorily handled through the normal means, we suggest the following steps:

STEP ONE

Explain your case to the dealer service agent, service manager, dealer sales agent, or sales manager, depending on your case. Make sure that they have all necessary information. They are interested in your continual satisfaction.

STEP TWO

If you are not satisfied, please contact the general manager or the dealership owner to ask for their help. If they are not able to resolve your case, ask them to contact the right people at General Motors for support, if needed.

STEP THREE

If your case is not resolved in a reasonable amount of time by your dealer, please call the General Motors Customer Assistance Center (CAC) and provide the following information:

- Name
- Address
- Phone number
- Model year
- Brand
- Vehicle Identification Number (VIN)
- Mileage
- Delivery date
- Description of the problem
- Dealership name
- Dealership address

See *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-6* for more information.

Customer Assistance Offices (U.S. and Canada)

Cadillac encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Cadillac, the letter should be addressed to:

United States

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169
www.Cadillac.com

1-800-458-8006
1-800-833-2622 (For Text Telephone devices (TTYs))
Roadside Assistance:
1-800-882-1112

From Puerto Rico:

1-800-496-9992 (English)
1-800-496-9993 (Spanish)

From U.S. Virgin Islands:

1-800-496-9994

Canada

General Motors of Canada Limited
Canadian Cadillac Customer Communication Centre, Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
www.gm.ca

1-888-446-2000
1-800-263-3830 (For Text Telephone devices (TTYs))
Roadside Assistance:
1-800-882-1112

Overseas

Please contact the local General Motors Business Unit.

Mexico, Central America and Caribbean Islands/Countries (Except Puerto Rico and U.S. Virgin Islands)

General Motors de Mexico,
S. de R.L. de C.V.
Customer Assistance Center
Av. Ejercito Nacional #843
Col. Granada
C.P. 11520, Mexico, D.F.

01-800-466-0805
Long Distance: 011-52-53 29 0805

Customer Assistance Offices (Mexico)

To contact the Customer Assistance Center (CAC), use the phone numbers listed in this section. Customer assistance is available Monday through Friday, 08:00 to 20:00 hours, and Saturdays from 08:00 to 15:00 hours.

All e-mail inquiries to the Customer Assistance Center (CAC) should be sent to: cac.cadillac@gm.com.

Mexico

From Mexico City

5329-0816

From Other Mexico Locations

01-800-466-0816

United States and Canada

1-866-466-8195

Costa Rica

00-800-052-1005

Guatemala

1-800-999-5252

Panama

00-800-052-0001

Dominican Republic

1-888-751-5301

El Salvador

800-6273

Honduras

800-0122-6101

Customer Assistance for Text Telephone (TTY) Users (U.S. and Canada)

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Cadillac has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Cadillac by dialing: 1-800-833-2622. TTY users in Canada can dial 1-800-263-3830.

Online Owner Center

Cadillac Owner Center (U.S.) www.cadillacownercenter.com

Information and services customized for your specific vehicle — all in one convenient place.

- Digital owner manual, warranty information, and more.
- Storage for online service and maintenance records.
- Cadillac dealer locator for service nationwide.
- Exclusive privileges and offers.
- Recall notices for your specific vehicle.
- OnStar and GM Cardmember Services Earnings summaries.

Other Helpful Links:

Cadillac — www.cadillac.com

Cadillac Merchandise — www.cadillaccollection.com

Help Center — www.cadillac.com/pages/mds/helpcenter/faq.do

- FAQ (Frequently Asked Questions)
- Contact Us

My GM Canada www.gm.ca

My GM Canada is a password-protected section of www.gm.ca where you can save information on GM vehicles, get personalized offers, and use handy tools and forms with greater ease.

Here are a few of the valuable tools and services you will have access to:

- My Showroom: Find and save information on vehicles and current offers in your area.
- My Dealers: Save details such as address and phone number for each of your preferred GM dealers.
- My Driveway: Access quick links to parts and service estimates, check trade-in values, or schedule a service appointment by adding the vehicles you own to your driveway profile.
- My Preferences: Manage your profile and use tools and forms with greater ease.

To sign up, visit the My GM.ca section within www.gm.ca.

GM Mobility Reimbursement Program (U.S. and Canada)

GM MOBILITY

This program is available to qualified applicants for cost reimbursement of eligible aftermarket adaptive equipment required for the vehicle, such as hand controls or a wheelchair/ scooter lift for the vehicle.

For more information on the limited offer, visit www.gmmobility.com or call the GM Mobility Assistance Center at 1-800-323-9935. Text Telephone (TTY) users, call 1-800-833-9935.

General Motors of Canada also has a Mobility Program. Call 1-800-GM-DRIVE (463-7483) for details. TTY users call 1-800-263-3830.

Roadside Service (U.S. and Canada)

In the United States or Canada, call **1-800-882-1112**.

Text Telephone (TTY), U.S. only, call **1-888-889-2438**.

Service is available 24 hours a day, 365 days a year.

Calling for Service

When calling Roadside Service, have the following information ready:

- Your name, home address, and home telephone number.
- Telephone number of your location.
- Location of the vehicle.
- Model, year, color, and license plate number of the vehicle.
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle.
- Description of the problem.

Coverage

Services are provided up to 5 years/160 000 km (100,000 mi), whichever comes first.

In the U.S., anyone driving the vehicle is covered. In Canada, a person driving the vehicle without permission from the owner is not covered.

Roadside Service is not a part of the New Vehicle Limited Warranty. Cadillac and General Motors of Canada Limited reserve the right to make any changes or discontinue the Roadside Service program at any time without notification.

Cadillac and General Motors of Canada Limited reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

Cadillac Owner Privileges™

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.
- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.
- **Emergency Tow From a Public Road or Highway:** Tow to the nearest Cadillac dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is also given when the vehicle is stuck in the sand, mud, or snow.
- **Flat Tire Change:** Service to change a flat tire with spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is your responsibility for the repair or replacement of the tire if it is not covered by the warranty.
- **Battery Jump Start:** Service to jump start a dead battery.
- **Trip Routing Service:** Detailed maps of North America are provided when requested either with the most direct route or the most scenic route. Additional travel information is also available. Allow three weeks for delivery.
- **Trip Interruption Benefits and Service:** If your trip is interrupted due to a warranty failure, incidental expenses may be reimbursed during the 5 years/160 000 km (100,000 mi) Powertrain warranty period. Items considered are hotel, meals, and rental car.

Cadillac Technician Roadside Service (U.S. only)

Cadillac's exceptional Roadside Service is more than an auto club or towing service. It provides every Cadillac owner in the United States with the advantage of contacting a Cadillac advisor and, where available, a Cadillac trained dealer technician who can provide on-site service.

A dealer technician will travel to your location within a 30 mile radius of a participating Cadillac dealership. If beyond this radius, we will arrange to have your car towed to the nearest Cadillac dealership. Each technician travels with a specially equipped service vehicle complete with the necessary Cadillac parts and tools required to handle most roadside repairs.

Services Not Included in Roadside Service

- Impound towing caused by violation of any laws.
- Legal fines.
- Mounting, dismounting, or changing of snow tires, chains, or other traction devices.
- Towing or services for vehicles driven on a non-public road or highway.

Services Specific to Canadian-Purchased Vehicles

- **Fuel delivery:** Reimbursement is approximately $5 Canadian. Diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.
- **Lock-Out Service:** Vehicle registration is required.
- **Trip Routing Service:** Limit of six requests per year.
- **Trip Interruption Benefits and Service:** Pre-authorization, original detailed receipts, and a copy of the repair orders are required. Once authorization has been received, the Roadside Service advisor will help you make arrangements and explain how to receive payment.
- **Alternative Service:** If assistance cannot be provided right away, the Roadside Service advisor may give you permission to get local emergency road service. You will receive payment, up to $100, after sending the original receipt to Roadside Service. Mechanical failures may be covered, however any cost for parts and labor for repairs not covered by the warranty are the owner responsibility.

Roadside Service (Mexico)

Roadside Service is available 24 hours a day, 365 days of the year.

For detailed information about Roadside Service, please see the brochure provided with your new vehicle or visit our website at: www.cadillac.com.mx. Navigate the site and click on "Asistencia en el Camino." E-mail correspondence should be sent to: asistencia.cadillac@gm.com.

To contact Roadside Service by phone, use the following numbers:

Mexico

01-800-466-0805

United States

1-866-466-8906

Canada

1-800-268-6800

Scheduling Service Appointments (U.S. and Canada)

When the vehicle requires warranty service, contact the dealer and request an appointment. By scheduling a service appointment and advising the service consultant of your transportation needs, the dealer can help minimize your inconvenience.

If the vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety related. If it is, please call the dealership, let them know this, and ask for instructions.

If the dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for the same day-repair.

Courtesy Transportation Program (U.S. and Canada)

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper-to-Bumper (Base Warranty Coverage period in Canada), extended powertrain, and/or hybrid-specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled "Warranty and Owner Assistance Information" furnished with each new vehicle provides detailed warranty coverage information.

Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to wait, GM helps to minimize inconvenience by providing several transportation options. Depending on the circumstances, the dealer can offer one of the following:

Shuttle Service

Shuttle service is the preferred means of offering Courtesy Transportation. Dealers may provide shuttle service to get you to your destination with minimal interruption of your daily schedule. This includes one-way or round-trip shuttle service within reasonable time and distance parameters of the dealer's area.

Public Transportation or Fuel Reimbursement

If the vehicle requires overnight warranty repairs, and public transportation is used instead of the dealer's shuttle service, the expense must be supported by original receipts and can only be up to the maximum amount allowed by GM for shuttle service. In addition, for U.S. customers, should you arrange transportation through a friend or relative, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See the dealer for information regarding the allowance amounts for reimbursement of fuel or other transportation costs.

Courtesy Rental Vehicle

The dealer may arrange to provide you with a courtesy rental vehicle or reimburse you for a rental vehicle that you obtain if the vehicle is kept for an overnight warranty repair. Rental reimbursement will be limited and must be supported by original receipts. This requires that you sign and complete a rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. You are responsible for fuel usage charges and may also be responsible for taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair.

It may not be possible to provide a like vehicle as a courtesy rental.

Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Please contact the dealer for specific information about availability. All Courtesy Transportation arrangements will be administered by appropriate dealer personnel.

General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

Collision Damage Repair (U.S. and Canada)

If the vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish the vehicle resale value, and safety performance can be compromised in subsequent collisions.

Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine GM Collision parts are the best choice to ensure that the vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain the GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain the vehicle's originally designed appearance and safety performance; however, the history of these parts is not known. Such parts are not covered by the GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for the vehicle. As a result, these parts may fit poorly, exhibit premature durability/corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by the GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

Repair Facility

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. The dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

Insuring The Vehicle

Protect your investment in the GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to the GM vehicle by limiting compensation for damage repairs by using aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you ensure that the vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If the vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read the lease carefully, as you may be charged at the end of the lease for poor quality repairs.

If a Crash Occurs

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-11*.

Gather the following information:

- Driver name, address, and telephone number.
- Driver license number.
- Owner name, address, and telephone number.
- Vehicle license plate number.
- Vehicle make, model, and model year.
- Vehicle Identification Number (VIN).
- Insurance company and policy number.
- General description of the damage to the other vehicle.

Choose a reputable repair facility that uses quality replacement parts. See "Collision Parts" earlier in this section.

If the airbag has inflated, see *What Will You See After an Airbag Inflates? on page 3-37*.

Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take the vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by the GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with the repair professional, and insist on Genuine GM parts. Remember, if the vehicle is leased, you may be obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

Service Publications Ordering Information

Service Manuals

Service Manuals have the diagnosis and repair information on the engines, transmission, axle, suspension, brakes, electrical, steering, body, etc.

Service Bulletins

Service Bulletins give additional technical service information needed to knowledgeably service General Motors cars and trucks. Each bulletin contains instructions to assist in the diagnosis and service of the vehicle.

Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The Owner Manual includes the Maintenance Schedule for all models.

In-Portfolio: Includes a Portfolio, Owner Manual, and Warranty Booklet.

RETAIL SELL PRICE: $35.00 (U.S.) plus handling and shipping fees.

Without Portfolio: Owner Manual only.

RETAIL SELL PRICE: $25.00 (U.S.) plus handling and shipping fees.

Current and Past Models

Technical Service Bulletins and Manuals are available for current and past model GM vehicles.

ORDER TOLL FREE:
1-800-551-4123 Monday - Friday
8:00 AM - 6:00 PM Eastern Time

For Credit Card Orders Only (VISA-MasterCard-Discover), visit Helm, Inc. at: www.helminc.com.

Or write to:

Helm, Incorporated
P.O. Box 07130
Detroit, MI 48207

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

All listed prices are quoted in U.S. funds. Make checks payable in U.S. funds.

Reporting Safety Defects

Reporting Safety Defects to the United States Government

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to *http://www.safercar.gov;* or write to:

Administrator, NHTSA
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from *http://www.safercar.gov.*

Reporting Safety Defects to the Canadian Government

If you live in Canada, and you believe that the vehicle has a safety defect, notify Transport Canada immediately, and notify General Motors of Canada Limited. Call them at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
2780 Sheffield Road
Ottawa, Ontario K1B 3V9

Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify General Motors.

Call 1-800-458-8006, or write:

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169

In Canada, call 1-888-446-2000, or write:

Canadian Cadillac Customer Communication Centre, Mail Code: CA1-163-005
General Motors of Canada Limited
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Vehicle Data Recording and Privacy

This GM vehicle has a number of sophisticated computers that record information about the vehicle's performance and how it is driven. For example, the vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy airbags in a crash, and, if so equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help the dealer technician service the vehicle. Some modules may also store data about how you operate the vehicle, such as rate of fuel consumption or average speed. These modules may also retain the owner's personal preferences, such as radio pre-sets, seat positions, and temperature settings.

Event Data Recorders

This vehicle has an Event Data Recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an airbag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in the vehicle were operating.
- Whether or not the driver and passenger safety belts were buckled/fastened.
- How far, if at all, the driver was pressing the accelerator and/or brake pedal.
- How fast the vehicle was traveling.

This data can help provide a better understanding of the circumstances in which crashes and injuries occur.

Important: EDR data is recorded by the vehicle only if a non-trivial crash situation occurs; no data is recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) is recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access this data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request by police or similar government office; as part of GM's defense of litigation through the discovery process; or, as required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

OnStar®

If the vehicle is equipped with an active OnStar system, that system may also record data in crash or near crash-like situations. The OnStar Terms and Conditions provides information on data collection and use and is available in the OnStar glove box kit, at www.onstar.com (U.S.) or www.onstar.ca (Canada), or by pressing the button and speaking to an advisor.

Navigation System

If the vehicle has a navigation system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. Refer to the navigation system operating manual for information on stored data and for deletion instructions.

Radio Frequency Identification (RFID)

RFID technology is used in some vehicles for functions such as tire pressure monitoring and ignition system security, as well as in connection with conveniences such as key fobs for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in GM vehicles does not use or record personal information or link with any other GM system containing personal information.

Radio Frequency Statement

This vehicle has systems that operate on a radio frequency that comply with Part 15 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-210/220/310.

Operation is subject to the following two conditions:

1. The device may not cause interference.
2. The device must accept any interference received, including interference that may cause undesired operation of the device.

Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

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This manual describes features that may or may not be on your specific vehicle either because they are options that you did not purchase or due to changes subsequent to the printing of this owner manual. Please refer to the purchase documentation relating to your specific vehicle to confirm each of the features found on your vehicle. For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Cadillac Motor Car Division wherever it appears in this manual.

Keep this manual in the vehicle for quick reference.

Canadian Vehicle Owners

Propriétaires Canadiens

A French language copy of this manual can be obtained from your dealer or from:

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire ou à l'adresse suivante:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Litho in U.S.A.
Part No. 20892406 B Second Printing

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Using this Manual

To quickly locate information about the vehicle, use the Index in the back of the manual. It is an alphabetical list of what is in the manual and the page number where it can be found.

Danger, Warnings, and Cautions

Warning messages found on vehicle labels and in this manual describe hazards and what to do to avoid or reduce them.

Danger indicates a hazard with a high level of risk which will result in serious injury or death.

Warning or **Caution** indicates a hazard that could result in injury or death.

⚠ WARNING

These mean there is something that could hurt you or other people.

***Notice:* This means there is something that could result in property or vehicle damage. This would not be covered by the vehicle's warranty.**

A circle with a slash through it is a safety symbol which means "Do Not," "Do not do this," or "Do not let this happen."

Symbols

The vehicle has components and labels that use symbols instead of text. Symbols are shown along with the text describing the operation or information relating to a specific component, control, message, gauge, or indicator.

: This symbol is shown when you need to see your owner manual for additional instructions or information.

: This symbol is shown when you need to see a service manual for additional instructions or information.

Vehicle Symbol Chart

Here are some additional symbols that may be found on the vehicle and what they mean. For more information on the symbol, refer to the Index.

: Airbag Readiness Light

: Air Conditioning

: Antilock Brake System (ABS)

: Audio Steering Wheel Controls or OnStar®

: Brake System Warning Light

: Charging System

: Cruise Control

: Engine Coolant Temperature

: Exterior Lamps

: Fog Lamps

: Fuel Gauge

: Fuses

: Headlamp High/Low-Beam Changer

: Heated Steering Wheel

: LATCH System Child Restraints

: Malfunction Indicator Lamp

: Oil Pressure

: Outside Power Foldaway Mirrors

: Power

: Remote Vehicle Start

: Safety Belt Reminders

: Tire Pressure Monitor

: Traction Control/StabiliTrak

: Windshield Washer Fluid

✍ NOTES

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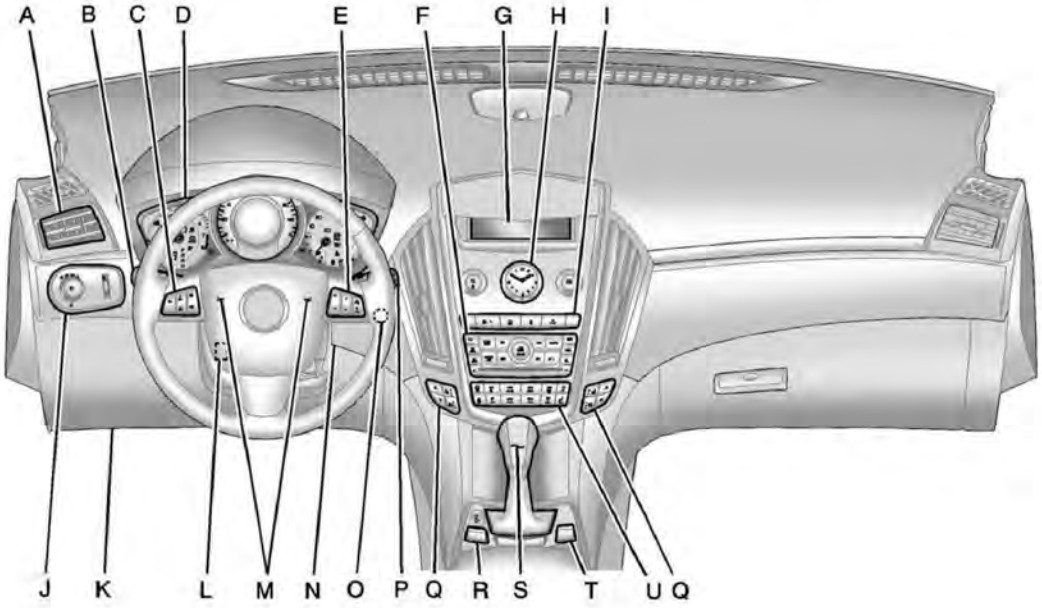
Instrument Panel



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A. *Air Vents on page 8-6.*

B. Turn and Lane-Change Lever. See *Turn and Lane-Change Signals on page 6-6.*

Driver Information Center (DIC) Controls. See *Driver Information Center (DIC) on page 5-27.*

C. *Cruise Control on page 9-36.*

Heated Steering Wheel on page 5-3 (If Equipped).

D. *Instrument Cluster on page 5-11.*

E. *Steering Wheel Controls on page 5-2.*

F. *AM-FM Radio on page 7-11.*

Navigation System (If Equipped). See Navigation System Manual.

G. Driver Information Center (DIC) Display. See *Driver Information Center (DIC) on page 5-27.*

H. *Clock (Analog Clock) on page 5-7* or *Clock (Digital Clock) on page 5-8.*

I. Navigation Display Control (If Equipped). See Navigation System Manual.

Safety Locks on page 2-14.

Power Door Locks on page 2-12.

Hazard Warning Flashers on page 6-5.

Phone Button (If Equipped). See *Bluetooth (Voice Recognition) on page 7-55* or *Bluetooth (Overview) on page 7-49* or *Bluetooth (UHP Mexico Only) on page 7-62* or *Bluetooth (Infotainment Controls) on page 7-51.*

J. *Exterior Lamp Controls on page 6-1.*

Front Fog Lamps on page 6-6 (If Equipped).

Instrument Panel Illumination Control on page 6-7.

K. Data Link Connector (DLC) (Out of View). See *Malfunction Indicator Lamp on page 5-18.*

L. *Steering Wheel Adjustment on page 5-2.*

M. *Horn on page 5-4.*

N. Adjustable Pedal Control (If Equipped). See *Adjustable Throttle and Brake Pedal on page 9-16.*

O. Start/Stop Button. See *Ignition Positions on page 9-17.*

P. *Windshield Wiper/Washer on page 5-4.*

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Q. *Heated and Ventilated Front Seats on page 3-10* (If Equipped).

R. *Parking Brake on page 9-30.*

S. Shift Lever. See *Automatic Transmission on page 9-24.*

T. *StabiliTrak® System on page 9-34.*

Ultrasonic Parking Assist on page 9-38 (If Equipped).

Economy Mode (If Equipped). See *Fuel Economy Mode on page 9-28*

U. *Dual Automatic Climate Control System on page 8-1.*

Initial Drive Information

This section provides a brief overview about some of the important features that may or may not be on your specific vehicle.

For more detailed information, refer to each of the features which can be found later in this owner manual.

Remote Keyless Entry (RKE) System

The Remote Keyless Entry (RKE) transmitter is used to lock and unlock the doors from up to 60 m (195 ft) away from the vehicle.

: Press to unlock the driver door or all doors depending on the vehicle personalization settings.

: Press to lock all doors.

Lock and unlock feedback can be personalized. See *Vehicle Personalization on page 5-40.*

: Press and hold to open or close the liftgate.

: Press and release to locate the vehicle.

Press and hold for three seconds to sound the panic alarm.

Press again or start the vehicle to cancel the panic alarm.

Press the key release button near the bottom of the transmitter to remove the key. The key can be used for the driver door and the glove box.

See *Keys on page 2-2* and *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Remote Vehicle Start

With this feature the engine can be started from outside of the vehicle.

Starting the Vehicle

1. Press and release on the RKE transmitter.
2. Within two seconds, press and hold until the turn signal lamps flash, or for at least two seconds if the vehicle is not in view.

When the vehicle starts, the parking lamps will turn on and remain on as long as the engine is running. The doors will be locked and the climate control system may come on.

The engine will continue to run for 10 minutes. Repeat the steps for a 10-minute time extension. Remote start can be extended only once.

Canceling a Remote Start

To cancel a remote start, do any of the following:

- Press and hold until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then off.

See *Remote Vehicle Start on page 2-10*.

Door Locks

To lock or unlock the doors from the outside, press or on the Remote Keyless Entry (RKE) transmitter. See *Remote Keyless Entry (RKE) System Operation on page 2-3*.

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks

There is a power door lock switch on the instrument panel and on the front door panels.

: Press to lock the doors.

: Press to unlock the doors.

See *Power Door Locks on page 2-12*.

Liftgate

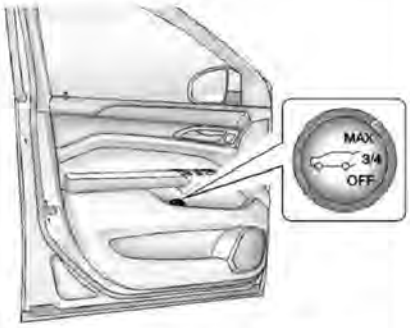
Manual Liftgate Operation

For vehicles without keyless access, unlock the vehicle before opening the liftgate.

Press the touch pad located in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Power Liftgate Operation

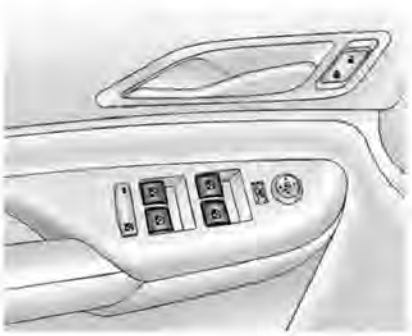


On vehicles with a power liftgate the switch is located on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

Choose the power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position. Press the center of the switch.

See *Liftgate on page 2-14* for more information.

Windows



Pushing or pulling the switch part of the way will open or close the window as long as the switch is operated.

Fully push the front of the switch down and release it to express-down the window. Fully pull the switch up and release it to express-up the window.

See *Power Windows on page 2-24*.

Remote Window Operation

The vehicle may have remote operating windows that will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

See *Power Windows on page 2-24*.

Seat Adjustment

Manual Seats

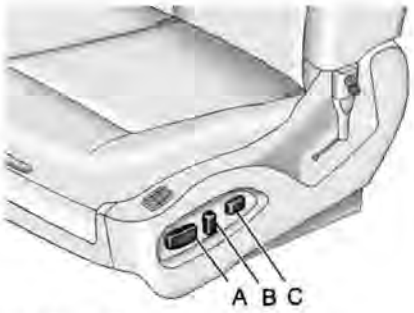
To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

To raise or recline the seatback, use the lever on the outboard side of the seat.

See *Seat Adjustment on page 3-4* and *Reclining Seatbacks on page 3-6*.

Power Seats



A. Seat Position Control
B. Seatback Adjustment Control
C. Lumbar Adjustment Control

To adjust a power seat, if equipped:

- Slide control (A) forward or rearward, and up or down to adjust the power seat.

  See *Power Seat Adjustment on page 3-5*.
- Raise or recline the seatback by tilting control (B) forward or rearward.

  See *Reclining Seatbacks on page 3-6*.
- Increase or decrease the lumbar support by pressing and holding the front or rear of control (C). See *Lumbar Adjustment on page 3-5*.

Memory Features

On vehicles with the memory feature, the "1" and "2" buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedals, if available. These manually stored positions are referred to as Button Memory positions.

The vehicle will also automatically save driver seat, outside mirror, and adjustable throttle and brake pedal positions to the current driver Remote Keyless Entry (RKE) transmitter when the ignition is turned off. These automatically stored positions are referred to as RKE Memory positions.

Storing Button Memory Positions

To save positions into Button Memory:

1. Adjust the driver seat, seatback recliner, both outside mirrors, and adjustable pedals, if available, to the desired driving positions.
2. Press and hold MEM (Memory) and "1" at the same time until a beep sounds.
3. Repeat Steps 1 and 2 for a second driver using "2."

To recall the manually saved Button Memory positions, press and hold "1" or "2." The driver seat, outside mirrors, and adjustable pedals, if available, move to the positions stored to those buttons when pressed. Releasing "1" or "2" before the stored positions are reached stops the recall.

To automatically recall RKE Memory positions, unlock the driver door with the RKE transmitter, and open the driver door. On vehicles with Keyless Access, opening the driver door when an RKE transmitter is present will activate the RKE Memory recall. If the driver door is already open, pressing the RKE transmitter button will also activate the RKE Memory recall. The driver seat, outside mirrors, and pedals, if available, will move to the previously saved RKE Memory positions.

See *Memory Seats on page 3-7*.

Easy Exit Driver Seat

This feature moves the seat rearward allowing the driver more room to exit the vehicle.

To activate, place the ignition in OFF and open the driver door. If the driver door is already open, placing the ignition in OFF will activate the easy exit driver seat.

This feature is turned on or off using the vehicle personalization menu. See *Vehicle Personalization on page 5-40*.

Heated and Ventilated Seats

Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the instrument panel. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat.

See *Heated and Ventilated Front Seats on page 3-10*.

Head Restraint Adjustment

Do not drive until the head restraints for all occupants are installed and adjusted properly.

To achieve a comfortable seating position, change the seatback recline angle as little as necessary while keeping the seat and the head restraint height in the proper position.

See *Head Restraints on page 3-2* and *Seat Adjustment on page 3-4*.

Safety Belts

Refer to the following sections for important information on how to use safety belts properly:

- *Safety Belts on page 3-14*.
- *How to Wear Safety Belts Properly on page 3-15*.
- *Lap-Shoulder Belt on page 3-17*.
- *Lower Anchors and Tethers for Children (LATCH System) on page 3-45*.

Passenger Sensing System

United States

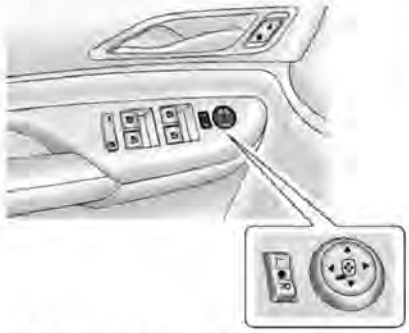
Canada and Mexico

The passenger sensing system will turn off the front outboard passenger frontal airbag and seat-mounted side impact airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger airbag status indicator will be visible on the overhead console when the vehicle is started. See *Passenger Sensing System on page 3-30* for more information.

Mirror Adjustment

Exterior



Manual Folding Mirrors Shown

To adjust the mirror:

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror to the desired position.
3. Return the selector switch to the center position.

Manual Folding Mirrors

Vehicles with manual fold mirrors are folded inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

Power Folding Mirrors

Vehicles with power folding mirrors, to fold the mirrors:

1. With the selector switch in the ● position, press the down arrow on the control pad. Both mirrors will automatically fold.
2. Pressing the down arrow again will return the mirrors to their original position.

See *Folding Mirrors on page 2-21*.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror and the inside rearview mirror automatically adjust for the glare of headlamps behind you. See *Automatic Dimming Mirror on page 2-22* or *Automatic Dimming Rearview Mirror on page 2-23*.

Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Throttle and Brake Pedal Adjustment

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.

The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

See *Adjustable Throttle and Brake Pedal on page 9-16*.

Interior Lighting

Dome Lamps

The dome lamp controls are located in the overhead console.

To change the dome lamp settings, press the following:

: Turns the lamp off, even when a door is open.

: The lamp comes on automatically when a door is opened.

: Turns the dome lamp on.

Reading Lamps

There are reading lamps located on the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

- For the overhead console reading lamps, press the button next to each lamp.
- For the rear passenger reading lamps, press the lamp lens.

For more information on interior lighting, see *Instrument Panel Illumination Control on page 6-7*.

Exterior Lighting

The exterior lamps control is located on the instrument panel to the left of the steering column.

The exterior lamps control has four positions:

⏻ : Briefly turn to this position to turn the automatic light control off or on again.

AUTO: Turns the headlamps on automatically at normal brightness, together with the parking lamps, taillamps, license plate lamps, and instrument panel lights.

: Turns the parking lamps on together with the taillamps, license plate lamps, and instrument panel lights.

: Turns the headlamps on together with the parking lamps, taillamps, license plate lamps, and instrument panel lights.

: For vehicles with fog lamps, press to turn the lamps on or off.

For more information, see:

- *Exterior Lamp Controls on page 6-1.*
- *Daytime Running Lamps (DRL) on page 6-3.*

Windshield Wiper/Washer

The windshield wiper/washer lever is located on the right side of the steering column. With the ignition in ACC/ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI: Use for fast wipes.

LO: Use for slow wipes.

INT: (Intermittent Wipes): Move the lever up to INT for intermittent wipes, then turn the INT band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see the following Rainsense information.

OFF: Use to turn the wipers off.

: For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers.

See *Windshield Wiper/Washer on page 5-4* and *Rear Window Wiper/Washer on page 5-6*, if equipped.

Rainsense™

For vehicles with Rainsense:

INT (Rainsense Wipe Sensitivity Control): Move the windshield wiper lever to INT. Turn the INT band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON: Press the upper portion of the button for continuous rear window wipes.

OFF: The rear wiper turns off when the button is returned to the middle position.

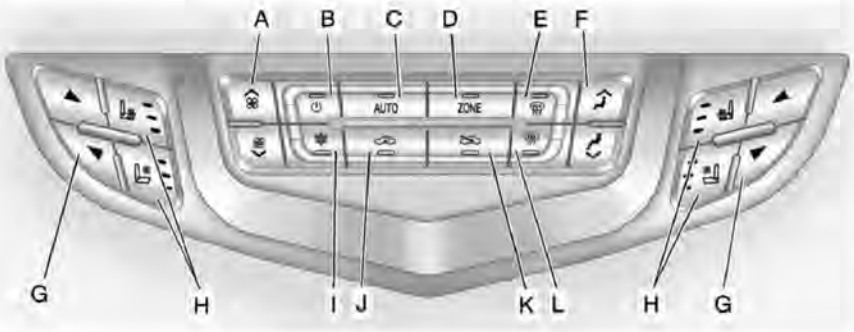
INT (Intermittent Rear Wipes): Press the lower portion of the button to set a delay between wipes.

: Push the windshield wiper lever forward to spray washer fluid on the rear window.

See *Windshield Wiper/Washer on page 5-4* and *Rear Window Wiper/Washer on page 5-6*.

Climate Controls

The heating, cooling, and ventilation for the vehicle can be controlled with this system.



A. Fan Control
B. Power
C. AUTO (Automatic Operation)
D. ZONE
E. Defrost
F. Air Delivery Mode Control
G. Driver and Passenger Temperature Control
H. Driver and Passenger Heated and Ventilated Seats
I. Air Conditioning
J. Recirculation
K. Outside Air
L. Rear Window Defogger

See *Dual Automatic Climate Control System on page 8-1* and *Rear Climate Control System on page 8-5*, if equipped.

Transmission

Driver Shift Control (DSC)

Driver Shift Control (DSC) allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).
2. To enter M (Manual Mode), press the shift lever forward (+) to upshift or rearward (−) to downshift.

See *Manual Mode on page 9-26*.

Vehicle Features

Radio(s)

VOL/ ⏻ : Press to turn the system on and off. Turn to increase or decrease the volume.

RADIO/BAND: Press to choose between FM, AM, or XM™, if equipped.

TUNE or TUNE/INFO: Turn to select radio stations.

Press the TUNE or TUNE/INFO button to show available information about the current station or track.

⏮ **SEEK:** Press to seek the previous station or track.

⏭ **SEEK:** Press to seek the next station or track.

⇦ **BACK or BACK ⇦ :** Press to exit or move backwards in a menu.

Buttons 1 - 6: Press to save and select favorite stations.

For more information about these and other radio features, see *Operation on page 7-7*.

Storing a Favorite Station

Stations from all bands can be stored in the favorite lists in any order. Up to six stations can be stored in each favorite page and the number of available favorite pages can be set.

To store the station to a position in the list, press the corresponding numeric button 1-6 until the station can be heard again.

For more information, see "Storing a Station as a Favorite" in *AM-FM Radio on page 7-11*.

Setting the Clock

The vehicle has a digital and an analog clock.

For detailed instructions on setting either clock, see *Clock (Analog Clock) on page 5-7* or *Clock (Digital Clock) on page 5-8*.

Turning the Digital Clock On or Off

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Clock Displayed.
4. Press the MENU/SELECT button to turn the clock on or off.

Setting the Time and Date

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Set Time or Set Date.
4. Turn the MENU/SELECT knob to adjust the highlighted value.
5. Press the MENU/SELECT knob to select the next value.
6. To save the time or date and return to the Time and Date Settings menu, press the BACK ⇦ button at any time or press the MENU/SELECT knob after adjusting the minutes or year.

Setting the 12/24 Hour Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight 12/24 Hour Format.
4. Press the MENU/SELECT knob to select the 12 hour or 24 hour display format.

Setting the Month & Day Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Month & Day Format.
4. Press the MENU/SELECT knob to select MM/DD (month/day) or DD/MM (day/month).

Setting the Auto Time Adjust (If Equipped)

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Auto Time Adjust.
4. Press the MENU/SELECT knob to turn Auto Time Adjust on or off.

Satellite Radio

Vehicles with an XM™ satellite radio tuner and a valid XM satellite radio subscription can receive XM programming.

XM Satellite Radio Service

XM is a satellite radio service based in the 48 contiguous United States and 10 Canadian provinces. XM satellite radio has a wide variety of programming and commercial-free music, coast to coast, and in digital-quality sound. A fee is required to receive the XM service.

Refer to:

- www.xmradio.com or call 1-800-929-2100 (U.S.).
- www.xmradio.ca or call 1-877-438-9677 (Canada).

See *Satellite Radio on page 7-14*.

Portable Audio Devices

Some vehicles have a 3.5 mm (1/8 in) auxiliary input and a USB port located in the center console. External devices such as iPods®, laptop computers, MP3 players, CD changers, and USB drives may be connected, depending on the audio system.

See *Auxiliary Devices (Radio with CD/DVD and MEM) on page 7-35* or *Auxiliary Devices (Radio with CD) on page 7-29*.

Bluetooth®

The Bluetooth system allows users with a Bluetooth-enabled cell phone to make and receive hands-free calls using the vehicle audio system and controls.

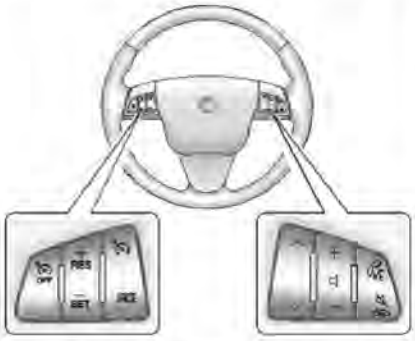
The Bluetooth-enabled cell phone must be paired with the in-vehicle Bluetooth system before it can be used in the vehicle. Not all phones will support all functions.

See *Bluetooth (Voice Recognition) on page 7-55* or *Bluetooth (Overview) on page 7-49* or *Bluetooth (UHP Mexico Only) on page 7-62* or *Bluetooth (Infotainment Controls) on page 7-51*.

Mobile Apps

Mobile apps are available for download through iTunes® to then access the iPhone® App Store and Google™ Marketplace for Android™. Search for the apps to download. The apps are free of charge; however, the myCadillac app requires the user to link their own vehicle and OnStar MyLink requires an active OnStar subscription.

Steering Wheel Controls



If available, some audio controls can be adjusted at the steering wheel.

∧ or ∨: Press ∧ to select the next favorite radio station or next CD, DVD, if equipped, or MP3 track.

Press ∨ to select the previous favorite radio station or previous CD, DVD, if equipped, or MP3 track.

+ ◁ −: Press + to increase the volume, press − to decrease the volume.

✆ / ⁂: Press to interact with the available Bluetooth, OnStar, or Navigation system.

◁ / ⊘: Press to silence the vehicle speakers only. Press again to turn the sound on. For vehicles with OnStar or Bluetooth systems, press to reject an incoming call, or end a current call.

SRCE: Press to select an audio source.

For more information, see *Steering Wheel Controls on page 5-2*.

Cruise Control

: Press to turn cruise control on and off.

+ RES: Press briefly to make the vehicle resume to a previously set speed or press and hold to accelerate.

–SET: Press to set the speed and activate cruise control or make the vehicle decelerate.

OFF: Press to disengage cruise control without erasing the set speed from memory.

See *Cruise Control on page 9-36.*

Navigation System

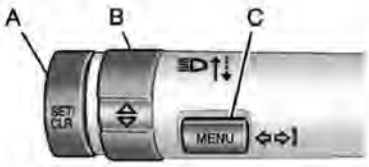
If the vehicle has a navigation system, there is a separate navigation system manual that includes information on the radio, audio players, and navigation system.

The navigation system provides detailed maps of most major freeways and roads. After a destination has been set, the system provides turn-by-turn instructions for reaching the destination. In addition, the system can help locate a variety of points of interest (POIs), such as banks, airports, restaurants, and more.

See the navigation system manual for more information.

Driver Information Center (DIC)

The DIC display is located in the center of the instrument panel cluster. It shows the status of many vehicle systems. The controls for the DIC are located on the turn signal lever.



A. **SET/CLR:** Press to set or clear the menu item when it is displayed.

B. △ / ▽ : Use the thumbwheel to scroll through the items in each menu.

C. **MENU:** Press to display the Trip/Fuel menu and the Vehicle Information menu. This button is also used to return to or exit the last screen displayed on the DIC.

See *Driver Information Center (DIC) on page 5-27.*

Rear Vision Camera (RVC)

If available, the RVC displays a view of the area behind the vehicle when the vehicle is shifted into R (Reverse). The display will appear on either the inside rearview mirror or navigation screen, if equipped.

To clean the camera lens, located above the license plate, rinse it with water and wipe it with a soft cloth.

See *Rear Vision Camera (RVC) on page 9-42.*

Ultrasonic Parking Assist

If available, Ultrasonic Front and Rear Parking Assist (UFRPA) uses sensors on the front and rear bumpers to detect objects while parking the vehicle. It operates at speeds less than 8 km/h (5 mph). UFRPA uses audio beeps to provide distance and system information.

Keep the sensors on the vehicle's front and rear bumpers clean to ensure proper operation.

See *Ultrasonic Parking Assist on page 9-38* for more information.

Storage Compartments

The glove box is air conditioned and can be used to store items at a lower temperature. Move the slide control to open or close the opening to adjust the air flow. See *Glove Box on page 4-1* for more information.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle has four accessory power outlets. The power outlets located below the climate control system inside the front storage bin, inside the center floor console, and on the rear of the center floor console are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

Open the protective cap to use the accessory power outlet.

See *Power Outlets on page 5-9.*

Universal Remote System

This system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Read the instructions completely before attempting to program the Universal Remote system. Because of the steps involved, it may be helpful to have another person available to assist you with programming the Universal Remote system.

See *Universal Remote System on page 5-46.*

Performance and Maintenance

Traction Control System (TCS)

The traction control system limits wheel spin. The system is on when the vehicle is started.

- To turn off traction control, press and release OFF located on the console. illuminates and the appropriate DIC message displays. See *Vehicle Messages on page 5-32.*
- Press and release OFF again to turn traction control back on.

For more information, see *Traction Control System (TCS) on page 9-32.*

StabiliTrak® System

The StabiliTrak system assists with directional control of the vehicle in difficult driving conditions. The system is on when the vehicle is started.

- To turn off both Traction Control and StabiliTrak, press and hold OFF until OFF and illuminate and the appropriate DIC message displays. See *Vehicle Messages on page 5-32.*
- Press OFF again to turn on both systems.

For more information, see *StabiliTrak® System on page 9-34.*

Tire Pressure Monitor

This vehicle may have a Tire Pressure Monitor System (TPMS).

The TPMS warning light alerts you to a significant loss in pressure of one of the vehicle's tires. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-10*. The warning light will remain on until the tire pressure is corrected.

During cooler conditions, the low tire pressure warning light may appear when the vehicle is first started and then turn off. This may be an early indicator that the tire pressures are getting low and the tires need to be inflated to the proper pressure.

The TPMS does not replace normal monthly tire maintenance. It is the driver's responsibility to maintain correct tire pressures.

See *Tire Pressure Monitor System on page 10-58*.

Tire Sealant and Compressor Kit

This vehicle may come with a spare tire and tire changing equipment or a tire sealant and compressor kit. The kit can be used to temporarily seal small punctures in the tread area of the tire.

See *Tire Sealant and Compressor Kit on page 10-73* for complete operating information.

If the vehicle came with a spare tire and tire changing equipment, see *If a Tire Goes Flat on page 10-71*.

Engine Oil Life System

The engine oil life system calculates engine oil life based on vehicle use and displays the CHANGE ENGINE OIL SOON message when it is time to change the engine oil and filter. The oil life system should be reset to 100% only following an oil change.

Resetting the Oil Life System

1. Using the DIC MENU button and thumbwheel on the turn signal lever, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-27* and *Engine Oil Messages on page 5-35*.
2. Press the SET/CLR button to reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

See *Engine Oil Life System on page 10-10.*

Fuel E85 (85% Ethanol)

Vehicles that have a FlexFuel badge and a yellow fuel cap can use either unleaded gasoline or ethanol fuel containing up to 85% ethanol (E85). See *Fuel E85 (85% Ethanol) on page 9-49.* For all other vehicles, use only the unleaded gasoline described under *Recommended Fuel on page 9-46.*

Driving for Better Fuel Economy

Driving habits can affect fuel mileage. Here are some driving tips to get the best fuel economy possible.

- Avoid fast starts and accelerate smoothly.
- Brake gradually and avoid abrupt stops.
- Avoid idling the engine for long periods of time.
- When road and weather conditions are appropriate, use cruise control.
- Always follow posted speed limits or drive more slowly when conditions require.
- Keep vehicle tires properly inflated.
- Combine several trips into a single trip.
- Replace the vehicle's tires with the same TPC Spec number molded into the tire's sidewall near the size.
- Follow recommended scheduled maintenance.

Roadside Service

U.S.: **1-800-224-1400**

Canada: **1-800-882-1112**

TTY Users (U.S. only): **1-888-889-2438**

Mexico: **01-800-466-0805**

As the owner of a new Cadillac, you are automatically enrolled in the Roadside Service program.

See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-10.*

Roadside Service and OnStar (U.S. and Canada)

If you have an active OnStar subscription, press the button and the current GPS location will be sent to an OnStar advisor who will assess your problem, contact Roadside Service, and relay your exact location to get the help you need.

Online Owner Center (U.S. and Canada)

The Online Owner Center is a complimentary service that includes online service reminders, vehicle maintenance tips, online owner manual, special privileges, and more.

Sign up today at:

U.S.: cadillac.com

Click on "Owners," then "Manage My Cadillac/Owners Login."

Canada: cadillacowner.ca

OnStar®

If equipped, this vehicle has a comprehensive, in-vehicle system that can connect to a live Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services. See *OnStar Overview on page 14-1*.

✍ NOTES

Keys, Doors, and Windows

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Keys and Locks

Keys

⚠ WARNING

Leaving children in a vehicle with the Remote Keyless Entry (RKE) transmitter is dangerous for many reasons; children or others could be badly injured or even killed. They could operate the power windows or other controls or even make the vehicle move. The windows will function with the RKE transmitter in the vehicle and they could be seriously injured or killed if caught in the path of a closing window. Do not leave the RKE transmitter in a vehicle with children.

This key, located inside the Remote Keyless Entry (RKE) transmitter, is used for the driver door and glove box.

To remove the key, press the button near the bottom of the transmitter, and pull the key out. Never pull the key out without pressing the button.

See your dealer if a new key is needed.

Contact Roadside Service if locked out of the vehicle. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-10*.

With an active OnStar subscription, an OnStar Advisor may remotely unlock the vehicle. See *OnStar Overview on page 14-1*.

Remote Keyless Entry (RKE) System

See *Radio Frequency Statement on page 13-23* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

If there is a decrease in the RKE operating range:

- Check the distance. The transmitter may be too far from the vehicle.
- Check the location. Other vehicles or objects may be blocking the signal.
- Check the transmitter's battery. See "Battery Replacement" later in this section.
- If the transmitter is still not working correctly, see your dealer or a qualified technician for service.

Remote Keyless Entry (RKE) System Operation

The Remote Keyless Entry (RKE) transmitter functions will work up to 60 m (195 ft) away from the vehicle.

Keep in mind that other conditions, such as those previously stated, can impact the performance of the transmitter.

With Remote Start and Power Liftgate Shown, Without Similar

(Lock): Press to lock all doors. The turn signal indicators may flash and/or the horn may sound to indicate locking, see "Locking Feedback" under *Vehicle Personalization on page 5-40*.

If the driver door is open when is pressed, all doors lock except the driver door, if enabled through the vehicle personalization. If the passenger door is open when is pressed, all doors lock.

Pressing may also arm the theft-deterrent system. See *Anti-theft Alarm System on page 2-18*.

(Unlock): Press to unlock the driver door or all doors, see "Door Unlock Options" under *Vehicle Personalization on page 5-40*. When remotely unlocking the vehicle at night the fog lamps and reverse lamps will come on for about 20 seconds to light your approach to the vehicle. The turn signal indicators may flash and/or the horn may sound to indicate unlocking. See "Unlock Feedback" under *Vehicle Personalization on page 5-40*.

Memory seat positions may be recalled when unlocking the vehicle. See "Memory Remote Recall" under *Vehicle Personalization on page 5-40* for more information.

Pressing will disarm the theft-deterrent system. See *Anti-theft Alarm System on page 2-18*.

On some models, pressing and holding will open all of the windows.

(Remote Start): For vehicles with this feature, press and then press and hold within two seconds to start the engine from outside the vehicle using the RKE transmitter. See *Remote Vehicle Start on page 2-10* for additional information.

(Vehicle Locator/Panic Alarm): Press and release one time to locate the vehicle. The exterior lamps flash and the horn chirps. Press and hold for three seconds to sound the panic alarm. The horn sounds and the turn signal lamps flash for 30 seconds, or until is pressed again or the vehicle is started.

(Remote Liftgate Release): Press until the liftgate begins to move to open or close the power liftgate.

Keyless Access Operation

Some vehicles have the keyless access system that lets you lock and unlock the doors and access the liftgate without removing the remote transmitter from your pocket, purse, briefcase, etc. The keyless entry transmitter must be within 1 m (3 ft) of the door being opened. If the vehicle has this feature, there will be a body colored touch pad on the outside front door handles.

Keyless Unlocking

With the transmitter within 1 m (3 ft), approach the front door and pull the handle. If the transmitter is recognized, the door will unlock and open.

Entering any door other than the driver door will always cause all of the doors to unlock. This is not customizable.

To customize which doors unlock when the driver's door is opened, see "Passive Unlock" under *Vehicle Personalization on page 5-40*.

Keyless Locking

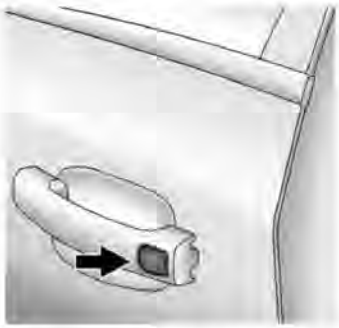
If the vehicle has the keyless access system, this feature allows you to select whether the doors automatically lock during normal vehicle exit. When the vehicle is turned off and all doors become closed, the vehicle will determine how many keyless access transmitters remain in the vehicle interior. If at least one keyless access transmitter has been removed from the interior of the vehicle, the doors will lock after eight seconds.

If there are two keyless access transmitters in the vehicle and one is removed, the other will be locked in. A person approaching the outside of the locked vehicle without an authorized keyless access transmitter will not be able to open the door, even with the transmitter in the vehicle.

You may temporarily disable the keyless locking feature by pressing and holding the power door unlock button on the instrument panel for several seconds with a door open. Keyless locking will then remain disabled until the door lock switch is pressed, or until the vehicle is turned on.

To customize whether the doors automatically lock when you exit the vehicle, see "Passive Locking" under *Vehicle Personalization on page 5-40*.

Lock Sensor



When all doors are closed and the ignition is off, the vehicle can be locked by pressing this area on the door handle. This feature will be available for several minutes after the vehicle has been turned off.

Keyless Liftgate Opening

Press the touch pad on the liftgate handle to open the liftgate if the keyless entry transmitter is within range.

Programming Transmitters to the Vehicle

Only keyless entry transmitters programmed to the vehicle will work. If a transmitter is lost or stolen, a replacement can be purchased and programmed through your dealer. The vehicle can be reprogrammed so that lost or stolen transmitters no longer work. Each vehicle can have up to eight transmitters matched to it.

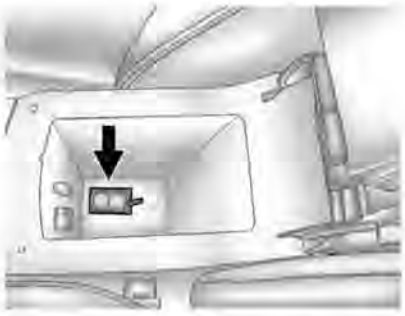
Programming with a Recognized Transmitter (Keyless Access Vehicles Only)

A new transmitter can be programmed to the vehicle when there is one recognized transmitter.

To program, the vehicle must be off and all of the transmitters, both currently recognized and new, must be with you.

1. Place the recognized transmitter(s) in the cupholder.
2. Insert the vehicle key of the new transmitter into the key lock cylinder located on the outside of the driver door and turn the key to the unlock position five times within ten seconds.

   The Driver Information Center (DIC) displays READY TO LEARN ELECTRONIC KEY #2, 3, 4, ETC.



3. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.
4. Press the ignition. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.
5. Remove the transmitter from the transmitter pocket and press on the transmitter.

   To program additional transmitters, repeat Steps 3 through 5.

   When all additional transmitters are programmed, press and hold the ignition for 10 seconds to exit programming mode.

Programming without a Recognized Transmitter (Keyless Access Vehicles Only)

If there are no currently recognized transmitters available, follow this procedure to program up to eight transmitters. This feature is not available in Canada. This procedure will take approximately 30 minutes to complete. The vehicle must be off and all of the transmitters you wish to program must be with you.

1. Insert the vehicle key of the transmitter into the key lock cylinder located on the outside of the driver door and turn the key to the unlock position five times within ten seconds.

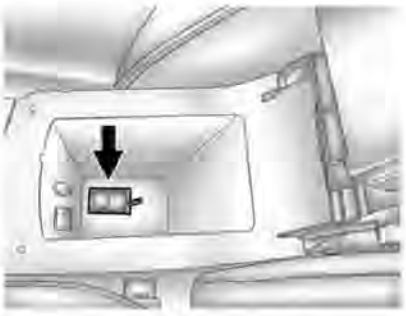
   The Driver Information Center (DIC) displays REMOTE LEARN PENDING, PLEASE WAIT.

2. Wait for ten minutes until the DIC displays PRESS ENGINE START BUTTON TO LEARN and then press the ignition.

   The DIC displays will again show REMOTE LEARN PENDING, PLEASE WAIT.

3. Repeat Step 2 two additional times. After the third time all previously known transmitters will no longer work with the vehicle. Remaining transmitters can be relearned during the next steps.

   The DIC display should now show READY FOR REMOTE # 1.



4. Place the new transmitter into the transmitter pocket. The transmitter pocket is inside the center console storage area located between the driver and front passenger seats. The storage area will need to be opened and the storage tray lifted up to access the transmitter pocket.

5. Press the ignition. When the transmitter is learned the DIC display will show that it is ready to program the next transmitter.

6. Remove the transmitter from the transmitter pocket and press on the transmitter.

   To program additional transmitters, repeat Steps 4 through 6.

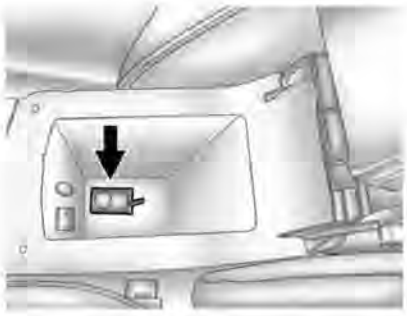
   When all additional transmitters are programmed, press and hold the ignition for 10 seconds to exit programming mode.

Starting the Vehicle with a Low Transmitter Battery

If the transmitter battery is weak, the DIC may display NO REMOTE DETECTED when you try to start the vehicle. The REPLACE BATTERY IN REMOTE KEY message may also be displayed at this time.

To start the vehicle:

1. Open the center console storage area and the storage tray.



2. Place the transmitter in the transmitter pocket.
3. With the vehicle in P (Park) or N (Neutral), press the brake pedal and the START button.

   Replace the transmitter battery as soon as possible.

Battery Replacement

Notice: **When replacing the battery, do not touch any of the circuitry on the transmitter. Static from your body could damage the transmitter.**

Replace the battery if the REPLACE BATTERY IN REMOTE KEY message displays in the DIC.

1. Press the button near the bottom of the transmitter and pull the key out.

2. Use the key blade to separate the two halves of the transmitter.

3. Remove the old battery. Do not use a metal object.
4. Insert the new battery, positive side facing down. Replace with a CR2032 or equivalent battery.
5. Snap the transmitter back together.

Remote Vehicle Start

If available, this feature allows you to start the engine from outside the vehicle.

(Remote Vehicle Start): This button will be on the RKE transmitter if the vehicle has remote start.

Vehicles with an automatic climate control system will automatically change to a heating or cooling mode depending on the outside temperature during a remote start. When the ON/RUN/START ignition mode is selected, the climate control system will return to its setting from when the vehicle was last turned off.

Laws in some local communities may restrict the use of remote starters. For example, some laws may require a person using remote start to have the vehicle in view. Check local regulations for any requirements.

Other conditions can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System on page 2-3* for additional information.

Starting the Engine Using Remote Start

1. Press and release on the RKE transmitter.
2. Within two seconds, press and hold until the turn signal lamps flash. This confirms the request to remote start the vehicle has been received. If the vehicle' s lamps are not visible, press and hold for at least two seconds.

   During the remote start the doors will be locked and the parking lamps will remain on as long as the engine is running.

   The engine will shut off after 10 minutes unless a time extension is done or the ignition is put in ON/RUN/START.
3. Press the brake pedal and select the ON/RUN/START ignition mode to drive the vehicle.

Extending Engine Run Time

For a 10-minute extension, repeat Steps 1 and 2 while the engine is still running. The remote start can only be extended once.

When the remote start is extended, the second 10-minute period will start immediately.

For example, if the vehicle has been running for five minutes, and 10 minutes are added, the engine will run for a total of 15 minutes.

A maximum of two remote starts, or a remote start with an extension, are allowed between ignition cycles.

The vehicle's ignition must be changed to ON/RUN/START and then back to OFF before the remote start procedure can be used again.

Shutting the Engine Off After a Remote Start

To cancel a remote start, do any of the following:

- Press Ω until the parking lamps turn off.
- Turn on the hazard warning flashers.
- Turn the vehicle on and then back off.

Conditions in Which Remote Start Will Not Work

The remote start will not operate if any of the following occur:

- The ignition is in any mode other than OFF.
- The transmitter is in the vehicle.
- The hood is not closed.
- The hazard warning flashers are on.
- There is an emission control system malfunction.
- The engine coolant temperature is too high.
- The oil pressure is low.
- Two remote vehicle starts have already been used.
- The vehicle is not in P (Park).

Door Locks

⚠ WARNING

Unlocked doors can be dangerous.

- Passengers, especially children, can easily open the doors and fall out of a moving vehicle. The chance of being thrown out of the vehicle in a crash is increased if the doors are not locked. So, all passengers should wear safety belts properly and the doors should be locked whenever the vehicle is driven.
- Young children who get into unlocked vehicles may be unable to get out. A child can be overcome by extreme heat and can suffer permanent injuries or even death from heat stroke. Always lock the vehicle whenever leaving it.

(Continued)

WARNING (Continued)

- Outsiders can easily enter through an unlocked door when slowing or stopping the vehicle. Lock the doors to help prevent this from happening.

To lock or unlock the doors from the outside, press 🔒 or 🔓 on the Remote Keyless Entry (RKE) transmitter. See *Remote Keyless Entry (RKE) System Operation on page 2-3* or use the key in the driver door. Turn the key counterclockwise once to unlock the driver door; turning the key again will unlock the passenger doors.

To unlock a door from the inside, pull once on the door handle to unlock it, and a second time to open it.

Power Door Locks

Instrument Panel

Front Door Panels

(Lock): Press to lock the doors.

(Unlock): Press to unlock the doors.

Lockout Deterrent

Lockout deterrent decreases the chances that the keys may be accidentally locked in the vehicle.

When door locking is requested by pressing on the instrument panel or front door panels, or the RKE transmitter and the driver door is open, all doors will lock and the driver door will immediately unlock. The driver door must be closed when is pressed for all doors to remain locked.

This feature can be programmed to provide the lockout deterrent feature only when the ignition mode is ACC/ACCESSORY, or ON/RUN/START. See "Power Door Locks" in *Vehicle Personalization on page 5-40*.

Delayed Locking

When this feature is enabled and the doors are locked with the power lock switch on the instrument panel or front door panels, three chimes sound to signal that the delayed locking feature is in use. All doors lock five seconds after the last door is closed.

When the delayed locking feature is in use, pressing on the instrument panel or front door panels, or the RKE transmitter will override the feature and lock all doors immediately.

This feature can be programmed by using the Driver Information Center (DIC). See "Delayed Door Lock" in *Vehicle Personalization on page 5-40*. The delayed locking feature is only available if "Unlocked Door Anti-Lockout" is disabled.

Safety Locks

Rear door safety locks prevent passengers from opening the rear doors from the inside.

Press 🔒 to activate the safety locks, the LED in the switch illuminates.

Press 🔒 to deactivate the safety locks.

Doors

Liftgate

⚠ WARNING

Exhaust gases can enter the vehicle if it is driven with the liftgate or trunk/hatch open, or with any objects that pass through the seal between the body and the trunk/hatch or liftgate. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

If the vehicle must be driven with the liftgate or trunk/hatch open:

- Close all of the windows.
- Fully open the air outlets on or under the instrument panel.

(Continued)

WARNING (Continued)

- Adjust the climate control system to a setting that brings in only outside air and set the fan speed to the highest setting. See "Climate Control Systems" in the Index.
- If the vehicle is equipped with a power liftgate, disable the power liftgate function.

For more information about carbon monoxide, see *Engine Exhaust on page 9-23*.

Notice: **If you open the liftgate without checking for overhead obstructions such as a garage door, you could damage the liftgate or the liftgate glass. Always check to make sure the area above and behind the liftgate is clear before opening it.**

Manual Liftgate

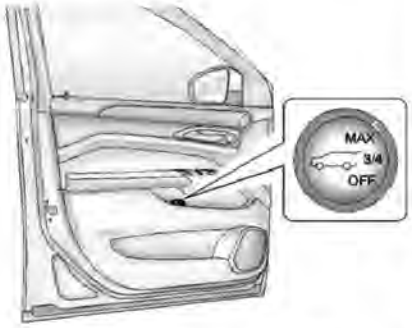
For vehicles without keyless access, unlock the vehicle before opening the liftgate.

Press the touch pad located in the handle of the liftgate, above the license plate, and lift up to open.

Do not press the touch pad while closing the liftgate. This will cause the liftgate to be unlatched.

Always close the liftgate before driving.

Power Liftgate



On vehicles with a power liftgate, the switch is on the driver door. The vehicle must be in P (Park) to use the power feature. The taillamps flash when the power liftgate moves.

⚠ WARNING

You or others could be injured if caught in the path of the power liftgate. Make sure there is no one in the way of the liftgate as it is opening and closing.

Choose the power liftgate mode by turning the dial on the switch until the indicator lines up with the desired position.

The three modes are:

MAX: The liftgate opens to the full open height.

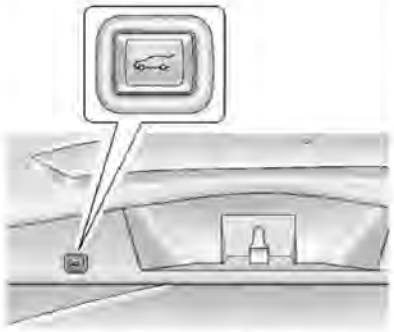
3/4: The liftgate opens to a reduced height that can be set by the vehicle operator in a range of approximately three-quarters open to full open. Use this setting to prevent the liftgate from opening into overhead obstructions such as a garage door or roof mounted cargo during power operation. The liftgate can still be manually opened all the way.

OFF: The liftgate only operates manually in this position.

Manual operation of a liftgate that also has power operation requires more effort than with a standard manual liftgate.

In either the MAX or the 3/4 mode, the liftgate can be power opened and closed by:

- Pressing on the Remote Keyless Entry (RKE) transmitter until the liftgate starts moving. See *Remote Keyless Entry (RKE) System Operation on page 2-3.*
- Pressing on the center of the mode switch on the driver door, with the driver door unlocked.
- Pressing the touch pad switch on the liftgate outside handle, with all doors unlocked, to open the liftgate.



Press and release on the liftgate next to the latch to close the liftgate.

Pressing any liftgate button, or the touch pad switch while the liftgate is moving, stops it. Pressing the button or RKE switch again reverses the direction. There is a minimum distance that the power liftgate must already be open for the system to hold it open. If movement is stopped below that minimum, the liftgate closes.

Do not force the liftgate open or closed during a power cycle.

The power liftgate may be temporarily disabled under extreme temperatures or low battery conditions. If this occurs, the liftgate can still be operated manually.

If you shift the transmission out of P (Park) while the power function is in progress, the liftgate power function will continue to completion. If you shift the transmission out of P (Park) and accelerate before the power liftgate latch is closed, the liftgate may reverse to the open position. Cargo could fall out of the vehicle. Always make sure the power liftgate is closed and latched before you drive away.

If you power open the liftgate and the liftgate support struts have lost pressure, the turn signals flash and a chime sounds. The liftgate stays open temporarily, then slowly closes. See your dealer for service before using the liftgate.

Obstacle Detection Features

If the liftgate encounters an obstacle during a power open or close cycle, a warning chime will sound and the liftgate will automatically reverse direction to the full closed or open position. After removing the obstruction, the power liftgate operation can be used again. If the liftgate encounters multiple obstacles on the same power cycle, the power function will deactivate. After removing the obstructions, the liftgate will resume normal power operation.

The vehicle has pinch sensors located on the side edges of the liftgate. If an object is caught between the liftgate and the body and presses against this sensor, the liftgate will reverse direction and open fully. The liftgate will remain open until it is activated again or closed manually.

Setting the Power Liftgate 3/4 Mode

To change the liftgate stop position.

1. Turn the liftgate switch to either the MAX, or the 3/4 mode position and power open the liftgate.
2. Stop the liftgate movement at the desired height by pressing any liftgate switch. Manually adjust the liftgate position if required.
3. Press and hold the button on the liftgate next to the latch until the turn signals flash and a beep sounds to indicate that the new setting is recorded.

When power opened with the 3/4 mode selected, the liftgate stops at the new set position.

If you do not receive the audible and visual feedback when setting the intermediate stop position, you are attempting to set the height below the 3/4 open height minimum (approximately 1.52 m or 5 ft). The liftgate cannot be set below that minimum and the new setting will not be recorded.

Manual Operation of Power Liftgate

To change the liftgate to manual operation, turn the mode switch to the OFF position.

With the power liftgate disabled and all of the doors unlocked, the liftgate can be manually opened and closed. The effort required to operate a power liftgate is greater than the effort required to operate a non-power liftgate.

To open the liftgate, press the touch pad on the handle on the outside of the liftgate, and lift the gate open.

To close the liftgate, use the pull cup to lower the liftgate and close. With the power liftgate disabled, the liftgate electric latch will still power latch once contact is made with the striker. Always close the liftgate before driving.

If the RKE button is pressed while power operation is disabled, the turn signals flash and the liftgate will not move.

The liftgate has an electric latch. If the battery is disconnected or has low voltage, the liftgate will not open. The liftgate will resume operation when the battery is reconnected and charged.

Vehicle Security

This vehicle has theft-deterrent features; however, they do not make it impossible to steal.

Anti-theft Alarm System

This vehicle has an anti-theft alarm system.

The LED light, located on the instrument panel near the windshield, indicates the status of the system.

Arming the System

1. Close all doors, liftgate, and hood.
2. Lock the vehicle using the transmitter or the power door lock button. The LED on the instrument panel should come on and stay on for about 30 seconds.

3. After 30 seconds, the alarm system will arm, and the LED will begin to slowly flash indicating the alarm is operating.

If a door, the hood, or liftgate is opened without first unlocking with the transmitter, the turn signals will flash and the horn will sound for about 30 seconds. The alarm system will then re-arm to monitor for the next unauthorized event.

The theft-deterrent alarm system will not activate if the doors are locked with the key. You can start the vehicle with a recognized transmitter in the vehicle if the alarm has been set off.

Disarming the System

To disarm the system, either unlock the doors using the transmitter, or start the vehicle with a recognized transmitter in the vehicle.

To avoid setting off the alarm by accident:

- Lock the vehicle with the transmitter after all occupants have left the vehicle and all doors are closed.
- Always unlock a door with the transmitter. Unlocking a door any other way will not disarm the alarm.

If you set off the alarm by accident, turn off the alarm by pressing on the transmitter. The alarm will not stop if you try to unlock a door any other way.

How to Detect a Tamper Condition

If is pressed and the horn chirps three times, an attempted break-in has occurred while the system was armed.

If the alarm has been activated, the THEFT ATTEMPTED message will appear on the DIC. See *Key and Lock Messages on page 5-36* for additional information.

Immobilizer

See *Radio Frequency Statement on page 13-23* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

Immobilizer Operation

This vehicle has a passive theft-deterrent system.

The system does not have to be manually armed or disarmed.

The vehicle is automatically immobilized when the vehicle is turned off.

The immobilization system is disarmed when the pushbutton start is activated to enter the ACC/ACCESSORY mode or the ON/RUN/START mode and a valid transmitter is present in the vehicle.

The security light, located in the instrument panel cluster, comes on if there is a problem with arming or disarming the theft-deterrent system.

The system has one or more RKE transmitters matched to an immobilizer control unit in your vehicle. Only a correctly matched RKE transmitter will start the vehicle. If the transmitter is ever damaged, you may not be able to start your vehicle.

When trying to start the vehicle, the security light comes on briefly when the ignition is turned on.

If the engine does not start and the security light stays on, there is a problem with the system. Turn the ignition off and try again.

If the vehicle will not change ignition modes (ACC/ACCESSORY, ON/RUN/START, OFF), and the RKE transmitter appears to be undamaged, try another transmitter. Or, you may try placing the transmitter in the transmitter pocket located in the center console. See "NO REMOTE DETECTED" under *Key and Lock Messages on page 5-36*.

If the ignition modes will not change with the other transmitter, your vehicle needs service. If the ignition does change modes, the first transmitter may be faulty. See your dealer who can service the theft-deterrent system and have a new RKE transmitter programmed to the vehicle.

It is possible for the immobilizer system to learn new or replacement RKE transmitters. Up to eight transmitters can be programmed for the vehicle. To program additional transmitters, see "Programming Transmitters to the Vehicle" under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

Do not leave the key or device that disarms or deactivates the theft-deterrent system in the vehicle.

Exterior Mirrors

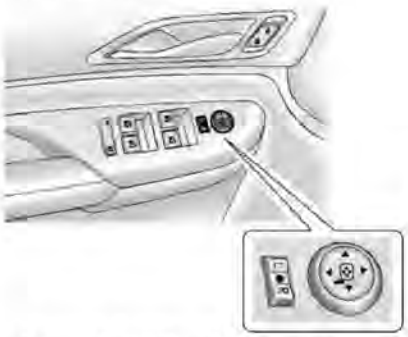
Convex Mirrors

⚠ WARNING

A convex mirror can make things, like other vehicles, look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on the right. Check the inside mirror or glance over your shoulder before changing lanes.

The passenger side mirror is convex shaped. A convex mirror's surface is curved so more can be seen from the driver seat.

Power Mirrors



Manual Folding Mirrors Shown

To adjust the mirror:

1. Move the selector switch to L (Left) or R (Right) to choose the driver or passenger mirror.
2. Press the arrows on the control pad to move each mirror in the desired direction.
3. Return the selector switch to the center position.

Folding Mirrors

Manual Folding Mirrors

Vehicles with manual fold mirrors are folded inward toward the vehicle to prevent damage when going through an automatic car wash. Push the mirror outward to return it to the original position.

Power Folding Mirrors

Vehicles with power folding mirrors, to fold the mirrors:

1. With the selector switch in the ● position, press the down arrow on the control pad. Both mirrors will automatically fold.
2. Pressing the down arrow again will return the mirrors to their original position.

Resetting the Power Folding Mirrors

Reset the power folding mirrors if:

- The mirrors are accidentally obstructed while folding.
- They are accidentally manually folded/unfolded.
- The mirrors do not stay in the unfolded position.
- The mirrors vibrate at normal driving speeds.

Fold and unfold the mirrors one time using the mirror controls to reset them to their normal position. A noise may be heard during the resetting of the power folding mirrors. This sound is normal after a manual folding operation.

Heated Mirrors

(Rear Window Defogger): Press to heat the mirrors.

See "Rear Window Defogger" under *Dual Automatic Climate Control System on page 8-1* for more information.

Automatic Dimming Mirror

If the vehicle has the automatic dimming mirror, the driver outside mirror automatically adjusts for the glare of headlamps behind you.

Reverse Tilt Mirrors

If the vehicle is equipped with memory mirrors, there is an option to have the mirrors tilt down, when in R (Reverse), to more easily see the ground near the vehicle.

When the vehicle is shifted to R (Reverse), both the driver and passenger mirrors will tilt downward. They will return to their previous position when the vehicle is shifted out of R (Reverse), the ignition is turned to OFF, or the vehicle is left in R (Reverse) for an extended period of time.

This feature can be turned on or off. See *Vehicle Personalization on page 5-40*.

Interior Mirrors

Manual Rearview Mirror

Adjust the inside rearview mirror for a clear view of the area behind your vehicle. To avoid glare of the headlamps from behind, push the tab forward for daytime and pull it for nighttime use.

Vehicles with OnStar® have three control buttons at the bottom of the mirror. See your dealer for more information about OnStar and how to subscribe to it. See *OnStar Overview on page 14-1*.

Automatic Dimming Rearview Mirror

The vehicle may have an automatic dimming inside rearview mirror. Automatic dimming reduces the glare from the headlamps of the vehicle behind you. The dimming feature and the indicator light come on each time the vehicle is started.

Vehicles with OnStar have three control buttons located at the bottom of the mirror. See your dealer for more information about OnStar and how to subscribe to it. See *OnStar Overview on page 14-1*.

Cleaning the Mirror

Do not spray glass cleaner directly on the mirror. Use a soft towel dampened with water.

Windows

⚠ WARNING

Leaving children, helpless adults, or pets in a vehicle with the windows closed is dangerous. They can be overcome by the extreme heat and suffer permanent injuries or even death from heat stroke. Never leave a child, a helpless adult, or a pet alone in a vehicle, especially with the windows closed in warm or hot weather.

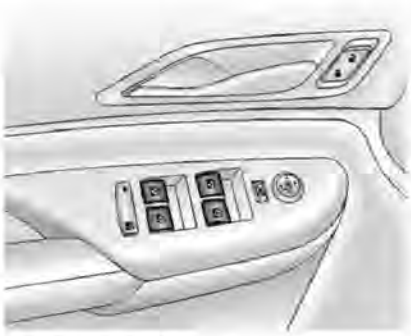
The vehicle aerodynamics are designed to improve fuel economy performance. This may result in a pulsing sound when a window is partially open. To reduce the sound, open another window or the sunroof (if equipped).

Power Windows

⚠ WARNING

Leaving children in a vehicle with the RKE transmitter is dangerous for many reasons; children or others could be badly injured or even killed. They could operate the power windows or other controls or even make the vehicle move. The windows will function with the RKE transmitter in the vehicle and they could be seriously injured or killed if caught in the path of a closing window. Do not leave the RKE transmitter in a vehicle with children.

When there are children in the rear seat, use the window lockout switch to prevent unintentional operation of the windows.



The power windows:

- Can be operated with the ignition in ACC/ACCESSORY or ON/RUN/START.
- Can be operated within 10 minutes of switching the ignition off. See *Retained Accessory Power (RAP) on page 9-21.*
- Will stop operation when any door is opened.

Pushing or pulling the switch part of the way will open or close the window as long as the switch is operated.

Express-Down/Up Windows

Windows that have the express-down/up feature allow the windows to be lowered and raised fully without holding the window switch. Press the window switch fully and release it to activate the express-down feature. Pull the window switch fully up and release it to activate the express-up feature. The express mode can be canceled at any time by briefly pressing or pulling the switch.

Programming the Power Windows

Programming the power windows may be necessary if the vehicle's battery has been disconnected or discharged.

If the window will not express up after power has been restored and a message is displayed in the Driver Information Center:

1. Close all doors.
2. Place the ignition in ACC/ACCESSORY or ON/RUN/START.
3. From any partial open position, close the window and continue to pull the switch briefly after the window has fully closed.

Obstacle Detection Feature

The Obstacle Detection Feature is part of the express-up feature and is active:

- In the middle and upper portions of the window opening.
- During window up movements.
- In ignition OFF during all window up movements and during express-up window movements in ignition ON/RUN/START.

If there is something blocking the window during automatic closing, the window will reverse direction for a short distance. Weather conditions such as extreme cold and/or ice may cause the window to auto-reverse. The window will return to normal operation once the object or condition is removed.

If conditions prevent the window from closing and the window continues to auto-reverse, it is possible to close the window with the ignition in ON/RUN/START by holding the window switch in the partially or fully pulled up position. Release of the switch from the partially pulled up position will cause the window to stop. Release of the switch from the fully pulled up position will activate the express-up and related obstacle detection features.

Overload

If the windows are repeatedly operated within a short time, the window operation is disabled for a short time.

Remote Window Operation

The vehicle may have remote operating windows that will open all the windows from outside the vehicle by pressing and holding on the Remote Keyless Entry (RKE) transmitter.

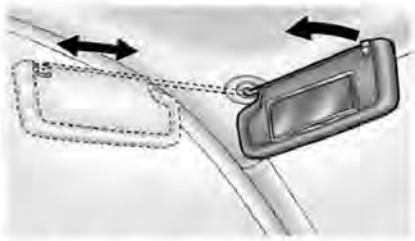
Window Lockout

This feature prevents the rear passenger windows from operating, except from the driver position.

Press to activate the rear window lockout, the LED in the switch illuminates.

Press to deactivate the rear window lockout.

Sun Visors



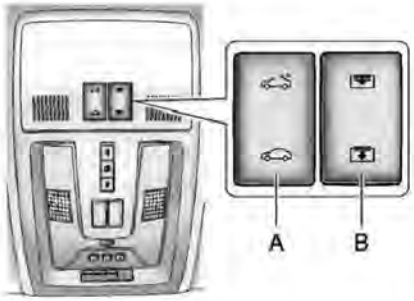
Pull the sun visor down to block glare. Detach the sun visor from the center mount to pivot to the side window, or to extend along the rod, if available.

Roof

Sunroof

On vehicles with a sunroof, the switches are on the overhead console.

The sunroof only operates when the ignition is in ON/RUN/START or ACC/ACCESSORY, or in Retained Accessory Power (RAP). See *Ignition Positions on page 9-17* and *Retained Accessory Power (RAP) on page 9-21*.



A. Sunroof Switch

B. Sunshade Switch

To open the sunroof, press the back of the sunroof switch (A) to the first detent and release, the sunroof will open to the vent position.

Press the back of the sunroof switch to the first detent and hold, to open the sunroof to a desired position at a normal speed. Press the rear of the switch to the second detent and release, to express open the sunroof to an automatically adjusted comfort position. Press the rear of the switch to the second detent and release again, to open the sunroof to the full open position. Press the front of the switch to second detent and release, to express close the sunroof.

Press the front of the sunroof switch to the first detent and hold, to close the sunroof to a desired position at a normal speed. Press the front of the switch to the second detent and release, to express close the sunroof.

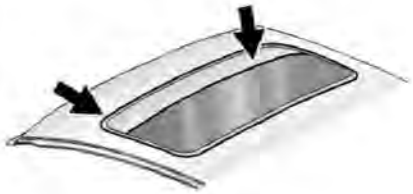
To open or close the sunshade, press the open or close sunroof switch (B).

Press the front or back of the sunshade switch to the first detent and hold, to open or close the sunshade to a desired position at a normal speed. Press the switch to the second detent and release, to express open or close the sunshade.

Fully close the glass before fully closing the sunshade.

Anti-Pinch Feature

If an object is in the path of the sunroof when it is closing, the anti-pinch feature detects the object and stops the sunroof from closing at the point of the obstruction. The sunroof then returns to the full-open position.



Dirt and debris may collect on the sunroof seal or in the track. This could cause an issue with sunroof operation, noise, or plugging the water drainage system. Periodically open the sunroof and remove any obstacles or loose debris. Wipe the sunroof seal and roof sealing area using a clean cloth, mild soap, and water. Do not remove grease from the sunroof.

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Head Restraints

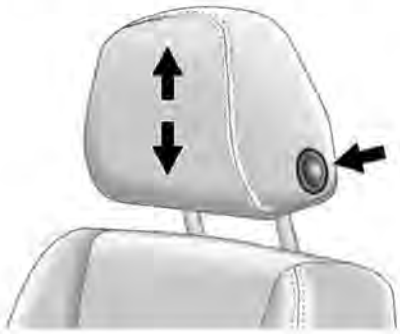
⚠ WARNING

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.

Front Seats

The vehicle's front seats have adjustable head restraints in the outboard seating positions.



The height of the head restraint can be adjusted. To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down, and release the button. Pull and push on the head restraint after the button is released to make sure that it is locked in place.

The front seat outboard head restraints are not designed to be removed.

Rear Seats

The vehicle's rear seats have adjustable head restraints in the outboard seating positions.

The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure that it is locked in place.

To lower the head restraint, press the button, located on the top of the seatback, and push the head restraint down. Try to move the head restraint after the button is released to make sure that it is locked in place.

The vehicle's rear seat has an adjustable headrest in the center seating position that can be adjusted the same way as the outboard head restraints.

If you are installing a child restraint in the rear seat, see "Securing a Child Restraint Designed for the LATCH System" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-45*.

Front Seats

Seat Adjustment

⚠ WARNING

You can lose control of the vehicle if you try to adjust a driver seat while the vehicle is moving. The sudden movement could startle and confuse you, or make you push a pedal when you do not want to. Adjust the driver seat only when the vehicle is not moving.

To adjust a manual seat:

1. Pull the handle at the front of the seat cushion.
2. Move the seat forward or rearward to adjust the seat position.
3. Release the handle to stop the seat from moving.
4. Try to move the seat back and forth to be sure it is locked in place.

Power Seat Adjustment

To adjust a power seat, if equipped:

- Move the seat forward or rearward by sliding the control forward or rearward.
- Raise or lower the front or rear part of the seat cushion by moving the front or rear of the control up or down.
- Raise or lower the seat by moving the control up or down.

To adjust the seatback, see *Reclining Seatbacks on page 3-6*.

To adjust the lumbar support, see *Lumbar Adjustment on page 3-5*.

Lumbar Adjustment

Power Lumbar

If available, press and hold the front or rear of the control to increase or decrease lumbar support. Release the control when the seatback reaches the desired level of lumbar support.

Thigh Support Adjustment

If available, adjust the manual leg extension by pulling up on the lever, and then pulling or pushing on the support to lengthen or shorten it. Release the lever to lock it in place.

Reclining Seatbacks

⚠ WARNING

Sitting in a reclined position when the vehicle is in motion can be dangerous. Even when buckled up, the safety belts cannot do their job.

The shoulder belt will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

The lap belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.

For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear the safety belt properly.

Do not have a seatback reclined if the vehicle is moving.

Manual Reclining Seatbacks

⚠ WARNING

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

To recline a manual seatback:

1. Lift the lever.
2. Move the seatback to the desired position, and then release the lever to lock the seatback in place.
3. Push and pull on the seatback to make sure it is locked.

To return the seatback to the upright position:

1. Lift the lever fully without applying pressure to the seatback, and the seatback will return to the upright position.
2. Push and pull on the seatback to make sure it is locked.

Power Reclining Seatbacks

To adjust a power seatback, if available:

- Tilt the top of the control rearward to recline.
- Tilt the top of the control forward to raise.

Memory Seats

On vehicles with the memory feature, the "1" and "2" buttons on the outboard side of the driver seat are used to manually save and recall the positions of the driver seat, outside mirrors, and adjustable throttle and brake pedal positions, if available. These manually stored positions are referred to as Button Memory positions.

The vehicle will also automatically save driver seat, outside mirror, and adjustable throttle and brake pedal positions to the current driver Remote Keyless Entry (RKE) transmitter when the ignition is turned off. These automatically stored positions are referred to as RKE Memory positions.
See *Remote Keyless Entry (RKE) System Operation on page 2-3.*

Storing Button Memory Positions

To save positions into Button Memory:

1. Adjust the driver seat, seatback recliner, both outside mirrors, and adjustable pedals, if available, to the desired driving positions.
2. Press and hold MEM (Memory) and "1" at the same time until a beep sounds.
3. Repeat Steps 1 and 2 for a second driver using "2."

Recalling Button Memory Positions

To recall the manually saved Button Memory positions, press and hold "1" or "2." The driver seat, outside mirrors, and adjustable pedals, if available, move to the positions stored to those buttons when pressed. Releasing "1" or "2" before the stored positions are reached stops the recall.

If something has blocked the driver seat and/or the adjustable pedals, if available, while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by pressing the appropriate memory button. If the memory position is still not recalling, see your dealer for service.

Recalling RKE Memory Positions (Memory Remote Recall)

The Memory Remote Recall feature can recall the driver seat, outside mirrors, and adjustable pedals, if available, to previously stored RKE Memory positions when entering the vehicle.

Every time the ignition is placed in OFF, the positions of the driver seat, outside mirrors, and adjustable pedals, if available, are automatically stored to the RKE transmitter that was used to start the vehicle. These positions are called RKE Memory positions and may be different than the previously mentioned Button Memory positions saved to the "1" or "2" buttons.

To automatically recall RKE Memory positions, unlock the driver door with the RKE transmitter, and open the driver door. On vehicles with Keyless Access, opening the driver door when an RKE transmitter is present will activate the RKE Memory recall. If the driver door is already open, pressing the RKE transmitter button will also activate the RKE Memory recall. The driver seat, outside mirrors, and pedals, if available, will move to the previously saved RKE Memory positions.

This feature is turned on or off using the vehicle personalization menu. See *Vehicle Personalization on page 5-40*.

To stop recall movement, press one of the memory, power mirror, or power seat controls, or the adjustable pedal switch, if available.

If something has blocked the driver seat and/or the adjustable pedals, if available, while recalling a memory position, the recall may stop. Remove the obstruction; then press and hold the appropriate manual control for the memory item that is not recalling for two seconds. Try recalling the memory position again by opening the driver door and pressing the RKE transmitter button. If the memory position is still not recalling, see your dealer for service.

Easy Exit Driver Seat

This feature moves the seat rearward allowing the driver more room to exit the vehicle.

To activate, place the ignition in OFF and open the driver door. If the driver door is already open, placing the ignition in OFF will activate the easy exit driver seat.

This feature is turned on or off using the vehicle personalization menu. See *Vehicle Personalization on page 5-40*.

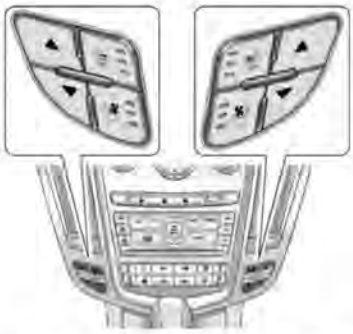
To stop recall movement, press one of the memory, power seat controls, or the adjustable pedal switch, if available.

If something has blocked the driver seat while recalling the exit position, the recall may stop. Remove the obstruction; then press and hold the power seat control rearward for two seconds. Try recalling the exit position again. If the exit position is still not recalling, see your dealer for service.

Heated and Ventilated Front Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures. To reduce the risk of burns, people with such a condition should use care when using the seat heater, especially for long periods of time. Do not place anything on the seat that insulates against heat, such as a blanket, cushion, cover, or similar item. This may cause the seat heater to overheat. An overheated seat heater may cause a burn or may damage the seat.



Heated and Ventilated Seat Buttons Shown, Heated Seat Buttons Similar

If available, the buttons are near the climate controls on the instrument panel. To operate, the ignition must be in ON/RUN/START.

Press or to heat the driver or passenger seat.

Press or , if available, to ventilate the driver or passenger seat.

Press the button once for the highest setting. With each press of the button, the seat will change to the next lower setting, and then to the off setting. The lights indicate three for the highest setting and one for the lowest.

The passenger seat may take longer to heat up.

Remote Start Heated and Ventilated Seats

During a remote start, the heated or ventilated seats can be turned on automatically. They are canceled when the ignition is turned on. Press the button to use the heated or ventilated seats after the vehicle is started.

The heated or ventilated seat indicator lights on the button do not turn on during a remote start.

The temperature performance of an unoccupied seat may be reduced. This is normal.

The heated or ventilated seats will not turn on during a remote start unless they are enabled in the vehicle personalization menu. See *Remote Vehicle Start on page 2-10* and *Vehicle Personalization on page 5-40*.

Rear Seats

Split Folding Seatbacks

With this feature, either side of the rear seatback can be folded down for more cargo space.

Folding the Seatbacks

Notice: **Folding a rear seat with the safety belts still fastened may cause damage to the seat or the safety belts. Always unbuckle the safety belts and return them to their normal stowed position before folding a rear seat.**

To fold the seatback:

1. Unbuckle the rear safety belts and move the front seatbacks to the upright position. See *Reclining Seatbacks on page 3-6*.
2. Make sure that there is nothing under, in front of, or on the seat.

3. Lift the lever on the top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.
4. Fold the seatback forward. A tab near the seatback lever retracts when the seatback is locked in place.

Keep the seatback in the upright, locked position when not in use.

Raising the Seatbacks

⚠ WARNING

If either seatback is not locked, it could move forward in a sudden stop or crash. That could cause injury to the person sitting there. Always push and pull on the seatbacks to be sure they are locked.

⚠ WARNING

A safety belt that is improperly routed, not properly attached, or twisted will not provide the protection needed in a crash. The person wearing the belt could be seriously injured. After raising the rear seatback, always check to be sure that the safety belts are properly routed and attached, and are not twisted.

To raise the seatback:

1. Lift the lever on top of the seatback. Raise the seatback and release the lever. A tab near the seatback lever raises when the seatback is unlocked.
2. Push the seatback rearward until it locks in the upright position. A tab near the seatback lever retracts when the seatback is locked in place.
3. Make sure the rear safety belts are not twisted or caught between the seat cushion and the seatback.

Reclining the Seatbacks

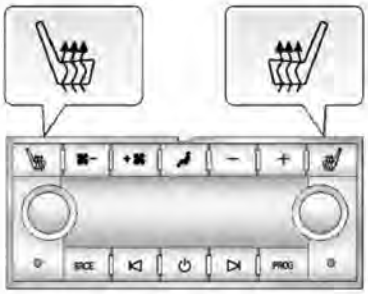
To recline the seatback:

1. Lift and hold the lever on top of the seatback. A tab near the seatback lever raises when the seatback is unlocked.
2. Tilt the seatback rearward, and then release the lever when the seatback is in the desired position. A tab near the seatback lever retracts when the seatback is locked in place.

Heated Rear Seats

⚠ WARNING

If you cannot feel temperature change or pain to the skin, the seat heater may cause burns even at low temperatures. See the Warning under *Heated and Ventilated Front Seats on page 3-10.*



If available, the buttons are on the Rear Sear Audio (RSA) panel on the rear of the center console.

With the ignition in ON/RUN/START, press or to heat the left or right outboard seat cushion and seatback. An indicator on the RSA display appears when this feature is on.

Press the button once for the highest setting. With each press of the button, the heated seat changes to the next lower setting, and then the off setting. Three lights indicate the highest setting, and one light indicates the lowest.

Rear Seat Pass-Through Door

Some vehicles have a rear seat pass-through door in the center of the rear seatback. Fold down the center armrest and push down on the latch to open the door.

Safety Belts

This section of the manual describes how to use safety belts properly. It also describes some things not to do with safety belts.

⚠ WARNING

Do not let anyone ride where a safety belt cannot be worn properly. In a crash, if you or your passenger(s) are not wearing safety belts, injuries can be much worse than if you are wearing safety belts. You can be seriously injured or killed by hitting things inside the vehicle harder or by being ejected from the vehicle. In addition, anyone who is not buckled up can strike other passengers in the vehicle.

(Continued)

WARNING (Continued)

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, passengers riding in these areas are more likely to be seriously injured or killed. Do not allow passengers to ride in any area of the vehicle that is not equipped with seats and safety belts.

Always wear a safety belt, and check that all passenger(s) are restrained properly too.

This vehicle has indicators as a reminder to buckle the safety belts. See *Safety Belt Reminders on page 5-15.*

Why Safety Belts Work

When riding in a vehicle, you travel as fast as the vehicle does. If the vehicle stops suddenly, you keep going until something stops you. It could be the windshield, the instrument panel, or the safety belts!

When you wear a safety belt, you and the vehicle slow down together. There is more time to stop because you stop over a longer distance and, when worn properly, your strongest bones take the forces from the safety belts. That is why wearing safety belts makes such good sense.

Questions and Answers About Safety Belts

Q: Will I be trapped in the vehicle after a crash if I am wearing a safety belt?

A: You *could* be— whether you are wearing a safety belt or not. Your chance of being conscious during and after a crash, so you *can* unbuckle and get out, is *much* greater if you are belted.

Q: If my vehicle has airbags, why should I have to wear safety belts?

A: Airbags are supplemental systems only; so they work *with* safety belts— not instead of them. Whether or not an airbag is provided, all occupants still have to buckle up to get the most protection.

Also, in nearly all states and in all Canadian provinces, the law requires wearing safety belts.

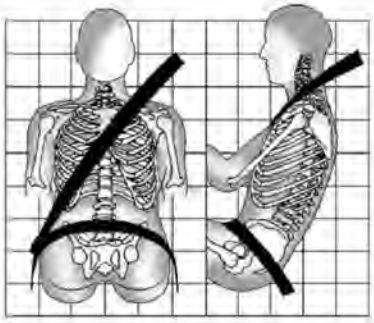
How to Wear Safety Belts Properly

This section is only for people of adult size.

There are special things to know about safety belts and children. And there are different rules for smaller children and infants. If a child will be riding in the vehicle, see *Older Children on page 3-37* or *Infants and Young Children on page 3-39*. Follow those rules for everyone's protection.

It is very important for all occupants to buckle up. Statistics show that unbelted people are hurt more often in crashes than those who are wearing safety belts.

There are important things to know about wearing a safety belt properly.



- Sit up straight and always keep your feet on the floor in front of you.
- Always use the correct buckle for your seating position.
- Wear the lap part of the belt low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones and you would be less likely to slide under the lap belt. If you slid under it, the belt would apply force on your abdomen. This could cause serious or even fatal injuries.
- Wear the shoulder belt over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces. The shoulder belt locks if there is a sudden stop or crash.

⚠ WARNING

You can be seriously injured, or even killed, by not wearing your safety belt properly.

- Never allow the lap or shoulder belt to become loose or twisted.
- Never wear the shoulder belt under both arms or behind your back.
- Never route the lap or shoulder belt over an armrest.

Lap-Shoulder Belt

All seating positions in the vehicle have a lap-shoulder belt.

The following instructions explain how to wear a lap-shoulder belt properly.

1. Adjust the seat, if the seat is adjustable, so you can sit up straight. To see how, see "Seats" in the Index.
2. Pick up the latch plate and pull the belt across you. Do not let it get twisted.

   The lap-shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

   If the shoulder portion of a passenger belt is pulled out all the way, the child restraint locking feature may be engaged. If this happens, let the belt go back all the way and start again.

3. Push the latch plate into the buckle until it clicks.

   Pull up on the latch plate to make sure it is secure. If the belt is not long enough, see *Safety Belt Extender on page 3-21*.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.
4. If equipped with a shoulder belt height adjuster, move it to the height that is right for you. See "Shoulder Belt Height Adjuster" later in this section for instructions on use and important safety information.

5. To make the lap part tight, pull up on the shoulder belt.

   It may be necessary to pull stitching on the safety belt through the latch plate to fully tighten the lap belt on smaller occupants.

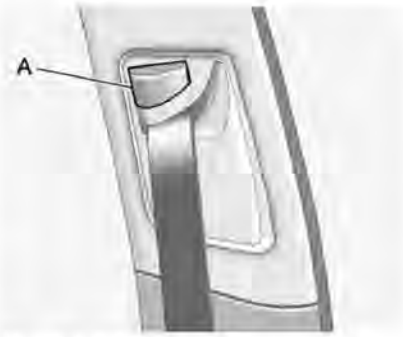
To unlatch the belt, just push the button on the buckle.

Before a door is closed, be sure the safety belt is out of the way. If a door is slammed against a safety belt, damage can occur to both the safety belt and the vehicle.

Shoulder Belt Height Adjuster

The vehicle has a shoulder belt height adjuster for the driver and right front passenger seating positions.

Adjust the height so that the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash. See *How to Wear Safety Belts Properly on page 3-15*.



Move the height adjuster up to the desired position by pushing up on the height adjuster.

After the height adjuster is set to the desired position, try to move it up or down without pressing the release button (A) to make sure it has locked into position. Press the release button to lower the height adjuster.

Safety Belt Pretensioners

This vehicle has safety belt pretensioners for front outboard occupants. Although the safety belt pretensioners cannot be seen, they are part of the safety belt assembly. They can help tighten the safety belts during the early stages of a moderate to severe frontal and near frontal crash and will deploy in side, rear and rollover events if the threshold conditions for pretensioner activation are met.

Pretensioners work only once. If the pretensioners activate in a crash, they will need to be replaced, and probably other new parts for the vehicle's safety belt system. See *Replacing Safety Belt System Parts after a Crash on page 3-22*.

Rear Safety Belt Comfort Guides

This vehicle may have rear shoulder belt comfort guides for the outboard passenger positions in the rear seat. If not, they are available through your dealer. The guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, and properly adjusted, the comfort guide positions the belt away from the neck and head.

Here is how to install a comfort guide to the safety belt:

1. Remove the guide from its storage pocket on the side of the seat.

2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.

3. Be sure that the belt is not twisted and it lies flat. The elastic cord must be under the belt and the guide on top.

⚠ WARNING

A safety belt that is not properly worn may not provide the protection needed in a crash. The person wearing the belt could be seriously injured. The shoulder belt should go over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces.

4. Buckle, position, and release the safety belt as described previously in this section. Make sure the shoulder portion of the belt is on the shoulder and not falling off of it. The belt should be close to, but not contacting, the neck.

To remove and store the comfort guide, squeeze the belt edges together so that the safety belt can be removed from the guide. Slide the guide back into its storage pocket located on the side of the seat.

Safety Belt Use During Pregnancy

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they do not wear safety belts.

A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

The best way to protect the fetus is to protect the mother. When a safety belt is worn properly, it is more likely that the fetus will not be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it.

But if a safety belt is not long enough, your dealer will order you an extender. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. To help avoid personal injury, do not let someone else use it, and use it only for the seat it is made to fit. The extender has been designed for adults. Never use it for securing child seats. To wear it, attach it to the regular safety belt. See the instruction sheet that comes with the extender.

Safety System Check

Now and then, check that the safety belt reminder light, safety belts, buckles, latch plates, retractors, and anchorages are all working properly. Look for any other loose or damaged safety belt system parts that might keep a safety belt system from doing its job. See your dealer to have it repaired. Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Make sure the safety belt reminder light is working. See *Safety Belt Reminders on page 5-15*.

Keep safety belts clean and dry. See *Safety Belt Care on page 3-22*.

Safety Belt Care

Keep belts clean and dry.

⚠ WARNING

Do not bleach or dye safety belts. It may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Replacing Safety Belt System Parts after a Crash

⚠ WARNING

A crash can damage the safety belt system in the vehicle. A damaged safety belt system may not properly protect the person using it, resulting in serious injury or even death in a crash. To help make sure the safety belt systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

After a minor crash, replacement of safety belts may not be necessary. But the safety belt assemblies that were used during any crash may have been stressed or damaged. See your dealer to have the safety belt assemblies inspected or replaced.

New parts and repairs may be necessary even if the safety belt system was not being used at the time of the crash.

Have the safety belt pretensioners checked if the vehicle has been in a crash, or if the airbag readiness light stays on after you start the vehicle or while you are driving. See *Airbag Readiness Light on page 5-16*.

Airbag System

The vehicle has the following airbags:

- A frontal airbag for the driver.
- A frontal airbag for the front outboard passenger.
- A seat-mounted side impact airbag for the driver.
- A seat-mounted side impact airbag for the front outboard passenger.
- A roof-rail airbag for the driver and for the second row passenger seated directly behind the driver.
- A roof-rail airbag for the front outboard passenger and the second row passenger seated directly behind the front outboard passenger.

All vehicle airbags have the word AIRBAG on the trim or on an attached label near the deployment opening.

For frontal airbags, the word AIRBAG is on the center of the steering wheel for the driver and on the instrument panel for the front outboard passenger.

For seat-mounted side impact airbags, the word AIRBAG is on the side of the seatback closest to the door.

For roof-rail airbags, the word AIRBAG is on the ceiling or trim.

Airbags are designed to supplement the protection provided by safety belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating bag, all airbags must inflate very quickly to do their job.

Here are the most important things to know about the airbag system:

⚠ WARNING

You can be severely injured or killed in a crash if you are not wearing your safety belt, even with airbags. Airbags are designed to work with safety belts, not replace them. Also, airbags are not designed to inflate in every crash. In some crashes safety belts are the only restraint. See *When Should an Airbag Inflate? on page 3-26*.

Wearing your safety belt during a crash helps reduce the chance of hitting things inside the vehicle or being ejected from it. Airbags are "supplemental restraints" to the safety belts. Everyone in the vehicle should wear a safety belt properly, whether or not there is an airbag for that person.

⚠ WARNING

Because airbags inflate with great force and faster than the blink of an eye, anyone who is up against, or very close to any airbag when it inflates can be seriously injured or killed. Do not sit unnecessarily close to any airbag, as you would be if sitting on the edge of the seat or leaning forward. Safety belts help keep you in position before and during a crash. Always wear a safety belt, even with airbags. The driver should sit as far back as possible while still maintaining control of the vehicle.

Occupants should not lean on or sleep against the door or side windows in seating positions with seat-mounted side impact airbags and/or roof-rail airbags.

⚠ WARNING

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Young children and infants need the protection that a child restraint system can provide. Always secure children properly in the vehicle. To read how, see *Older Children on page 3-37* or *Infants and Young Children on page 3-39*.

There is an airbag readiness light on the instrument panel cluster, which shows the airbag symbol.

The system checks the airbag electrical system for malfunctions. The light tells you if there is an electrical problem. See *Airbag Readiness Light on page 5-16* for more information.

Where Are the Airbags?

The driver frontal airbag is in the center of the steering wheel.

The front outboard passenger frontal airbag is in the passenger side instrument panel.

Driver Side Shown, Passenger Side Similar

The driver and front outboard passenger seat-mounted side impact airbags are in the side of the seatbacks closest to the door.

Driver Side Shown, Passenger Side Similar

The roof-rail airbags for the driver, right front passenger, and second row outboard passengers are in the ceiling above the side windows.

⚠ WARNING

If something is between an occupant and an airbag, the airbag might not inflate properly or it might force the object into that person causing severe injury or even death. The path of an inflating airbag must be kept clear. Do not put anything between an occupant and an airbag, and do not attach or put anything on the steering wheel hub or on or near any other airbag covering.

Do not use seat accessories that block the inflation path of a seat-mounted side impact airbag.

Never secure anything to the roof of a vehicle with roof-rail airbags by routing a rope or tie-down through any door or window opening. If you do, the path of an inflating roof-rail airbag will be blocked.

When Should an Airbag Inflate?

Frontal airbags are designed to inflate in moderate to severe frontal or near frontal crashes to help reduce the potential for severe injuries mainly to the driver's or front outboard passenger's head and chest. However, they are only designed to inflate if the impact exceeds a predetermined deployment threshold. Deployment thresholds are used to predict how severe a crash is likely to be in time for the airbags to inflate and help restrain the occupants.

Whether the frontal airbags will or should inflate is not based primarily on how fast the vehicle is traveling. It depends on what is hit, the direction of the impact, and how quickly the vehicle slows down.

Frontal airbags may inflate at different crash speeds depending on whether the vehicle hits an object straight on or at an angle, and whether the object is fixed or moving, rigid or deformable, narrow or wide.

Thresholds can also vary with specific vehicle design.

Frontal airbags are not intended to inflate during vehicle rollovers, rear impacts, or in many side impacts.

In addition, the vehicle has dual-stage frontal airbags. Dual-stage airbags adjust the restraint according to crash severity. The vehicle has electronic frontal sensors, that help the sensing system distinguish between a moderate frontal impact and a more severe frontal impact. For moderate frontal impacts, dual-stage airbags inflate at a level less than full deployment. For more severe frontal impacts, full deployment occurs.

The vehicle has seat-mounted side impact and roof-rail airbags. See *Airbag System on page 3-23*. Seat-mounted side impact and roof-rail airbags are intended to inflate in moderate to severe side crashes depending on the location of the impact. In addition, these roof-rail airbags are intended to inflate during a rollover or in a severe frontal impact. Seat-mounted side impact and roof-rail airbags will inflate if the crash severity is above the system's designed threshold level. The threshold level can vary with specific vehicle design.

Seat-mounted side impact airbags are not intended to inflate in frontal impacts, near frontal impacts, rollovers, or rear impacts. Roof-rail airbags are not intended to inflate in rear impacts. A seat-mounted side impact airbag is intended to deploy on the side of the vehicle that is struck. Both roof-rail airbags will deploy when either side of the vehicle is struck, or if the sensing system predicts that the vehicle is about to roll over, or in a severe frontal impact.

In any particular crash, no one can say whether an airbag should have inflated simply because of the vehicle damage or repair costs.

What Makes an Airbag Inflate?

In a deployment event, the sensing system sends an electrical signal triggering a release of gas from the inflator. Gas from the inflator fills the airbag causing the bag to break out of the cover. The inflator, the airbag, and related hardware are all part of the airbag module.

For airbag location, see *Where Are the Airbags? on page 3-25*.

How Does an Airbag Restrain?

In moderate to severe frontal or near frontal collisions, even belted occupants can contact the steering wheel or the instrument panel. In moderate to severe side collisions, even belted occupants can contact the inside of the vehicle.

Airbags supplement the protection provided by safety belts by distributing the force of the impact more evenly over the occupant's body.

Rollover capable roof-rail airbags are designed to help contain the head and chest of occupants in the outboard seating positions in the first and second rows. The rollover capable roof-rail airbags are designed to help reduce the risk of full or partial ejection in rollover events, although no system can prevent all such ejections.

But airbags would not help in many types of collisions, primarily because the occupant's motion is not toward those airbags. See *When Should an Airbag Inflate? on page 3-26* for more information.

Airbags should never be regarded as anything more than a supplement to safety belts.

What Will You See after an Airbag Inflates?

After the frontal airbags and seat-mounted side impact airbags inflate, they quickly deflate, so quickly that some people may not even realize an airbag inflated. Roof-rail airbags may still be at least partially inflated for some time after they inflate. Some components of the airbag module may be hot for several minutes. For location of the airbags, see *Where Are the Airbags? on page 3-25.*

The parts of the airbag that come into contact with you may be warm, but not too hot to touch. There may be some smoke and dust coming from the vents in the deflated airbags. Airbag inflation does not prevent the driver from seeing out of the windshield or being able to steer the vehicle, nor does it prevent people from leaving the vehicle.

⚠ WARNING

When an airbag inflates, there may be dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone in the vehicle should get out as soon as it is safe to do so. If you have breathing problems but cannot get out of the vehicle after an airbag inflates, then get fresh air by opening a window or a door. If you experience breathing problems following an airbag deployment, you should seek medical attention.

The vehicle has a feature that may automatically unlock the doors, turn on the interior lamps, turn on the hazard warning flashers, and shut off the fuel system after the airbags inflate. You can lock the doors, turn off the interior lamps, and turn off the hazard warning flashers by using the controls for those features.

⚠ WARNING

A crash severe enough to inflate the airbags may have also damaged important functions in the vehicle, such as the fuel system, brake and steering systems, etc. Even if the vehicle appears to be drivable after a moderate crash, there may be concealed damage that could make it difficult to safely operate the vehicle.

Use caution if you should attempt to restart the engine after a crash has occurred.

In many crashes severe enough to inflate the airbag, windshields are broken by vehicle deformation. Additional windshield breakage may also occur from the front outboard passenger airbag.

- Airbags are designed to inflate only once. After an airbag inflates, you will need some new parts for the airbag system. If you do not get them, the airbag system will not be there to help protect you in another crash. A new system will include airbag modules and possibly other parts. The service manual for the vehicle covers the need to replace other parts.

- The vehicle has a crash sensing and diagnostic module which records information after a crash. See *Vehicle Data Recording and Privacy on page 13-21* and *Event Data Recorders on page 13-21*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your dealer for service.

Passenger Sensing System

The vehicle has a passenger sensing system for the front outboard passenger position. The passenger airbag status indicator will light on the overhead console when the vehicle is started.

United States

Canada and Mexico

The words ON and OFF, or the symbol for on and off, are visible during the system check. If you use remote start, if equipped, to start the vehicle, you may not see the system check. When the system check is complete, either the word ON or OFF, or the symbol for on or off, will be visible. See *Passenger Airbag Status Indicator on page 5-17*.

The passenger sensing system turns off the front outboard passenger frontal airbag and seat-mounted side impact airbag under certain conditions. No other airbag is affected by the passenger sensing system.

The passenger sensing system works with sensors that are part of the front outboard passenger seat. The sensors are designed to detect the presence of a properly-seated occupant and determine if the front outboard passenger frontal airbag and seat-mounted side impact airbag should be allowed to inflate or not.

According to accident statistics, children are safer when properly secured in a rear seat in the correct child restraint for their weight and size.

We recommend that children be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

Never put a rear-facing child seat in the front. This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the passenger frontal airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the

(Continued)

WARNING (Continued)

passenger frontal airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the front outboard passenger airbag(s), no system is fail-safe. No one can guarantee that an airbag will not inflate under some unusual circumstance, even though the airbag(s) are off.

Secure rear-facing child restraints in a rear seat, even if the airbag(s) are off. If you secure a forward-facing child restraint in the front outboard passenger seat, always move the seat as far back as it will go. It is better to secure the child restraint in a rear seat.

The passenger sensing system is designed to turn off the front outboard passenger airbag and seat-mounted side impact airbag if:

- The front outboard passenger seat is unoccupied.
- The system determines that an infant is present in a rear-facing infant seat.
- The system determines that a small child is present in a child restraint.
- The system determines that a small child is present in a booster seat.
- A front outboard passenger takes his/her weight off of the seat for a period of time.
- The front outboard passenger seat is occupied by a smaller person, such as a child who has outgrown child restraints.
- There is a critical problem with the airbag system or the passenger sensing system.

When the passenger sensing system has turned off the front outboard passenger frontal airbag and seat-mounted side impact airbag, the off indicator will light and stay lit as a reminder that the airbags are off. See *Passenger Airbag Status Indicator on page 5-17*.

The passenger sensing system is designed to turn on the front outboard passenger frontal airbag and seat-mounted side impact airbag anytime the system senses that a person of adult size is sitting properly in the front outboard passenger seat.

When the passenger sensing system has allowed the airbags to be enabled, the on indicator will light and stay lit as a reminder that the airbags are active.

For some children who have outgrown child restraints and for very small adults, the passenger sensing system may or may not turn off the front outboard passenger frontal airbag and seat-mounted side impact airbag, depending upon the person's seating posture and body build. Everyone in the vehicle who has outgrown child restraints should wear a safety belt properly — whether or not there is an airbag for that person.

⚠ WARNING

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 5-16* for more information, including important safety information.

If the On Indicator Is Lit for a Child Restraint

If a child restraint has been installed and the on indicator is lit:

1. Turn the vehicle off.
2. Remove the child restraint from the vehicle.
3. Remove any additional items from the seat such as blankets, cushions, seat covers, seat heaters, or seat massagers.
4. Reinstall the child restraint following the directions provided by the child restraint manufacturer and refer to "Securing a Child Restraint in the Right Front Seat Position" under *Securing Child Restraints (Rear Seat) on page 3-54* or *Securing Child Restraints (Front Passenger Seat) on page 3-56*.

5. If, after reinstalling the child restraint and restarting the vehicle, the on indicator is still lit, turn the vehicle off. Then slightly recline the vehicle seatback and adjust the seat cushion, if adjustable, to make sure that the vehicle seatback is not pushing the child restraint into the seat cushion.

   Also make sure the child restraint is not trapped under the vehicle head restraint. If this happens, adjust the head restraint. See *Head Restraints on page 3-2*.

6. Restart the vehicle.

   If the on indicator is still lit, secure the child restraint in a rear seat position in the vehicle, and check with your dealer.

If the Off Indicator Is Lit for an Adult-Size Occupant

If a person of adult-size is sitting in the front outboard passenger seat, but the off indicator is lit, it could be because that person is not sitting properly in the seat.

Use the following steps to allow the system to detect that person and enable the front outboard passenger frontal airbag and seat-mounted side impact airbag:

1. Turn the vehicle off.
2. Remove any additional material from the seat, such as blankets, cushions, seat covers, seat heaters, or seat massagers.
3. Place the seatback in the fully upright position.
4. Have the person sit upright in the seat, centered on the seat cushion, with legs comfortably extended.
5. Restart the vehicle and have the person remain in this position for two to three minutes after the on indicator is lit.

Additional Factors Affecting System Operation

Safety belts help keep the passenger in position on the seat during vehicle maneuvers and braking, which helps the passenger sensing system maintain the passenger airbag status. See "Safety Belts" and "Child Restraints" in the Index for additional information about the importance of proper restraint use.

A thick layer of additional material, such as a blanket or cushion, or aftermarket equipment such as seat covers, seat heaters, and seat massagers can affect how well the passenger sensing system operates. We recommend that you not use seat covers or other aftermarket equipment except when approved by GM for your specific vehicle. See *Adding Equipment to the Airbag-Equipped Vehicle on page 3-35* for more information about modifications that can affect how the system operates.

⚠ WARNING

Stowing of articles under the passenger seat or between the passenger seat cushion and seatback may interfere with the proper operation of the passenger sensing system.

Servicing the Airbag-Equipped Vehicle

Airbags affect how the vehicle should be serviced. There are parts of the airbag system in several places around the vehicle. Your dealer and the service manual have information about servicing the vehicle and the airbag system. To purchase a service manual, see *Service Publications Ordering Information on page 13-18*.

⚠ WARNING

For up to 10 seconds after the vehicle is turned off and the battery is disconnected, an airbag can still inflate during improper service. You can be injured if you are close to an airbag when it inflates. Avoid yellow connectors. They are probably part of the airbag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.

Adding Equipment to the Airbag-Equipped Vehicle

Adding accessories that change the vehicle's frame, bumper system, height, front end, or side sheet metal may keep the airbag system from working properly.

The operation of the airbag system can also be affected by changing or moving any parts of the front seats, safety belts, airbag sensing and diagnostic module, steering wheel, instrument panel, roof-rail airbag modules, ceiling or pillar garnish trim, overhead console, front sensors, side impact sensors, rollover sensor module, airbag wiring, or cargo restraint system and convenience net.

Your dealer and the service manual have information about the location of the airbag sensors, sensing and diagnostic module, and airbag wiring.

In addition, the vehicle has a passenger sensing system that includes sensors as part of the front outboard passenger seat. The passenger sensing system may not operate properly if the original seat trim is replaced with non-GM covers, upholstery, or trim; or with GM covers, upholstery, or trim designed for a different vehicle. Any object, such as an aftermarket seat heater or a comfort-enhancing pad or device, installed under or on top of the seat fabric, could also interfere with the operation of the passenger sensing system. This could either prevent proper deployment of the passenger airbag(s) or prevent the passenger sensing system from properly turning off the passenger airbag(s). See *Passenger Sensing System on page 3-30*.

If the vehicle has rollover roof-rail airbags, see *Different Size Tires and Wheels on page 10-67* for additional important information.

If your vehicle needs to be modified because you have a disability and you have questions about whether the modifications will affect the vehicle's airbag system, or if you have questions about whether the airbag system will be affected if the vehicle is modified for any other reason, call Customer Assistance. See *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-5*.

Airbag System Check

The airbag system does not need regularly scheduled maintenance or replacement. Make sure the airbag readiness light is working. See *Airbag Readiness Light on page 5-16*.

Notice: **If an airbag covering is damaged, opened, or broken, the airbag may not work properly. Do not open or break the airbag coverings. If there are any opened or broken airbag covers, have the airbag covering and/or airbag module replaced. For the location of the airbags, see *Where Are the Airbags? on page 3-25*. See your dealer for service.**

Replacing Airbag System Parts after a Crash

⚠ WARNING

A crash can damage the airbag systems in the vehicle. A damaged airbag system may not work properly and may not protect you and your passenger(s) in a crash, resulting in serious injury or even death. To help make sure the airbag systems are working properly after a crash, have them inspected and any necessary replacements made as soon as possible.

If an airbag inflates, you will need to replace airbag system parts. See your dealer for service.

If the airbag readiness light stays on after the vehicle is started or comes on when you are driving, the airbag system may not work properly. Have the vehicle serviced right away. See *Airbag Readiness Light on page 5-16*.

Child Restraints

Older Children

Older children who have outgrown booster seats should wear the vehicle safety belts.

The manufacturer's instructions that come with the booster seat state the weight and height limitations for that booster. Use a booster seat with a lap-shoulder belt until the child passes the fit test below:

- Sit all the way back on the seat. Do the knees bend at the seat edge? If yes, continue. If no, return to the booster seat.
- Buckle the lap-shoulder belt. Does the shoulder belt rest on the shoulder? If yes, continue. If no, try using the rear safety belt comfort guide. See "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-17* for more information. If the shoulder belt still does not rest on the shoulder, then return to the booster seat.
- Does the lap belt fit low and snug on the hips, touching the thighs? If yes, continue. If no, return to the booster seat.
- Can proper safety belt fit be maintained for the length of the trip? If yes, continue. If no, return to the booster seat.

Q: What is the proper way to wear safety belts?

A: An older child should wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide. The shoulder belt should not cross the face or neck. The lap belt should fit snugly below the hips, just touching the top of the thighs. This applies belt force to the child's pelvic bones in a crash. It should never be worn over the abdomen, which could cause severe or even fatal internal injuries in a crash.

Also see "Rear Safety Belt Comfort Guides" under *Lap-Shoulder Belt on page 3-17*.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

In a crash, children who are not buckled up can strike other people who are buckled up, or can be thrown out of the vehicle. Older children need to use safety belts properly.

⚠ WARNING

Never allow more than one child to wear the same safety belt. The safety belt cannot properly spread the impact forces. In a crash, they can be crushed together and seriously injured. A safety belt must be used by only one person at a time.

⚠ WARNING

Never allow a child to wear the safety belt with the shoulder belt behind their back. A child can be seriously injured by not wearing the lap-shoulder belt properly. In a crash, the child would not be restrained by the shoulder belt. The child could move too far forward increasing the chance of head and neck injury.

(Continued)

WARNING (Continued)

The child might also slide under the lap belt. The belt force would then be applied right on the abdomen. That could cause serious or fatal injuries. The shoulder belt should go over the shoulder and across the chest.

Infants and Young Children

Everyone in a vehicle needs protection! This includes infants and all other children. Neither the distance traveled nor the age and size of the traveler changes the need, for everyone, to use safety restraints. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

⚠ WARNING

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Never leave children unattended in a vehicle and never allow children to play with the safety belts.

Airbags plus lap-shoulder belts offer protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its airbag system is designed for them. Every time infants and young children ride in vehicles, they should have the protection provided by appropriate child restraints.

Children who are not restrained properly can strike other people, or can be thrown out of the vehicle.

⚠ WARNING

Never hold an infant or a child while riding in a vehicle. Due to crash forces, an infant or a child will become so heavy it is not possible to hold it during a crash. For example, in a crash at only 40 km/h (25 mph), a 5.5 kg (12 lb) infant will suddenly become a 110 kg (240 lb) force on a person's arms. An infant should be secured in an appropriate restraint.

⚠ WARNING

Children who are up against, or very close to, any airbag when it inflates can be seriously injured or killed. Never put a rear-facing child restraint in the right front seat. Secure a rear-facing child restraint in a rear seat. It is also better to secure a forward-facing child restraint in a rear seat.

(Continued)

WARNING (Continued)

If you must secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go.

Q: What are the different types of add-on child restraints?

A: Add-on child restraints, which are purchased by the vehicle owner, are available in four basic types. Selection of a particular restraint should take into consideration not only the child's weight, height, and age but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.

For most basic types of child restraints, there are many different models available. When purchasing a child restraint, be sure it is designed to be used in a motor vehicle. If it is, the restraint will have a label saying that it meets federal motor vehicle safety standards.

The restraint manufacturer's instructions that come with the restraint state the weight and height limitations for a particular child restraint. In addition, there are many kinds of restraints available for children with special needs.

⚠ WARNING

To reduce the risk of neck and head injury during a crash, infants need complete support. In a crash, if an infant is in a rear-facing child restraint, the crash forces can be distributed across the strongest part of an infant's body, the back and shoulders. Infants should always be secured in rear-facing child restraints.

⚠ WARNING

A young child's hip bones are still so small that the vehicle's regular safety belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's abdomen. In a crash, the belt would apply force on a body area that is unprotected by any bony structure. This alone could cause serious or fatal injuries. To reduce the risk of serious or fatal injuries during a crash, young children should always be secured in appropriate child restraints.

Child Restraint Systems

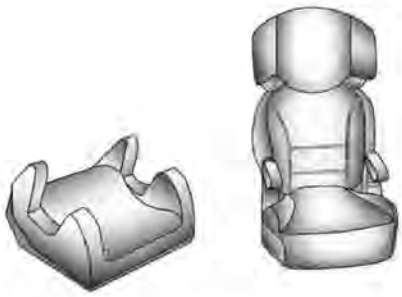
(A) Rear-Facing Infant Seat

A rear-facing infant seat (A) provides restraint with the seating surface against the back of the infant.

The harness system holds the infant in place and, in a crash, acts to keep the infant positioned in the restraint.

(B) Forward-Facing Child Seat

A forward-facing child seat (B) provides restraint for the child's body with the harness.



(C) Booster Seats

A booster seat (C) is a child restraint designed to improve the fit of the vehicle's safety belt system. A booster seat can also help a child to see out the window.

Securing an Add-On Child Restraint in the Vehicle

⚠ WARNING

A child can be seriously injured or killed in a crash if the child restraint is not properly secured in the vehicle. Secure the child restraint properly in the vehicle using the vehicle safety belt or LATCH system, following the instructions that came with that child restraint and the instructions in this manual.

To help reduce the chance of injury, the child restraint must be secured in the vehicle. Child restraint systems must be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt, or by the LATCH system. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-45*.

Children can be endangered in a crash if the child restraint is not properly secured in the vehicle.

When securing an add-on child restraint, refer to the instructions that come with the restraint which may be on the restraint itself or in a booklet, or both, and to this manual. The child restraint instructions are important, so if they are not available, obtain a replacement copy from the manufacturer.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in the vehicle — even when no child is in it.

In some areas of the United States and Canada, Certified Child Passenger Safety Technicians (CPSTs) are available to inspect and demonstrate how to correctly use and install child restraints.

In the U.S., refer to the National Highway Traffic Safety Administration (NHTSA) website to locate the nearest child safety seat inspection station. For CPST availability in Canada, check with Transport Canada or the Provincial Ministry of Transportation office.

Securing the Child Within the Child Restraint

⚠ WARNING

A child can be seriously injured or killed in a crash if the child is not properly secured in the child restraint. Secure the child properly following the instructions that came with that child restraint.

Where to Put the Restraint

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position.

We recommend that children and child restraints be secured in a rear seat, including: an infant or a child riding in a rear-facing child restraint; a child riding in a forward-facing child seat; an older child riding in a booster seat; and children, who are large enough, using safety belts.

A label on your sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

Even if the passenger sensing system has turned off the right front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

(Continued)

WARNING (Continued)

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-30* for additional information.

When securing a child restraint in a rear seating position, study the instructions that came with your child restraint to make sure it is compatible with this vehicle.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, we recommend that rear-facing child restraints not be transported in the vehicle, even if the airbag is off.

Child restraints and booster seats vary considerably in size, and some may fit in certain seating positions better than others. Always make sure the child restraint is properly secured.

Depending on where you place the child restraint and the size of the child restraint, you may not be able to access adjacent safety belt assemblies or LATCH anchors for additional passengers or child restraints. Adjacent seating positions should not be used if the child restraint prevents access to or interferes with the routing of the safety belt.

Wherever you install a child restraint, be sure to secure the child restraint properly.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in your vehicle — even when no child is in it.

Lower Anchors and Tethers for Children (LATCH System)

The LATCH system holds a child restraint during driving or in a crash. This system is designed to make installation of a child restraint easier. The LATCH system uses anchors in the vehicle and attachments on the child restraint that are made for use with the LATCH system.

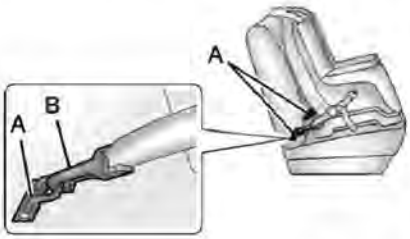
Make sure that a LATCH-compatible child restraint is properly installed using the anchors, or use the vehicle's safety belts to secure the restraint, following the instructions that came with that restraint, and also the instructions in this manual.

When installing a child restraint with a top tether, you must also use either the lower anchors or the safety belts to properly secure the child restraint. A child restraint must never be installed using only the top tether and anchor.

In order to use the LATCH system in your vehicle, you need a child restraint that has LATCH attachments. The child restraint manufacturer will provide you with instructions on how to use the child restraint and its attachments. The following explains how to attach a child restraint with these attachments in your vehicle.

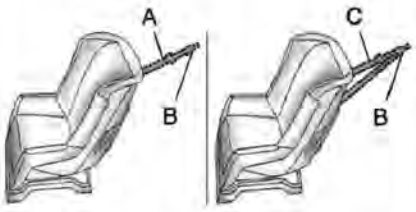
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

Lower Anchors



Lower anchors (A) are metal bars built into the vehicle. There are two lower anchors for each LATCH seating position that will accommodate a child restraint with lower attachments (B).

Top Tether Anchor



A top tether (A, C) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (B) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during driving or in a crash.

Your child restraint may have a single tether (A) or a dual tether (C). Either will have a single attachment (B) to secure the top tether to the anchor.

Some child restraints that have a top tether are designed for use with or without the top tether being attached. Others require the top tether always to be attached. In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached. Be sure to read and follow the instructions for your child restraint.

Lower Anchor and Top Tether Anchor Locations

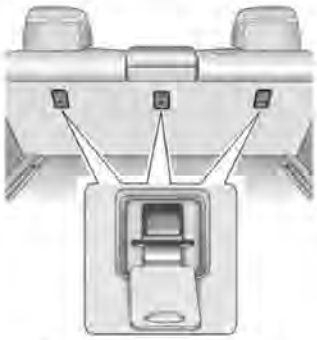
Rear Seat

(Top Tether Anchor): Seating positions with top tether anchors.

(Lower Anchor): Seating positions with two lower anchors.

To assist you in locating the lower anchors, each seating position with lower anchors has two labels, near the crease between the seatback and the seat cushion.

To assist you in locating the top tether anchors, the top tether anchor symbol is located on the cover.



Top Tether Anchors

The top tether anchors for each rear seating position are located under the covers, on the back of the rear seatback. Be sure to use an anchor located on the same side of the vehicle as the seating position where the child restraint will be placed.

Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether be attached, or if the instructions that come with the child restraint say that the top tether must be attached.

According to accident statistics, children and infants are safer when properly restrained in a child restraint system or infant restraint system secured in a rear seating position. See *Where to Put the Restraint on page 3-44* for additional information.

Securing a Child Restraint Designed for the LATCH System

⚠ WARNING

If a LATCH-type child restraint is not attached to anchors, the child restraint will not be able to protect the child correctly. In a crash, the child could be seriously injured or killed. Install a LATCH-type child restraint properly using the anchors, or use the vehicle safety belts to secure the restraint, following the instructions that came with the child restraint and the instructions in this manual.

⚠ WARNING

Do not attach more than one child restraint to a single anchor. Attaching more than one child restraint to a single anchor could cause the anchor or attachment to come loose or even break during a crash. A child or others could be injured. To reduce the risk of serious or fatal injuries during a crash, attach only one child restraint per anchor.

⚠ WARNING

Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Buckle any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, if the vehicle has one, after the child restraint has been installed.

Notice: **Do not let the LATCH attachments rub against the vehicle's safety belts. This may damage these parts. If necessary, move buckled safety belts to avoid rubbing the LATCH attachments.**

Do not fold the empty rear seat with a safety belt buckled. This could damage the safety belt or the seat. Unbuckle and return the safety belt to its stowed position, before folding the seat.

Make sure to attach the child restraint at the proper anchor location.

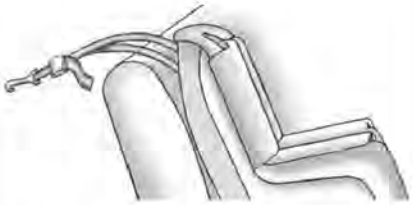
This system is designed to make installation of child restraints easier. When using lower anchors, do not use the vehicle's safety belts. Instead use the vehicle's anchors and child restraint attachments to secure the restraints. Some restraints also use another vehicle anchor to secure a top tether.

1. Attach and tighten the lower attachments to the lower anchors. If the child restraint does not have lower attachments or the desired seating position does not have lower anchors, secure the child restraint with the top tether and the safety belts. Refer to your child restraint manufacturer instructions and the instructions in this manual.
   1.1. Find the lower anchors for the desired seating position.
   1.2. Put the child restraint on the seat.

   For the outboard rear seating positions, if the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" at the end of this section.
   1.3. Attach and tighten the lower attachments on the child restraint to the lower anchors.
2. If the child restraint manufacturer recommends that the top tether be attached, attach and tighten the top tether to the top tether anchor, if equipped. Refer to the child restraint instructions and the following steps:
   2.1. Find the top tether anchor and open its cover to expose the anchor.

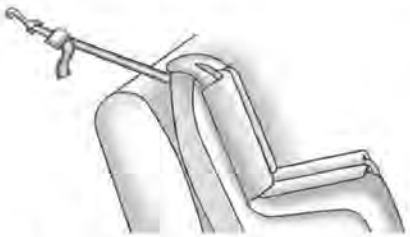
2.2. Route, attach, and tighten the top tether according to your child restraint instructions and the following instructions:

- If you are using a dual tether in the rear outboard seating position with an adjustable head restraint, route the dual tether around the head restraint.



- If you are using a dual tether in the rear outboard seating position and the head restraint has been removed, route the dual tether over the seatback.

- If you are using a single tether in the rear outboard seating position with an adjustable head restraint, route the single tether under the head restraint and in between the head restraint posts.



- If you are using a single tether in the rear outboard seating position and the head restraint has been removed, route the single tether over the seatback.

- If you are using a dual tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the dual tether over the headrest.

- If you are using a single tether in the rear center seating position, lower the adjustable headrest down to its stowed position and route the single tether over the headrest.

3. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the LATCH path and attempt to move it side-to-side and back-and-forth. There should be no more than 2.5 cm (1 in) of movement for proper installation.

Head Restraint Removal and Reinstallation

The rear outboard head restraints can be removed if they interfere with the proper installation of the child restraint. The headrest in the rear center seating position is not removable and should be lowered to the stowed position for child restraint installation.

To remove the head restraint:

1. Partially fold the seatback forward. See *Rear Seats on page 3-11* for additional information.

2. Press both buttons on the head restraint posts at the same time, and pull up on the head restraint.
3. Store the head restraint in the cargo area of the vehicle.
4. When the child restraint is removed, reinstall the head restraint before the seating position is used.

⚠ WARNING

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly.

To reinstall the head restraint:

1. Insert the head restraint posts into the holes in the top of the seatback. The notches (A) on the posts must face the driver side of the vehicle.
2. Push the head restraint down.

   If necessary, press the height adjustment release button to further lower the head restraint. See *Head Restraints on page 3-2*.
3. Try to move the head restraint to make sure that it is locked in place.

Replacing LATCH System Parts After a Crash

⚠ WARNING

A crash can damage the LATCH system in the vehicle. A damaged LATCH system may not properly secure the child restraint, resulting in serious injury or even death in a crash. To help make sure the LATCH system is working properly after a crash, see your dealer to have the system inspected and any necessary replacements made as soon as possible.

If the vehicle has the LATCH system and it was being used during a crash, new LATCH system parts may be needed.

New parts and repairs may be necessary even if the LATCH system was not being used at the time of the crash.

Securing Child Restraints (Rear Seat)

When securing a child restraint in a rear seating position, study the instructions that came with the child restraint to make sure it is compatible with this vehicle.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-45* for how and where to install the child restraint using LATCH. If a child restraint is secured in the vehicle using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-45* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

If the child restraint does not have the LATCH system, you will be using the safety belt to secure the child restraint in this position. Be sure to follow the instructions that came with the child restraint. Secure the child in the child restraint when and as the instructions say.

If more than one child restraint needs to be installed in the rear seat, be sure to read *Where to Put the Restraint on page 3-44*.

1. Put the child restraint on the seat.

   If the head restraint interferes with the proper installation of the child restraint, the head restraint may be removed. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-45*.

2. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

3. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle so that the safety belt could be quickly unbuckled if necessary.

4. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

5. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 4 and 5.

6. If the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-45* for more information.
7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position. If the top tether is attached to a top tether anchor, disconnect it. If the head restraint was removed, reinstall it before the seating position is used. See "Head Restraint Removal and Reinstallation" under *Lower Anchors and Tethers for Children (LATCH System) on page 3-45* for additional information on installing the head restraint properly.

Securing Child Restraints (Front Passenger Seat)

This vehicle has airbags. A rear seat is a safer place to secure a forward-facing child restraint. See *Where to Put the Restraint on page 3-44*.

In addition, the vehicle has a passenger sensing system which is designed to turn off the right front passenger frontal airbag under certain conditions. See *Passenger Sensing System on page 3-30* and *Passenger Airbag Status Indicator on page 5-17* for more information, including important safety information.

A label on the sun visor says, "Never put a rear-facing child seat in the front." This is because the risk to the rear-facing child is so great, if the airbag deploys.

⚠ WARNING

A child in a rear-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates. This is because the back of the rear-facing child restraint would be very close to the inflating airbag. A child in a forward-facing child restraint can be seriously injured or killed if the right front passenger airbag inflates and the passenger seat is in a forward position.

(Continued)

WARNING (Continued)

Even if the passenger sensing system has turned off the right front passenger frontal airbag, no system is fail-safe. No one can guarantee that an airbag will not deploy under some unusual circumstance, even though it is turned off.

Secure rear-facing child restraints in a rear seat, even if the airbag is off. If you secure a forward-facing child restraint in the right front seat, always move the front passenger seat as far back as it will go. It is better to secure the child restraint in a rear seat.

See *Passenger Sensing System on page 3-30* for additional information.

If the vehicle does not have a rear seat that will accommodate a rear-facing child restraint, a rear-facing child restraint should not be installed in the vehicle, even if the airbag is off.

If the child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-45* for how and where to install the child restraint using LATCH. If a child restraint is secured using a safety belt and it uses a top tether, see *Lower Anchors and Tethers for Children (LATCH System) on page 3-45* for top tether anchor locations.

Do not secure a child seat in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

In Canada, the law requires that forward-facing child restraints have a top tether, and that the tether be attached.

You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

1. Move the seat as far back as it will go before securing the forward-facing child restraint.

   When the passenger sensing system has turned off the right front passenger frontal airbag and seat-mounted side impact airbag, the off indicator on the passenger airbag status indicator should light and stay lit when you start the vehicle. See *Passenger Airbag Status Indicator on page 5-17*.

2. Put the child restraint on the seat.

3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

4. Push the latch plate into the buckle until it clicks.

   Position the release button on the buckle, so that the safety belt could be quickly unbuckled if necessary.

5. Pull the shoulder belt all the way out of the retractor to set the lock. When the retractor lock is set, the belt can be tightened but not pulled out of the retractor.

6. To tighten the belt, push down on the child restraint, pull the shoulder portion of the belt to tighten the lap portion of the belt, and feed the shoulder belt back into the retractor. When installing a forward-facing child restraint, it may be helpful to use your knee to push down on the child restraint as you tighten the belt.

   Try to pull the belt out of the retractor to make sure the retractor is locked. If the retractor is not locked, repeat Steps 5 and 6.

   If the vehicle does not have a rear seat and the child restraint has a top tether, follow the child restraint manufacturer's instructions regarding the use of the top tether. See *Lower Anchors and Tethers for Children (LATCH System) on page 3-45* for more information.

7. Before placing a child in the child restraint, make sure it is securely held in place. To check, grasp the child restraint at the safety belt path and attempt to move it side to side and back and forth. When the child restraint is properly installed, there should be no more than 2.5 cm (1 in) of movement.

   If the airbags are off, the off indicator in the passenger airbag status indicator will come on and stay on when the vehicle is started.

   If a child restraint has been installed and the on indicator is lit, see "If the On Indicator is Lit for a Child Restraint" under *Passenger Sensing System on page 3-30* for more information.

   To remove the child restraint, unbuckle the vehicle safety belt and let it return to the stowed position.

✍ NOTES

Storage

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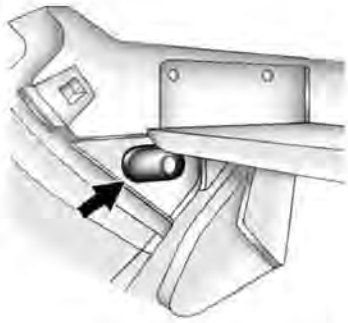
Storage Compartments

Glove Box

Lift the glove box handle up to open it. Use the key to lock and unlock the glove box.



The glove box is air conditioned and can be used to store items at a lower temperature. The vehicle air conditioning must be turned on for the maximum cool air to enter the glove box. Move the slide control to allow cool air into the glove box. After opening the air flow, close the glove box door to keep the cold air from entering the vehicle.

Cupholders

This vehicle has a cupholder equipped with a divider that can be adjusted to accommodate large containers or small containers.

For large containers, push the button to move aside the divider and make the cupholder deeper.

For small containers, push down on the top edge of the divider to lock it back in place and make the cupholder shorter.

Front Storage

A storage area is located in front of the shift lever. Push upward on the top of the door and release; the door automatically opens.

There is an accessory power outlet inside. See *Power Outlets on page 5-9*.

Armrest Storage

For vehicles with a rear seat armrest, pull the rear seat armrest forward to access cupholders with removable liners. For vehicles with a rear storage area, pull the lever to access.

Center Console Storage

The center console has an armrest, upper storage tray, and a lower storage area.

The armrest can be adjusted to a rearward, middle, and forward position. Slide the top of the armrest to adjust to the desired position.

To access the storage, move the armrest to the full rearward position to access the storage compartment buttons.

Push the driver side button to access the upper storage tray. Push the passenger side button to access the lower storage area.

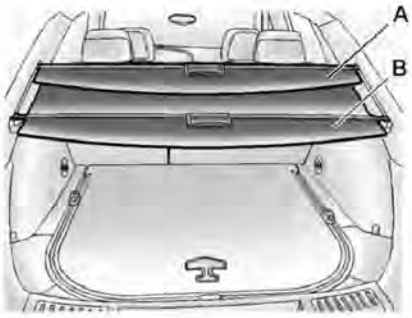
There is an accessory power outlet inside the center console. See *Power Outlets on page 5-9* for more information.

Push the button to open the storage area located at the rear of the center console.

Additional Storage Features

Cargo Cover

For vehicles with the dual position cargo cover, it can be used to cover items in the cargo area of the vehicle.

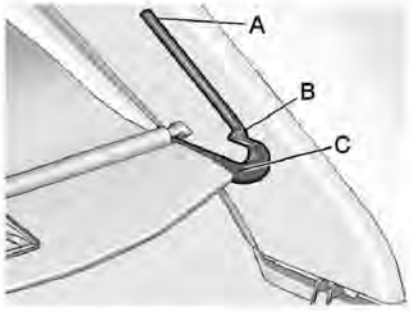


The shade can be set in two positions. It can be set in a halfway open (A) position for loading objects into the rear compartment, or the lower (B) position to conceal objects in the rear compartment.

Install the Cargo Cover

1. Hold the cartridge so that the pull-out shade faces the rear of the vehicle.

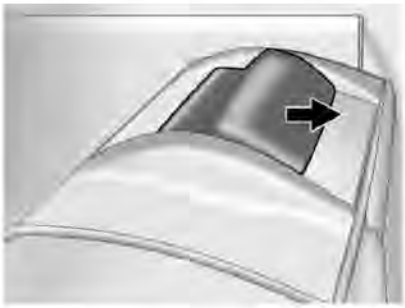
2. Align the cartridge over the pins on the trim panels of the vehicle.
3. Push down on the cartridge to snap it into place.
4. Unroll the shade toward the rear of the vehicle.



5. Insert the shade pins in the channels (C) on both sides.
6. Slide the shade to the lower (B) position, or the halfway open (A) position.

Remove the Cargo Cover

1. Remove the cover from the channels and carefully roll it back up.



2. Slide the button on the top to release the cartridge.
3. Pull up to remove the cartridge from the pins.

⚠ WARNING

An unsecured cargo cover could strike people in a sudden stop or turn, or in a crash. Store the cargo cover securely or remove it from the vehicle.

Cargo Tie-Downs

For vehicles equipped with cargo tie-downs, the four tie-downs are located in the rear compartment of the vehicle. Use the tie-downs to secure small loads.

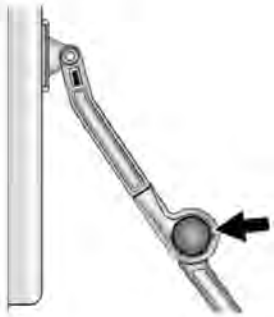
Cargo Management System

To open the cargo management system, press the rear of the handle to unlatch it and then lift the handle up.

A prop rod locks to hold the cover up when opened.

Four hooks are located on the inside cover and can be used for storing items.

There may be additional storage compartments on each side of the cargo management system. Lift the panel up to open.



Press the red button on the prop rod to close the cover.

Rear Storage Area

⚠ WARNING

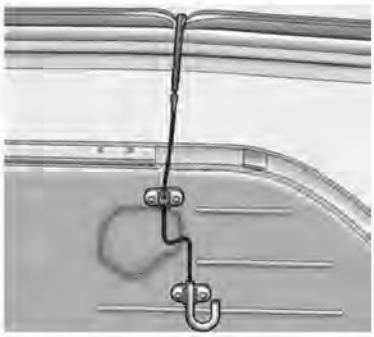
An improperly latched and closed cargo cover, or cargo cover left in the open position, could be thrown about the vehicle during a crash or sudden maneuver. Someone could be injured. Be sure to return the cover to the closed position and latch before driving. If the cover is removed, always store it outside of the vehicle. When it is replaced, always be sure that it is securely reattached.

To access the rear storage areas of the cargo management system, and the tire sealant and compressor kit:

1. Remove the cargo cover, if equipped.
2. Open the cargo management system cover.

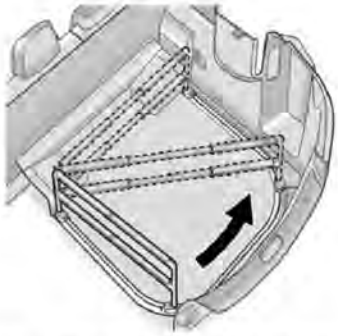
3. Release the prop rod from the inside cover by sliding the red clip down.

   Unhook the prop rod from the pin on the inside cover. Store the unhooked prop rod by folding it into the cargo management compartment.

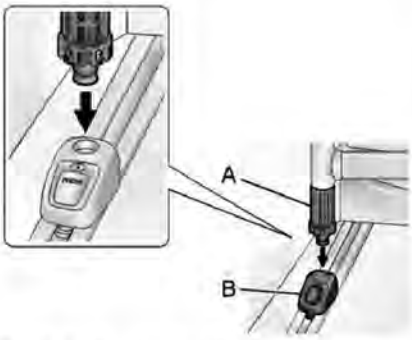


4. Store the cargo management system cover by hooking it onto the weatherstrip.

U-Rail



For vehicles with a u-rail system, the fence can be moved to different positions on the u-rail track to secure cargo.



Push both adapter buttons to move the adapters (B) on the straight part of the u-rail.

To move the fence around the u-rail, disconnect one side:

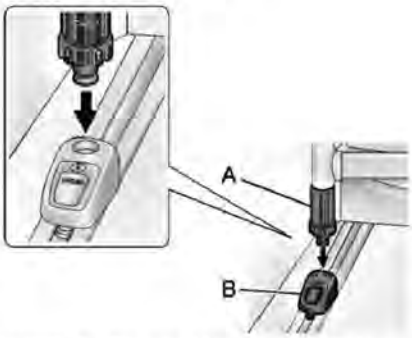
1. Unlock by turning the latch (A) to align 🔓 with the arrow on the adapter (B).
2. Push the adapter button to move the adapters (B) to the desired position.
3. Reinstall the fence and lock both latches (A) by turning to align 🔒 with the arrow on the adapter (B).

Use the fence to secure items in place.

Removing the Fence

Unlock by turning both latches (A) to align 🔓 with the arrow on the adapter (B). Lift and remove the fence.

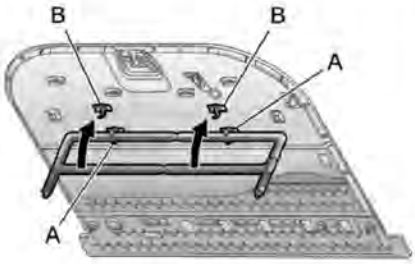
Installing the Fence



Insert the fence into the adapters and lock both latches (A) by turning to align 🔒 with the arrow on the adapter (B).

Storing the Fence

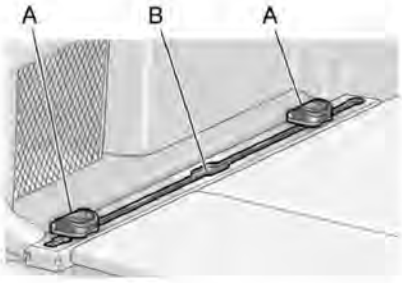
1. Lift the cargo management system cover.
2. Release the cover from the prop rod as described in the previous steps.



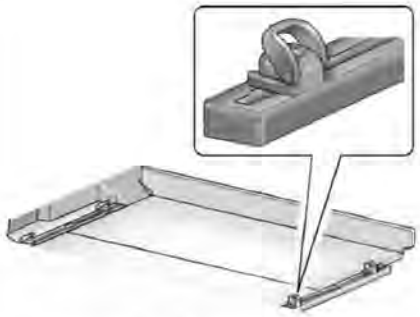
3. Insert the top of the fence into the lower two clips (A).
4. Turn the bottom of the fence up and insert it into the upper two clips (B).

D-Ring Sliders

For vehicles with a D-ring system, there are four D-ring sliders that move along rails. These can be used as tie-downs when storing cargo.



Insert the D-ring sliders (A) into the channel (B) located in the middle of the rail. Push the button to move the D-ring slider along the rail.



The loop of the D-ring slider must be facing inward toward the storage area and the ring must be in the up position for proper usage.

Cargo Net

⚠ WARNING

Do not stack items higher than the upper end of the cargo net or hang anything from the net. Avoid items that have sharp edges or that apply excessive force to the net. If items are not properly stored, damage to the net could occur and items can be thrown about the vehicle. You or others could be injured. Always store items behind the net.

For vehicles equipped with a cargo net, it can be used to store light loads, keeping them from falling over or being thrown into the cabin during heavy braking.

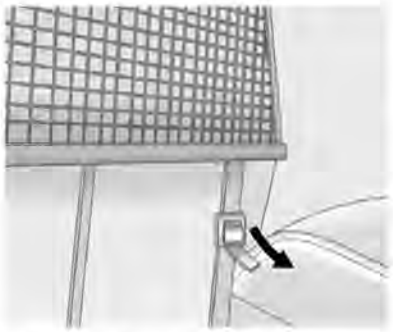
The net should not be overloaded or used to store heavy loads.

There are four openings in the headliner: two located behind the front seats and two behind the rear seats.

1. Insert the top corners of the cargo net into the large opening in the headliner and secure by sliding them into the small opening.
2. The rear seatbacks should be folded down when the net is installed in the headliner opening located behind the front seats.

3. Mount the cargo net to the rear seat tethers located on the back of the folded down rear seats and pull on the straps to tighten the net.
4. When the net is installed in the headliner opening located behind the rear seats, the rear seatbacks should be upright.

5. Mount the cargo net to the cargo tie-downs located on the lower side panels.



6. Pull on the straps to tighten the net.

Cargo Net Storage

The cargo net can be removed from the vehicle and stored in the cargo management system.

1. Disconnect the net from the roof openings and the tethers.
2. Press the red button on the center of the net to fold it in half.
3. Roll up the cargo net, storing it into the attached vinyl bag.
4. Open the cargo management system cover.
5. For vehicles with an inflator kit, store the cargo net in the available space next to the kit.

Convenience Net

This vehicle may have a convenience net located in the rear of the vehicle. Attach it to the cargo tie-downs for storing small loads.

Do not use the net to store heavy loads.

Roof Rack System

⚠ WARNING

If something is carried on top of the vehicle that is longer or wider than the roof rack — like paneling, plywood, or a mattress — the wind can catch it while the vehicle is being driven. The item being carried could be violently torn off, and this could cause a collision and damage the vehicle. Never carry something longer or wider than the roof rack on top of the vehicle unless using a GM certified accessory carrier.

For vehicles with a roof rack, the rack can be used to load items. For roof racks that do not have crossrails included, GM Certified crossrails can be purchased as an accessory. See your dealer for additional information.

Notice: **Loading cargo on the roof rack that weighs more than 100 kg (220 lbs) or hangs over the rear or sides of the vehicle may damage the vehicle. Load cargo onto the roof rack so that it rests evenly between the siderails, making sure to fasten cargo securely.**

To prevent damage or loss of cargo when driving, check to make sure crossrails and cargo are securely fastened. Loading cargo on the roof rack will make the vehicle's center of gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking, or abrupt maneuvers; otherwise it may result in loss of control. If driving for a long distance, on rough roads, or at high speeds, occasionally stop the vehicle to make sure the cargo remains in its place. Do not exceed the maximum vehicle capacity when loading the vehicle. For more information on vehicle capacity and loading, see *Vehicle Load Limits on page 9-10.*

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Controls

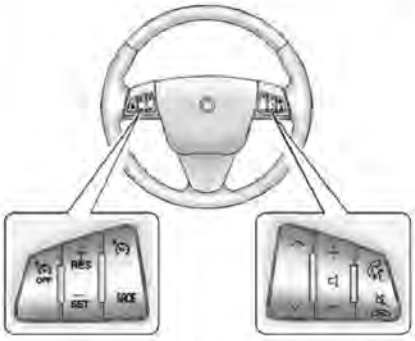
Steering Wheel Adjustment

To adjust the steering wheel:

1. Pull the lever down.
2. Move the steering wheel up or down.
3. Pull or push the steering wheel closer or away from you.
4. Pull the lever up to lock the steering wheel in place.

Do not adjust the steering wheel while driving.

Steering Wheel Controls



Use these controls, if equipped, to make audio adjustments at the steering wheel.

∧ or ∨ : Press ∧ to select the next favorite radio station or next CD, DVD, if equipped, or MP3 track.

Press ∨ to select the previous favorite radio station or previous CD, DVD, if equipped, or MP3 track.

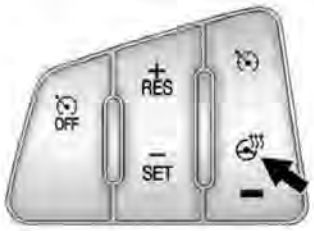
+ ◁ − (Volume): Press + to increase the volume; press − to decrease the volume.

/ (Push to Talk): For vehicles with an OnStar®, Bluetooth®, or navigation system, press to interact with those systems. See *Bluetooth (Voice Recognition) on page 7-55* or *Bluetooth (Overview) on page 7-49* or *Bluetooth (UHP Mexico Only) on page 7-62* or *Bluetooth (Infotainment Controls) on page 7-51*, *OnStar Overview on page 14-1*, or the separate navigation manual for more information.

/ (End Call/Mute): Press to silence the vehicle speakers only. Press again to turn the sound on. For vehicles with OnStar or Bluetooth systems, press to reject an incoming call, or end a current call.

SRCE: Press to select an audio source. For vehicles with a heated steering wheel, use the infotainment buttons to select an audio source. See *Heated Steering Wheel on page 5-3* or *Overview (Radio with CD) on page 7-3* or *Overview (Radio with CD/DVD and MEM) on page 7-5* for more information.

Heated Steering Wheel



For vehicles with a heated steering wheel, the button for this feature is located on the steering wheel.

(Heated Steering Wheel): Press to turn the heated steering wheel on or off. A light on the button displays when the feature is turned on.

The steering wheel takes about three minutes to start heating.

Horn

Press on the steering wheel pad to sound the horn.

Windshield Wiper/Washer

The windshield wiper/washer lever is located on the right side of the steering column. With the ignition in ACC/ACCESSORY or ON/RUN/START, move the windshield wiper lever to select the wiper speed.

HI: Use for fast wipes.

LO: Use for slow wipes.

INT: (Intermittent Wipes): Move the lever up to INT for intermittent wipes, then turn the INT band up for more frequent wipes or down for less frequent wipes. If the vehicle has Rainsense™, see the following Rainsense information.

OFF: Use to turn the wipers off.

(Mist): For a single wipe, briefly move the wiper lever down. For several wipes, hold the wiper lever down.

Clear snow and ice from the wiper blades before using them. If frozen to the windshield, carefully loosen or thaw them. Damaged blades should be replaced. See *Wiper Blade Replacement on page 10-27*.

Heavy snow or ice can overload the wiper motor.

Wipe Parking

If the ignition is changed to STOPPING THE ENGINE/OFF mode while the wipers are on 1, 2, or INT, they will immediately stop.

If the windshield wiper lever is then moved to off before the driver door is opened or within 10 minutes, the wipers will restart and move to the base of the windshield.

If the ignition is changed to STOPPING THE ENGINE/OFF while the wipers are performing wipes due to windshield washing, the wipers continue to run until they reach the base of the windshield.

Rainsense™

For vehicles with Rainsense, a sensor located near the top center of the windshield detects the amount of water on the windshield and automatically controls the frequency of the windshield wiper.

Keep this area of the windshield clear of debris to allow for best system performance.

INT (Rainsense Wipe Sensitivity Control): Move the windshield wiper lever to INT. Turn the INT band on the wiper lever to adjust the sensitivity.

- Turn the band up for more sensitivity to moisture.
- Turn the band down for less sensitivity to moisture.
- Move the windshield wiper lever out of the INT position to deactivate Rainsense.

Wiper Arm Assembly Protection

When using an automatic car wash, move the windshield wiper lever to OFF. This disables the automatic Rainsense windshield wipers and/or rear wiper.

With Rainsense, if the transmission is in N (Neutral) and the vehicle speed is very slow, the wipers will automatically stop at the base of the windshield.

The wiper operations return to normal when the transmission is no longer in N (Neutral) or the vehicle speed has increased.

Windshield Washer

Pull the windshield wiper lever toward you to spray windshield washer fluid and activate the wipers. The wipers will continue until the lever is released or the maximum wash time is reached. When the windshield wiper lever is released, additional wipes may occur depending on how long the windshield washer had been activated. See *Washer Fluid on page 10-21* for information on filling the windshield washer fluid reservoir.

⚠ WARNING

In freezing weather, do not use the washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.

Rear Window Wiper/Washer

The rear wiper controls are on the end of the windshield wiper lever.

ON: Press the upper portion of the button for continuous rear window wipes.

OFF: The rear wiper turns off when the button is returned to the middle position.

INT (Intermittent Rear Wipes): Press the lower portion of the button to set a delay between wipes.

(Rear Washer): Push the windshield wiper lever forward to spray washer fluid on the rear window. The lever automatically returns to its original position when released.

Reverse Gear Wipes

If the rear wiper control is off, the rear wiper will automatically operate continuously when the shift lever is in R (Reverse), and the front windshield wiper is performing low or high speed wipes. If the rear wiper control is off, the shift lever is in R (Reverse), and the front windshield wiper is performing interval wipes, then the rear wiper automatically performs interval wipes.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

The windshield washer reservoir is used for the windshield and the rear window. Check the fluid level in the reservoir if either washer is not working. See *Washer Fluid on page 10-21*.

Headlamp Washer

For vehicles with headlamp washers, they are located to the side of the headlamps.

The headlamps must be on in order to use the headlamp washers. If the headlamps are not on, only the windshield will be washed.

Pull the wiper lever toward you and hold briefly to activate. The headlamp washers will spray once, pause, and spray again. The headlamp washer will spray again after five windshield wash cycles.

See *Washer Fluid on page 10-21* for information on filling the windshield washer fluid.

Compass

The vehicle may have a compass display on the Driver Information Center (DIC). The compass receives its heading and other information from the Global Positioning System (GPS) antenna, StabiliTrak, and vehicle speed information.

Avoid covering the GPS antenna for long periods of time with objects that may interfere with the antenna's ability to receive a satellite signal. See *Multi-Band Antenna on page 7-18* for the location of the vehicle's antenna. The compass system is designed to operate for a certain number of miles or degrees of turn before needing a signal from the GPS satellites. When the compass display shows CAL, drive the vehicle for a short distance in an open area where it can receive a GPS signal. The compass system will automatically determine when a GPS signal is restored and provide a heading again. See *Compass Messages on page 5-33* for more information on the messages that may be displayed for the compass.

Clock (Analog Clock)

The analog clock is located on the instrument panel above the radio. The clock is not connected with any other vehicle system and runs by itself. To adjust the clock:

1. Locate the adjustment buttons directly below the clock face.
2. Push and hold either adjustment button to advance or reverse the clock hands. Holding the buttons down will cause the clock to advance faster. Release the buttons before reaching the desired time.
3. Push and release the buttons to increase the time by one minute increments until the desired time is reached.

Clock (Digital Clock)

The infotainment system controls are used to access the time and date settings through the menu system. See *Operation on page 7-7* for information about how to use the menu system. See the separate navigation manual for instructions on how to operate the digital clock for the navigation system.

To turn the digital clock on or off:

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Clock Displayed.
4. Press MENU/SELECT to turn the clock on or off.

Setting the Time and Date

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Select Set Time or Set Date.
4. Turn the MENU/SELECT knob to adjust the highlighted value.
5. Press the MENU/SELECT knob to select the next value.
6. To save the time or date and return to the Time and Date Settings menu, press the BACK ⇦ button at any time or press the MENU/SELECT knob after adjusting the minutes or year.

Setting the 12/24 Hour Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight 12/24 Hour Format.
4. Press the MENU/SELECT knob to select the 12 hour or 24 hour display format.

Setting the Month & Day Format

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Month & Day Format.
4. Press the MENU/SELECT knob to select MM/DD (month/day) or DD/MM (day/month).

Setting the Auto Time Adjust

1. Press the CONFIG button.
2. Select Time and Date Settings.
3. Highlight Auto Time Adjust.
4. Press the MENU/SELECT knob to turn Auto Time Adjust on or off.

Power Outlets

The accessory power outlets can be used to plug in electrical equipment, such as a cell phone or MP3 player.

The vehicle has four accessory power outlets. The power outlets located below the climate control system inside the front storage bin, inside the center floor console, and on the rear of the center floor console are powered while the vehicle is in ON/RUN/START or ACC/ACCESSORY mode, or until the driver door is opened within 10 minutes of turning off the vehicle.

The power outlet located in the rear cargo area is powered at all times.

There is a small cap that must be removed to access the accessory power outlet. When not using the outlet be sure to cover it with the protective cap.

Notice: **Leaving electrical equipment plugged in for an extended period of time while the vehicle is off will drain the battery. Power is always supplied to the rear cargo outlet. Always unplug electrical equipment when not in use and do not plug in equipment that exceeds the maximum 20 ampere rating.**

Certain accessory power plugs may not be compatible with the accessory power outlet and could overload vehicle or adapter fuses. If a problem is experienced, see your dealer.

When adding electrical equipment, be sure to follow the proper installation instructions included with the equipment. See *Add-On Electrical Equipment on page 9-61.*

Notice: **Hanging heavy equipment from the power outlet can cause damage not covered by the vehicle warranty. The power outlets are designed for accessory power plugs only, such as cell phone charge cords.**

Cigarette Lighter

There may be a cigarette lighter located under the climate control system, inside the front storage bin.

To activate the cigarette lighter, push it into the heating element and let go. The lighter pops out when it is ready to be used.

Notice: **Holding a cigarette lighter in while it is heating does not let the lighter back away from the heating element when it is hot. Damage from overheating can occur to the lighter or heating element, or a fuse could be blown. Do not hold a cigarette lighter in while it is heating.**

Ashtrays

There may be an ashtray located under the climate control system on the instrument panel. Press the door to release the ashtray.

To empty the ashtray, remove it from the instrument panel by holding the edges and pulling straight out. To reinstall, push the tray back into place.

There may also be ashtrays located on the center floor console behind the shift lever and in the rear doors.

Notice: **If papers, pins, or other flammable items are put in the ashtray, hot cigarettes or other smoking materials could ignite them and possibly damage the vehicle. Never put flammable items in the ashtray.**

Warning Lights, Gauges, and Indicators

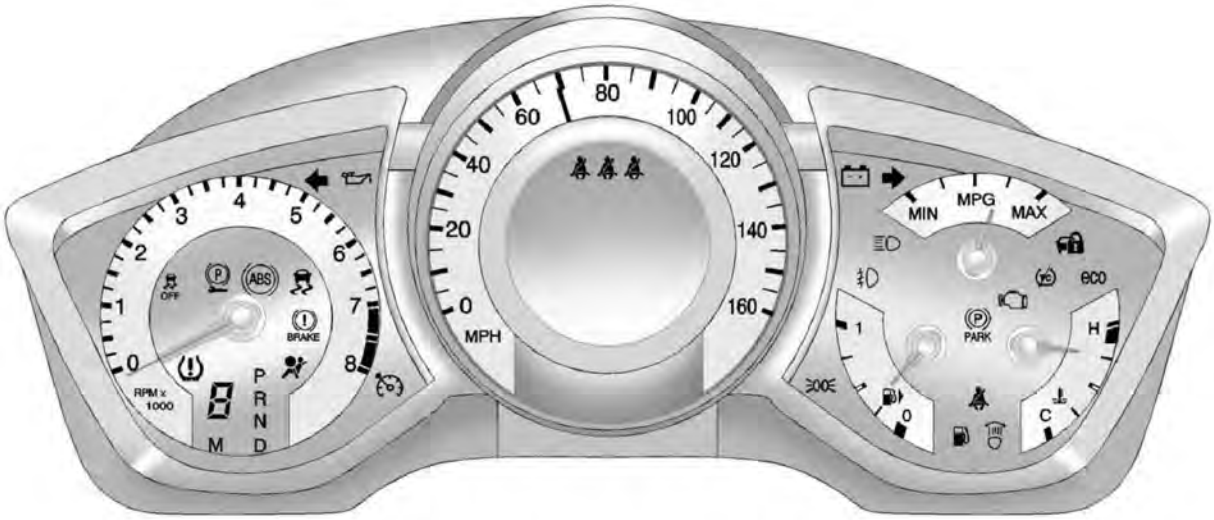
Warning lights and gauges can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to the warning lights and gauges could prevent injury.

Warning lights come on when there could be a problem with a vehicle function. Some warning lights come on briefly when the engine is started to indicate they are working.

Gauges can indicate when there could be a problem with a vehicle function. Often gauges and warning lights work together to indicate a problem with the vehicle.

When one of the warning lights comes on and stays on while driving, or when one of the gauges shows there may be a problem, check the section that explains what to do. Follow this manual's advice. Waiting to do repairs can be costly and even dangerous.

Instrument Cluster



English Shown, Metric Similar

Speedometer

The speedometer shows the vehicle's speed in either kilometers per hour (km/h) or miles per hour (mph).

Odometer

The odometer shows how far the vehicle has been driven, in either kilometers or miles.

This vehicle has a tamper-resistant odometer. If the vehicle needs a new odometer installed, the new one is set to the mileage of the old odometer. If this is not possible, it is set at zero and a label is put on the driver door to show the old mileage reading.

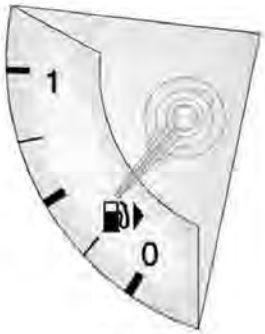
Tachometer

The tachometer displays the engine speed in revolutions per minute (rpm).

Notice: **If the engine is operated with the tachometer in the shaded warning area, the vehicle could be damaged, and the damages would not be covered by the vehicle warranty. Do not operate the engine with the tachometer in the shaded warning area.**

Fuel Gauge

Metric



English

When the ignition is on, the fuel gauge indicates about how much fuel is left in the tank.

An arrow on the fuel gauge indicates the side of the vehicle the fuel door is on.

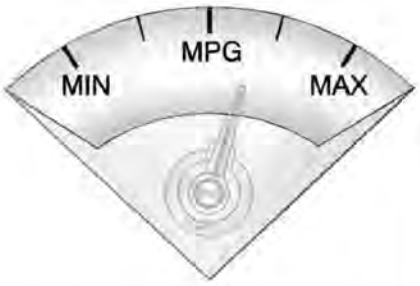
When the indicator nears empty, the low fuel light comes on. There still is a little fuel left, but the vehicle should be refueled soon.

Here are four things that some owners ask about. None of these show a problem with the fuel gauge:

- At the service station, the fuel pump shuts off before the gauge reads full.
- It takes a little more or less fuel to fill up than the gauge indicated. For example, the gauge may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gauge moves a little while turning a corner or speeding up.
- The gauge takes a few seconds to stabilize after the ignition is turned on, and goes back to empty when the ignition is turned off.

Fuel Economy Gauge

Metric



English

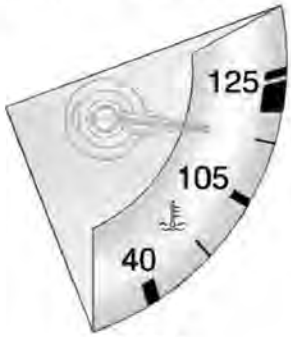
The gauge shows the fuel usage that the vehicle is currently achieving in MPG and in liters per 100 kilometers (l/100 km).

MIN/20: Is when the least efficient fuel economy usually occurs during acceleration or when idling.

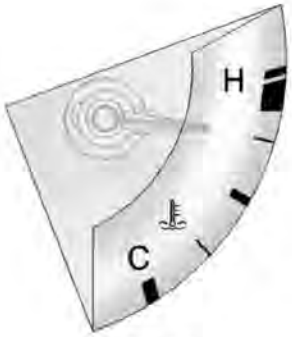
MAX/l/100 km: Is when the best fuel economy is being achieved.

This gauge moves often as it is an instantaneous calculation based on current driving conditions.

Engine Coolant Temperature Gauge



Metric



English

This gauge measures the temperature of the vehicle's engine.

If the indicator needle moves into the shaded area, the engine is too hot.

While driving under normal operating conditions, if the needle moves into the shaded area, the engine is too hot. Pull off the road, stop the vehicle and turn off the engine as soon as possible.

Safety Belt Reminders

Driver Safety Belt Reminder Light

There is a driver safety belt reminder light on the instrument panel cluster.

When the vehicle is started this light flashes and a chime comes on to remind drivers to fasten their safety belt. Then the light stays on solid until the belt is buckled.

This cycle may continue several times if the driver remains or becomes unbuckled during driving while the vehicle is moving.

If the driver safety belt is already buckled, neither the light nor chime comes on.

Passenger Safety Belt Reminder Light

When the vehicle is started this light flashes and a chime may come on to remind the front passenger to fasten their safety belt. Then the light stays on solid until the belt is buckled.

This cycle may continue several times if the passenger remains or becomes unbuckled while the vehicle is moving.

If the passenger safety belt is buckled, neither the chime nor the light comes on.

The front passenger safety belt reminder light and chime may turn on if an object is put on the seat such as a briefcase, handbag, grocery bag, laptop, or other electronic device. To turn off the reminder light and/or chime, remove the object from the seat or buckle the safety belt.

Second Row Passenger Belt Reminder Light

When the engine is started and the Trip/Fuel display is chosen, three gray safety belt symbols come on and stay on for several seconds on the top of the Driver information Center (DIC) to remind passengers to fasten their safety belts.

If the Vehicle Information is selected, a full page screen displays at start-up the three safety belt symbols.

Once the passenger safety belt is buckled, the corresponding safety belt symbol in the DIC turns green. There are no seat position sensors in the seat, nor a safety belt reminder sensor pad. If a safety belt is not initially buckled, the cluster continues to show the gray safety belt icon.

While the vehicle is moving, if a second row passenger who was previously buckled becomes unbuckled, a full screen warning displays with the corresponding safety belt indicator flashing red. A chime may sound.

Acknowledge warning messages by pressing any of the DIC buttons.

Airbag Readiness Light

This light shows if there is an electrical problem with the airbag system. The system check includes the airbag sensor(s), passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module. For more information on the airbag system, see *Airbag System on page 3-23*.

The airbag readiness light comes on for several seconds when the vehicle is started. If the light does not come on then, have the vehicle fixed immediately.

⚠ WARNING

If the airbag readiness light stays on after the vehicle is started or comes on while driving, it means the airbag system might not be working properly. The airbags in the vehicle might not inflate in a crash, or they could even inflate without a crash. To help avoid injury, have the vehicle serviced right away.

Passenger Airbag Status Indicator

The vehicle has a passenger sensing system. See *Passenger Sensing System on page 3-30* for important safety information. The overhead console has a passenger airbag status indicator.

United States

Canada and Mexico

When the vehicle is started, the passenger airbag status indicator will light ON and OFF, or the symbol for on and off, for several seconds as a system check. If you are using remote start, if equipped, to start the vehicle from a distance you may not see the system check. Then, after several more seconds, the status indicator will light either ON or OFF, or either the on or off symbol to let you know the status of the right front passenger frontal and seat-mounted side impact airbag.

If the word ON or the on symbol is lit on the passenger airbag status indicator, it means that the right front passenger frontal airbag and seat-mounted side impact airbag are enabled (may inflate).

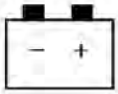
If the word OFF or the off symbol is lit on the passenger airbag status indicator, it means that the passenger sensing system has turned off the right front passenger frontal and seat-mounted side impact airbag.

If, after several seconds, both status indicator lights remain on, or if there are no lights at all, there may be a problem with the lights or the passenger sensing system. See your dealer for service.

⚠ WARNING

If the airbag readiness light ever comes on and stays on, it means that something may be wrong with the airbag system. To help avoid injury to yourself or others, have the vehicle serviced right away. See *Airbag Readiness Light on page 5-16* for more information, including important safety information.

Charging System Light



The charging system light comes on briefly when the ignition is turned on, but the engine is not running, as a check to show the light is working. The light turns off when the engine is started. If it does not, have the vehicle serviced by your dealer.

If the light stays on, or comes on while driving, there may be a problem with the electrical charging system. Have it checked by your dealer. Driving while this light is on could drain the battery.

When this light comes on, the Driver Information Center (DIC) also displays a message.

See *Battery Voltage and Charging Messages on page 5-32*.

If a short distance must be driven with the light on, be sure to turn off all accessories, such as the radio and air conditioner.

Malfunction Indicator Lamp

A computer system called OBD II (On-Board Diagnostics-Second Generation) monitors the operation of the vehicle to ensure emissions are at acceptable levels, to produce a cleaner environment. This light comes on when the vehicle is placed in Service Only Mode, as a check to show it is working. If it does not, have the vehicle serviced by your dealer. See *Ignition Positions on page 9-17*.

If the malfunction indicator lamp comes on and stays on while the engine is running, this indicates that there is an OBD II problem and service is required.

Malfunctions often are indicated by the system before any problem is apparent. Being aware of the light can prevent more serious damage to the vehicle. This system assists the service technician in correctly diagnosing any malfunction.

Notice: **If the vehicle is continually driven with this light on, the emission controls might not work as well, the vehicle fuel economy might not be as good, and the engine might not run as smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.**

Notice: **Modifications made to the engine, transmission, exhaust, intake, or fuel system of the vehicle or the replacement of the original tires with other than those of the same Tire Performance Criteria (TPC) can affect the vehicle's emission controls and can cause this light to come on. Modifications to these systems could lead to costly repairs not covered by the vehicle warranty. This could also result in a failure to pass a required Emission Inspection/Maintenance test. See *Accessories and Modifications on page 10-4*.**

This light comes on during a malfunction in one of two ways:

Light Flashing: A misfire condition has been detected. A misfire increases vehicle emissions and could damage the emission control system on the vehicle. Diagnosis and service might be required.

To prevent more serious damage to the vehicle:

- Reduce vehicle speed.
- Avoid hard accelerations.
- Avoid steep uphill grades.
- If towing a trailer, reduce the amount of cargo being hauled as soon as it is possible.

If the light continues to flash, stop and park the vehicle. Turn the vehicle off, wait at least 10 seconds, and restart the engine. If the light is still flashing, follow the previous steps and see your dealer for service as soon as possible.

Light On Steady: An emission control system malfunction has been detected on the vehicle. Diagnosis and service might be required.

The following may correct an emission system malfunction:

- Check that the fuel cap is fully installed. See *Filling the Tank on page 9-50*. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap allows fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn the light off.

- Check that good quality fuel is used. Poor fuel quality causes the engine not to run as efficiently as designed and may cause stalling after start-up, stalling when the vehicle is changed into gear, misfiring, hesitation on acceleration, or stumbling on acceleration. These conditions might go away once the engine is warmed up.

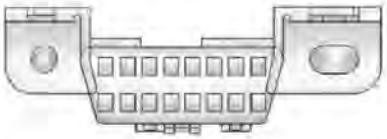
If one or more of these conditions occurs, change the fuel brand used. It will require at least one full tank of the proper fuel to turn the light off.

See *Recommended Fuel on page 9-46*.

If none of the above have made the light turn off, your dealer can check the vehicle. The dealer has the proper test equipment and diagnostic tools to fix any mechanical or electrical problems that might have developed.

Emissions Inspection and Maintenance Programs

Some local governments may have programs to inspect the on-vehicle emission control equipment. For the inspection, the emission system test equipment is connected to the vehicle's Data Link Connector (DLC).



The DLC is under the instrument panel on the outboard side of the steering wheel. See your dealer if assistance is needed.

The vehicle may not pass inspection if:

- The malfunction indicator lamp is on with the engine running, or if the vehicle is placed in Service Only Mode and the malfunction indicator lamp does not come on. See your dealer for assistance in verifying proper operation of the malfunction indicator lamp.
- The OBD II (On-Board Diagnostics) system determines that critical emission control systems have not been completely diagnosed. The vehicle would be considered not ready for inspection. This can happen if the 12-volt battery has recently been replaced or run down. The diagnostic system is designed to evaluate critical emission control systems during normal driving. This can take several days of routine driving. If this has been done and the vehicle still does not pass the inspection for lack of OBD II system readiness, your dealer can prepare the vehicle for inspection.

Brake System Warning Light

The vehicle brake system consists of two hydraulic circuits. If one circuit is not working, the remaining circuit can still work to stop the vehicle. For normal braking performance, both circuits need to be working.

If the warning light comes on, there is a brake problem. Have the brake system inspected right away.

Metric

English

The brake indicator light should come on briefly as the engine is started. If it does not come on have the vehicle serviced by your dealer.

⚠ WARNING

The brake system might not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to a crash. If the light is still on after the vehicle has been pulled off the road and carefully stopped, have the vehicle towed for service.

If the light comes on while driving, a chime sounds. Pull off the road and stop. The pedal might be harder to push or go closer to the floor. It might also take longer to stop. If the light is still on, have the vehicle towed for service. See *Towing the Vehicle on page 10-93*.

Electric Parking Brake Light

Metric

English

For vehicles with the Electric Parking Brake (EPB), this light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

The parking brake status light comes on when the brake is applied. If the light continues flashing after the parking brake is released, or while driving, there is a problem with the Electric Parking Brake system. A SERVICE PARKING BRAKE message may also display in the Driver Information Center (DIC). See *Brake System Messages on page 5-33* for more information.

If the light does not come on, or remains flashing, see your dealer.

For vehicles with the EPB, the parking brake warning light should come on briefly when the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If this light comes on, there is a problem with a system on the vehicle that is causing the parking brake system to work at a reduced level. The vehicle can still be driven, but should be taken to a dealer as soon as possible. See *Parking Brake on page 9-30* for more information.

Antilock Brake System (ABS) Warning Light

For vehicles with the Antilock Brake System (ABS), this light comes on briefly when the engine is started.

If the light does not come on, have it fixed so it will be ready to warn if there is a problem.

If the ABS light comes on and stays on while driving, stop as soon as possible and turn the ignition off.

Start the engine again to reset the system. If the light stays on after driving at a speed above 20 km/h (13 mph), see your dealer for service. A chime may also sound when the light comes on steady.

If the regular brake system warning light is not on, the vehicle still has brakes, but not antilock brakes. If the regular brake system warning light is also on, the vehicle does not have antilock brakes and there is a problem with the regular brakes. See *Brake System Warning Light on page 5-21*.

See *Brake System Messages on page 5-33* for all brake-related DIC messages.

Traction Off Light

This light comes on briefly while starting the engine. If it does not, have the vehicle serviced by your dealer. If the system is working normally, the indicator light then turns off.

The traction off light comes on when the Traction Control System (TCS) has been turned off by pressing and releasing the TCS/StabiliTrak button.

This light and the StabiliTrak OFF light come on when StabiliTrak is turned off.

If the TCS is off, wheel spin is not limited. Adjust driving accordingly.

See *Traction Control System (TCS) on page 9-32* and *StabiliTrak® System on page 9-34*.

StabiliTrak® OFF Light

This light should come on briefly as the vehicle is started. If it does not come on, have the vehicle serviced by your dealer.

This light comes on when the StabiliTrak system is turned off by pressing the StabiliTrak/TCS button. If the Traction Control System (TCS) is off, wheel spin is not limited.

When the StabiliTrak system is off, the system does not assist in controlling the vehicle. Adjust driving accordingly.

The warning light goes off when traction control and the StabiliTrak system are enabled.

See *Traction Control System (TCS) on page 9-32* and *StabiliTrak® System on page 9-34* for more information.

Traction Control System (TCS)/StabiliTrak® Light

The StabiliTrak or Traction Control System (TCS) indicator/warning light comes on briefly when the engine is started.

If the light does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light is on and not flashing, the TCS, and potentially the StabiliTrak system have been disabled. A DIC message may display. Check the DIC messages to determine which feature(s) is no longer functioning and whether the vehicle requires service.

If the indicator/warning light is on and flashing, the TCS and/or the StabiliTrak system is actively working.

See *StabiliTrak® System on page 9-34* and *Traction Control System (TCS) on page 9-32*.

Tire Pressure Light

For vehicles with the Tire Pressure Monitor System (TPMS), this light comes on briefly when the engine is started. It provides information about tire pressures and the TPMS.

When the Light Is On Steady

This indicates that one or more of the tires are significantly underinflated.

A Driver Information Center (DIC) tire pressure message may also display. See *Tire Messages on page 5-38*. Stop as soon as possible, and inflate the tires to the pressure value shown on the Tire and Loading Information label. See *Tire Pressure on page 10-56*.

When the Light Flashes First and Then Is On Steady

If the light flashes for about a minute and then stays on, there may be a problem with the TPMS. If the problem is not corrected, the light will come on at every ignition cycle. See *Tire Pressure Monitor Operation on page 10-59*.

Engine Oil Pressure Light

Notice: **Lack of proper engine oil maintenance can damage the engine. Driving with the engine oil low can also damage the engine. The repairs would not be covered by the vehicle warranty. Check the oil level as soon as possible. Add oil if required, but if the oil level is within the operating range and the oil pressure is still low, have the vehicle serviced. Always follow the maintenance schedule for changing engine oil.**

The oil pressure light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer.

If the light comes on and stays on, it means that oil is not flowing through the engine properly. The vehicle could be low on oil and might have some other system problem. See your dealer.

Fuel Economy Light

eco

This light should come on briefly as the vehicle is started. If it does not come on, have the vehicle serviced by your dealer.

For vehicles with the fuel economy mode light, it comes on when the eco (economy) button, located next to the shift lever, is pressed. Press the button again to turn off the light and exit the fuel economy mode. See *Driving for Better Fuel Economy on page 1-24* and *Fuel Economy Mode on page 9-28* for more information.

Low Fuel Warning Light

This light is located near the fuel gauge and comes on briefly when the ignition is turned on as a check to show it is working.

It also comes on when the fuel tank is low on fuel. The light turns off when fuel is added. If it does not, have the vehicle serviced.

Security Light

The immobilizer light should come on briefly as the engine is started. If it does not come on, have the vehicle serviced by your dealer. If the system is working normally, the indicator light turns off.

If the light stays on and the engine does not start, there could be a problem with the theft-deterrent system. See *Immobilizer Operation on page 2-20*.

High-Beam On Light

This light comes on when the high-beam headlamps are in use.

See *Headlamp High/Low-Beam Changer on page 6-2* for more information.

Adaptive Forward Lighting (AFL) Light

This light should come on briefly as the vehicle is started. If it does not come on, have the vehicle serviced by your dealer.

This light comes on solid when there is a problem with the Adaptive Forward Lighting system and flashes when the system is switching between lighting modes. See *Adaptive Forward Lighting (AFL) on page 6-3*.

Front Fog Lamp Light

The fog lamp light comes on when the fog lamps are in use.

The light goes out when the fog lamps are turned off. See *Front Fog Lamps on page 6-6* for more information.

Lamps On Reminder

For vehicles with the lamps on reminder light, it comes on when the lights are in use.

Cruise Control Light

The cruise control light is white whenever the cruise control is set, and turns green when the cruise control is active.

The light turns off when the cruise control is turned off. See *Cruise Control on page 9-36*.

Information Displays

Driver Information Center (DIC)

The DIC displays information about the vehicle. It also displays warning messages if a system problem is detected. See *Vehicle Messages on page 5-32* for more information. All messages appear in the DIC display located in the center of the instrument panel cluster.

The vehicle may also have features that can be customized through the controls on the radio. See *Vehicle Personalization on page 5-40* for more information.

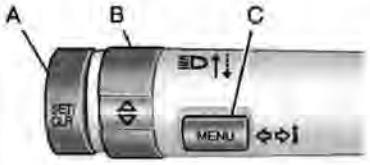
The DIC may display an indicator when the Rainsense wipers are active.

DIC Operation and Displays

The DIC has different displays which can be accessed by using the DIC buttons on the turn signal lever located on the left side of the steering wheel. The DIC displays trip, fuel, vehicle system information, and warning messages if a system problem is detected.

The bottom of the DIC display shows what position the shift lever is in and the odometer. The direction the vehicle is driving will be shown on the top of the display.

DIC Buttons



A. **SET/CLR (Set/Clear):** Use this button to set or clear the menu item when it is displayed.

B. △ ▽ **(Thumbwheel):** Use the thumbwheel to scroll through the items in each menu. A small marker will move up or down the side of the display as you scroll through the items. This shows where each item is in the menu.

C. **MENU:** Press this button to get to the Trip/Fuel Information Menu and the Vehicle Information Menu.

Trip/Fuel Information Menu Items

Press the MENU button on the turn signal lever until Trip/Fuel Information Menu is displayed. Use the thumbwheel to scroll through the following possible menu items:

- Trip
- Average Fuel Economy or Average Fuel Economy and Instantaneous Fuel Economy
- Fuel Range
- Fuel Used
- Average Vehicle Speed
- Timer
- Distance to Destination
- Navigation Turn by Turn
- Speed and Curve Assist
- Digital Speedometer
- Blank

Trip

The Trip display shows the current distance traveled, in either kilometers (km) or miles (mi), since the trip odometer was last reset. The trip odometer can be reset to zero by pressing the trip reset stem or the SET/CLR button while the trip odometer display is showing.

Average Fuel Economy or Average Fuel Economy and Instantaneous Fuel Economy

The Average Fuel Economy display shows the approximate average liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number is calculated based on the number of L/100 km (mpg) recorded since the last time this menu item was reset. The Average Fuel Economy can be reset by pressing SET/CLR while the Average Fuel Economy display is showing.

The Instantaneous Fuel Economy display shows the current fuel economy in either liters per 100 kilometers (L/100 km) or miles per gallon (mpg). This number reflects only the fuel economy that the vehicle has right now and changes frequently as driving conditions change. Unlike average economy, this display cannot be reset.

Fuel Range

The Fuel Range display shows the approximate distance the vehicle can be driven without refueling. The fuel range estimate is based on an average of the vehicle's fuel economy over recent driving history and the amount of fuel remaining in the fuel tank. Fuel range cannot be reset.

Fuel Used

The Fuel Used display shows the approximate liters (L) or gallons (gal) of fuel that have been used since last reset. The fuel used can be reset by pressing the SET/CLR button while the Fuel Used display is showing.

Average Vehicle Speed

The Average Vehicle Speed display shows the average speed of the vehicle in kilometers per hour (km/h) or miles per hour (mph). This average is calculated based on the various vehicle speeds recorded since the last reset of this value. The average speed can be reset by pressing the SET/CLR button while the Average Vehicle Speed display is showing.

Timer

This display can be used as a timer. To start the timer, press SET/CLR while Timer is displayed. The display will show the amount of time that has passed since the timer was last reset. To stop the timer, press SET/CLR briefly while Elapsed Time is displayed. To reset the timer to zero, press and hold SET/CLR.

Distance to Destination

This display will show the vehicle distance with estimated time of arrival to destination. The value can be cleared or reset by pressing the SET/CLR button. Move the thumbwheel up or down to increase or decrease the destination distance value. Once the distance value is set, press SET/CLR to confirm the value.

Turn-by-Turn

This display is used for the OnStar or Navigation System Turn-by-Turn guidance. See *OnStar Overview on page 14-1* or the navigation manual, if the vehicle has navigation, for more information.

Speed and Curve Assist

This display will show the speed limit or the advised speed as determined by the information provided by the navigation system. The map database loaded in the navigation system may need to be updated periodically to display accurate information. See "Maps" in the navigation manual for information on updating the map database.

Digital Speedometer

The speedometer shows how fast the vehicle is moving in either kilometers per hour (km/h) or miles per hour (mph). The speedometer cannot be reset.

Blank Display

This display shows no information.

Vehicle Information Menu Items

Press the MENU button on the turn signal lever until Vehicle Information Menu is displayed. Use the thumbwheel to scroll through the following possible menu items:

- Unit
- Speed Warning
- Battery Voltage
- Remaining Oil Life
- Tire Pressure
- Blank

Unit

Move the thumbwheel up or down to switch between metric or English when the Unit display is active. Press SET/CLR to confirm the setting. This will change the displays on the cluster and DIC to either metric or English measurements.

Speed Warning

Speed Warning allows the driver to set a speed that they do not want to exceed. To set the Speed Warning, press SET/CLR when Speed Warning is displayed. After selecting ON, use the thumbwheel to increase or decrease the desired speed limit. The value can be set from 0-250 km/h (0-160 mph). Press SET/CLR to confirm. If the selected speed limit is exceeded, a pop-up warning is displayed with a chime.

Battery Voltage

This display, available on some vehicles, shows the current battery voltage. If the voltage is in the normal range, the value will display. For example, the display may read BATTERY VOLTAGE 15.0 VOLTS. The vehicle's charging system regulates voltage based on the state of the battery. The battery voltage can fluctuate while viewing this information on the DIC. This is normal. See *Charging System Light on page 5-18* for more information. If there is a problem with the battery charging system, the DIC will display a message. See *Battery Voltage and Charging Messages on page 5-32*.

Remaining Oil Life

This display shows an estimate of the oil's remaining useful life. If REMAINING OIL LIFE 99% is displayed, that means 99% of the current oil life remains.

When the remaining oil life is low, the CHANGE ENGINE OIL SOON message will appear on the display. See *Engine Oil Messages on page 5-35*. The oil should be changed as soon as possible. See *Engine Oil on page 10-8*. In addition to the engine oil life system monitoring the oil life, additional maintenance is recommended in the Maintenance Schedule in this manual. See *Maintenance Schedule on page 11-4* for more information.

Remember, the Oil Life display must be reset after each oil change. It will not reset itself. Also, be careful not to reset the Oil Life display accidentally at any time other than when the oil has just been changed. It cannot be reset accurately until the next oil change. To reset the engine oil life system, press the SET/CLR button while the Oil Life display is active. See *Engine Oil Life System on page 10-10*.

Tire Pressure

The display will show a vehicle with the approximate pressures of all four tires. Tire pressure is displayed in either kilopascal (kPa) or in pounds per square inch (psi). See *Tire Pressure Monitor System on page 10-58* and *Tire Pressure Monitor Operation on page 10-59* for more information.

Blank Display

This display shows no information.

Compass

The vehicle may have a compass display in the Driver Information Center (DIC). See *Compass on page 5-7*.

Vehicle Messages

Messages displayed on the DIC indicate the status of the vehicle or some action that may be needed to correct a condition. Multiple messages may display one after the other.

The messages that do not require immediate action can be acknowledged and cleared by pressing SET/CLR. The messages that require immediate action cannot be cleared until that action is performed. All messages should be taken seriously and clearing the messages does not correct the problem.

Battery Voltage and Charging Messages

BATTERY SAVER ACTIVE

This message displays when the vehicle has detected that the battery voltage is dropping beyond a reasonable point. The battery saver system starts reducing certain features of the vehicle that you may be able to notice. At the point that features are disabled, this message is displayed. It means that the vehicle is trying to save the charge in the battery. Turn off unnecessary accessories to allow the battery to recharge.

LOW BATTERY

This message is displayed when the battery voltage is low. See *Battery on page 10-24*.

SERVICE BATTERY CHARGING SYSTEM

This message is displayed when there is a fault in the battery charging system. Take the vehicle to your dealer for service.

Brake System Messages

BRAKE FLUID LOW

This message is displayed when the brake fluid level is low. See *Brake Fluid on page 10-23*.

BRAKES OVERHEATED

This message is displayed when the brakes are becoming overheated. You may see this when driving on hills. Shift to a lower gear.

STEP ON BRAKE TO RELEASE PARK BRAKE

This message is displayed if you attempt to release the Electric Parking Brake without the brake pedal applied. See *Parking Brake on page 9-30* for more information.

RELEASE PARKING BRAKE

This message is displayed if the Electric Parking Brake is on while the vehicle is in motion. Release it before you attempt to drive. See *Parking Brake on page 9-30* for more information.

SERVICE BRAKE ASSIST

This message may be displayed when there is a problem with the brake boost assist system. When this message is displayed, the brake boost assist motor might be heard operating and you might notice pulsation in the brake pedal. This is normal under these conditions. Take the vehicle to your dealer for service.

SERVICE PARKING BRAKE

This message is displayed when there is a problem with the parking brake. Take the vehicle to your dealer for service.

Compass Messages

CAL

This message is displayed when the compass needs to be calibrated. See *Compass on page 5-7*.

– – –

Three dashes will be displayed if the compass needs service. See your dealer for service.

Cruise Control Messages

APPLY BRAKE BEFORE CRUISE

If this message displays when attempting to activate cruise control, apply the brake pedal and try again.

CRUISE SET TO XXX

This message displays when the cruise control is set and shows the speed it was set to. See *Cruise Control on page 9-36* for more information.

Door Ajar Messages

DOOR OPEN

A door open symbol will be displayed on the DIC showing which door is open. If the vehicle has been shifted out of P (Park), a DOOR OPEN message will also be displayed. Close the door completely.

HOOD OPEN

This message will display along with a hood open symbol when the hood is open. Close the hood completely.

REAR ACCESS OPEN

This message will display along with a symbol when the liftgate is open. Close the liftgate completely.

Engine Cooling System Messages

A/C OFF DUE TO HIGH ENGINE TEMP

This message displays when the engine coolant becomes hotter than the normal operating temperature. To avoid added strain on a hot engine, the air conditioning compressor automatically turns off. When the coolant temperature returns to normal, the air conditioning compressor turns back on. You can continue to drive the vehicle.

If this message continues to appear, have the system repaired by your dealer as soon as possible to avoid damage to the engine.

COOLANT LEVEL LOW ADD COOLANT

This message will display if the coolant is low. See *Engine Coolant on page 10-15*.

ENGINE OVERHEATED— IDLE ENGINE

This message displays when the engine coolant temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OVERHEATED— STOP ENGINE

This message displays and a continuous chime sounds if the engine cooling system reaches unsafe temperatures for operation. Stop and turn off the vehicle as soon as it is safe to do so to avoid severe damage. This message clears when the engine has cooled to a safe operating temperature.

HIGH COOLANT TEMPERATURE

This message displays if the coolant temperature is hot. See *Engine Overheating on page 10-18*.

Engine Oil Messages

CHANGE ENGINE OIL SOON

This message displays when the engine oil needs to be changed. When you change the engine oil, be sure to reset the Oil Life System. See *Engine Oil Life System on page 10-10*, *Driver Information Center (DIC) on page 5-27*, *Engine Oil on page 10-8* and *Maintenance Schedule on page 11-4*.

ENGINE OIL HOT, IDLE ENGINE

This message displays when the engine oil temperature is too hot. Stop and allow the vehicle to idle until it cools down.

ENGINE OIL LOW — ADD OIL

This message displays when the engine oil level is too low. Check the oil level. See *Engine Oil on page 10-8*.

OIL PRESSURE LOW — STOP ENGINE

This message displays if low oil pressure levels occur. Stop the vehicle as soon as safely possible and do not operate it until the cause of the low oil pressure has been corrected. Check the oil as soon as possible and have the vehicle serviced by your dealer.

Engine Power Messages

ENGINE POWER IS REDUCED

This message displays when the vehicle's engine power is reduced. Reduced engine power can affect the vehicle's ability to accelerate. If this message is on, but there is no reduction in performance, proceed to your destination. The performance may be reduced the next time the vehicle is driven. The vehicle may be driven at a reduced speed while this message is on, but maximum acceleration and speed may be reduced. Anytime this message stays on, the vehicle should be taken to your dealer for service as soon as possible.

Fuel System Messages

FUEL LEVEL LOW

This message displays when the vehicle is low on fuel. Refuel as soon as possible

TIGHTEN GAS CAP

This message displays when the fuel cap is not on tight. Tighten the fuel cap.

Key and Lock Messages

NO REMOTE DETECTED

This message displays when trying to start the vehicle if an RKE transmitter is not detected. The transmitter battery may be weak. See "Starting the Vehicle with a Low Transmitter Battery" under *Remote Keyless Entry (RKE) System Operation on page 2-3*.

NO REMOTE PRESS BRAKE TO RESTART

This message is displayed if the remote is no longer detected in the vehicle. Press the brake pedal to restart the vehicle.

NUMBER OF KEYS PROGRAMMED

This message displays when programming new keys to the vehicle.

REMOTE LEFT IN VEHICLE

This message displays when leaving the vehicle with the RKE transmitter still inside.

REPLACE BATTERY IN REMOTE KEY

This message displays when the battery in the RKE transmitter needs to be replaced.

Lamp Messages

AFL (ADAPTIVE FORWARD LIGHTING) LAMPS NEED SERVICE

This message displays when the Adaptive Forward Lighting (AFL) system is disabled and needs service. See your dealer. See *Adaptive Forward Lighting (AFL) on page 6-3* for more information.

AUTOMATIC LIGHT CONTROL ON

This message is displayed when the exterior lamp control is in AUTO and the lights have turned on. See *Twilight Sentinel on page 6-4*.

AUTOMATIC LIGHT CONTROL OFF

This message is displayed when the exterior lamp control is in AUTO and the lights have turned off. See *Twilight Sentinel on page 6-4*.

XXX TURN INDICATOR FAILURE

When one of the turn signals is out, this message displays to show which bulb needs to be replaced. See *Bulb Replacement on page 10-32* and *Replacement Bulbs on page 10-40* for more information on the turn signal bulb replacement.

TURN SIGNAL ON

This message is displayed if the turn signal has been left on. Turn off the turn signal.

Object Detection System Messages

PARK ASSIST OFF

This message displays when the park assist system has been turned off or when there is a temporary condition causing the system to be disabled. See *Ultrasonic Parking Assist on page 9-38*.

SERVICE PARKING ASSIST

This message displays if there is a problem with the Ultrasonic Front and Rear Parking Assist (UFRPA) system. Do not use this system to help you park. See *Ultrasonic Parking Assist on page 9-38* for more information. See your dealer for service.

Ride Control System Messages

SERVICE REAR AXLE

This message displays when there is a problem with the All-Wheel Drive (AWD) System. See your dealer for service.

SERVICE STABILITRAK

This message displays if there is a problem with the StabiliTrak system. See *StabiliTrak® System on page 9-34*.

SERVICE SUSPENSION SYSTEM

This message displays if there is a problem with the selective ride control. See *Selective Ride Control on page 9-35*.

SERVICE TRACTION CONTROL

This message displays when there is a problem with the Traction Control System (TCS). See *Traction Control System (TCS) on page 9-32*.

SPORT MODE ON

This message displays when Sport Mode has been activated. See *Selective Ride Control on page 9-35* and *Manual Mode on page 9-26* for more information.

Airbag System Messages

SERVICE AIRBAG

This message displays if there is a problem with the airbag system. Take the vehicle to your dealer for service.

Safety Belt Messages

BUCKLE SEATBELT

This message displays as a reminder when the safety belt is not buckled.

Anti-theft Alarm System Messages

THEFT ATTEMPTED

This message displays if the vehicle detects a tamper condition.

Service Vehicle Messages

SERVICE AC SYSTEM

This message is displayed if there is a problem with the air conditioning system. Take the vehicle to your dealer for service.

SERVICE POWER STEERING

This message is displayed if there is a problem with the power steering system. Take the vehicle to your dealer for service.

SERVICE VEHICLE SOON

This message is displayed if there is a problem with the vehicle. Take the vehicle to your dealer for service.

Starting the Vehicle Messages

PRESS BRAKE TO START VEHICLE

This message is displayed when attempting to start the vehicle without first pressing the brake pedal.

SERVICE KEYLESS START SYSTEM

This message is displayed if there is a problem with the pushbutton start system. Take the vehicle to your dealer for service.

Tire Messages

SERVICE TIRE MONITOR SYSTEM

This message displays if there is a problem with the Tire Pressure Monitor System (TPMS). See *Tire Pressure Monitor Operation on page 10-59* for more information.

TIRE LEARNING ACTIVE

This message displays when the system is learning new tires. See *Tire Pressure Monitor Operation on page 10-59* for more information.

TIRE LOW ADD AIR TO TIRE

This message displays when the pressure in one or more of the tires is low.

This message also displays LEFT FRONT, RIGHT FRONT, LEFT REAR, or RIGHT REAR to indicate the location of the low tire.

The low tire pressure warning light will also come on. See *Tire Pressure Light on page 5-24*.

If a tire pressure message appears on the DIC, stop as soon as you can. Inflate the tires by adding air until the tire pressure is equal to the values shown on the Tire and Loading Information label. See *Tires on page 10-49*, *Vehicle Load Limits on page 9-10*, and *Tire Pressure on page 10-56*.

You can receive more than one tire pressure message at a time. The DIC also shows the tire pressure values. See *Driver Information Center (DIC) on page 5-27*.

Transmission Messages

SERVICE TRANSMISSION

This message displays if there is a problem with the transmission. See your dealer.

SHIFT DENIED

This message displays when using the Driver Shift Control (DSC) and attempting to shift to a gear not appropriate for the vehicle speed and engine revolutions per minute (rpm). See *Manual Mode on page 9-26* for more information.

SHIFT TO PARK

This message displays when the transmission needs to be shifted to P (Park). This may appear when attempting to remove the key from the vehicle if the vehicle is not in P (Park).

TRANSMISSION HOT — IDLE ENGINE

This message displays and a chime sounds if the transmission fluid in the vehicle gets hot. Driving with the transmission fluid temperature high can cause damage to the vehicle. Stop the vehicle and let it idle to allow the transmission to cool. This message clears when the fluid temperature reaches a safe level.

Vehicle Reminder Messages

ICE POSSIBLE DRIVE WITH CARE

This message is displayed when ice conditions are possible.

TURN WIPER CONTROL TO INTERMITTENT FIRST

This message is displayed when attempting to adjust the intermittent wiper speed without intermittent selected on the wiper control. See *Windshield Wiper/Washer on page 5-4*.

Vehicle Speed Messages

SELECTED SPEED LIMIT EXCEEDED

This message is displayed when the vehicle speed is greater than the set speed. See "Speed Warning" under *Driver Information Center (DIC) on page 5-27*.

Washer Fluid Messages

WASHER FLUID LOW ADD FLUID

This message may display when the washer fluid level is low. See *Washer Fluid on page 10-21*.

Vehicle Personalization

The audio system controls are used to access the personalization menus for customizing vehicle features. Not all features are available on every vehicle. Only the features available on a particular vehicle will be displayed on that vehicle.

CONFIG (Configuration): Press to access the Configuration Settings Menu.

MENU/SELECT Knob: Press the center of this knob to enter the menus and select menu items. Turn the knob to scroll through the menus.

⇦ BACK or BACK ⇦ (depending on system): Press to exit or move backward in a menu.

Entering the Personalization Menus

1. Press CONFIG to access the Configuration Settings menu.
2. Turn the MENU/SELECT knob to highlight Vehicle Settings.
3. Press the center of the MENU/SELECT knob to select the Vehicle Settings menu.

The following list of menu items will be available:

- Climate and Air Quality
- Comfort and Convenience
- Language
- Lighting
- Power Door Locks
- Remote Lock/Unlock/Start
- Return to Factory Settings

Turn the MENU/SELECT knob to highlight the menu. Press the knob to select it. Each of the menus is detailed in the following information.

Climate and Air Quality

Select the Climate and Air Quality menu and the following will be displayed:

- Auto Fan Speed
- Air Quality Sensor
- Remote Start Auto Seat Cool
- Remote Start Auto Heated Seats
- Auto Defog
- Auto Rear Defog

Auto Fan Speed

This will allow you to select the automatic fan speed. This feature sets the climate control fan speed to maintain the interior temperature.

Press the MENU/SELECT knob when Auto Fan Speed is highlighted to open the menu. Turn the knob to highlight High, Medium, or Low. Press the knob to confirm the selection and move back to the last menu.

Air Quality Sensor

This will allow you to select whether the system will operate at high or low sensitivity. Only vehicles with the dual zone climate control will have this option.

Press the MENU/SELECT knob when Air Quality Sensor is highlighted to open the menu. Turn the knob to highlight High or Low Sensitivity. Press the knob to confirm the selection and move back to the last menu.

Remote Start Auto Seat Cool

When on, this feature will turn the vented seats on when using remote start on warm days.

Press the MENU/SELECT knob when Remote Start Auto Seat Cool is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Start Auto Heated Seats

When on, this feature will turn the heated seats on when using remote start on cold days.

Press the MENU/SELECT knob when Remote Start Auto Heated Seats is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Auto Defog

This will allow you to turn the auto defog on or off.

Press the MENU/SELECT knob when Auto Defog is highlighted to open the menu. Turn the knob to highlight On or Off. Press the knob to confirm the selection and move back to the last menu.

Auto Rear Defog

This will allow you to turn the auto rear defog on or off.

Press the MENU/SELECT knob when Auto Rear Defog is highlighted to open the menu. Turn the knob to highlight On or Off. Press the knob to confirm the selection and move back to the last menu.

Comfort and Convenience

Select the Comfort and Convenience menu and the following will be displayed:

- Easy Exit Driver Seat
- Chime Volume
- Reverse Tilt Mirror
- Auto Wipe in Reverse Gear

Easy Exit Driver Seat

This allows you to turn the easy exit driver seat feature on or off. When on, this feature will move the driver seat rearward upon turning the ignition off and the driver door opened. This may be performed to make it easier to exit the vehicle. See *Power Seat Adjustment on page 3-5* for more information.

Press the MENU/SELECT knob when Easy Exit Driver Seat is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Chime Volume

This allows the selection of the chime volume level.

Press the MENU/SELECT knob when Chime Volume is highlighted. Turn the knob to select Normal or High. Press the knob to confirm and go back to the last menu.

Reverse Tilt Mirror

This allows you to turn the reverse tilt mirror feature on or off. When on, both the driver and passenger mirrors will tilt downward when vehicle is shifted to R (Reverse) to improve visibility of the ground near the rear wheels. They will return to their previous driving position when the vehicle is shifted out of R (Reverse), the ignition is turned to OFF, or the vehicle is left in reverse.

Press the MENU/SELECT knob when Reverse Tilt Mirror is highlighted. Turn the knob to select Driver & Passenger or Off. Press the knob to confirm and go back to the last menu.

Auto Wipe in Reverse Gear

When on, and the front windshield wipers are on, the rear window wiper will turn on automatically when the vehicle is shifted into R (Reverse).

Press the MENU/SELECT knob when Auto Wipe in Reverse Gear is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Language

Select the Language menu and the following will be displayed:

- English
- French
- Spanish

Turn the MENU/SELECT knob to select the language. Press the knob to confirm and go back to the last menu.

Lighting

Select the Lighting menu and the following will be displayed:

- Vehicle Locator Lights
- Exit Lighting

Vehicle Locator Lights

This allows the vehicle locator lights to be turned on or off.

Press the MENU/SELECT knob when Vehicle Locator Lights is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Exit Lighting

This allows the selection of how long the exterior lamps stay on when leaving the vehicle when it is dark outside.

Press the MENU/SELECT knob when Exit Lighting is highlighted. Turn the knob to select Off, 30 Seconds, 1 Minute, or 2 Minutes. Press the knob to confirm and go back to the last menu.

Power Door Locks

Select Power Door Locks and the following will be displayed:

- Unlocked Door Anti Lock Out
- Auto Door Unlock
- Delayed Door Lock

Unlocked Door Anti Lock Out

When on, this feature will keep the driver door from locking when the door is open. If Off is selected, the Delayed Door Lock menu will be available and the door will lock as programmed through this menu.

Press the MENU/SELECT knob when Auto Door Unlock is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Auto Door Unlock

This allows selection of which of the doors will automatically unlock when the vehicle is shifted into P (Park).

Press the MENU/SELECT knob when Auto Door Unlock is highlighted. Turn the knob to select All Doors, Driver Door, or Off. Press the knob to confirm and go back to the last menu.

Delayed Door Lock

When on, this feature will delay the locking of the doors until five seconds after the last door is closed. You will hear three chimes to signal delayed locking is in use. Pressing either the power lock button or the lock button on the RKE transmitter twice will override the delayed locking feature and immediately lock all of the doors.

Press the MENU/SELECT knob when Delayed Door Lock is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Lock/Unlock/Start

Select Remote Lock/Unlock/Start and the following will be displayed:

- Unlock Feedback (Lights)
- Locking Feedback
- Door Unlock Options
- Passive Door Lock
- Passive Door Unlock
- Memory Remote Recall
- Remote Left in Vehicle Reminder

Unlock Feedback (Lights)

When on, the exterior lamps will flash when unlocking the vehicle with the RKE transmitter.

Press the MENU/SELECT knob when Unlock Feedback (Lights) is highlighted. Turn the knob to select Flash Lights or Off. Press the knob to confirm and go back to the last menu.

Locking Feedback

This allows selection of what type of feedback is given when locking the vehicle with the RKE transmitter.

Press the MENU/SELECT knob when Locking Feedback is highlighted. Turn the knob to select Lights and Horn, Lights Only, Horn Only, or Off. Press the knob to confirm and go back to the last menu.

Door Unlock Options

This allows selection of which doors will unlock when pressing the unlock button on the RKE transmitter.

Press the MENU/SELECT knob when Door Unlock Options is highlighted. Turn the knob to select All Doors or Driver Door Only. When set to Driver Door Only, the driver door will unlock the first time the unlock button is pressed and all doors will unlock when the button is pressed a second time.

When set to All Doors, all of the doors will unlock at the first press of the unlock button. Press the knob to confirm and go back to the last menu.

Passive Door Lock

If the vehicle has the Remote Keyless Entry (RKE) system, when enabled, this feature allows the doors to lock after several seconds if all doors are closed and at least one RKE transmitter has been removed from the interior of the vehicle. It does not matter how far away the RKE transmitter is from the vehicle. This feature can also be configured to chirp the horn when the doors are passively locked.

Press the MENU/SELECT knob when Passive Door Lock is highlighted. Turn the knob to select On With Chirp, On, or Off. Press the knob to confirm and go back to the last menu.

Passive Door Unlock

If the vehicle has the RKE system, this feature allows you to select which doors will automatically unlock when you open the driver door with the RKE transmitter present.

Press the MENU/SELECT knob when Passive Door Unlock is highlighted. Turn the knob to select All Doors or Driver Door. Press the knob to confirm and go back to the last menu.

Memory Remote Recall

This allows the Memory Remote Recall feature to be turned on or off.

Press the MENU/SELECT knob when Memory Remote Recall is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Remote Left in Vehicle Reminder

This allows the Remote Left In Vehicle reminder feature to be turned on or off. If on, the horn will chirp if a remote is left in the vehicle.

Press the MENU/SELECT knob when Remote Left In Vehicle is highlighted. Turn the knob to select On or Off. Press the knob to confirm and go back to the last menu.

Return to Factory Settings

Select Return to Factory Settings to return all of the vehicle personalization to the default settings. Turn the knob to select Yes or No. Press the knob to confirm and go back to the last menu.

Universal Remote System

See *Radio Frequency Statement on page 13-23* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

Universal Remote System Programming

If the vehicle has this feature, you will see these buttons with one indicator light next to them in the overhead console.

This system provides a way to replace up to three remote control transmitters used to activate devices such as garage door openers, security systems, and home automation devices.

Do not use the Universal Remote system with any garage door opener that does not have the stop and reverse feature. This includes any garage door opener model manufactured before April 1,1982.

Read the instructions completely before attempting to program the Universal Remote system. Because of the steps involved, it may be helpful to have another person available to assist with programming the Universal Remote system.

Keep the original hand-held transmitter for use in other vehicles as well as for future Universal Remote system programming. It is also recommended that upon the sale of the vehicle, the programmed Universal Remote system buttons be erased for security purposes. See "Erasing Universal Remote System Buttons" later in this section.

When programming a garage door, park outside of the garage. Park directly in line with and facing the garage door opener motor-head or gate motor-head. Be sure that people and objects are clear of the garage door or gate being programmed.

It is recommended that a new battery be installed in the hand-held transmitter for quicker and more accurate transmission of the radio-frequency signal.

Programming the Universal Remote System

For questions or help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com.

Programming a garage door opener involves time-sensitive actions, so read the entire procedure before starting. Otherwise, the device will time out and the procedure will have to be repeated.

To program up to three devices:

1. Hold the end of the hand-held transmitter about 3 to 8 cm (1 to 3 in) away from the Universal Remote system buttons while keeping the indicator light in view. The hand-held transmitter was supplied by the manufacturer of the garage door opener receiver (motor-head unit).
2. At the same time, press and hold both the hand-held transmitter button and one of the three Universal Remote system buttons to be used to operate the garage door. Do not release the Universal Remote system button or the hand-held transmitter button until the indicator light changes from a slowly to a rapidly flashing light. You now may release both buttons.

   Some entry gates and garage door openers may require substitution of Step 2 with the procedure noted in "Gate Operator and Canadian Programming" later in this section.
3. Press and hold for five seconds the newly trained Universal Remote system button (the button selected in Step 2) while observing the indicator light and garage door activation.
   - If the indicator light stays on continuously or the garage door starts to move when the Universal Remote system button is pressed and released, then the programming is complete. There is no need to continue programming Steps 4–6.
   - If the Universal Remote system indicator light blinks rapidly for two seconds, then turns to a constant light and the garage door does not move, continue with programming Steps 4–6.

     It may be helpful to have another person assist with the remaining Steps 4–6.

"Learn" or "Smart" Button

4. After Steps 1–3 have been completed, locate the "Learn" or "Smart" button inside the garage on the garage door opener receiver (motor-head unit). The name and color of the button may vary by manufacturer.
5. Firmly press and release the "Learn" or "Smart" button. After pressing this button, you will have 30 seconds to complete Step 6.
6. Immediately return to the vehicle. Firmly press and hold for two seconds the Universal Remote system button, selected in Step 2 to control the garage door, and then release it. If the garage door does not move or the lamp on the garage door opener receiver (motor-head unit) does not flash, press and hold the same button a second time for two seconds, then release it. Again, if the door does not move or the garage door lamp does not flash, press and hold the same button a third time for two seconds, then release.

The Universal Remote system should now activate the garage door.

To program the remaining two Universal Remote system buttons, begin with Step 1 of "Programming the Universal Remote System."

Gate Operator and Canadian Programming

If you have questions or need help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com.

Canadian radio-frequency laws require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for the Universal Remote system to pick up the signal during programming. Similarly, some U.S. gate operators are manufactured to time out in the same manner.

If you live in Canada, or you are having difficulty programming a gate operator or garage door opener by using the "Programming the Universal Remote System" procedures, regardless of where you live, replace Step 2 under "Programming the Universal Remote System" with the following:

Continue to press and hold the Universal Remote system button while you press and release every two seconds (cycle) the hand-held transmitter button until the frequency signal has been successfully accepted by the Universal Remote system. The Universal Remote system indicator light will flash slowly at first and then rapidly. Proceed with Step 3 under "Programming the Universal Remote System" to complete.

Universal Remote System Operation

Using the Universal Remote System

Press and hold the appropriate Universal Remote system button for at least half of a second. The indicator light will come on while the signal is being transmitted.

Erasing Universal Remote System Buttons

All programmed buttons should be erased when the vehicle is sold or the lease ends.

To erase all programmed buttons on the Universal Remote system device:

1. Press and hold down the two outside buttons until the indicator light begins to flash. This should take about 10 seconds.
2. Release both buttons.

Reprogramming a Single Universal Remote System Button

To reprogram any of the three Universal Remote system buttons:

1. Press and hold the desired Universal Remote system button. Do not release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the button, proceed with Step 1 under "Programming the Universal Remote System."

If you have questions or need help programming the Universal Remote system, call 1-800-355-3515 or go to www.homelink.com. You may also call the customer assistance phone number under *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-5*.

✍ NOTES

Lighting

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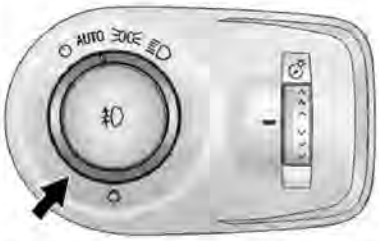
Exterior Lighting

Exterior Lamp Controls



The exterior lamp control is located on the instrument panel to the left of the steering column.

It controls the following systems:

- Headlamps
- Taillamps
- Parking Lamps
- License Plate Lamps
- Instrument Panel Lights
- Fog Lamps

The exterior lamps control has four positions:

⏻ **(Off):** Briefly turn to this position to turn the automatic light control off or on again.

AUTO (Automatic): Turns the headlamps on automatically at normal brightness, together with the following:

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Parking Lamps): Turns the parking lamps on together with the following:

- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Headlamps): Turns the headlamps on together with the lamps listed below. A warning chime sounds if the driver door is opened when the ignition switch is off and the headlamps are on.

- Parking Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lights

(Front Fog Lamps): For vehicles with fog lamps, press to turn the lamps on or off.

See *Front Fog Lamps on page 6-6*.

Headlamp High/ Low-Beam Changer

Push the turn signal/lane change lever away from you and release, to turn the high beams on. To return to low beams, push the lever again or pull it toward you and release.

This indicator light turns on in the instrument panel cluster when the high-beam headlamps are on.

Flash-to-Pass

The flash-to-pass feature works with the low beams or Daytime Running Lamps (DRL) on or off.

To flash the high beams, pull the turn signal/lane change lever all the way toward you, then release it.

Daytime Running Lamps (DRL)

Daytime Running Lamps (DRL) can make it easier for others to see the front of your vehicle during the day. Fully functional daytime running lamps are required on all vehicles first sold in Canada.

A light sensor on top of the instrument panel makes the DRL work, so be sure it is not covered.

The DRL system makes the low-beam headlamps come on at a reduced brightness or for vehicles with High Intensity Discharge (HID) headlamps, the DRL lights will come on when the following conditions are met:

- The ignition is in the ON/RUN mode.
- The exterior lamps control is in AUTO.
- The engine is running.

When the DRL are on, only the low-beam headlamps, at a reduced level of brightness, will be on. The high-beam headlamps, taillamps, sidemarker, instrument panel lamps, and other lamps will not be on.

The headlamps automatically change from DRL to the regular headlamps depending on the darkness of the surroundings. The other lamps that come on with the headlamps will also come on.

When it is bright enough outside, the headlamps go off and the DRL come on.

To turn the DRL lamps off or on again, turn the exterior lamps control to the off position and then release. For vehicles first sold in Canada, the DRL cannot be turned off.

This vehicle may have a DRL disabling function. When the DRL are on and a turn signal is activated, the DRL on that side will be off until the turn signal goes off.

Adaptive Forward Lighting (AFL)

For vehicles with uplevel headlamps, the Adaptive Forward Lighting System (AFL) adjusts the headlamps to provide greater road illumination in various driving conditions.

To enable AFL, set the exterior lamp control to the AUTO position. Moving the control out of the AUTO position will deactivate the system. AFL will operate when the vehicle speed is greater than 3 km/h (2 mph). AFL will not operate when the transmission is in R (Reverse). AFL is not immediately operable after starting the vehicle; driving a short distance is required to calibrate the AFL. See *Exterior Lamp Controls on page 6-1*.

Curve Lighting

The light beam pivots based on the steering wheel position and vehicle speed of at least 10 km/h (6 mph). The headlamps shine at an angle of up to 15 degrees to the right or left of the direction of travel.

Highway Lighting

If the vehicle is traveling straight continuously at high speeds, the light beam automatically raises slightly to increase the headlamp range.

City Lighting

If the vehicle speed is less than 50 km/h (31 mph), the headlamp range is automatically reduced.

Twilight Sentinel

This feature automatically turns the lamps on and off. A light sensor on top of the instrument panel makes the Twilight Sentinel® work, so be sure it is not covered.

With Twilight Sentinel the following will happen:

- When it is dark enough outside, and the exterior lamp control is in the AUTO position, the Daytime Running Lamps (DRL) go off, and the headlamps and parking lamps come on. The other lamps that come on with the headlamps also come on.
- When it is bright enough outside, the headlamps go off, and the DRL come on, as long as the exterior lamp control is in the AUTO position. See *Exterior Lamp Controls on page 6-1*.

If the vehicle is started in a dark garage, the automatic headlamp system comes on immediately. If it is light outside when the vehicle leaves the garage, there is a slight delay before the automatic headlamp system changes to the DRL. During that delay, the instrument panel cluster may not be as bright as usual. Make sure the instrument panel brightness control is in full bright position. See *Instrument Panel Illumination Control on page 6-7* for more information.

The vehicle can be idled with the lamps off, even when it is dark outside. After starting the vehicle, turn the exterior lamps control to off, then release it. The lamps will remain off until the control is turned to off again.

Twilight Sentinel also provides exterior illumination as you leave the vehicle. If Twilight Sentinel has turned on the lamps when the ignition is turned off, the lamps remain on until one of the following occurs:

- The exterior lamp control is moved from ⏻ to the parking lamp position.
- The delay time selected has elapsed.

See *Vehicle Personalization on page 5-40* to select the delay time. You can also select no delay time.

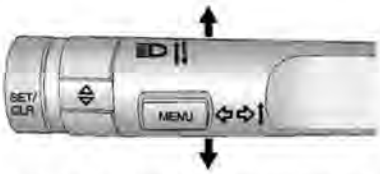
If the ignition is turned off with the exterior lamps control in the parking lamp or headlamp position, the Twilight Sentinel delay will not occur. The lamps will turn off as soon as the control is turned off.

The regular headlamp system should be turned on when needed.

Hazard Warning Flashers

⚠ **(Hazard Warning Flashers):** Press this button on the instrument panel, to make the front and rear turn signal lamps flash on and off. This warns others that you are having trouble. Press again to turn the flashers off.

Turn and Lane-Change Signals



An arrow on the instrument panel cluster will flash in the direction of the turn or lane change.

Move the lever all the way up or down to signal a turn.

Raise or lower the lever until the arrow starts to flash to signal a lane change. The turn signal flashes three times.

The lever returns to its starting position when it is released.

If after signaling a turn or lane change the arrow flashes rapidly or does not come on, a signal bulb may be burned out.

Replace any burned out bulbs. If the bulb is not burned out, check the fuse. See *Fuses and Circuit Breakers on page 10-41* for more information.

Front Fog Lamps

The front fog lamp button is located on the exterior lamp control, on the outboard side of the steering wheel.

The ignition must be on to turn on the fog lamps.

(Front Fog Lamps): Press to turn the fog lamps on or off. An indicator light on the instrument panel cluster comes on when the fog lamps are on.

The fog lamps come on together with the parking lamps.

Some localities have laws that require the headlamps to be on along with the fog lamps.

Interior Lighting

Instrument Panel Illumination Control

The brightness of the instrument panel lights and steering wheel controls can be adjusted.

(Instrument Panel Brightness): Move and hold the thumbwheel up or down to brighten or dim the lights.

Cargo Lamp

The cargo lamp is located in the rear compartment and is controlled by the dome lamp. See *Dome Lamps on page 6-7*.

Courtesy Lamps

The courtesy lamps come on automatically when any door is opened and the dome lamp is in the door position.

Dome Lamps

The dome lamp is located in the overhead console.

To change the dome lamp settings, press the following:

(Dome Lamp Override): Turns the lamp off, even when a door is open.

(Door): The lamp comes on automatically when a door is opened.

(On): Turns the dome lamp on.

Reading Lamps

There are reading lamps located on the overhead console and over the rear passenger doors. These lamps come on automatically when any door is opened.

To manually turn the reading lamps on or off:

- Press or next to each overhead console reading lamp.
- Press the lamp lens on the rear passenger reading lamps.

Lighting Features

Entry Lighting

The headlamps, taillamps, license plate lamps, back-up lamps, dome lamps, and most of the interior lights turn on briefly, when is pressed on the Remote Keyless Entry (RKE) transmitter, or when the door handle is pulled. After about 30 seconds the exterior lamps turn off, and then the dome and remaining interior lights dim to off. The entry lighting can be manually turned off by changing the ignition out of the off position, or by pressing on the RKE transmitter.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

Exit Lighting

The headlamps, taillamps, parking lamps, back-up lamps, and license plate lamps come on at night, or in areas with limited lighting, when a door is opened after the ignition is turned off. The dome lamps also come on when a door is opened after the ignition is changed to the off position.

The exterior lights and dome lamp remain on after the door is closed for a set amount of time, then automatically turn off.

The exterior lights turn off immediately by turning the exterior lamps control to off.

This feature can be changed. See *Vehicle Personalization on page 5-40*.

Battery Load Management

The vehicle has Electric Power Management (EPM) that estimates the battery's temperature and state of charge. It then adjusts the voltage for best performance and extended life of the battery.

When the battery's state of charge is low, the voltage is raised slightly to quickly bring the charge back up. When the state of charge is high, the voltage is lowered slightly to prevent overcharging. If the vehicle has a voltmeter gauge or a voltage display on the Driver Information Center (DIC), you may see the voltage move up or down. This is normal. If there is a problem, an alert will be displayed.

The battery can be discharged at idle if the electrical loads are very high. This is true for all vehicles. This is because the generator (alternator) may not be spinning fast enough at idle to produce all of the power needed for very high electrical loads.

A high electrical load occurs when several of the following are on, such as: headlamps, high beams, fog lamps, rear window defogger, climate control fan at high speed, heated seats, engine cooling fans, trailer loads, and loads plugged into accessory power outlets.

EPM works to prevent excessive discharge of the battery. It does this by balancing the generator's output and the vehicle's electrical needs. It can increase engine idle speed to generate more power whenever needed. It can temporarily reduce the power demands of some accessories.

Normally, these actions occur in steps or levels, without being noticeable. In rare cases at the highest levels of corrective action, this action may be noticeable to the driver. If so, a DIC message might be displayed and it is recommended that the driver reduce the electrical loads as much as possible.
See *Battery Voltage and Charging Messages on page 5-32.*

✍ NOTES

Infotainment System

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Introduction

Infotainment

Read the following pages to become familiar with the audio system's features.

⚠ WARNING

Taking your eyes off the road for extended periods could cause a crash resulting in injury or death to you or others. Do not give extended attention to infotainment tasks while driving.

This system provides access to many audio and non-audio listings.

To minimize taking your eyes off the road while driving, do the following while the vehicle is parked:

- Become familiar with the operation and controls of the audio system.
- Set up the tone, speaker adjustments, and preset radio stations.

For more information, see *Defensive Driving on page 9-3.*

This vehicle's infotainment system may be equipped with a noise reduction system which can work improperly if the audio amplifier, engine calibrations, exhaust system, microphones, radio, or speakers are modified or replaced. This could result in more noticeable engine noise at certain speeds.

***Notice:* Contact your dealer before adding any equipment.**

Adding audio or communication equipment could interfere with the operation of the engine, radio, or other systems, and could damage them. Follow federal rules covering mobile radio and telephone equipment.

The vehicle has Retained Accessory Power (RAP). With RAP, the audio system can be played even after the ignition is turned off. See *Retained Accessory Power (RAP) on page 9-21* for more information.

Navigation System

For vehicles with a navigation system, see the separate navigation manual.

Theft-Deterrent Feature

The theft-deterrent feature works by learning a portion of the Vehicle Identification Number (VIN) to the infotainment system. The infotainment system does not operate if it is stolen or moved to a different vehicle.

Overview (Radio with CD)

A. VOL/ ⏻
- Turns the system on or off and adjusts the volume.

B. Buttons 1 to 6
- Radio: Saves and selects favorite stations.

C. TUNE
- Radio: Manually selects radio stations.
- CD: Selects tracks.

D. FAV
- Radio: Opens the favorites list.

E. ⏭ SEEK
- Radio: Seeks the next station.
- CD: Selects the next track or fast forwards within a track.

F. ⏮ SEEK
- Radio: Seeks the previous station.
- CD: Selects the previous track or rewinds within a track.

G. ⏏ (CD Eject)
- Removes a disc from the CD slot.

H. CD
- Selects the CD player when listening to a different audio source.

I. RADIO/BAND
- Changes the band while listening to the radio.
- Selects the radio when listening to a different audio source.

J. ⏵/⏸
- CD: Pauses the CD.

K. CD Slot
- Insert a CD.

L. MENU/SELECT
- Press: Selects menu items.
- Turn: Opens menus, highlights menu items, or sets numeric values while in a menu.

M. BACK ⇦
- Menu: Moves one level back.
- Character Input: Deletes the last character.

N. CONFIG
- Opens the settings menu.

O. PHONE
- Opens the phone main menu.
- Mutes the audio system.

P. TONE
- Opens the tone menu.

Q. AUX
- Selects a connected external audio source.

R. INFO
- Radio: Shows available information about the current station.
- CD: Shows available information about the current track.

Overview (Radio with CD/DVD and MEM)

A. VOL/ ⏻
- Turns the system on or off and adjusts the volume.

B. Buttons 1 to 6
- Radio: Saves and selects favorite stations.
- MEM: Saves and selects favorite tracks and playlists.

C. TUNE/INFO
- Radio: Manually selects radio stations and shows available information about the current station.
- CD: Selects tracks and shows available information about the current track.
- MEM: Selects tracks and shows available information about the current track.

D. FAV
- Radio: Opens the favorites list.
- MEM: Opens the favorites list.

E. ⏭ SEEK
- Radio: Seeks the next station.
- CD/DVD: Selects the next track or fast forwards within a track.
- MEM: Selects the next track or fast forwards within a track.

F. ⏮ SEEK
- Radio: Seeks the previous station.
- CD/DVD: Selects the previous track or rewinds within a track.
- MEM: Selects the previous track or rewinds within a track.

G. ⏏ (CD Eject)
- Removes a disc from the CD slot.

H. RADIO/BAND
- Changes the band while listening to the radio.
- Selects the radio when listening to a different audio source.

I. MEM/CD/AUX
- Selects MEM, CD/DVD, USB, or a connected auxiliary audio or auxiliary audio/video source.

J. ⏵/⏸
- Radio: Pauses time shifted content.
- CD/DVD: Pauses CD/DVD-A and DVD-V playback.
- MEM: Pauses MEM playback.

K. CD/DVD Slot
- Insert a disc.

L. MENU/SELECT
- Press: Selects menu items.
- Turn: Open menus, highlights menu items, or sets numeric values while in a menu.

M. TONE
- Opens the tone menu.

N. ⇦ BACK
- Menu: Moves one level back.
- Character Input: Deletes the last character.

O. CONFIG
- Opens the settings menu.

P. DEL
- MEM: Deletes the current track from MEM.

Q. ○ REC

- CD/DVD: Records content from audio CDs and MP3/WMA CDs.
- AUX: Records content from USB mass storage devices.

R. PHONE

- Opens the phone main menu.
- Mutes the audio system.

Operation

Controls

The infotainment system is operated by using the pushbuttons, multifunction knobs, menus shown on the display, and steering wheel controls, if equipped.

Turning the System On or Off

VOL/ ⏻ (Volume/Power): Press to turn the system on and off.

Automatic Switch-Off

If the infotainment system has been turned on after the ignition is turned off, the system will turn off automatically after 10 minutes.

Volume Control

VOL/ ⏻ (Volume/Power): Turn to adjust the volume.

PHONE: For vehicles with OnStar, press and hold PHONE to mute the infotainment system. Press and hold PHONE again, or turn the VOL/ ⏻ knob to cancel mute.

For vehicles without OnStar®, press PHONE to mute the infotainment system. Press PHONE again, or turn the VOL/ ⏻ knob to cancel mute.

Menu System

Controls

The MENU/SELECT knob and the BACK ⇦ button are used to navigate the menu system.

MENU/SELECT: Press to:

- Select or activate the highlighted menu option.
- Confirm a set value.
- Turn a system setting on or off.

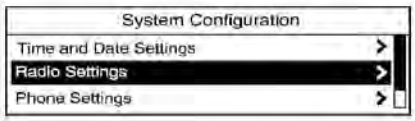
Turn to:

- Enter the menu system.
- Highlight a menu option.
- Select a value.

BACK ⇦ : Press to:

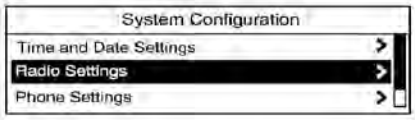
- Exit a menu.
- Return from a submenu screen to the previous menu screen.
- Delete the last character in a sequence.

Selecting a Menu Option



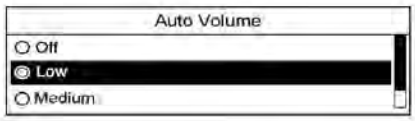
1. Turn the MENU/SELECT knob to move the highlighted bar.
2. Press the MENU/SELECT button to select the highlighted option.

Submenus



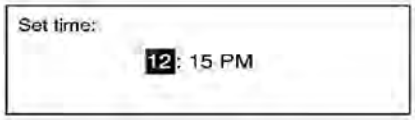
An arrow on the right-hand edge of the menu indicates that it has a submenu with other options.

Activating a Setting



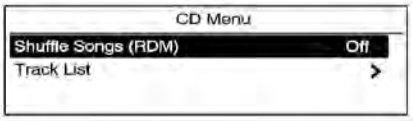
1. Turn the MENU/SELECT knob to highlight the setting.
2. Press the MENU/SELECT button to activate the setting.

Setting a Value



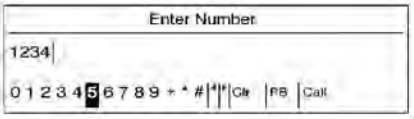
1. Turn the MENU/SELECT knob to change the current value of the setting.
2. Press the MENU/SELECT button to confirm the setting.

Turning a Function On or Off



1. Turn the MENU/SELECT knob to highlight the function.
2. Press the MENU/SELECT button to turn the function on or off.

Entering a Character Sequence



1. Turn the MENU/SELECT knob to highlight the character.
2. Press the MENU/SELECT button to select the character.

Press the BACK ⇦ button to delete the last character in the sequence or press and hold to delete the entire character sequence.

Audio Settings

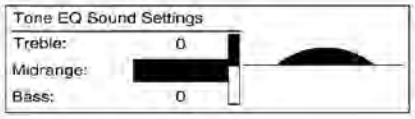
The audio settings can be set for each radio band and each audio player source.

To quickly reset an audio setting value to 0:

1. Press the TONE button.
2. Select the audio setting.
3. Press and hold the MENU/SELECT button until the value changes to 0.

Press the BACK ⇦ button to go back to the Tone Settings menu.

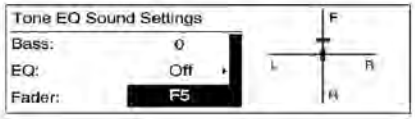
Adjusting the Treble, Midrange, and Bass



1. Press the TONE button.
2. Select Treble, Midrange, or Bass.
3. Select the value.

Press the BACK ⇦ button to go back to the Tone Settings menu.

Adjusting the Fader and Balance



1. Press the TONE button.
2. Select Fader or Balance.
3. Select the value.

Press the BACK ⇦ button to go back to the Tone Settings menu.

Adjusting the EQ (Equalizer)

For vehicles that have an equalizer:

1. Press the TONE button.
2. Select EQ.
3. Select the setting.

Press the BACK ⇦ button to go back to the Tone Settings menu.

DSP (Digital Signal Processing) Settings

For vehicles with DSP, it is used to provide a choice of different listening experiences.

- *2.0 Normal* - Select this setting to adjust the audio for normal mode. This provides the best sound quality for all seating positions.
- *Centerpoint* - Centerpoint® signal processing circuitry. This setting creates a surround sound listening experience from stereo CDs and satellite radio.

  For more information on Bose® Centerpoint® signal processing circuitry, please visit www. bose.com/centerpoint.
- *5.1 Surround* - The infotainment system used in conjunction with the Bose® 5.1 Cabin Surround® sound system for the vehicle includes digital 5.1 decoding. This technology unlocks the full benefit of digital 5.1 recordings, so digitally encoded music and movie soundtracks can be presented faithfully and accurately. If the video screens or Rear Seat Audio (RSA) are on, 5.1 Surround is not available.

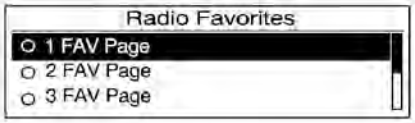
To adjust the DSP settings:

1. Press the TONE button.
2. Select DSP.
3. Select the setting.

Press the BACK ⇦ button to go back to the Tone Settings menu.

System Settings

Configuring the Number of Favorite Pages



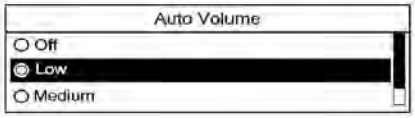
To configure the number of available favorite pages:

1. Press the CONFIG button.
2. Select Radio Settings.
3. Select Radio Favorites.
4. Select the number of available favorite pages.
5. Press the BACK ⇦ button to go back to the System Configuration menu.

Auto Volume

The auto volume feature automatically adjusts the radio volume to compensate for road and wind noise as the vehicle speeds up or slows down, so that the volume level is consistent.

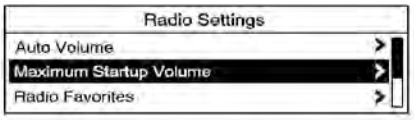
The level of volume compensation can be selected, or the auto volume feature can be turned off.



1. Press the CONFIG button.
2. Select Radio Settings.
3. Select Auto Volume.
4. Select the setting.
5. Press the BACK ⇦ button to go back to the System Configuration menu.

Maximum Startup Volume

The maximum volume played when the radio is first turned on can be set.



1. Press the CONFIG button.
2. Select Radio Settings.
3. Select Maximum Startup Volume.
4. Select the setting.
5. Press the BACK ⇦ button to go back to the System Configuration menu.

Radio

AM-FM Radio

Control Buttons

The buttons used to control the radio are:

RADIO/BAND: Press to turn the radio on and choose between AM, FM, and XM™, if equipped.

MENU/SELECT: Press and turn to navigate the available menus.

TUNE: Turn to search for stations.

INFO: Press to display additional information that may be available for the current song.

⏭ SEEK / ⏮ SEEK: Press to search for stations.

FAV: Press to open the favorites list.

1 to 6: Press to select preset stations.

⏵/⏸ (Play/Pause): Press to pause time shifted content, if equipped.

RDS (Radio Data System)

The radio may have RDS. The RDS feature is available for use only on FM stations that broadcast RDS information. This feature only works when the information from the radio station is available. In rare cases, a radio station could broadcast incorrect information that causes the radio features to work improperly. If this happens, contact the radio station.

While the radio is tuned to an FM-RDS station, the station name or call letters display.

Radio Menus

Radio menus are available for AM and FM.

Turn the MENU/SELECT knob to open the main radio menu for that frequency.

Selecting a Band

Press the RADIO/BAND button to choose AM, FM, or XM, if equipped. The last station that was playing starts playing again.

Selecting a Station

Seek Tuning (Radio with CD)

If the radio station is not known:

Briefly press ⏮ SEEK or ⏭ SEEK to automatically search for the next available station. If a station is not found, the radio switches to a more sensitive search level. If a station still is not found, the frequency that was last active begins to play.

If the radio station is known:

Press and hold ⏮ SEEK or ⏭ SEEK until the station on the display is reached, then release the button.

Seek Tuning (Radio with CD/DVD and MEM)

Briefly press ⏮ SEEK or ⏭ SEEK, to automatically search for the next available station. If a station is not found, the radio switches to a more sensitive search level. If a station still is not found, the frequency that was last active begins to play.

Manual Tuning

Turn the TUNE knob to select the frequency on the display.

Favorites List

1. Turn the MENU/SELECT knob.
2. Select Favorites List.
3. Select the station.

Station Lists

1. Turn the MENU/SELECT knob.
2. Select AM or FM Station List. All receivable stations in the current reception area are displayed. If a station list has not been created, an automatic station search is done.
3. Select the station.

Category Lists

Most stations that broadcast an RDS program type code specify the type of programming transmitted. Some stations change the program type code depending on the content. The system stores the RDS stations sorted by program type in the FM category list.

To search for a programming type determined by station:

1. Turn the MENU/SELECT knob.
2. Select FM category list. A list of all programing types available displays.
3. Select the programming type. A list of stations that transmit programming of the selected type displays.
4. Select the station.

   The category lists are updated when the station lists are updated.

Updating Station & Category Lists

If stations stored in the station list can no longer be received:

1. Turn the MENU/SELECT knob.
2. Select Update AM or FM Station List, if the stations stored in the station list are no longer received. A station search will be completed and the first station in the updated list will play.

To cancel the station search, press the MENU/SELECT knob.

Storing a Station as a Favorite

Stations from all bands can be stored in any order in the favorite pages.

Up to six stations can be stored in each favorite page and the number of available favorite pages can be set.

Storing Stations

To store the station to a position in the list, press the corresponding button 1 to 6 until a beep is heard.

Retrieving Stations

Press the FAV button to open a favorite page or to switch to another favorite page. Briefly press one of the 1 to 6 buttons to retrieve the station.

Time Shifting (Radio with CD/DVD and MEM)

The radio with MEM time shift feature can rewind 20 minutes of FM/AM content. While listening to the radio, the content from the current station is always being buffered.

Press ▶/II to pause the radio. The radio displays the time shift status bar. The status bar shows the amount of content stored in the buffer and the current pause point.

To resume playback from the current pause point, press ▶/II again. The radio is no longer live, but played from the time shift buffer. A status bar displays below the station number.

Press and hold ⏮ SEEK or ⏭ SEEK to fast forward or rewind through the time shift buffer. Hold ⏭ SEEK until the end of the recorded buffer resumes live playback.

Press and release ⏮ SEEK or ⏭ SEEK to jump forward or back 30 seconds in the time shift buffer.

When the radio station is changed, the buffer is cleared and automatically restarted for the current station. Content from a previously tuned station is no longer available.

The time shift feature is not available while recording or with other sources of playback.

Pausing AM/FM with the Vehicle Turned Off

If AM/FM is paused when the vehicle is turned off, the radio continues to buffer the current radio station for up to 20 minutes. If the vehicle is turned back on within 20 minutes, the radio resumes playback from the paused point.

Satellite Radio

Vehicles with an XM™ Satellite Radio tuner and a valid XM Satellite Radio subscription can receive XM programming.

XM Satellite Radio Service

XM is a satellite radio service based in the 48 contiguous United States and 10 Canadian provinces. XM Satellite Radio has a wide variety of programming and commercial-free music, coast to coast, and in digital-quality sound. If XM service needs to be reactivated, the radio will display "No Subscription Please Renew on channel XM1." A service fee is required to receive the XM service. For more information, contact XM at www.xmradio.com or 1-800-929-2100 in the U.S. and www.xmradio.ca or 1-877-438-9677 in Canada.

Control Buttons

The buttons used to control the XM radio are:

RADIO/BAND: Press to turn the radio on and choose between AM, FM, and XM, if equipped.

⏮ SEEK / ⏭ SEEK: Press to go to the previous or next channel.

FAV: Press to open the favorites list.

1-6: Press to select a favorite.

TUNE: Turn to select a channel.

INFO: Press to display additional information that may be available about the current song.

⏵/⏸ (Play/Pause): Press to pause time shifted content, if equipped.

Selecting the XM Band

Press the RADIO/BAND button to choose between the AM, FM and XM bands. The last channel played in that band begins to play when that band is selected.

XM Categories

XM channels are organized in categories.

Removing or Adding Categories

Channels in a category that have been removed can still be accessed by using the ⏮ SEEK or ⏭ SEEK buttons, or the TUNE knob.

To add or remove categories:

1. Press the CONFIG button.
2. Select Radio Settings.
3. Select XM Categories.
4. Turn the MENU/SELECT knob to highlight the category.
5. Press the MENU/SELECT knob to remove or add the category.

Selecting an XM Channel

XM channels can be selected by using ⏮ SEEK, ⏭ SEEK, the TUNE knob, or the menu system.

Selecting a Channel Using ⏮ SEEK or ⏭ SEEK (Radio with CD)

- Press and release ⏮ SEEK or ⏭ SEEK to go to the previous or next channel.
- Press and hold ⏮ SEEK or ⏭ SEEK to scroll through the previous or next channel until the channel is reached.

Selecting a Channel Using ⏮ SEEK or ⏭ SEEK (Radio with CD/DVD and MEM)

Press and release ⏮ SEEK or ⏭ SEEK to go to the previous or next channel.

Selecting a Channel Using the TUNE Knob

To select an XM channel using the TUNE knob:

Turn the TUNE knob to highlight an XM channel; the channel is selected after a short delay.

To select a channel using the menu:

1. Turn the MENU/Select knob and select Channel List.
2. Select the desired channel.

Selecting a Channel Using the Menu System

1. Turn the MENU/SELECT knob.
2. Select XM Category List.
3. Select the category.
4. Select the channel.

Storing an XM Channel as a Favorite

Channels from all bands can be stored in any order in the favorite pages.

Up to six channels can be stored in each favorite page and the number of available favorite pages can be set.

Storing a Channel as a Favorite

To store the channel to a position in the list, press and hold the corresponding 1 to 6 button until the channel can be heard again.

Retrieving Channels

Press the FAV button to open a favorite page or to change to another favorite page. Briefly press one of the 1 to 6 buttons to retrieve the channel.

Time Shifting (Radio with CD/DVD and MEM)

The radio with the MEM time shift feature can rewind 20 minutes of XM content. While listening to the radio, the content from the current channel is always being buffered.

Press ▶/II to pause the radio. The radio displays the time shift status bar. The status bar shows the amount of content stored in the buffer and the current pause point.

To resume playback from the current pause point, press ▶/II again. The radio is no longer live, but played from the time shift buffer. A status bar displays below the channel number.

Press and hold ⏮ SEEK or ⏭ SEEK to fast forward or rewind through the time shift buffer. Hold ⏭ SEEK until the end of the recorded buffer resumes live playback.

Press and release ⏮ SEEK or ⏭ SEEK to go to the next or previous song in the time shift buffer.

When the channel is changed, the buffer is cleared and automatically restarted for the current channel. Content from a previously tuned station is no longer available.

The time shift feature is not available while recording or with other sources of playback.

Pausing XM with the Vehicle Turned Off

If XM is paused when the vehicle is turned off, the radio continues to buffer the current radio station for up to 20 minutes. If the vehicle is turned back on within 20 minutes, the radio resumes playback from the paused point.

XM Messages

XL (Explicit Language Channels): These channels, or any others, can be blocked by request, by calling 1-800-929-2100 in the U.S. and 1-877-438-9677 in Canada.

XM Updating: The encryption code in the receiver is being updated, no action is required. This process should take no longer than 30 seconds.

Loading XM: The audio system is acquiring and processing audio and text data, no action is needed. This message should disappear shortly.

Channel Off Air: This channel is not currently in service. Tune in to another channel.

Channel Unauth: This channel is blocked or cannot be received with your XM Subscription package.

Channel Unavailable: This previously assigned channel is no longer assigned. Tune to another station.

No Artist Info: The system is working properly. No artist information is available at this time on this channel.

No Title Info: The system is working properly. No song title information is available at this time on this channel.

No CAT Info: The system is working properly. No category information is available at this time on this channel.

No Information: The system is working properly. No text or informational messages are available at this time on this channel.

No Subscription Please Renew: XM subscription needs to be reactivated. Contact XM at www.xmradio.com or call 1-800-929-2100 in the U.S. and www.xmradio.ca or call 1-877-438-9677 in Canada.

No XM Signal: The system is working properly. The vehicle may be in a location where the XM signal is being blocked. When the vehicle is moved into an open area, the signal should return.

CAT Not Found: The system is working properly. There are no channels available for the selected category.

XM Radio ID: If tuned to channel 0, this message alternates with the XM Radio eight-digit radio ID label. This label is needed to activate the service.

Unknown: If this message is received when tuned to channel 0, there could be a receiver fault. Consult with your dealer.

Check Antenna: If this message does not clear within a short period of time, the receiver could have a fault. Consult with your dealer.

XM Not Available: If this message does not clear within a short period of time, the receiver could have a fault. Consult with your dealer.

Radio Reception

Frequency interference and static can occur during normal radio reception if items such as cell phone chargers, vehicle convenience accessories, and external electronic devices are plugged into the accessory power outlet. If there is interference or static, unplug the item from the accessory power outlet.

FM

FM signals only reach about 16 to 65 km (10 to 40 mi). Although the radio has a built-in electronic circuit that automatically works to reduce interference, some static can occur, especially around tall buildings or hills, causing the sound to fade in and out.

AM

The range for most AM stations is greater than for FM, especially at night. The longer range can cause station frequencies to interfere with each other. Static can occur when things like storms and power lines interfere with radio reception. When this happens, try reducing the treble on the radio.

XM™ Satellite Radio Service

XM Satellite Radio Service gives digital radio reception from coast to coast in the 48 contiguous United States, and in Canada. Just as with FM, tall buildings or hills can interfere with satellite radio signals, causing the sound to fade in and out. In addition, traveling or standing under heavy foliage, bridges, garages, or tunnels may cause loss of the XM signal for a period of time.

Cellular Phone Usage

Cellular phone usage can cause interference with the vehicle's radio.

Multi-Band Antenna

The multi-band antenna is on the roof of the vehicle. The antenna is used for the AM-FM radio, OnStar, the XM Satellite Radio Service System, and GPS (Global Positioning System), if the vehicle has these features. Keep the antenna clear of obstructions for clear reception.

Audio Players

CD Player (Radio with CD)

The CD player can play audio CDs and MP3 CDs.

The CD player will not play 8 cm (3 in) CDs.

Care of CDs

Sound quality can be reduced due to disc quality, recording method, quality of the music recorded, and how the disc has been handled. Handle discs carefully and store them in their original cases or other protective cases away from direct sunlight and dust. If the bottom surface of a disc is damaged, the disc may not play properly or at all.

Do not touch the bottom surface of a disc while handling it; this could damage the surface. Pick up discs by grasping the outer edges or the edge of the hole and the outer edge.

If the bottom surface of a disc is dirty, take a soft lint-free cloth, or dampen a clean soft cloth in a mild neutral detergent solution mixed with water, and clean it. Wipe the disc from the center to the outer edge.

Care of the CD Player

Do not add a label to a disc, as it could get caught in the CD player. If a label is needed, label the top of the recorded disc with a marking pen.

Do not use disc lens cleaners because they could contaminate the lens of the disc optics and damage the CD player.

Notice: **If a label is added to a CD, more than one CD is inserted into the slot at a time, or an attempt is made to play scratched or damaged CDs, the CD player could be damaged. While using the CD player, use only CDs in good condition without any label, load one CD at a time, and keep the CD player and the loading slot free of foreign materials, liquids, and debris.**

Control Buttons

The buttons used to control the CD player are:

CD: Press to use the CD player.

⏭ SEEK / ⏮ SEEK: Press to select tracks or to fast forward or rewind within a track.

INFO: Press to display additional information about the current track that may be available.

TUNE: Turn to select tracks.

MENU/SELECT: Turn to enter the menu; press to select an item.

⏏ **(Eject):** Press to eject the disc.

⏵/⏸ **(Play/Pause):** Press to pause a CD or MP3 track, press again to resume playback.

Inserting a CD

With the printed side facing up, insert a disc into the CD slot until it is drawn in.

Removing a CD

Press ⏏.

The disc is pushed out of the CD slot.

If the disc is not removed after it is ejected, it is pulled back in after a few seconds.

Playing a CD or MP3 CD

Press the CD button. If there is a disc in the player, it begins playing.

Information about the disc and current track is shown on the display depending on the data stored.

Selecting a CD Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob.

Using the CD Menu:

1. Turn the MENU/SELECT knob.
2. Select Tracks list.
3. Select the track.

Playing Tracks in Random Order

Turn the MENU/SELECT knob and set Shuffle Songs to On.

Fast Forward and Rewind

Press and hold ⏭ SEEK or ⏮ SEEK to fast forward or rewind within the current track.

Selecting an MP3 Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob.

Using the CD Menu:

1. Turn the MENU/SELECT knob.
2. Select Playlists/Folders.
3. Select the playlist or folder.
4. Select the track.

Searching for MP3 Tracks

The search feature may take some time to display the information after reading the disc due to the amount of information stored on the disc. FM automatically plays while the disc is being read.

Tracks can be searched by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres
- Folder View

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Genres, or Folder View.
4. Select the track.

CD/DVD Player

The CD/DVD player can play CDs, DVD-As, MP3/WMA CDs, MP3/WMA DVDs, and DVD-Vs.

The CD/DVD player will not play 8 cm (3 in) discs.

Care of CDs and DVDs

Sound quality can be reduced due to disc quality, recording method, quality of the music recorded, and how the disc has been handled. Handle discs carefully and store them in their original cases or other protective cases away from direct sunlight and dust. If the bottom surface of a disc is damaged, the disc may not play properly or at all.

Do not touch the bottom surface of a disc while handling it; this could damage the surface. Pick up discs by grasping the outer edges or the edge of the hole and the outer edge.

If the bottom surface of a disc is dirty, take a soft lint-free cloth, or dampen a clean soft cloth in a mild neutral detergent solution mixed with water, and clean it. Wipe the disc from the center to the outer edge.

Care of the CD/DVD Player

Do not add a label to a disc, as it could get caught in the CD/DVD player. If a label is needed, label the top of the recorded disc with a marking pen.

Do not use disc lens cleaners because they could contaminate the lens of the disc optics and damage the CD/DVD player.

Notice: **If a label is added to a CD, more than one CD is inserted into the slot at a time, or an attempt is made to play scratched or damaged CDs, the CD player could be damaged. While using the CD player, use only CDs in good condition without any label, load one CD at a time, and keep the CD player and the loading slot free of foreign materials, liquids, and debris.**

Control Buttons

The buttons used to control the CD/DVD player are:

MEM/CD/AUX: Press to choose between the MEM, CD/DVD, and AUX.

⏭ **SEEK/** ⏮ **SEEK:** Press to select tracks or to fast forward or rewind within a track.

INFO: Press to display additional information about the disc that may be available.

TUNE: Turn to select tracks.

MENU/SELECT: Turn to enter the menu and press to select an item.

⏏ **(Eject):** Press to eject the disc.

⏵/⏸ **(Play/Pause):** Press to pause a CD, DVD-A, or DVD-V. Press again to resume playback. Press and hold to stop a DVD-V disc.

Inserting a CD or DVD

With the printed side facing up, insert a disc into the slot until it is drawn in.

Removing a CD or DVD

Press ⏏

The disc is pushed out of the CD/DVD slot.

If the disc is not removed after it is ejected, it is pulled back in after a few seconds.

Playing a CD or DVD-A Disc

Press the MEM/CD/AUX button. If there is a disc in the player, it begins playing.

Information about the disc and current track is shown on the display depending on the data stored.

Selecting CD or DVD-A Tracks

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob.

Using the menu:

1. Turn the MENU/SELECT knob.
2. Select Tracks List.
3. Select the track.

Pausing a CD or DVD-A Track

Press ⏵/⏸ to pause a CD or DVD-A track. Press ⏵/⏸ again to continue playing the track.

Playing CD or DVD-A Tracks in Random Order

Turn the MENU/SELECT knob and then set Shuffle Songs to On.

Fast Forward and Rewind

Press and hold ⏭ SEEK or ⏮ SEEK to fast forward or rewind within the current track.

Playing an MP3 CD or DVD

Files that are not stored in folders are displayed in the root directory (disc).

The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Selecting an MP3 Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob.

Using the CD or DVD Menu:

1. Turn the MENU/SELECT knob.
2. Select Folder List.
3. Select the folder.
4. Select the track.

Searching for MP3s on a CD or DVD

It is normal for the search feature to take some time to display the information after reading the disc due to the amount of information stored on the disc. The infotainment system automatically switches to FM while the disc is being read.

Files that do not have any meta data stored in the ID3 tag display as Unknown.

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, or Genres.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Playing MP3 Tracks in Random Order

Turn the MENU/SELECT knob and set Shuffle Songs to On.

Recording an Audio or MP3 CD to MEM

See *Mass Storage Media (MEM) on page 7-25* for more information.

Playing a DVD-V

See *Rear Seat Entertainment (RSE) System on page 7-37* for information about how to control a Video DVD using the wireless remote control.

Selecting a Chapter

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next chapter.
- Turn the TUNE knob.

Using the DVD Menu:

1. Turn the MENU/SELECT knob.
2. Select Chapter List.
3. Select the chapter.

Selecting a Title

1. Turn the MENU/SELECT knob.
2. Select Title List.
3. Select the title.

Changing the Audio Stream

1. Turn the MENU/SELECT knob.
2. Select Audio Stream.
3. Select Change Audio Stream.
4. Press MENU/SELECT to change the selection.

Select Cancel to exit the menu.

Pausing a DVD

1. Turn the MENU/SELECT knob.
2. Select Pause to pause the disc. Select unpause to start playback.

Navigating the DVD-V Disc Menu

Use the following actions to navigate the title menu on a DVD-V Disc.

- Select/Enter
- Cursor UP
- Cursor DOWN
- Cursor RIGHT
- Cursor LEFT
- Up Menu

Use the following actions to navigate the menu on a DVD-V Disc while playing chapters.

- Pause (Play)
- Chapter List
- Title List
- DVD/DVD — DVD on both video screens
- DVD/AUX — Left video screen/Right AUX input
- AUX/DVD — Left AUX input/Right video screen
- AUX/AUX — AUX input on both video screens

To navigate the menu:

1. Turn the MENU/SELECT knob.
2. Select the action.

Mass Storage Media (MEM)

Infotainment systems with MEM storage are able to record up to 1.1 GB (gigabyte) of music from Audio CDs, MP3/WMA/AAC discs, and USB storage devices. The MEM player can also time shift audio from AM, FM, and XM radio.

Music or content stored in MEM that you did not create, or have the right to distribute, must be deleted before the sale or end of lease of the vehicle.

Control Buttons

The buttons used to control the MEM player are:

MEM/CD/AUX: Press to select the MEM player.

⏭ SEEK/ ⏮ SEEK: Press to select tracks or to fast forward or rewind within a track.

INFO: Press to display additional information about the MEM track that may be available. Turn to select tracks.

▶/⏸ (Play/Pause): Press to pause the track currently playing; press again to resume playback.

○ REC: Press to record music from a CD or USB drive.

DEL: Press to delete the current track from MEM.

FAV (Favorites): Press to display MEM favorites.

1 to 6: Press to select a track or playlist stored in that numeric position.

Recording from Audio CDs

The infotainment system can record the current song playing or all songs from an audio CD to MEM. A status bar appears on the top of the display when the recording process starts and disappears when the process has ended. Copy protected CDs cannot be recorded to MEM.

Recording to MEM

Press ○ REC, then select "Record Current Song" or "Record All Songs on Disc." If the track has started playing, the system will restart the track and begin recording from the beginning of the track. When the song recording is completed, the message "Song Recorded to MEM" displays, and there may be a slight pause.

Songs recorded to MEM are stored as the current date, disc, and track number.

Re-recording a Previously Recorded Disc

If the disc or track has already been recorded to MEM, the message "The Song(s) is Already Recorded" displays.

Stopping the Recording

Press the ○ REC button while recording from an audio CD to display the stop recording option. Select "Stop Recording Song to MEM."

Renaming Recorded Discs

Discs that have been recorded to MEM can be renamed.

1. Turn the MENU/SELECT knob.
2. Select Rename Recorded Discs.
3. Select the disc.
4. Select Album or Artist to rename either one.
5. Use the MENU/SELECT knob to enter the character sequence. See *Operation on page 7-7* for more information.

Recording from MP3/WMA Discs or USB Storage Devices

USB Host Support

The USB connector uses the USB standards, 1.1 and 2.0.

USB-Supported Devices

- USB Flash Drives
- Portable USB Hard Drives

Recording to MEM

Press ○ REC, then select "Record Current Song" or "Record All Songs on Disc."

The information stored by MEM is titled according to the ID3 tag associated with it.

Re-recording a Previously Recorded Disc

If the disc or track has already been recorded to MEM, the message "The Song(s) is Already Recorded" displays.

Stopping the Recording

Press the ○ REC button while recording from an MP3/WMA CD or USB storage device to display the stop recording option. Select "Stop Recording Song to MEM"

Deleting Tracks from MEM

Individual tracks and all tracks can be deleted from MEM.

To delete individual tracks, press and release the DEL button while the track is playing.

To delete all tracks from MEM, press and hold the DEL button while a track is playing.

Playing from MEM

Playing Back a Previously Recorded CD

Turn the TUNE knob to select a track if MEM is already playing from the previously recorded disc.

1. Select Recorded Disc List.
2. Select the disc.
3. Select the track.

Searching for a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, or Genres.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Shuffle Songs

Select the Shuffle Songs option from the MEM menu to randomly play back tracks stored in MEM.

Configuring MEM Favorites

During MEM playback, press the FAV button to change between favorite categories. The favorite categories are:

- Playlists
- Artists
- Albums
- Genres

To remove MEM favorites categories:

1. Press the CONFIG button.
2. Select Radio Settings.
3. Select MEM Favorites.
4. Remove the checkmark from the box to remove that MEM favorites category.

Replace the checkmark to re-add the removed category.

Saving MEM Tracks as Favorites

Favorites can be saved by pressing and holding one of the 1 to 6 buttons. Favorites can be stored according to the following list:

Playlist: Adds the currently playing track to the playlist selected.

Artist: Saves the artist associated with the currently playing track in the indicated favorites position.

Album: Saves the album associated with the currently playing track in the indicated favorites position.

Genre: Saves the genre associated with the currently playing track in the indicated favorites position.

Creating Playlists

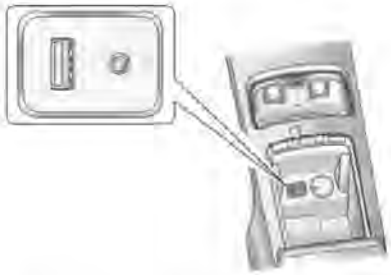
To create a playlist using tracks stored in MEM:

1. Select Playlist from the MEM favorites.
2. Select the track to be stored in the playlist.
3. Press and hold one of the 1 to 6 buttons until the track can be heard again to store the track.
4. Repeat Steps 1 though 3 to store additional tracks in the playlist.

Auxiliary Devices (Radio with CD)

The optional AUX input allows portable devices to connect to the vehicle using the 3.5 mm (1/8 in) input jack, the USB port, or Bluetooth® wireless technology, if equipped.

Portable devices are controlled by using the menu system described in *Operation on page 7-7*.



The AUX input is located in the center console.

3.5 mm Auxiliary Input Jack

Connect a 3.5 mm (1/8 in) cable to the 3.5 mm auxiliary input jack to use a portable audio player.

Playback of an audio device that is connected to the 3.5 mm auxiliary input jack can only be controlled using the controls on the device.

Adjusting the Volume

Turn the VOL/ ⏻ knob to adjust the volume of the infotainment system after the volume level has been set on the portable audio device.

USB Port

For vehicles with a USB port, the following devices may be connected and controlled by the infotainment system.

- iPods®
- PlaysForSure Devices (PFD)
- USB Drives
- Zunes

Not all iPods, PFDs, USB Drives, and Zunes are compatible with the infotainment system.

Connecting and Controlling an iPod®

Not all iPods can be controlled by the infotainment system.

Connecting an iPod

Connect the iPod to the USB port.

Searching for a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Podcasts
- Genres
- Audiobooks
- Composers

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Podcasts, Genres, Audiobooks, or Composers.
4. Select the track.

Shuffle

Turn the MENU/SELECT knob and set Shuffle Songs (Random) to On or Off, then press the BACK button to return to the main screen.

On: Plays tracks in the current folder in random order.

Off: Plays tracks in the current folder in sequential order.

Repeat

Turn the MENU/SELECT knob and set Repeat to On or Off, then press the BACK button to return to the main screen.

On: Repeats the current track.

Off: Playback starts from the beginning of the current track after the last track finishes.

Connecting and Controlling a PlaysForSure Device (PFD) or Zune™

Connecting a PFD or Zune

Connect the PFD or Zune to the USB port.

Searching for a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Podcasts
- Genres

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Podcasts, or Genres.
4. Select the track.

Shuffle Functionality

Turn the MENU/SELECT knob and set Shuffle Songs (Random) to On or Off.

On: Plays current tracks in random order.

Off: Plays current tracks in sequential order.

Repeat Functionality

Turn the MENU/SELECT knob and set Repeat to On or Off.

Repeat On: Repeats the current track.

Repeat Off: Playback starts from the beginning of the current track after the last track finishes.

Connecting and Controlling a USB Drive

The infotainment system can only play back .mp3 and .wma files from a USB drive.

Only the first 10,000 songs are recognized on the device.

When a device is not supported, the message "No supported data found. You can safely disconnect the device" appears.

Connecting a USB Drive

Connect the USB drive to the USB port.

Searching for a Track

It is normal for the search feature to take some time to display the information after reading the device due to the amount of information stored.

Files that do not have any meta data stored in the ID3 tag display as Unknown.

Tracks can be searched for by:

- Playlists*
- Artists
- Albums
- Song Titles
- Genres
- Folder View

*This only displays if a playlist is found on the device.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Genres, or Folder View.
4. Select the track.

Shuffle Functionality

Turn the MENU/SELECT knob and set Shuffle Songs (Random) to On or Off.

On: Plays current tracks in random order.

Off: Plays current tracks in sequential order.

Repeat Functionality

Turn the MENU/SELECT knob and set Repeat to On or Off.

Repeat On: Repeats the current track.

Repeat Off: Playback starts from the beginning of the current track after the last track finishes.

Connecting a Bluetooth® Device

Before a Bluetooth device can be connected to the infotainment system, it must first be paired to the system. Not all Bluetooth devices can be paired to the infotainment system. Before pairing the Bluetooth device, become familiar with its user guide for Bluetooth functions. The system only connects to Bluetooth devices that support A2DP (Advanced Audio Distribution Profile) version 1.2.

A Bluetooth phone with MP3 capability cannot be paired to the vehicle as a phone and an MP3 player at the same time.

Pairing Information:

- Up to five devices can be paired to the system.
- The pairing process is disabled when the vehicle is moving.
- The infotainment system automatically links with the first available paired device in the order the device was paired.
- Only one paired device can be connected to the infotainment system at a time.
- Pairing should only need to be completed once, unless changes to the pairing information have been made or the device is deleted.

Bluetooth Setup Menu

The Bluetooth Setup menu can be accessed with or without a device attached to the USB port.

To select the Bluetooth Setup menu when a device is attached to the USB port and active:

1. Turn the MENU/SELECT knob while in the iPod, Zune, PFD, or USB device main menu.
2. Select Bluetooth Music Setup.

To select the Bluetooth Music Setup menu when a device is not attached to the USB port, or when a device is attached to the USB port but not active:

1. Press the AUX button until AUX is the active source.
2. Turn the MENU/SELECT knob.
3. Select Bluetooth Music Setup.

To select the Bluetooth Music Setup menu when a Bluetooth device is connected and active:

1. Turn the MENU/SELECT knob.
2. Select Bluetooth Music Setup.

Pairing a Device

1. Select Connect To New Device from the Bluetooth Music Setup menu.
2. The system asks a series of Yes/No questions to determine what type of device is being paired.
3. After the system determines what type of Bluetooth device is being paired, the Bluetooth device will need to be put into discovery mode.
4. Some devices may require a Personal Identification Number (PIN) in order to complete the pairing process. Locate the device named "GMusicConnect" in the list on the Bluetooth device and follow the instructions on the device to enter the four-digit PIN provided by the infotainment system.

Connecting to a Device

Once a device is paired to the infotainment system, it can be connected to the infotainment system.

To connect a paired device when no other device is connected to the infotainment system:

1. Select the Select Device option from the Bluetooth Music Setup menu.
2. Select the new device.

To connect a paired device when another device is connected to the infotainment system:

1. Select the Select Device option from the Bluetooth Music Setup menu.
2. Select the new device.
3. The active device is disconnected from the system and the new device is connected.

Removing a Device

1. Select Remove Device from the Bluetooth Music Setup menu.
2. Select the device.
3. The device is removed from the system.

Before connecting to the removed device again, it will need to paired to the infotainment system.

Changing the Default PIN

To change the default PIN:

1. Select Change Default PIN from the Bluetooth Music Setup menu.
2. Select one of the pre-defined PIN, or select Other to create a PIN.

To create a PIN:

1. Select the length of the PIN.
2. Enter the character sequence.

Messages

The following messages may appear on the infotainment screen.

Poor Bluetooth Signal Quality: This message displays when the Bluetooth signal strength is low.

This Feature is Unavailable While Vehicle is Moving: This message displays when an action is not allowed while the vehicle is moving.

Controlling a Bluetooth® Device

Bluetooth devices that support AVRCP (Audio/Video Remote Control Profile) version 1.0 may be able to be controlled by the infotainment system.

Press and release ⏮ SEEK / ⏭ SEEK to skip tracks.

Other Information

The Bluetooth® word mark and logos are owned by the Bluetooth® SIG, Inc. and any use of such marks by General Motors is under license. Other trademarks and trade names are those of their respective owners.

See *Radio Frequency Statement on page 13-23* for FCC information.

Auxiliary Devices (Radio with CD/DVD and MEM)

The optional AUX input allows portable devices to be connected using the 3.5 mm (1/8 in) input jack or the USB port.

Portable devices are controlled by using the menu system described in *Operation on page 7-7*.

The AUX input is located in the center console.

3.5 mm Auxiliary Input Jack

Connect a 3.5 mm (1/8 in) cable to the 3.5 mm auxiliary input jack to use a portable audio player.

Playback of an audio device that is connected to the 3.5 mm auxiliary input jack can only be controlled using the controls on the device.

Adjusting the Volume

Turn the VOL/ ⏻ knob to adjust the volume of the infotainment system after the volume level has been set on the portable audio device.

USB Port

The following devices may be connected to the USB port and controlled by the infotainment system.

- iPods
- USB Mass Storage Devices

Not all iPods or USB Mass Storage Devices are compatible with the infotainment system.

Connecting and Controlling an iPod®

Not all iPods can be controlled by the infotainment system.

Connecting an iPod

Connect the iPod to the USB port.

Selecting a Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob to select a track in the current submenu. The track will start to play.

Playing Tracks in Random Order

Turn the MENU/SELECT knob and set Shuffle Songs to On or Off.

Shuffle On: Plays current tracks in random order.

Shuffle Off: Plays current tracks in sequential order.

Searching for a Track

Tracks can be searched for by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres
- Composers
- Audiobooks

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, Genres, Composers, or Audiobooks.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Connecting and Controlling a USB Drive

Files that are not stored in folders are displayed in the root directory (USB).

Connecting a USB Drive

Connect the USB drive to the USB port.

Disconnecting a USB Drive

A USB drive should be ejected from the USB port before disconnecting it. To eject a USB drive:

1. Turn the MENU/SELECT knob.
2. Select USB Eject.

Playing Tracks in Random Order

Turn the MENU/SELECT knob and then set Shuffle Songs to On.

Selecting a Track

Using the control buttons:

- Press ⏮ SEEK or ⏭ SEEK to select the previous or next track.
- Turn the TUNE knob to select a track in the current submenu. The track will start to play.

Selecting a track in a different folder:

1. Turn the MENU/SELECT knob.
2. Select Folder List.
3. Select the folder.
4. Select the track.

Searching for Tracks

It is normal for the search feature to take some time to display the information after reading the device due to the amount of information stored.

Files that do not have any meta data stored in the ID3 tag display as Unknown.

Tracks can be searched by:

- Playlists
- Artists
- Albums
- Song Titles
- Genres

The number of objects in each category is shown in parentheses after the category.

To search for tracks:

1. Turn the MENU/SELECT knob.
2. Select Search.
3. Select: Playlists, Artists, Albums, Song Titles, or Genres.
4. Select the track. The search rate increases if the MENU/SELECT knob is continuously turned while searching in a list.

Recording Tracks to MEM

See *Mass Storage Media (MEM) on page 7-25* for more information.

Rear Seat Infotainment

Rear Seat Entertainment (RSE) System

The vehicle may have a DVD Rear Seat Entertainment (RSE) system. The RSE system works with the vehicle's infotainment system. The DVD player is part of the front radio. The RSE system includes a radio with a DVD player, two rear seat video display screens, audio/video jacks, two wireless headphones, and a remote control. See *CD/DVD Player on page 7-21* or the separate navigation manual for more information on the vehicle's DVD system.

Before Driving

The RSE is for rear seat passengers only. The driver cannot safely view the video screen while driving.

In severe or extreme weather conditions the RSE system may not work until the temperature is within the operating range. The operating range is above −20°C (−4°F) and below 60°C (140°F). If the temperature is outside of this range, heat or cool the vehicle until it is within the operating range.

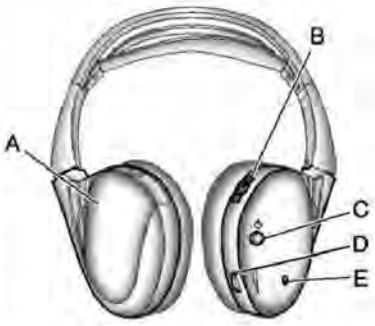
Global Off

Depending on the infotainment system, the RSE system may have a Global Off feature. The Global Off feature disables all RSE system features. Press and hold the radio power button for more than three seconds for Global Off to disable the RSE features. A padlock icon may display on the infotainment screen when the Global Off feature is on.

On some infotainment systems, the Global Off feature can be turned off by performing one of the following:

- Press and hold the radio power button for more than three seconds.
- Insert or eject any disc.
- Insert a DVD video disc.
- Press the Remote Control power button.
- Press the MEM/CD/AUX button or the ▶/II button when a DVD video disc is in the player.
- Press the SRC button on the steering wheel when a DVD video disc is in the player.
- Cycle the ignition.

Headphones



A. Battery cover
B. Channel 1 or 2 switch
C. Power button
D. Volume control
E. Power indicator light

RSE includes two 2-channel wireless headphones. Channel 1 is dedicated to the DVD player, and Channel 2 is dedicated to RSA selections. The headphones are used to listen to various multi-media. If the vehicle is not equipped with RSA, then Channel 2 is dedicated to any external auxiliary device connected to the rear A/V jacks. The wireless headphones have a power button, Channel 1 or 2 switch, and a volume control. Turn the headphones off when not in use.

Push the power button to turn on the headphones. A light on the headphones comes on. If the light does not come on, check the batteries. Intermittent sound or static can also indicate weak batteries. See "Battery Replacement" later in this section for more information.

Infrared transmitters are on the top of the left seatback video screen. The headphones shut off automatically to save the battery power if the RSE system and RSA are shut off or if the headphones are out of range of the transmitters for more than three minutes. Moving too far forward or stepping out of the vehicle can cause the headphones to lose the signal or have static.

To adjust the volume on the headphones, use the volume control.

For best audio performance, the headphones must be worn correctly, with the headband over the top of the head. L (Left) and R (Right) are above the ear pads and are indicators as to how the headphones should be placed on the head.

Notice: **Do not store the headphones in heat or direct sunlight. This could damage the headphones and repairs will not be covered by the warranty. Storage in extreme cold can weaken the batteries. Keep the headphones stored in a cool, dry place.**

If the foam ear pads attached to the headphones become worn or damaged, the pads can be replaced separately from the headphone set. To purchase replacement ear pads, call 1-888-293-3332, then prompt zero (0), or contact your dealer.

Battery Replacement

To change the batteries:

1. Loosen the screw to the battery door located on the left side of the headphones.
2. Slide the battery door open.
3. Replace the two AAA batteries.
4. Replace the battery door and tighten the screw.

Remove the batteries if the headphones are not going to be used for a long period of time.

Audio/Video (A/V) Jacks

The A/V jacks may be located on the rear of the floor console. They allow audio or video cables to be connected from an auxiliary device such as a camcorder or a video game system.

The A/V jacks are color coded:

- Yellow for video input.
- White for left audio input.
- Red for right audio input.

Power for auxiliary devices is not supplied by the radio system.

To use the auxiliary inputs of the RSE system:

1. Connect the auxiliary device cables to the A/V jacks.
2. Power on both the auxiliary device and the RSE video screen.

Changing the Source on the Video Display Screens

The image from the auxiliary device can be switched between the video display screens.

To change the display:

1. Press the AUX button on the remote control to change the source of both video screens from the DVD player to the auxiliary device.
2. Press the AUX button a second time to change the left video screen source to the DVD player and the right video screen to the auxiliary device.
3. Press the AUX button a third time to change the left video screen source to the auxiliary device and the right video screen to the DVD player.
4. Press the AUX button a fourth time to change the source of both video screens to the DVD player.

Changing the RSE Video Screen Settings

The screen display mode, brightness, and language can be changed from the setup menu using the remote control. To change a setting:

1. Press ☐.
2. Use ▲, ▼, ◀, ▶, and ◀┘ to select the settings.
3. Press ☐ again to exit the setup menu.

Audio Output

Audio from the DVD player or auxiliary inputs can be heard through the following:

- Wireless headphones
- Vehicle speakers
- Vehicle wired headphone jacks on the rear seat audio system, if the vehicle has this feature.

The RSE system transmits the audio signal to the wireless headphones if an audio signal is available. See "Headphones" earlier in this section for more information.

Audio can be heard from the wired headphone jacks on the RSA system by selecting the desired source from the RSA system, if the vehicle has this feature.

The front seat passengers are able to listen to playback from the A/V jacks through the vehicle speakers by selecting Rear A/V as the source on the radio.

Video Screens

The video screens are located in the back of the driver and front passenger seats.

To use the video screen:

1. Push the release button located on the seatback console.
2. Move the screen to the desired viewing position.

Push the video screen down into its locked position when it is not in use. The screen turns off automatically.

Only the left RSE seatback console contains the infrared transmitters for the wireless headphones. They may be visible as eight illuminated LEDs. These LEDs are not on the right video screen. Both seatback consoles contain an infrared receiver for the remote control. They are located at the top of each console.

Notice: **Avoid directly touching the video screen, as damage may occur. See "Cleaning the Video Screens" later in this section for more information.**

Video Screen Input Jack

Each video screen is equipped with a video input jack to allow video cables to be connected from an auxiliary device such as a camcorder or a video game system. This signal will override any video provided by the RSE system; either the DVD or Auxiliary A/V jack source. The RSE system must be on for this input to operate.

Remote Control

To use the remote control, aim it at the transmitter window at either seatback console and press the button. Direct sunlight or very bright light could affect the ability of the RSE transmitter to receive signals from the remote control. Check the batteries if the remote control does not seem to be working. See "Battery Replacement" later in this section. Objects blocking the line of sight could also affect the function of the remote control.

If a CD, DVD, or MP3 disc is in the Radio DVD slot, the remote control ⏻ button can be used to turn on the video screen display and start the disc. The infotainment system can also turn on the video screen display. See *CD/DVD Player on page 7-21* or the separate navigation manual for more information.

Notice: **Storing the remote control in a hot area or in direct sunlight can damage it, and the repairs will not be covered by the warranty. Storage in extreme cold can weaken the batteries. Keep the remote control stored in a cool, dry place.**

Remote Control Buttons

⏻ **(Power):** Press to turn the video screens on and off.

☼ **(Illumination):** Press to turn the remote control backlight on. The backlight times out after several seconds if no other button is pressed.

(Title): Press to return to the main menu of the DVD. This function could vary for each disc.

▤ **(Main Menu):** Press to access the DVD menu. The DVD menu is different on every DVD. Use the navigation arrows to move the cursor. After making a selection press the enter button. This button only operates when using a DVD.

▲, ▼, ◀, ▶ **(Menu Navigation Arrows):** Use the arrow buttons to navigate through a menu.

(Enter): Press to select the highlighted choice in any menu.

(Display Menu): Press to adjust the brightness and screen display mode, and display the language menu.

(Return): Press to exit the current active menu and return to the previous menu. This button operates only when the display menu or a DVD menu is active.

(Stop): Press to stop playing, rewinding, or fast forwarding a DVD. Press twice to return to the beginning of the DVD.

(Play/Pause): Press to start playing a DVD. Press to pause a DVD while it is playing. Press again to continue playing.

Depending on the infotainment system in the vehicle, DVD playback may be slowed down by pressing ► ‖ then ►►. Reverse slow play by pressing ► ‖ then ◄◄. Press ► ‖ again to cancel slow play.

(Previous Track/Chapter): Press to go to the start of the current track or chapter. Press again to go to the previous track or chapter. This button may not work when the DVD is playing the copyright information or the previews.

(Next Track/Chapter): Press to go to the beginning of the next chapter or track. This button might not work when the DVD is playing the copyright information or the previews.

(Fast Reverse): Press to quickly reverse the DVD or CD. To stop fast reversing a DVD video, press ► ‖. To stop fast reversing a DVD audio or CD, release ◄◄. This button might not work when the DVD is playing the copyright information or the previews.

(Fast Forward): Press to fast forward the DVD or CD. To stop fast forwarding a DVD video, press ► ‖. To stop fast forwarding a DVD audio or CD, release ►►. This button might not work when the DVD is playing the copyright information or the previews.

(Audio): Press to change audio tracks on DVDs that have this feature when the DVD is playing.

(Subtitles): Press to turn ON/OFF subtitles and to move through subtitle options when a DVD is playing.

AUX (Auxiliary): Press to switch the video displays between the DVD player and an auxiliary source.

The AUX button also controls the source display between the left and right video screens as described in the table below:

Aux Button Press	Left Screen	Right Screen
Default State (No Press)	DVD Media	DVD Media
First Press	Aux Video Source	Aux Video Source
Second Press	DVD Media	Aux Video Source
Third Press	Aux Video Source	DVD Media
Fourth Press	Return to Default State	Return to Default State

(Camera): Press to change the camera angle on DVDs that have this feature when the DVD is playing.

(Clear) (If Available): Press this button within three seconds after inputting a numeric selection, to clear all numeric inputs.

≧10 (Double Digit Entries) (If Available): Press this button to select chapter or track numbers greater than 9. Press this button before inputting the number.

1 through 0 (Numeric Keypad): The numbered keypad provides the capability of direct chapter or track number selection.

Replacing the Remote Control

If the remote control becomes lost or damaged, a new universal remote control can be purchased. Use a Toshiba® code set for replacement universal remote controls.

Battery Replacement

To change the remote control batteries:

1. Slide back the rear cover on the remote control.
2. Replace the two batteries in the compartment.
3. Replace the battery cover.

Remove the batteries from the remote control if unused for an extended period of time.

Tips and Troubleshooting Chart

Problem	Recommended Action
No power.	The ignition might not be turned to ON/RUN or ACC/ACCESSORY.
The picture does not fill the screen. There are black borders on the top and bottom or on both sides or it looks stretched out.	Check the display mode settings in the setup menu by pressing the display menu button on the remote control.
In auxiliary mode, the picture moves or scrolls.	Check the auxiliary input connections at both devices.
The remote control does not work.	Check to make sure there is no obstruction between the remote control and the transmitter window. Check the batteries to make sure they are not dead or installed incorrectly.
After stopping the player, I push Play but sometimes the DVD starts where I left off and sometimes at the beginning.	If the stop button was pressed one time, the DVD player resumes playing where the DVD was stopped. If the stop button was pressed two times, the DVD player begins to play from the beginning of the DVD.

Tips and Troubleshooting Chart (cont'd)

Problem	Recommended Action
The auxiliary source is running but there is no picture or sound.	Check that the RSE video screen is in the auxiliary source mode by pressing the AUX button on the remote control. Check the auxiliary input connections at both devices.
Sometimes the wireless headphone audio cuts out or buzzes.	Check for obstructions, low batteries, reception range, and interference from cellular telephone towers or by using a cellular telephone in the vehicle. Check that the headphones are on correctly using the L (left) and R (right) on the headphones. Check that the headphones are positioned properly with the headband across the top of the head.
I lost the remote and/or the headphones.	See your dealer for assistance.
The DVD is playing, but there is no picture or sound.	Check that the RSE video screen is sourced to the DVD player by pressing the AUX button on the remote control.

DVD Display Error Messages

The DVD display error message depends on which radio the vehicle has. The video screen may display one of the following:

Disc Load/Eject Error or Mechanical Error: There are disc load or eject problems.

Disc Format Error or Unknown Format: The disc is inserted with the disc label wrong side up, or the disc is damaged.

Disc Region Error or Disc Error: The disc is not from a correct region.

No Disc Inserted: No disc is present when the ⏏ or MEM/CD/AUX button is pressed on the radio.

DVD Distortion

Video distortion can occur when operating cellular phones, scanners, CB radios, Global Position Systems (GPSs)*, two-way radios, mobile faxes, or walkie talkies.

It might be necessary to turn off the DVD player when operating one of these devices in or near the vehicle.

*Excludes the OnStar® System.

Cleaning the RSE Seatback Console

Use only a clean cloth dampened with clean water to clean the RSE seatback console surface.

Cleaning the Video Screens

Use only a clean cloth dampened with clean water. Use care when touching or cleaning the screens as damage could result.

Rear Seat Audio (RSA) System

Vehicles with this feature allow the rear seat passengers to listen to and control any of the music sources: radio, CDs, DVDs, or other auxiliary sources. RSA can only control music sources that the front seat passengers are not listening to, except on radios where dual control is allowed.

RSA can function when the front radio is off. 🎧 displays on the infotainment system when RSA is on.

Audio can be heard through wired headphones (not included) plugged into the jacks on the RSA. If the vehicle has a Rear Seat Entertainment system with wireless headphones, audio can also be heard on Channel 2 of the wireless headphones.

To listen to a portable audio device through the RSA, attach the portable audio device to either the front or rear auxiliary input, if available. Turn the device on, then choose the front auxiliary input with the RSA SRCE button.

A. Left side volume control.

   Turn to increase or decrease the volume of the left headphones.

B. Right side volume control.

   Turn to increase or decrease the volume of the right headphones.

C. Left side 3.5 mm (1/8 in) headphone auxiliary jack.

D. Right side 3.5 mm (1/8 in) headphone auxiliary jack.

⏻ **(Power):** Press to turn the RSA on or off.

SRCE (Source): Press to select between the radio, CD, and if these features are available: DVD, front or rear auxiliary, HDD, USB. The front radio may override the rear selection as required.

⏮ **or** ⏭ **(Seek):** While listening to the radio, press to go to the previous or to the next station and stay there. If the front seat passengers are listening to the radio, this function may be inactive on some radios.

Press and hold ⏮ or ⏭ until "Tune" displays. Continue to press ⏮ or ⏭ to tune to an individual station. Tune stays active until ⏮ or ⏭ has not been pressed for several seconds.

If the front seat passengers are listening to the radio, this function may be inactive on some radios.

While listening to a disc, press ⏭ to go to the next track or chapter on the disc. Press ⏮ to go back to the start of the current track or chapter if more than 10 seconds have played. If the front seat passengers are listening to a disc, this function may be inactive on some radios. Press and hold ⏮ or ⏭ to fast reverse or fast forward.

When a DVD video menu is being displayed, press ⏮ or ⏭ to cursor up or down on the menu. Hold ⏮ or ⏭ to cursor left or right on the menu.

PROG (Program): Press to go to the next preset radio station or channel set on the main radio. If the front seat passengers are listening to the radio, this function may be inactive on some radios.

When a CD or DVD audio disc is playing, press PROG to go to the beginning of the disc or display disc info. If the front seat passengers are listening to a disc, this function may be inactive on some radios.

When a disc is playing in the CD or DVD changer, press and hold PROG to select the next disc, if multiple discs are loaded. If the front seat passengers are listening to a disc, this function may be inactive on some radios.

The PROG button may be used to access the menu of an MP3. Once in the menu, use ⏮ or ⏭ to make selections.

When a DVD video menu is displayed, press PROG, or press and hold PROG to perform the menu function, then press ENTER.

Phone

Bluetooth (Overview)

For vehicles equipped with Bluetooth capability, the system can interact with many cell phones, allowing:

- Placement and receipt of calls in a hands-free mode.
- Sharing of the cell phone's address book or contact list with the vehicle.

To minimize driver distraction, before driving, and with the vehicle parked:

- Become familiar with the features of the cell phone. Organize the phone book and contact lists clearly and delete duplicate or rarely used entries. If possible, program speed dial or other shortcuts.
- Review the controls and operation of the infotainment system.
- Pair cell phone(s) to the vehicle. The system may not work with all cell phones. See "Pairing" in this section for more information.
- If the cell phone has voice dialing capability, learn to use that feature to access the address book or contact list. See "Voice Pass-Thru" in this section for more information.
- See "Storing and Deleting Phone Numbers" in this section for more information.

⚠ WARNING

When using a cell phone, it can be distracting to look too long or too often at the screen of the phone or the infotainment (navigation) system. Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Vehicles with a Bluetooth system can use a Bluetooth-capable cell phone with a Hands-Free Profile to make and receive phone calls. The infotainment system and voice recognition are used to control the system. The system can be used while in ON/RUN or ACC/ACCESSORY. The range of the Bluetooth system can be up to 9.1 m (30 ft). Not all phones support all functions and not all phones work with the Bluetooth system. See www.gm.com/bluetooth for more information about compatible phones.

Bluetooth Controls

Use the buttons located on the infotainment system and the steering wheel to operate the Bluetooth system.

Steering Wheel Controls

(Push To Talk): Press to answer incoming calls, confirm system information, and start voice recognition.

(End Call/Mute): Press to end a call, reject a call, or cancel an operation.

Infotainment System Controls

If equipped, the infotainment system allows certain controls to be selected on the infotainment display.

For information about how to navigate the menu system using the infotainment controls, see *Operation on page 7-7*.

PHONE: Press to enter the Phone main menu.

Voice Recognition

The voice recognition system uses commands to control the system and dial phone numbers.

Noise: The system may not recognize voice commands if there is too much background noise.

When to Speak: A tone sounds to indicate that the system is ready for a voice command. Wait for the tone and then speak.

How to Speak: Speak clearly in a calm and natural voice.

Audio System

When using the Bluetooth system, sound comes through the vehicle's front audio system speakers and overrides the audio system.

Use the VOL/ ⏻ knob during a call to change the volume level. The adjusted volume level remains in memory for later calls. The system maintains a minimum volume level.

Other Information

The Bluetooth® word mark and logos are owned by the Bluetooth® SIG, Inc. and any use of such marks by General Motors is under license. Other trademarks and trade names are those of their respective owners.

See *Radio Frequency Statement on page 13-23* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

Bluetooth (Infotainment Controls)

For information about how to navigate the menu system using the infotainment controls, see *Operation on page 7-7*.

Pairing

A Bluetooth-enabled cell phone must be paired to the Bluetooth system and then connected to the vehicle before it can be used. See your cell phone manufacturer's user guide for Bluetooth functions before pairing the cell phone. If a Bluetooth phone is not connected, calls will be made using OnStar Hands-Free Calling, if available. See *OnStar Overview on page 14-1* for more information.

Pairing Information

- A Bluetooth phone with MP3 capability cannot be paired to the vehicle as a phone and an MP3 player at the same time.
- Up to five cell phones can be paired to the Bluetooth system.
- The pairing process is disabled when the vehicle is moving.
- Pairing only needs to be completed once, unless the pairing information on the cell phone changes or the cell phone is deleted from the system.
- Only one paired cell phone can be connected to the Bluetooth system at a time.
- If multiple paired cell phones are within range of the system, the system connects to the first available paired cell phone in the order that they were first paired to the system. To link to a different paired phone, see "Linking to a Different Phone" later in this section.

Pairing a Phone

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Pair Device (Phone). A four-digit Personal Identification Number (PIN) appears on the display. The PIN is used is Step 6.
5. Start the pairing process on the cell phone to be paired to the vehicle. See the cell phone manufacturer's user guide for information on this process.
6. Locate the device named "Your Vehicle" in the list on the cell phone. Follow the instructions on the cell phone to enter the PIN provided in Step 4. After the PIN is successfully entered, the system prompts you to provide a name for the paired cell phone. This name will be used to indicate which phones are paired and connected to the vehicle. The system responds with "<Phone name> has been successfully paired" after the pairing process is complete.
7. Repeat Steps 1 through 6 to pair additional phones.

Listing All Paired and Connected Phones

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Device List.

Deleting a Paired Phone

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Device List.
5. Select the phone to delete and follow the on screen prompts.

Linking to a Different Phone

To link to a different phone, the new phone must be in the vehicle and available to be connected to the Bluetooth system before the process is started.

1. Press the CONFIG button.
2. Select Phone Settings.
3. Select Bluetooth.
4. Select Device List.
5. Select the new phone to link to and follow the on screen prompts.

   If delete is selected, the highlighted phone will be deleted.

Making a Call Using Phone Book

For cell phones that support the phone book feature, the Bluetooth system can use the contacts stored on your cell phone to make calls. See your cell phone's owner's guide or contact your wireless provider to find out if this feature is supported by your phone.

When a cell phone supports the phone book feature, the Phone Book and Call Lists menus are automatically available.

The Phone Book menu allows you to access the phone book stored in the cell phone to make a call.

The Call Lists menu allows you to access the phone numbers from the Incoming Calls, Outgoing Calls, and Missed Calls menus on your cell phone to make a call.

Radio with CD

To make a call using the Phone Book menu:

1. Press the PHONE button twice.
2. Select Phone Book.
3. Search through the list by selecting the letter group the phone book entry begins with, or press the SELECT button to scroll through the entire list of names/numbers in the phone book.
4. Select the name or number you want to call.

To make a call using the Call Lists menu:

1. Press the PHONE button twice.
2. Select Call Lists.
3. Select the Incoming Calls, Outgoing Calls, or Missed Calls list.
4. Select the name or number you want to call.

Radio with CD/DVD and MEM

1. Press the PHONE button.
2. Select Phone Book.
3. Search through the list by selecting the letter group the phone book entry begins with, or press the SELECT button to scroll through the entire list of names/numbers in the phone book.
4. Select the name or number you want to call.

To make a call using the Call Lists menu:

1. Press the PHONE button.
2. Select Call Lists.
3. Select the Incoming Calls, Outgoing Calls, or Missed Calls list.
4. Select the name or number you want to call.

Making a Call

Radio with CD

1. Press the PHONE button twice.
2. Enter the character sequence. See "Entering a Character Sequence" in *Operation on page 7-7* for more information.
3. Select Call to start dialing the number.

Radio with CD/DVD and MEM

1. Press the PHONE button.
2. Select Enter number.
3. Enter the character sequence. See "Entering a Character Sequence" in *Operation on page 7-7* for more information.
4. Select Call to start dialing the number.

Accepting or Declining a Call

When an incoming call is received, the infotainment system mutes and a ring tone is heard in the vehicle.

Accepting a Call

Turn the MENU/SELECT knob to "Answer" and press the MENU/SELECT knob to accept the call.

Declining a Call

Turn the MENU/SELECT knob to "Decline" and press the MENU/SELECT knob to decline the call.

Call Waiting

Call waiting must be supported on the Bluetooth phone and enabled by the wireless service carrier to work.

Accepting a Call

Turn the MENU/SELECT knob to "Answer" and press the MENU/SELECT knob to accept the call.

Declining a Call

Turn the MENU/SELECT knob to "Decline" and press the MENU/SELECT knob to decline the call.

Switching Between Calls (Call Waiting Calls Only)

To switch between calls:

1. Turn or press the MENU/SELECT knob.
2. Select Switch Call from the menu.

Conference Calling

Conference calling and three-way calling must be supported on the Bluetooth phone and enabled by the wireless service carrier to work.

To start a conference while in a current call:

1. Turn or press the MENU/SELECT knob.
2. Select Enter Number.
3. Enter the character sequence then select Call. See "Entering a Character Sequence" in *Operation on page 7-7* for more information.
4. After the call has been placed, turn or press the MENU/SELECT knob and choose Merge Calls.
5. To add more callers to the conference call, repeat Steps 1 through 4. The number of callers that can be added is limited by your wireless service carrier.

Ending a Call

Turn or press the MENU/SELECT knob and select Hang Up.

Muting a Call

To Mute a Call

Turn or press the MENU/SELECT knob and select Mute Call.

To Cancel Mute

Turn or press the MENU/SELECT knob and select Mute Call.

Dual Tone Multi-Frequency (DTMF) Tones

The in-vehicle Bluetooth system can send numbers during a call. This is used when calling a menu-driven phone system.

1. Turn or press the MENU/SELECT knob and select Enter Number.
2. Enter the character sequence. See "Entering a Character Sequence" in *Operation on page 7-7* for more information.

Bluetooth (Voice Recognition)

Using Voice Recognition

To use voice recognition, press the ✆ / 🎤 button located on the steering wheel. Use the commands below for the various voice features. For additional information, say "Help" while you are in a voice recognition menu.

Pairing

A Bluetooth-enabled cell phone must be paired to the Bluetooth system and then connected to the vehicle before it can be used. See your cell phone manufacturer's user guide for Bluetooth functions before pairing the cell phone. If a Bluetooth phone is not connected, calls will be made using OnStar Hands-Free Calling, if available. See *OnStar Overview on page 14-1* for more information.

Pairing Information

- A Bluetooth phone with MP3 capability cannot be paired to the vehicle as a phone and an MP3 player at the same time.
- Up to five cell phones can be paired to the Bluetooth system.
- The pairing process is disabled when the vehicle is moving.
- Pairing only needs to be completed once, unless the pairing information on the cell phone changes or the cell phone is deleted from the system.
- Only one paired cell phone can be connected to the Bluetooth system at a time.
- If multiple paired cell phones are within range of the system, the system connects to the first available paired cell phone in the order that they were first paired to the system. To link to a different paired phone, see "Linking to a Different Phone" later in this section.

Pairing a Phone

1. Press ✆ / 🎤. The system responds "Ready," followed by a tone.
2. Say "Bluetooth." This command can be skipped.
3. Say "Pair." The system responds with instructions and a four-digit Personal Identification Number (PIN). The PIN is used in Step 5.
4. Start the pairing process on the cell phone that you want to pair. For help with this process, see your cell phone manufacturer's user guide.
5. Locate the device named "Your Vehicle" in the list on the cell phone. Follow the instructions on the cell phone to enter the PIN provided in Step 3. After the PIN is successfully entered, the system prompts you to provide a name for the paired cell phone. This name will be used to indicate which phones are paired and connected to the vehicle. The system responds with "<Phone name> has been successfully paired" after the pairing process is complete.
6. Repeat Steps 1 through 5 to pair additional phones.

Listing All Paired and Connected Phones

The system can list all cell phones paired to it. If a paired cell phone is also connected to the vehicle, the system responds with "is connected" after that phone name.

1. Press ✆ / 🎤. The system responds "Ready," followed by a tone.
2. Say "Bluetooth."
3. Say "List."

Deleting a Paired Phone

If the phone name you want to delete is unknown, see "Listing All Paired and Connected Phones."

1. Press ✆ / 🎤. The system responds "Ready," followed by a tone.
2. Say "Bluetooth."
3. Say "Delete." The system asks for which phone to delete.
4. Say the name of the phone you want to delete.

Connecting to a Different Phone

To connect to a different cell phone, the Bluetooth system looks for the next available cell phone in the order in which all the available cell phones were paired. Depending on which cell phone you want to connect to, you may have to use this command several times.

1. Press ✆ / 🎤. The system responds "Ready," followed by a tone.
2. Say "Bluetooth."
3. Say "Change phone."
   - If another cell phone is found, the response will be "<Phone name> is now connected."
   - If another cell phone is not found, the original phone remains connected.

Storing and Deleting Phone Numbers

The system can store up to 30 phone numbers as name tags in the Hands-Free Directory that is shared between the Bluetooth and OnStar systems.

The following commands are used to delete and store phone numbers.

Store: This command will store a phone number, or a group of numbers as a name tag.

Digit Store: This command allows a phone number to be stored as a name tag by entering the digits one at a time.

Delete: This command is used to delete individual name tags.

Delete All Name Tags: This command deletes all stored name tags in the Hands-Free Calling Directory and the Destinations Directory.

Using the "Store" Command

1. Press ✆ / 🎤. The system responds "Ready," followed by a tone.
2. Say "Store."
3. Say the phone number or group of numbers you want to store all at once with no pauses, then follow the directions given by the system to save a name tag for this number.

Using the "Digit Store" Command

If an unwanted number is recognized by the system, say "Clear" at any time to clear the last number.

To hear all of the numbers recognized by the system, say "Verify" at any time.

1. Press ✆ / 🎤. The system responds "Ready," followed by a tone.
2. Say "Digit Store."
3. Say each digit, one at a time, that you want to store. After each digit is entered, the system repeats back the digit it heard followed by a tone. After the last digit has been entered, say "Store," and then follow the directions given by the system to save a name tag for this number.

Using the "Delete" Command

1. Press ✆ / 🎤. The system responds "Ready," followed by a tone.
2. Say "Delete."
3. Say the name tag you want to delete.

Using the "Delete All Name Tags" Command

This command deletes all stored name tags in the Hands Free Calling Directory and the Destinations Directory.

To delete all name tags:

1. Press ✆ / 🎤. The system responds "Ready," followed by a tone.
2. Say "Delete all name tags."

Listing Stored Numbers

The list command will list all the stored numbers and name tags.

Using the "List" Command

1. Press ✆ / 🎤. The system responds "Ready," followed by a tone.
2. Say "Directory."
3. Say "Hands Free Calling."
4. Say "List."

Making a Call

Calls can be made using the following commands.

Dial or Call: The dial or call command can be used interchangeably to dial a phone number or a stored name tag.

Digit Dial: This command allows a phone number to be dialed by entering the digits one at a time.

Re-dial: This command is used to dial the last number used on the cell phone.

Using the "Dial" or "Call" Command

1. Press / . The system responds "Ready," followed by a tone.
2. Say "Dial" or "Call."
3. Say the entire number without pausing or say the name tag.

Once connected, the person called will be heard through the audio speakers.

Using the "Digit Dial" Command

The digit dial command allows a phone number to be dialed by entering the digits one at a time. After each digit is entered, the system repeats back the digit it heard followed by a tone.

If an unwanted number is recognized by the system, say "Clear" at any time to clear the last number.

To hear all of the numbers recognized by the system, say "Verify" at any time.

1. Press / . The system responds "Ready," followed by a tone.
2. Say "Digit Dial."
3. Say each digit, one at a time, that you want to dial. After each digit is entered, the system repeats back the digit it heard followed by a tone. After the last digit has been entered, say "Dial."

Once connected, the person called will be heard through the audio speakers.

Using the "Re-dial" Command

1. Press / . The system responds "Ready," followed by a tone.
2. After the tone, say "Re-dial." The system dials the last number called from the connected cell phone.

Once connected, the person called will be heard through the audio speakers.

Receiving a Call

When an incoming call is received, the audio system mutes and a ring tone is heard in the vehicle.

- Press / to answer the call.
- Press / to ignore a call.

Call Waiting

Call waiting must be supported on the cell phone and enabled by the wireless service carrier.

- Press ✆ / 🎤 to answer an incoming call when another call is active. The original call is placed on hold.
- Press ✆ / 🎤 again to return to the original call.
- To ignore the incoming call, no action is required.
- Press 🔇 / ☎ to disconnect the current call and switch to the call on hold.

Three-Way Calling

Three-way calling must be supported on the cell phone and enabled by the wireless service carrier.

1. While on a call, press ✆ / 🎤.
2. Say "Three-way call."
3. Use the dial or call command to dial the number of the third party to be called.
4. Once the call is connected, press ✆ / 🎤 to link all callers together.

Ending a Call

Press 🔇 / ☎ to end a call.

Muting a Call

During a call, all sounds from inside the vehicle can be muted so that the person on the other end of the call cannot hear them.

To mute a call, press ✆ / 🎤, and then say "Mute Call."

To cancel mute, press ✆ / 🎤, and then say "Un-mute Call."

Transferring a Call

Audio can be transferred between the Bluetooth system and the cell phone.

The cell phone must be paired and connected with the Bluetooth system before a call can be transferred. The connection process can take up to two minutes after the ignition is turned to ON/RUN.

To Transfer Audio from the Bluetooth System to a Cell Phone

During a call with the audio in the vehicle:

1. Press ✆ / 🎤.
2. Say "Transfer Call."

To Transfer Audio to the Bluetooth System from a Cell Phone

During a call with the audio on the cell phone, press ✆ / ⌇. The audio transfers to the vehicle. If the audio does not transfer to the vehicle, use the audio transfer feature on the cell phone. See your cell phone manufacturer's user guide for more information.

Voice Pass-Thru

Voice pass-thru allows access to the voice recognition commands on the cell phone. See your cell phone manufacturer's user guide to see if the cell phone supports this feature.

To access contacts stored in the cell phone:

1. Press ✆ / ⌇. The system responds "Ready," followed by a tone.
2. Say "Bluetooth." This command can be skipped.
3. Say "Voice." The system responds "OK, accessing <phone name>."

The cell phone's normal prompt messages will go through their cycle according to the phone's operating instructions.

Dual Tone Multi-Frequency (DTMF) Tones

The Bluetooth system can send numbers and the numbers stored as name tags during a call. You can use this feature when calling a menu-driven phone system. Account numbers can also be stored for use.

Sending a Number or Name Tag During a Call

1. Press ✆ / ⌇. The system responds "Ready," followed by a tone.
2. Say "Dial."
3. Say the number or name tag to send.

Clearing the System

Unless information is deleted out of the in-vehicle Bluetooth system, it will be retained indefinitely. This includes all saved name tags in the phone book and phone pairing information. For information on how to delete this information, see the previous sections on "Deleting a Paired Phone" and "Deleting Name Tags."

Bluetooth (UHP Mexico Only)

General Information

Vehicles with a Universal Hands-free Phone (UHP) system can use a Bluetooth® capable mobile phone with a Hands-Free Profile to make and receive phone calls. The infotainment system and voice control are used to control the system. The system can be used while the ignition is in ON/RUN or ACC/ACCESSORY. The range of the UHP system can be up to 10 m (33 ft). Not all phones support all functions and not all phones work with the UHP system.

Other Information

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UHP Controls

Use the buttons located on the infotainment system and the steering wheel to operate the UHP system.

Steering Wheel Controls

Steering wheel controls can be used to:

- Answer incoming calls
- Confirm system information
- Start voice recognition
- End a call
- Reject a call
- Cancel an operation
- Make outgoing calls using the call list

(Push To Talk): Press to answer incoming calls, to confirm system information, and to start voice control. Press and hold for two to three seconds to access the call list.

(End call/Mute): Press to end a call, reject a call, or to cancel an operation.

To make outgoing calls using the call list.

1. Press the button.
2. Highlight the phone number by toggling the SRC switch up or down.
3. Dial the highlighted number by pressing the button.

Infotainment System Controls

For information about how to navigate the menu system using the navigation system controls, see the separate Navigation System Manual.

PHONE: Press to enter the Phone main menu.

Voice Control

The voice control system uses commands to control the system and dial phone numbers.

Noise: The system may not recognize voice commands if there is too much background noise.

When to Speak: A tone sounds to indicate that the system is ready for a voice command. Wait for the tone and then speak.

How to Speak: Speak clearly in a calm and natural voice.

Audio System

When using the UHP system, sound comes through the vehicle's front audio system speakers and overrides the audio system. Use the VOL/ ⏻ knob during a call to change the volume level. The adjusted volume level remains in memory for later calls. The system maintains a minimum volume level.

Turning Bluetooth On or Off

1. Press the CONFIG button.
2. Select Phone Settings, or touch Phone on a navigation radio.
3. Select Bluetooth.
4. Select Activation.

Changing Bluetooth Code

The default Bluetooth code should work with most mobile phones. If you are having difficulty pairing your mobile phone, you can change the code at any time.

1. Press the CONFIG button.
2. Select Phone Settings, or touch Phone on a navigation radio.
3. Select Bluetooth.
4. Select Change Bluetooth Code.
5. Enter a new four-digit code, then select OK.

Ring Tone

There are three different ring tones available for the UHP system.

To change the ring tone:

1. Press the CONFIG button.
2. Select Phone Settings, or touch Phone on a navigation radio.
3. Select Ring Tones.
4. Select Ring Tone 1, 2, or 3.

Default Settings

Selecting this option will reset the ring tones and the Bluetooth code.

Pairing

A Bluetooth enabled mobile phone must be paired to the UHP system first and then connected to the vehicle before it can be used. See the mobile phone manufacturer's user guide for Bluetooth functions before pairing the mobile phone.

Pairing Information:

- Up to five mobile phones can be paired to the UHP system
- The pairing process is disabled when the vehicle is moving
- The UHP system connects with the first available paired mobile phone in the order the phone was paired
- Only one paired mobile phone can be connected to the UHP system at a time
- Pairing should only need to be completed once, unless changes to the pairing information have been made or the mobile phone is deleted

Using UHP with Infotainment Controls

Pairing a Phone

If your mobile phone has simple pairing or auto discovery features, they need to be turned off before the mobile phone can be paired to the UHP system. Reference the mobile phone manufacturer's user guide for information on these features.

1. Press the CONFIG button.
2. Select Phone Settings, or touch Phone on a navigation radio.
3. Select Bluetooth.
4. Select Pair Device or Add new Hands-free (HF) device on a navigation radio. A four-digit number appears on the display and the UHP system goes into discovery mode.
5. Start the pairing process on the mobile phone that will be paired to the vehicle. Reference the mobile phone manufacturer's user guide for information on this process.

   Locate the device named UHP followed by a four-digit number in the list on the mobile phone and follow the instructions on the mobile phone and enter the four-digit code provided by the system if necessary, then follow the instructions on the infotainment display screen.
6. Repeat Steps 1 through 5 to pair additional mobile phones.

Viewing All Paired and Connected Phones

To view all available mobile phones that are paired to the UHP system:

1. Press the CONFIG button.
2. Select Phone Settings, or touch Phone on a navigation radio.
3. Select Bluetooth.
4. Select Device List.
5. Repeat Steps 1 through 4 to pair additional mobile phones.

Deleting a Paired Phone

To remove a paired mobile phone from the UHP system:

1. Press the CONFIG button.
2. Select Phone Settings, or touch Phone on a navigation radio.
3. Select Bluetooth.
4. Select Device List.
5. Select the mobile phone to delete and follow the on screen prompts.

Connecting to a Different Phone

To connect to a different paired mobile phone, the new mobile phone must be in the vehicle and available to be connected to the UHP system before the process is started.

To connect to a different phone:

1. Press the CONFIG button.
2. Select Phone Settings, or touch Phone on a navigation radio.
3. Select Bluetooth.
4. Select Device List.
5. Select the new mobile phone to link to and follow the on screen prompts.

If delete is selected, the highlighted mobile phone will be deleted.

Making a Call Using Phone Book and Call List

For mobile phones that support the phone book and call list features, the UHP system can use the contacts and call lists stored on your mobile phone to make calls. See your mobile phone manufacturer's user guide or contact your wireless provider to find out if this feature is supported by your mobile phone.

The time it takes to download the phone book and call list from your mobile phone to the UHP system can vary depending on the size of the phone book and call list stored on your mobile phone.

When a mobile phone supports the phone book and call list features, the Phone Book, and Call Lists menus are automatically available.

The Phone Book menu allows you to access the phone book stored in the mobile phone to make a call.

The Call Lists menu allows you to access the phone numbers from the Incoming Calls, Outgoing Calls, and Missed Calls menus on your mobile phone to make a call.

To make a call using the Phone Book menu:

1. Press PHONE twice, or press PHONE once on vehicles with a navigation system.
2. Select Phone Book.
3. You can search through the list by selecting the letter group the phone book entry begins with, to continue scrolling through the entire list, turn the MENU knob.
4. Select the name or number you want to call.

To make a call using the Call Lists menu:

1. Press PHONE twice, or press PHONE once on vehicles with a navigation system.
2. Select Call Lists.
3. Select the Incoming Calls, Outgoing Calls, or Missed Calls list.
4. Select the name or number you want to call.

Making a Call

To make a call:

1. Press PHONE twice, or press PHONE once on vehicles with a navigation system.
2. Select Enter Number for vehicles without a navigation system.
3. Select the numbers to be dialed. For vehicles with a navigation system, touch the numbers on the infotainment screen. For vehicles without a navigation system, see "Entering a Character Sequence" in *Operation on page 7-7* for more information.
4. Select Call to start dialing the number.

Accepting or Declining a Call

When an incoming call is received, the infotainment system mutes and a ring tone is heard in the vehicle.

To accept the incoming call, turn the MENU/SELECT knob to "Answer" and press the MENU/SELECT knob, or press the ✆ / ✆ button on the steering wheel controls.

To decline the incoming call, turn the MENU/SELECT knob to "decline" and press the MENU/SELECT knob, or press the ✆ / ✆ button on the steering wheel controls.

Call Waiting

Call waiting must be supported on the mobile phone and enabled by the wireless service carrier to work.

To accept the incoming call, turn the MENU/SELECT knob to "Answer" and press the MENU/SELECT knob, or press the ✆ / ✆ button on the steering wheel controls.

To decline the incoming call, turn the MENU/SELECT knob to "Decline" and press the MENU/SELECT knob, or press the ✆ / ✆ button on the steering wheel controls.

1. Press PHONE.
2. Select Switch Call from the menu.

Conference Calling

Conference calling and three way calling must be supported on the mobile phone and enabled by the wireless service carrier to work.

To start a conference call while in a call:

1. Press the MENU/SELECT knob and select Enter Number.
2. Enter the character sequence then select call.
3. After the call has been placed, press the MENU/SELECT knob and choose Merge Calls.
4. To add more callers to the conference call, repeat steps 1 through 3. The number of callers that can be added is limited by your wireless service carrier.

To disconnect from one caller while in a conference call, select Detach Number from the menu and select the number to hang up on.

Ending a Call

Press the MENU/SELECT knob and select Hang Up, or press the ✆ / ✆ button on the steering wheel controls.

To Mute a Call

Press the MENU/SELECT knob and select Mute Call.

To Cancel Mute

Press the MENU/SELECT knob and select Mute Call.

Dual Tone Multi-Frequency (DTMF) Tones

The UHP system can send numbers during a call. This is used when calling a menu driven phone system.

To access this system:

1. Press the MENU/SELECT knob and select Enter Number.
2. Enter the character sequence.

Operating UHP Using Voice Control

The voice control of the UHP system enables you to operate several functions of the mobile phone using your voice. The UHP system uses voice commands to control the system and dial phone numbers. After input of the command the infotainment system guides you through the dialogue with appropriate questions and feedback to achieve the desired action. The commands and numbers can be spoken without a pause between the individual words.

In addition you can save telephone numbers under a name tag that is selectable by you. The telephone connection can be set up with this name.

In the event of incorrect operation or incorrect codes, the voice control gives you voice feedback and requests you to re-enter the desired command. Apart from this, the voice control acknowledges important commands and will ask if necessary.

In order that calls are made inside the vehicle do not lead to unintentional triggering of the mobile phone, the voice control does not start until it has been activated.

Activating the Voice Control

For vehicles without a navigation system, press the ✆ / button on the steering wheel to activate the voice control of the UHP system.

For vehicles with a navigation system, press the ✆ / button on the steering wheel to activate the voice control of the UHP system The system responds with a tone. After the tone, say"Phone."

For the duration of the dialogue any audio source that is active is muted and any traffic news fade-in is cancelled.

Adjusting the Volume for Voice Output

Turn the volume knob of the Infotainment system or press the + / - buttons on the steering wheel.

Canceling Dialogue

There are various possibilities of deactivating the voice control and cancelling the dialogue:

- Press the / button on the steering wheel controls.
- Enter the command "Cancel."
- Do not enter a command for some time.
- The command is unrecognized after three tries.

Main Menu Commands

The UHP system has a set of main menu commands that are available when voice control is first started. After the voice control is activated, a short tone indicates that the voice control system is waiting for a command.

Available commands:

- "Dial"
- "Call"
- "Re-dial"
- "Save"
- "Delete"
- "Directory"
- "Pair"
- "Select device"
- "Voice feedback"
- "Help"
- "Cancel"

Frequently Used Commands

Here is a list of frequently used commands:

- "Help": the dialogue is terminated and all commands available in the current context are enumerated.
- "Cancel": the voice control is deactivated.
- "Yes": a suitable action is triggered depending on the context.
- "No": a suitable action is triggered depending on the context.

Voice Feedback

Each voice input is answered or commented on by the infotainment system by way of a voice output that is adapted to the situation.

To switch the voice output on or off, enter "Voice feedback" or press the ✆ / 🔊 button.

Pairing, Saving, or Deleting Phone From Device List

With the command "Pair" a mobile phone can be saved to or deleted from the device list of the UHP system. A device number will be assigned by the UHP system to the mobile phone when it is paired.

Available commands:

- "Add"
- "Delete"
- "Help"
- "Cancel"

Example of a dialogue

User: "Pair."

Voice output: "Do you want to add or delete a device?"

User: "Add."

Voice output: "Using the pair function in the external device, enter <1234> to pair."

(At this time, start the pairing process on the mobile phone that will be paired to the vehicle. Reference the mobile phone manufacturer's user guide for information on this process. Locate the device named UHP followed by a four-digit number in the list on the mobile phone and follow the instructions on the mobile phone and enter the four-digit code provided by the system.)

Voice output: "Do you want to pair the device?"

User: "Yes."

Voice output: "Paired, ending session."

Selecting Phone from Device List

The "Select device" command can be used to select a different paired mobile phone. The UHP system asks for a device number that was assigned by the UHP system to the mobile phone when it was paired.

Example of a dialogue

User: "Select device."

Voice output: "Please, say a device number to select."

User: "device number."

Voice output: "Do you want to select the device number "device number."

(The device name appears on the infotainment display screen)

User: "Yes."

Voice output: "One moment please, the system searches for the selected device."

Voice output: "Device number "device number" is selected, ending session."

Telephone Number Dialing

After the "Dial" command, the voice control requests input of a number.

The telephone number must be spoken in your normal speech without any artificial pauses between the numbers.

Recognition is best, if a pause of at least half a second is made after every three to five digits. The infotainment system then repeats the numbers recognized.

Available Commands:

- "Dial": the inputs are accepted.
- "Digit": a numeric value between "0-9" is entered.
- "Delete": the number last entered or the block of numbers last entered is deleted.
- "Plus": a preceding "+" is entered for a call abroad.
- "Verify": the inputs are repeated by the voice output.
- "Asterisk": an asterisk "*" is entered.
- "Hash": a hash character "#" is entered.
- "Pause": a pause is entered into the character sequence.
- "Help"
- "Cancel"

The telephone number entered can have a maximum length of 25 digits.

To be able to make a call abroad you can say the word "Plus" (+) at the beginning of your number. The plus allows you to call from any country without knowing the prefix for calls made abroad in that country. Then say the required country code.

Example of a dialogue

User: "Dial."

Voice output: "Please, say the number to dial."

User: "Plus four nine."

User: "Seven three one."

Voice output: "Seven three one."

User: "One one nine nine."

Voice output: "One one nine nine."

User: "Dial."

Voice output: "The number is being dialled."

Making a Call Using Name Tag

When the "Call" command is used, a telephone number is entered that has been stored in the telephone book as a name tag.

Available commands:

- "Yes"
- "No"
- "Help"
- "Cancel"

Example of a dialogue

User: "Call."

Voice output: "Please, say the name tag to call."

(for name tag information, see "Saving a Name Tag" later in this section)

User:"Name tag."

Voice output: "Seven three one."

User: "Yes."

Voice output: "Calling."

Starting a Second Call

Press the button ✆ / ✆ to start a second call during an active telephone call.

Available commands:

- "Send": activate manual DTMF (touch-tone dialling), e.g. for voice mail or telephone banking.
- "Send name tag": activate DTMF (touch-tone dialling) by entering a name tag.
- "Dial"
- "Call"
- "Re-dialing"
- "Help"
- "Cancel"

Example of a dialogue

User: Press the ✆ / 🎤 button if a telephone call is active.

User: "Send."

Voice output: "Please, say the number to send."

(for number input information, see the dialogue example for "Making a Call Using a Telephone Number" earlier in this section)

User: "Send."

Re-dialing

The "Re-dialing" command re-dials the last number dialed .

Saving a Name Tag

The "Save" command is used to store a telephone number in the telephone book under as a name tag.

The name entered must be repeated once. The pitch and pronunciation must be as identical as possible for both name inputs, otherwise the voice control will reject the inputs.

A maximum of 50 name tags can be stored in the telephone book.

Name tags are speaker-dependent, i.e. only the person who recorded a name tag can open it. To avoid the start of the recording of a saved name from being cut off, a short pause should be left after an input request.

To be able to use the name tag independently of the location, i.e. including other countries, all telephone numbers should be entered with a "plus" character and a country code.

Available commands:

- "Save": the inputs are accepted.
- "Re-dialing": the last input is repeated.
- "Help"
- "Cancel"

Example of a dialogue

User: "Save."

Voice output: "Please, say the number to save."

User: Say number to save.

(for number input information, see the dialogue example for "Making a Call Using a Telephone Number" earlier in this section)

User: "Save."

User: "Name Tag" (give name tag).

Voice output: "Please, repeat the name tag to confirm."

User: "Name Tag"

Voice output: "Saving the name tag."

Deleting a Name Tag

The "Delete" command is used to delete a previously saved name tag.

Available commands:

- "Yes"
- "No"
- "Help"
- "Cancel"

Listening to Stored Name Tags

The "Directory" command is used to listen to all stored name tags.

Available commands:

- "Call": the telephone number of the voice tag last read aloud is selected.
- "Delete": the entry of the voice tag last read aloud is deleted.

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✍ NOTES

Climate Controls

Climate Control Systems
Dual Automatic Climate Control System 8-1
Rear Climate Control System 8-5

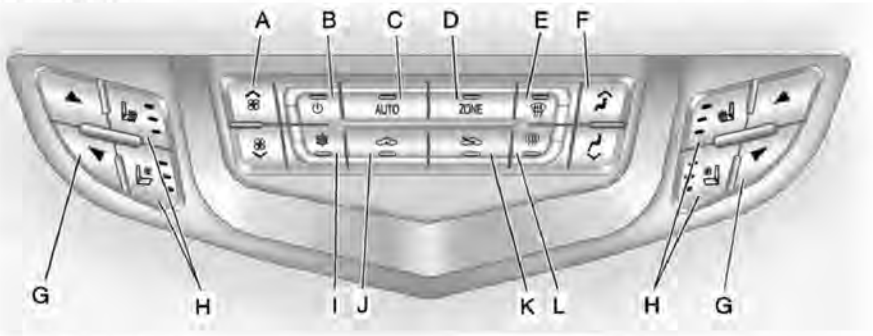
Air Vents
Air Vents 8-6

Maintenance
Passenger Compartment Air Filter 8-6

Climate Control Systems

Dual Automatic Climate Control System

The heating, cooling, and ventilation for the vehicle can be controlled with this system.



A. Fan Control
B. Power
C. AUTO (Automatic Operation)
D. ZONE
E. Defrost
F. Air Delivery Mode Control
G. Driver and Passenger Temperature Controls
H. Driver and Passenger Heated and Ventilated Seats
I. Air Conditioning
J. Recirculation
K. Outside Air
L. Rear Window Defogger

Q8_000003172

Automatic Operation

The system automatically controls the fan speed, air delivery, air conditioning and recirculation in order to heat or cool the vehicle to the desired temperature.

When the indicator light is on, the system is in full automatic operation. If the air delivery mode or fan setting is manually adjusted, the auto indicator turns off and displays will show the selected settings.

To place the system in automatic mode do the following:

1. Press AUTO.
2. Set the temperature. Allow the system time to stabilize. Then adjust the temperature as needed for best comfort.

English units can be changed to metric units through the Driver Information Center (DIC). See *Vehicle Personalization on page 5-40*.

▲ / ▼ (Driver and Passenger Temperature Controls): The temperature can be adjusted separately for the driver and the passenger. Press to increase or decrease the temperature.

ZONE: Press to link all climate zone settings to the driver settings. The ZONE indicator light turns off. When the passenger settings are adjusted, the ZONE indicator light is on.

Manual Operation

⏻ (Power): Press to turn the climate control system on or off.

(Fan Control): Press to increase or decrease the fan speed. Pressing either button cancels automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

(Air Delivery Mode Control): Press to change the direction of the airflow. The current mode appears in the display screen. Changing the mode cancels the automatic operation and the system goes into manual mode. Press AUTO to return to automatic operation.

To change the current mode, select one of the following:

(Vent): Air is directed to the instrument panel outlets.

(Bi-Level): Air is divided between the instrument panel outlets and the floor outlets.

(Tri-Level): Air is divided between the windshield, instrument panel, and floor outlets.

(Floor): Air is directed to the floor outlets.

(Defog): Clears the windows of fog or moisture. Air is directed to the windshield and floor outlets.

(Upper): Air is directed to the windshield outlets.

(Hi-Level): Air is divided between the windshield and instrument panel outlets.

(Defrost): Clears the windshield of fog or frost more quickly. Air is directed to the windshield.

(Air Conditioning): Press to turn the automatic air conditioning on or off. If the fan is turned off or the outside temperature falls below freezing, the air conditioner will not run.

Press AUTO to return to automatic operation and the air conditioner runs as needed. When the indicator light is on, the air conditioner runs automatically to cool the air inside the vehicle or to dry the air needed to defog the windshield faster.

(Recirculation): Press to turn on recirculation. An indicator light comes on. Air is recirculated to quickly cool the inside of the vehicle or prevent outside air and odors from entering.

Automatic Air Recirculation: When the AUTO indicator light is on, the air is automatically recirculated as needed to help quickly cool the inside of the vehicle.

The climate control system may have a sensor to detect air pollution. In auto recirculation control, the Air Quality Control system may operate. To adjust the sensitivity of the Air Quality Control, see "Climate and Air Quality" under *Vehicle Personalization on page 5-40*.

Auto Defog: The climate control system may have a sensor to automatically detect high humidity inside the vehicle. When high humidity is detected, the climate control system may adjust to outside air supply and turn on the air conditioner. If the climate control system does not detect possible window fogging, it returns to normal operation. To turn Auto Defog off or on, see "Climate and Air Quality" under *Vehicle Personalization on page 5-40*.

(Outside Air): Press to turn on outside air. An indicator light comes on. Outside air is circulated through the vehicle.

Rear Window Defogger

(Rear Window Defogger): Press to turn the rear window defogger on or off.

The rear window defogger turns off automatically after about 10 minutes. If turned on again it runs for about five minutes before turning off. At higher speeds, the rear window defogger may stay on continuously.

The rear window defogger can be set to automatic operation. See "Climate and Air Quality" under *Vehicle Personalization on page 5-40*. When Auto Rear Defog is selected, the rear window defogger turns on automatically when the interior temperature is cold and the outside temperature is about 40°F and below. The auto rear defogger turns off automatically after about 10 minutes. At higher speeds, the rear window defogger may stay on continuously.

The heated outside rearview mirrors turn on when the rear window defogger button is on and help to clear fog or frost from the surface of the mirrors. See *Heated Mirrors on page 2-22*.

Notice: **Do not try to clear frost or other material from the inside of the front windshield and rear window with a razor blade or anything else that is sharp. This may damage the rear window defogger grid and affect your radio's ability to pick up stations clearly. The repairs would not be covered by your warranty.**

Heated and Ventilated Seats: Press to heat or ventilate the seat. See *Heated and Ventilated Front Seats on page 3-10*.

Remote Start Climate Control Operation: For vehicles with the remote vehicle start feature, the climate control system may run when the vehicle is started remotely. The system uses the driver's previous settings to heat or cool the inside of the vehicle. See *Remote Vehicle Start on page 2-10*.

The rear window defogger turns on if it is cold outside.

Sensors

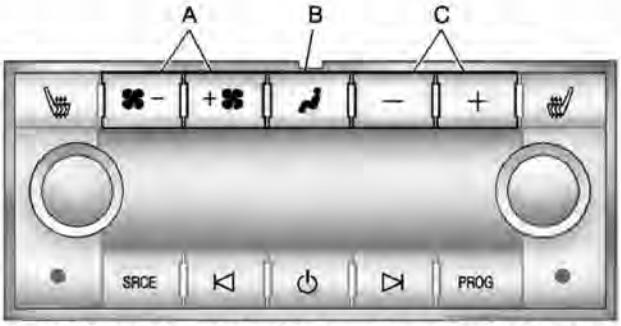
The solar sensor, located on top of the instrument panel near the windshield, monitors the solar heat.

The climate control system uses the sensor information to adjust the temperature, fan speed, recirculation, and air delivery mode for best comfort.

If the sensor is covered, the automatic climate control system may not work properly.

Rear Climate Control System

For vehicles with the rear heat and air conditioning controls, they are integrated with the rear seat audio controls located in the center console.



Rear Climate Control with Rear Seat Audio Controls

A. Fan Control
B. Air Delivery Mode Control
C. Temperature Control

ZONE: When the rear climate control is turned on from the rear, the ZONE indicator light will turn on.

Press the ZONE button on the front climate control system to turn off the rear blower and match the rear settings to the front. The ZONE indicator light and rear climate control display will turn off.

The rear climate control can be turned off by pressing – .

Independent Mode: This mode directs rear seating airflow according to the settings of the rear controls.

The front climate control system must be on for the rear climate control to work. To turn on the rear climate control from rear seating, press any rear climate control button.

The rear climate control will not work if the front climate control system is in defrost.

Automatic Operation

AUTO: Press ↝ until the AUTO setting is selected to control the rear temperature, air delivery, and fan speed automatically.

Manual Operation

⁘ −/+ ⁘ (Fan Control): Press these buttons on the rear seat audio control panel to increase or decrease the airflow. Pressing + ⁘ when the system is off will turn the system on. The air delivery mode remains in its previous setting.

−/+ (Temperature Control): Press these buttons to adjust the temperature of the air flowing into the passenger area. Press + for warmer air and press − for cooler air.

↝ (Air Delivery Mode Control): Press the mode button to change the direction of the airflow. Multiple presses will cycle through the delivery selections.

Air Vents

Move the sliding knob on the air outlets up and down or left and right to direct the airflow. Use the thumbwheels near the air outlets to open or close off the airflow.

Operation Tips

- Clear away any ice, snow, or leaves from air inlets at the base of the windshield that could block the flow of air into the vehicle.
- Keep the path under the front seats clear of objects to help circulate the air inside the vehicle more effectively.
- Use of non-GM approved hood deflectors can adversely affect the performance of the system. Check with your dealer before adding equipment to the outside of the vehicle.
- Do not insert any objects in the outlets, as failure of the mechanism may occur.

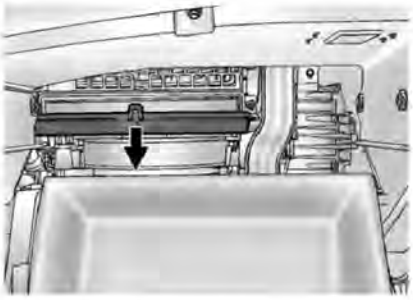
Maintenance

Passenger Compartment Air Filter

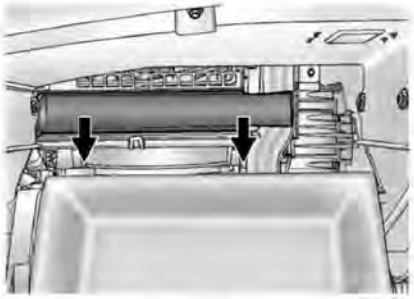
The filter removes dust, pollen, and other airborne irritants from outside air that is pulled into the vehicle.

The filter should be replaced as part of routine scheduled maintenance, see *Maintenance Schedule on page 11-4*. To find out what type of filter to use, see *Maintenance Replacement Parts on page 11-14*.

1. Open the glove box completely and remove the four screws along the upper portion of the glove box.
2. When released, lower the upper portion of the glove box.
3. Locate the service door for the passenger compartment air filter.



4. Release the two latches holding the service door. Lower the service door.



5. Remove the old air filter.
6. Install the new air filter.
7. Close the service door and latches.
8. Reinstall the upper portion of the glove box.

See your dealer if additional assistance is needed.

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Driving Information

Distracted Driving

Distraction comes in many forms and can take your focus from the task of driving. Exercise good judgment and do not let other activities divert your attention away from the road. Many local governments have enacted laws regarding driver distraction. Become familiar with the local laws in your area.

To avoid distracted driving, always keep your eyes on the road, hands on the wheel, and mind on the drive.

- Do not use a phone in demanding driving situations. Use a hands-free method to place or receive necessary phone calls.
- Watch the road. Do not read, take notes, or look up information on phones or other electronic devices.
- Designate a front seat passenger to handle potential distractions.
- Become familiar with vehicle features before driving, such as programming favorite radio stations and adjusting climate control and seat settings. Program all trip information into any navigation device prior to driving.
- Wait until the vehicle is parked to retrieve items that have fallen to the floor.
- Stop or park the vehicle to tend to children.
- Keep pets in an appropriate carrier or restraint.
- Avoid stressful conversations while driving, whether with a passenger or on a cell phone.

⚠ WARNING

Taking your eyes off the road too long or too often could cause a crash resulting in injury or death. Focus your attention on driving.

Refer to the infotainment section for more information on using that system, including pairing and using a cell phone.

If equipped, refer to the navigation manual for information on that system, including pairing and using a cell phone.

Defensive Driving

Defensive driving means "always expect the unexpected." The first step in driving defensively is to wear the safety belt. See *Safety Belts on page 3-14.*

- Assume that other road users (pedestrians, bicyclists, and other drivers) are going to be careless and make mistakes. Anticipate what they might do and be ready.
- Allow enough following distance between you and the driver in front of you.
- Focus on the task of driving.

Drunk Driving

Death and injury associated with drinking and driving is a global tragedy.

⚠ WARNING

Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness, and judgment can be affected by even a small amount of alcohol. You can have a serious — or even fatal — collision if you drive after drinking.

Do not drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you are with a group, designate a driver who will not drink.

Control of a Vehicle

Braking, steering, and accelerating are important factors in helping to control a vehicle while driving.

Braking

Braking action involves perception time and reaction time. Deciding to push the brake pedal is perception time. Actually doing it is reaction time.

Average driver reaction time is about three-quarters of a second. In that time, a vehicle moving at 100 km/h (60 mph) travels 20 m (66 ft), which could be a lot of distance in an emergency.

Helpful braking tips to keep in mind include:

- Keep enough distance between you and the vehicle in front of you.
- Avoid needless heavy braking.
- Keep pace with traffic.

If the engine ever stops while the vehicle is being driven, brake normally but do not pump the brakes. Doing so could make the pedal harder to push down. If the engine stops, there will be some power brake assist but it will be used when the brake is applied. Once the power assist is used up, it can take longer to stop and the brake pedal will be harder to push.

Steering

Hydraulic Power Steering

Your vehicle has hydraulic power steering. It may require maintenance. See *Power Steering Fluid on page 10-20.*

If power steering assist is lost due to a system malfunction, the vehicle can be steered, but may require increased effort.

See your dealer if there is a problem.

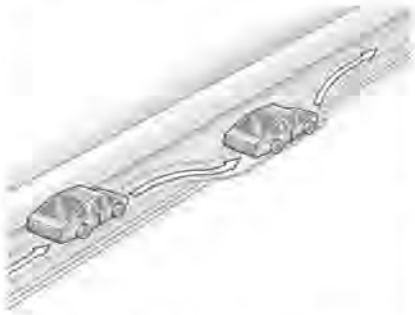
Curve Tips

- Take curves at a reasonable speed.
- Reduce speed before entering a curve.
- Maintain a reasonable steady speed through the curve.
- Wait until the vehicle is out of the curve before accelerating gently into the straightaway.

Steering in Emergencies

- There are some situations when steering around a problem may be more effective than braking.
- Holding both sides of the steering wheel allows you to turn 180 degrees without removing a hand.
- The Antilock Brake System (ABS) allows steering while braking.

Off-Road Recovery



The vehicle's right wheels can drop off the edge of a road onto the shoulder while driving. Follow these tips:

1. Ease off the accelerator and then, if there is nothing in the way, steer the vehicle so that it straddles the edge of the pavement.
2. Turn the steering wheel about one-eighth of a turn, until the right front tire contacts the pavement edge.
3. Then turn the steering wheel to go straight down the roadway.

Loss of Control

Skidding

There are three types of skids that correspond to the vehicle's three control systems:

- Braking Skid — wheels are not rolling.
- Steering or Cornering Skid — too much speed or steering in a curve causes tires to slip and lose cornering force.
- Acceleration Skid — too much throttle causes the driving wheels to spin.

Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not overdriving those conditions. But skids are always possible.

If the vehicle starts to slide, follow these suggestions:

- Ease your foot off the accelerator pedal and quickly steer the way you want the vehicle to go. The vehicle may straighten out. Be ready for a second skid if it occurs.
- Slow down and adjust your driving according to weather conditions. Stopping distance can be longer and vehicle control can be affected when traction is reduced by water, snow, ice, gravel, or other material on the road. Learn to recognize warning clues — such as enough water, ice, or packed snow on the road to make a mirrored surface — and slow down when you have any doubt.
- Try to avoid sudden steering, acceleration, or braking, including reducing vehicle speed by shifting to a lower gear. Any sudden changes could cause the tires to slide.

Remember: Antilock brakes help avoid only the braking skid.

Driving on Wet Roads

Rain and wet roads can reduce vehicle traction and affect your ability to stop and accelerate. Always drive slower in these types of driving conditions and avoid driving through large puddles and deep-standing or flowing water.

⚠ WARNING

Wet brakes can cause crashes. They might not work as well in a quick stop and could cause pulling to one side. You could lose control of the vehicle.

After driving through a large puddle of water or a car/vehicle wash, lightly apply the brake pedal until the brakes work normally.

Flowing or rushing water creates strong forces. Driving through flowing water could cause the vehicle to be carried away. If this happens, you and other vehicle occupants could drown. Do not ignore police warnings and be very cautious about trying to drive through flowing water.

Hydroplaning

Hydroplaning is dangerous. Water can build up under the vehicle's tires so they actually ride on the water. This can happen if the road is wet enough and you are going fast enough. When the vehicle is hydroplaning, it has little or no contact with the road.

There is no hard and fast rule about hydroplaning. The best advice is to slow down when the road is wet.

Other Rainy Weather Tips

Besides slowing down, other wet weather driving tips include:

- Allow extra following distance.
- Pass with caution.
- Keep windshield wiping equipment in good shape.
- Keep the windshield washer fluid reservoir filled.
- Have good tires with proper tread depth. See *Tires on page 10-49*.
- Turn off cruise control.

Highway Hypnosis

Always be alert and pay attention to your surroundings while driving. If you become tired or sleepy, find a safe place to park the vehicle and rest.

Other driving tips include:

- Keep the vehicle well ventilated.
- Keep the interior temperature cool.
- Keep your eyes moving — scan the road ahead and to the sides.
- Check the rearview mirror and vehicle instruments often.

Hill and Mountain Roads

Driving on steep hills or through mountains is different than driving on flat or rolling terrain. Tips for driving in these conditions include:

- Keep the vehicle serviced and in good shape.
- Check all fluid levels and brakes, tires, cooling system, and transmission.
- Shift to a lower gear when going down steep or long hills.

⚠ WARNING

If you do not shift down, the brakes could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Shift down to let the engine assist the brakes on a steep downhill slope.

⚠ WARNING

Coasting downhill in N (Neutral) or with the ignition off is dangerous. The brakes will have to do all the work of slowing down and they could get so hot that they would not work well. You would then have poor braking or even none going down a hill. You could crash. Always have the engine running and the vehicle in gear when going downhill.

- Stay in your own lane. Do not swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- Be alert on top of hills; something could be in your lane (stalled car, accident).
- Pay attention to special road signs (falling rocks area, winding roads, long grades, passing or no-passing zones) and take appropriate action.

Winter Driving

Driving on Snow or Ice

Drive carefully when there is snow or ice between the tires and the road, creating less traction or grip. Wet ice can occur at about 0°C (32°F) when freezing rain begins to fall, resulting in even less traction. Avoid driving on wet ice or in freezing rain until roads can be treated with salt or sand.

Drive with caution, whatever the condition. Accelerate gently so traction is not lost. Accelerating too quickly causes the wheels to spin and makes the surface under the tires slick, so there is even less traction.

Try not to break the fragile traction. If you accelerate too fast, the drive wheels will spin and polish the surface under the tires even more.

The *Antilock Brake System (ABS) on page 9-29* improves vehicle stability during hard stops on slippery roads, but apply the brakes sooner than when on dry pavement.

Allow greater following distance on any slippery road and watch for slippery spots. Icy patches can occur on otherwise clear roads in shaded areas. The surface of a curve or an overpass can remain icy when the surrounding roads are clear. Avoid sudden steering maneuvers and braking while on ice.

Turn off cruise control, if equipped, on slippery surfaces.

Blizzard Conditions

Being stuck in snow can be a serious situation. Stay with the vehicle unless there is help nearby. If possible, use the *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-10*. To get help and keep everyone in the vehicle safe:

- Turn on the hazard warning flashers.
- Tie a red cloth to an outside mirror.

⚠ WARNING

Snow can trap engine exhaust under the vehicle. This may cause exhaust gases to get inside. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death.

(Continued)

WARNING (Continued)

If the vehicle is stuck in the snow:

- Clear away snow from around the base of your vehicle, especially any that is blocking the exhaust pipe.
- Check again from time to time to be sure snow does not collect there.
- Open a window about 5 cm (2 in) on the side of the vehicle that is away from the wind to bring in fresh air.
- Fully open the air outlets on or under the instrument panel.
- Adjust the climate control system to a setting that circulates the air inside the vehicle and set the fan speed to the highest setting. See "Climate Control Systems" in the Index.

(Continued)

WARNING (Continued)

For more information about carbon monoxide, see *Engine Exhaust on page 9-23*.

Run the engine for short periods only as needed to keep warm, but be careful.

To save fuel, run the engine for only short periods as needed to warm the vehicle and then shut the engine off and close the window most of the way to save heat. Repeat this until help arrives but only when you feel really uncomfortable from the cold. Moving about to keep warm also helps.

If it takes some time for help to arrive, now and then when you run the engine, push the accelerator pedal slightly so the engine runs faster than the idle speed. This keeps the battery charged to restart the vehicle and to signal for help with the headlamps. Do this as little as possible to save fuel.

If the Vehicle Is Stuck

Slowly and cautiously spin the wheels to free the vehicle when stuck in sand, mud, ice, or snow.

If stuck too severely for the traction system to free the vehicle, turn the traction system off and use the rocking method.

⚠ WARNING

If the vehicle's tires spin at high speed, they can explode, and you or others could be injured. The vehicle can overheat, causing an engine compartment fire or other damage. Spin the wheels as little as possible and avoid going above 56 km/h (35 mph).

For information about using tire chains on the vehicle, see *Tire Chains on page 10-70*.

Rocking the Vehicle to Get it Out

Turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction system. Shift back and forth between R (Reverse) and a forward gear, spinning the wheels as little as possible. To prevent transmission wear, wait until the wheels stop spinning before shifting gears. Release the accelerator pedal while shifting, and press lightly on the accelerator pedal when the transmission is in gear. Slowly spinning the wheels in the forward and reverse directions causes a rocking motion that could free the vehicle. If that does not get the vehicle out after a few tries, it might need to be towed out. If the vehicle does need to be towed out, see *Towing the Vehicle on page 10-93*.

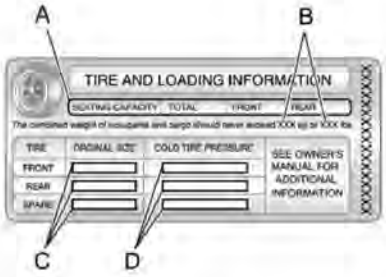
Vehicle Load Limits

It is very important to know how much weight the vehicle can carry. This weight is called the vehicle capacity weight and includes the weight of all occupants, cargo and all nonfactory-installed options. Two labels on the vehicle show how much weight it may properly carry, the Tire and Loading Information label and the Certification label.

⚠ WARNING

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Tire and Loading Information Label



Label Example

A vehicle-specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar). With the driver door open, the label is attached near the door lock post. The Tire and Loading Information label shows the number of occupant seating positions (A), and the maximum vehicle capacity weight (B) in kilograms and pounds.

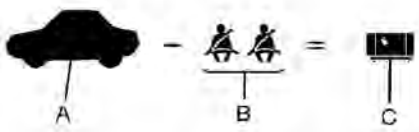
The Tire and Loading Information label also shows the tire size of the original equipment tires (C) and the recommended cold tire inflation pressures (D). For more information on tires and inflation see *Tires on page 10-49* and *Tire Pressure on page 10-56*.

There is also important loading information on the Certification label. It tells you the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axle. See "Certification Label" later in this section.

Steps for Determining Correct Load Limit

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs" on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs (1400 − 750 (5 x 150) = 650 lbs).
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, the load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

See *Trailer Towing on page 9-57* for important information on towing a trailer, towing safety rules and trailering tips.

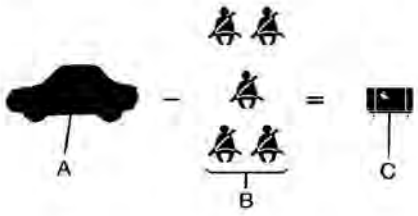


Example 1

A. Vehicle Capacity Weight for Example 1 = 453 kg (1,000 lbs).

B. Subtract Occupant Weight @ 68 kg (150 lbs) × 2 = 136 kg (300 lbs).

C. Available Occupant and Cargo Weight = 317 kg (700 lbs).

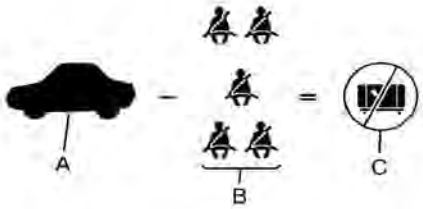


Example 2

A. Vehicle Capacity Weight for Example 2 = 453 kg (1,000 lbs).

B. Subtract Occupant Weight @ 68 kg (150 lbs) × 5 = 340 kg (750 lbs).

C. Available Cargo Weight = 113 kg (250 lbs).



Example 3

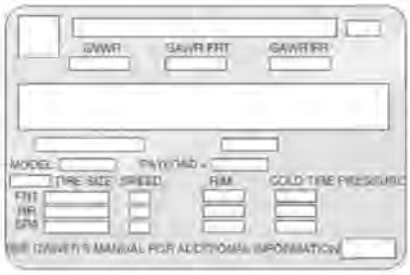
A. Vehicle Capacity Weight for Example 3 = 453 kg (1,000 lbs).

B. Subtract Occupant Weight @ 91 kg (200 lbs) × 5 = 453 kg (1,000 lbs).

C. Available Cargo Weight = 0 kg (0 lbs).

Refer to the vehicle's Tire and Loading Information label for specific information about the vehicle's capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's capacity weight.

Certification Label



Label Example

A vehicle-specific Certification/ Tire label is attached to the driver side center pillar (B-pillar).

The label shows the size of the vehicle's original tires and the inflation pressures needed to obtain the gross weight capacity of the vehicle. This is called Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel, and cargo.

The Certification/Tire label also tells you the maximum weights for the front and rear axles, called Gross Axle Weight Rating (GAWR). To find out the actual loads on the front and rear axles, you need to go to a weigh station and weigh the vehicle. Your dealer can help you with this. Be sure to spread out the load equally on both sides of the center line.

Never exceed the GVWR for the vehicle, or the GAWR for either the front or rear axle.

If the vehicle is carrying a heavy load, it should be spread out. See "Steps for Determining Correct Load Limit" earlier in this section.

⚠ WARNING

Do not load the vehicle any heavier than the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). This can cause systems to break and change the way the vehicle handles. This could cause loss of control and a crash. Overloading can also shorten the life of the vehicle.

Your warranty does not cover parts or components that fail because of overloading.

The label will help you decide how much cargo and installed equipment your vehicle can carry.

Using heavier suspension components to get added durability might not change your weight ratings. Ask your dealer to help you load your vehicle the right way.

If you put things inside your vehicle – like suitcases, tools, packages, or anything else – they will go as fast as the vehicle goes. If you have to stop or turn quickly, or if there is a crash, they will keep going.

⚠ WARNING

Things inside the vehicle can strike and injure people in a sudden stop or turn, or in a crash.

- Put things in the cargo area of the vehicle. In the cargo area, put them as far forward as possible. Try to spread the weight evenly.
- Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.

(Continued)

WARNING (Continued)

- Do not leave an unsecured child restraint in the vehicle.
- Secure loose items in the vehicle.
- Do not leave a seat folded down unless needed.

Starting and Operating

New Vehicle Break-In

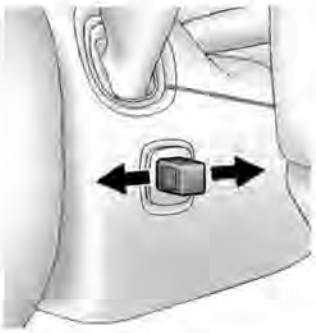
Notice: **The vehicle does not need an elaborate break-in. But it will perform better in the long run if you follow these guidelines:**

- **Do not drive at any one constant speed, fast or slow, for the first 805 km (500 mi). Do not make full-throttle starts. Avoid downshifting to brake or slow the vehicle.**
- **During the first 1 000 km (600 mi), avoid using more than moderate acceleration in lower gears and avoid vehicle speeds above 110 km/h (68 mph).**
- **Between the first 1 000 km (600 mi) and 5 000 km (3,000 mi), heavy acceleration in lower gears can be used. Vehicle speeds above 110 km/h (68 mph) should be limited to five minutes per use.**
- **Avoid making hard stops for the first 322 km (200 mi) or so. During this time the new brake linings are not yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this breaking-in guideline every time you get new brake linings.**
- **Do not tow a trailer during break-in. See *Driving Characteristics and Towing Tips on page 9-53* for the trailer towing capabilities of your vehicle and more information.**

Following break-in, engine speed and load can be gradually increased.

Adjustable Throttle and Brake Pedal

If the vehicle has this feature, the position of the throttle and brake pedals can be adjusted.



The switch used to adjust the pedals is located on the right side of the steering column, below the wiper stalk. Pull the switch toward you to move the pedals further from the floor, or push the switch away from you to move the pedals closer to the floor.

Adjust the throttle and brake pedals while the vehicle is in P (Park) without pressing on the pedals. The pedals cannot be adjusted while the vehicle is in R (Reverse) or when cruise control is engaged. The throttle and brake pedals can also be adjusted while driving.

Ignition Positions

The vehicle has an electronic keyless ignition with pushbutton start.

Pressing the button cycles it through three modes, ACC/ACCESSORY, ON/RUN/START and STOPPING THE ENGINE/OFF.

If the pushbutton start is not working, the vehicle may be near a strong radio antenna signal causing interference to the keyless entry system. See *Driver Information Center (DIC) on page 5-27* for more information.

To shift out of P (Park), the vehicle must be in ACC/ACCESSORY or ON/RUN mode and the brake pedal must be applied.

STOPPING THE ENGINE/OFF (No LED Lights): When the vehicle is stopped, press the engine START/STOP button once to turn the engine off.

If the vehicle is in P (Park), the ignition will turn off, and Retained Accessory Power (RAP) will remain active. See *Retained Accessory Power (RAP) on page 9-21* for more information.

If the vehicle is not in P (Park), the ignition will return to ACC/ACCESSORY and display the message SHIFT TO PARK in the Driver Information Center (DIC). See *Driver Information Center (DIC) on page 5-27* for more information. When the vehicle is shifted into P (Park), the ignition system will switch to OFF.

Do not turn the engine off when the vehicle is moving. This will cause a loss of power assist in the brake and steering systems and disable the airbags.

If the vehicle must be shut off in an emergency:

1. Brake using a firm and steady pressure. Do not pump the brakes repeatedly. This may deplete power assist, requiring increased brake pedal force.
2. Shift the vehicle to N (Neutral). This can be done while the vehicle is moving. After shifting to N (Neutral), firmly apply the brakes and steer the vehicle to a safe location.
3. Come to a complete stop, shift to P (Park), and turn the ignition to OFF. On vehicles with an automatic transmission, the shift lever must be in P (Park) to turn the ignition switch to the OFF position.
4. Set the parking brake. See *Parking Brake on page 9-30*.

⚠ WARNING

Turning off the vehicle while moving may cause loss of power assist in the brake and steering systems and disable the airbags. While driving, only shut the vehicle off in an emergency.

If the vehicle cannot be pulled over, and must be shut off while driving, switch the ignition to ACC/ACCESSORY.

ACC/ACCESSORY (Amber LED Light): This mode allows you to use some electrical accessories when the engine is off.

With the ignition off, pressing the button one time without the brake pedal applied, will place the ignition system in ACC/ACCESSORY.

The ignition will switch from ACC/ACCESSORY to OFF after ten minutes to prevent battery run down.

ON/RUN/START (Green LED Light): This mode is for driving and starting. With the ignition off, and the brake pedal applied, pressing the button once will place the ignition system in ON/RUN/START. Once engine cranking begins, release the button. Engine cranking will continue until the engine starts. See *Starting the Gasoline Engine on page 9-19* for more information. The ignition will then remain in ON/RUN.

Service Only Mode

This power mode is available for service and diagnostics, and to verify the proper operation of the malfunction indicator lamp as may be required for emission inspection purposes. With the vehicle off, and the brake pedal not applied, pressing and holding the button for more than five seconds will place the vehicle in Service Only Mode. The instruments and audio systems will operate as they do in ON/RUN, but the vehicle will not be able to be driven. The engine will not start in Service Only Mode. Push the button again to turn the vehicle off.

Starting the Gasoline Engine

Place the transmission in the proper gear by moving the shift lever to P (Park) or N (Neutral). To restart the engine when the vehicle is already moving, use N (Neutral).

Notice: **Do not try to shift to P (Park) if the vehicle is moving. If you do, you could damage the transmission. Shift to P (Park) only when the vehicle is stopped.**

The keyless access transmitter must be inside the vehicle for the ignition to work.

Cell phone chargers can interfere with the operation of the Keyless Access System. Battery chargers should not be plugged in when starting or turning off the engine.

To start the vehicle:

Starting Procedure

1. With the brake pedal applied, press the START button located on the instrument panel. See *Ignition Positions on page 9-17*.
2. When the engine begins cranking, let go of the button and the engine cranks automatically until it starts.

   If the transmitter is not in the vehicle or something is interfering with the transmitter, the Driver Information Center (DIC) will display NO REMOTE DETECTED. See *Driver Information Center (DIC) on page 5-27* for more information.

   If the battery in the keyless access transmitter needs replacing, the DIC displays REPLACE BATTERY IN REMOTE KEY. The vehicle can still be driven. See *Remote Keyless Entry (RKE) System Operation on page 2-3* for more information.

3. Do not race the engine immediately after starting it. Operate the engine and transmission gently until the oil warms up and lubricates all moving parts.
4. If the engine does not start and no DIC message is displayed, wait 15 seconds before trying again to let the cranking motor cool down.

   If the engine does not start after 5-10 seconds, especially in very cold weather (below −18°C or 0°F), it could be flooded with too much gasoline. Try pushing the accelerator pedal all the way to the floor while cranking for up to 15 seconds.

Notice: **Cranking the engine for long periods of time, by pressing the START button immediately after cranking has ended, can overheat and damage the cranking motor, and drain the battery. Wait at least 15 seconds between each try, to allow the cranking motor to cool down.**

When the engine starts, let go of the accelerator. If the vehicle starts briefly but then stops again, do the same thing. This clears the extra gasoline from the engine.

The vehicle has a Computer-Controlled Cranking System. This feature assists in starting the engine and protects components. Once cranking has been initiated, the engine continues cranking for a few seconds or until the vehicle starts. If the engine does not start, cranking automatically stops after 15 seconds to prevent cranking motor damage. To prevent gear damage, this system also prevents cranking if the engine is already running.

Notice: **The engine is designed to work with the electronics in the vehicle. If you add electrical parts or accessories, you could change the way the engine operates. Before adding electrical equipment, check with your dealer. If you do not, the engine might not perform properly. Any resulting damage would not be covered by the vehicle warranty.**

Engine Heater

The engine coolant heater, if available, can help in cold weather conditions at or below −18°C (0°F) for easier starting and better fuel economy during engine warm-up. Plug in the coolant heater at least four hours before starting the vehicle. An internal thermostat in the plug end of the cord will prevent engine coolant heater operation at temperatures above −18°C (0°F).

To Use the Engine Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord. The cord is located near the air cleaner.
3. Plug it into a normal, grounded 110-volt AC outlet.

> **⚠ WARNING**
>
> Plugging the cord into an ungrounded outlet could cause an electrical shock. Also, the wrong kind of extension cord could overheat and cause a fire. You could be seriously injured. Plug the cord into a properly grounded three-prong 110-volt AC outlet. If the cord will not reach, use a heavy-duty three-prong extension cord rated for at least 15 amps.

4. Before starting the engine, be sure to unplug and store the cord as it was before to keep it away from moving engine parts. If you do not it could be damaged.

The length of time the heater should remain plugged in depends on several factors. Ask a dealer in the area where you will be parking the vehicle for the best advice on this.

Retained Accessory Power (RAP)

These accessories can be used after the engine is turned off:

- Audio system (up to 10 minutes or driver door is opened).
- Power windows, sunroof (if equipped), and power outlets (up to 10 minutes or any door is opened).

Shifting Into Park

> **⚠ WARNING**
>
> It can be dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, use the steps that follow.

1. Hold the brake pedal down and set the parking brake.

   See *Parking Brake on page 9-30* for more information.
2. Move the shift lever into P (Park) by pushing the lever all the way toward the front of the vehicle.
3. Turn the ignition off.

Leaving the Vehicle with the Engine Running

⚠ WARNING

It can be dangerous to leave the vehicle with the engine running. The vehicle could move suddenly if the shift lever is not fully in P (Park) with the parking brake firmly set. And, if you leave the vehicle with the engine running, it could overheat and even catch fire. You or others could be injured. Do not leave the vehicle with the engine running.

If you have to leave the vehicle with the engine running, be sure the vehicle is in P (Park) and the parking brake is firmly set before you leave it. After you have moved the shift lever into P (Park), hold down the regular brake pedal.

See if you can move the shift lever away from P (Park) without first pulling it toward you. If you can, it means that the shift lever was not fully locked into P (Park).

Torque Lock

Torque lock is when the weight of the vehicle puts too much force on the parking pawl in the transmission. This happens when parking on a hill and shifting the transmission into P (Park) is not done properly and then it is difficult to shift out of P (Park). To prevent torque lock, set the parking brake and then shift into P (Park). To find out how, see "Shifting Into P (Park)" listed previously.

If torque lock does occur, your vehicle may need to be pushed uphill by another vehicle to relieve the parking pawl pressure, so you can shift out of P (Park).

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 9-53.*

Shifting out of Park

This vehicle is equipped with an automatic transmission shift lock control system. The shift lock control is designed to prevent movement of the shift lever out of P (Park), unless the ignition is in ON/RUN and the brake pedal is applied

The shift lock control is always functional except in the case of an uncharged or low voltage (less than 9-volt) battery.

If the vehicle has an uncharged battery or a battery with low voltage, try charging or jump starting the battery. See *Jump Starting on page 10-88.*

To shift out of P (Park):

1. Apply the brake pedal.
2. Turn the ignition to ON/RUN.
3. Press the shift lever button.
4. Move the shift lever to the desired position.

If you still are unable to shift out of P (Park):

1. Fully release the shift lever button.
2. Hold the brake pedal down and press the shift lever button again.
3. Move the shift lever to the desired position.

If you still cannot move the shift lever from P (Park), consult your dealer or a professional towing service.

Parking over Things That Burn

⚠ WARNING

Things that can burn could touch hot exhaust parts under the vehicle and ignite. Do not park over papers, leaves, dry grass, or other things that can burn.

Engine Exhaust

⚠ WARNING

Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. Exposure to CO can cause unconsciousness and even death.

Exhaust may enter the vehicle if:

- The vehicle idles in areas with poor ventilation (parking garages, tunnels, deep snow that may block underbody airflow or tail pipes).
- The exhaust smells or sounds strange or different.
- The exhaust system leaks due to corrosion or damage.
- The vehicle exhaust system has been modified, damaged or improperly repaired.

(Continued)

WARNING (Continued)

- There are holes or openings in the vehicle body from damage or aftermarket modifications that are not completely sealed.

If unusual fumes are detected or if it is suspected that exhaust is coming into the vehicle:

- Drive it only with the windows completely down.
- Have the vehicle repaired immediately.

Never park the vehicle with the engine running in an enclosed area such as a garage or a building that has no fresh air ventilation.

Running the Vehicle While Parked

It is better not to park with the engine running. But if you ever have to, here are some things to know.

⚠ WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains Carbon Monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 9-23*.

⚠ WARNING

It can be dangerous to get out of the vehicle if the automatic transmission shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll. Do not leave the vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park).

Follow the proper steps to be sure the vehicle will not move. See *Shifting Into Park on page 9-21*.

If parking on a hill and pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-53*.

Automatic Transmission

The shift lever is located on the center console between the front seats.

There are several different positions for the shift lever.

P (Park): This position locks the front wheels. It is the best position to use when you start the engine because the vehicle cannot move easily.

⚠ WARNING

It is dangerous to get out of the vehicle if the shift lever is not fully in P (Park) with the parking brake firmly set. The vehicle can roll.

Do not leave the vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure the vehicle will not move, even when you are on fairly level ground, always set the parking brake and move the shift lever to P (Park). See *Shifting Into Park on page 9-21*. If you are pulling a trailer, see *Driving Characteristics and Towing Tips on page 9-53*.

Make sure the shift lever is fully in P (Park) before starting the engine. The vehicle has an automatic transmission shift lock control system. You must fully apply the regular brakes first and then press the shift lever button before you can shift from P (Park) when the ignition is in ON/RUN. If you cannot shift out of P (Park), ease pressure on the shift lever and push the shift lever all the way into P (Park) as you maintain brake application. Then press the shift lever button and move the shift lever into another gear. See *Shifting out of Park on page 9-22*.

Notice: **Shifting to R (Reverse) while the vehicle is moving forward could damage the transmission. The repairs would not be covered by the vehicle warranty. Shift to R (Reverse) only after the vehicle is stopped.**

R (Reverse): Use this gear to back up.

At low vehicle speeds, R (Reverse) can be used to rock the vehicle back and forth to get out of snow, ice, or sand without damaging your transmission. See *If the Vehicle Is Stuck on page 9-10* for additional information.

N (Neutral): In this position, the engine does not connect with the wheels. To restart when the vehicle is already moving, use N (Neutral) only. You can also use N (Neutral) when the vehicle is being towed.

⚠ WARNING

Shifting into a drive gear while the engine is running at high speed is dangerous. Unless your foot is firmly on the brake pedal, the vehicle could move very rapidly. You could lose control and hit people or objects. Do not shift into a drive gear while the engine is running at high speed.

Notice: **Shifting out of P (Park) or N (Neutral) with the engine running at high speed may damage the transmission. The repairs would not be covered by the vehicle warranty. Be sure the engine is not running at high speed when shifting the vehicle.**

D (Drive): This position is for normal driving. It provides the best fuel economy. If you need more power for passing, and you are:

- Going less than 35 mph (55 km/h), push the accelerator pedal about halfway down.
- Going about 35 mph (55 km/h) or more, push the accelerator all the way down.

  The transmission will shift down to a lower gear and have more power.

Downshifting the transmission in slippery road conditions could result in skidding, see "Skidding" under *Loss of Control on page 9-5*

Notice: **Spinning the tires or holding the vehicle in one place on a hill using only the accelerator pedal may damage the transmission. If you are stuck, do not spin the tires. When stopping on a hill, use the brakes to hold the vehicle in place.**

Manual Mode

Driver Shift Control (DSC)

Notice: **Driving with the engine at a high rpm without upshifting while using Driver Shift Control (DSC), could damage the vehicle. Always upshift when necessary while using DSC.**

Driver Shift Control (DSC) allows you to shift an automatic transmission similar to a manual transmission. To use the DSC feature:

1. Move the shift lever to the left from D (Drive) to M (Manual Mode).

   If you do not move the shift lever forward or rearward, the vehicle will be in Sport Mode. When you are in Sport Mode the vehicle will still shift automatically. The transmission may remain in a gear longer than it would in the normal driving mode based on braking, throttle input, and vehicle lateral acceleration.

SPORT MODE ON will be displayed in the DIC. See *Ride Control System Messages on page 5-37*. The word "sport" will display below the odometer. The gear position will also be indicated in the tachometer.

Within Sport Mode there is a further performance feature called Performance Mode Lift Foot (PMLF) Mode. The feature is activated automatically when sports oriented driving is detected, based on cornering and on/off throttle application. PMLF allows the transmission to hold the current gear instead of upshifting when the throttle is lifted.

2. To enter M (Manual Mode), press the shift lever forward to upshift or rearward to downshift.

   An M will be displayed in the DIC.

3. To return to Sport Mode from M (Manual Mode), press and briefly hold the shift lever forward.

The tachometer display on the instrument panel cluster will show which gear the vehicle is in. The number indicates the requested gear range when moving the shift lever forward or rearward. See *Tachometer on page 5-12* for more information.

While using the DSC feature, the vehicle will have firmer, quicker shifting. You can use this for sport driving or when climbing or descending hills, to stay in gear longer, or to downshift for more power or engine braking.

The transmission will only allow you to shift into gears appropriate for the vehicle speed and engine revolutions per minute (rpm). The transmission will not automatically shift to the next lower gear if the engine rpm is too high, nor to the next higher gear when the maximum engine rpm is reached.

If shifting is prevented for any reason, the currently selected gear will flash multiple times, indicating that the transmission has not shifted gears.

While in the DSC mode, the transmission will automatically downshift when the vehicle comes to a stop. This will allow for more power during take-off.

When accelerating the vehicle from a stop in snowy and icy conditions, you may want to shift into second gear. A higher gear ratio allows you to gain more traction on slippery surfaces.

Fuel Economy Mode

The vehicle may have a fuel economy mode. When engaged, fuel economy mode can improve the vehicle's fuel economy.

Pressing the eco button by the shift lever will engage fuel economy mode. When activated, the eco light in the instrument cluster will come on. See *Fuel Economy Light on page 5-25*. Pressing the button a second time will turn fuel economy mode off.

When fuel economy mode is on:

- The transmission will upshift sooner, and downshift later.
- The torque converter will lock up sooner, and stay on longer.
- The gas pedal will be less sensitive.
- The vehicle's computers will more aggressively shut off fuel to the engine under deceleration.
- The engine operates at lower rpm's in fuel economy mode, which can increase noise and vibration. This is normal.

Drive Systems

All-Wheel Drive

Vehicles with this feature always send engine power to all four wheels. It is fully automatic, and adjusts itself as needed for road conditions.

When using a compact spare tire on an AWD vehicle, the system automatically detects the compact spare and disables AWD. To restore AWD operation and prevent excessive wear on the system, replace the compact spare with a full-size tire as soon as possible. See *Compact Spare Tire on page 10-88* for more information.

Brakes

Antilock Brake System (ABS)

This vehicle has the Antilock Brake System (ABS), an advanced electronic braking system that helps prevent a braking skid.

When the engine is started and the vehicle begins to drive away, ABS checks itself. A momentary motor or clicking noise might be heard while this test is going on, and it might even be noticed that the brake pedal moves a little. This is normal.

If there is a problem with ABS, this warning light stays on. See *Antilock Brake System (ABS) Warning Light on page 5-22*.

If driving safely on a wet road and it becomes necessary to slam on the brakes and continue braking to avoid a sudden obstacle, a computer senses that the wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each wheel.

ABS can change the brake pressure to each wheel, as required, faster than any driver could. This can help the driver steer around the obstacle while braking hard.

As the brakes are applied, the computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: ABS does not change the time needed to get a foot up to the brake pedal or always decrease stopping distance.

If you get too close to the vehicle in front of you, there will not be enough time to apply the brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even with ABS.

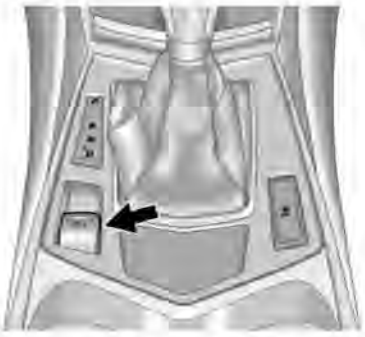
Using ABS

Do not pump the brakes. Just hold the brake pedal down firmly and let ABS work. You might hear the ABS pump or motor operating and feel the brake pedal pulsate, but this is normal.

Braking in Emergencies

ABS allows the driver to steer and brake at the same time. In many emergencies, steering can help more than even the very best braking.

Parking Brake



The vehicle has an Electric Parking Brake (EPB). The switch for the EPB is in the center console. The EPB can always be activated, even if the ignition is off. To avoid draining the battery, do not cycle the EPB too often without the engine running. The EPB can be left applied while the vehicle is parked.

The system has a parking brake status light and a parking brake warning light. See *Brake System Warning Light on page 5-21*. There are also three Driver Information Center (DIC) messages. See *Driver Information Center (DIC) on page 5-27* for more information. In case of insufficient electrical power, the EPB cannot be applied or released.

Before leaving the vehicle, check the parking brake status light to ensure the parking brake is applied.

EPB Apply

The EPB can be applied any time the vehicle is stopped. The EPB is applied by momentarily lifting up on the EPB switch. Once fully applied, the parking brake status light will be on. While the brake is being applied, the status light will flash until full apply is reached. If the light does not come on, or remains flashing, you need to have the vehicle serviced. Do not drive the vehicle if the parking brake status light is flashing. See your dealer. See *Brake System Warning Light on page 5-21* for more information.

If the EPB is applied while the vehicle is in motion, a chime will sound, and the DIC message RELEASE PARKING BRAKE will be displayed. The vehicle will decelerate as long as the switch is held in the up position. Releasing the EPB switch during the deceleration will release the parking brake. If the switch is held in the up position until the vehicle comes to a stop, the EPB will remain applied.

If the parking brake status light flashes continuously, the EPB is only partially applied or released, or there is a problem with the EPB. The DIC message SERVICE PARKING BRAKE will be displayed. If this light flashes continuously, release the EPB, and attempt to apply it again. If this light continues to flash, do not drive the vehicle. See your dealer.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To apply the EPB when this light is on, lift up on the EPB switch and hold it in the up position. Full application of the parking brake by the EPB system may take a longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light remains on. If the parking brake warning light is on, see your dealer.

If the EPB fails to apply, the rear wheels should be blocked to prevent vehicle movement.

EPB Release

To release the EPB, place the ignition in the ON/RUN position, apply and hold the brake pedal, and push down momentarily on the EPB switch. If you attempt to release the EPB without the brake pedal applied, a chime will sound, and the DIC message STEP ON BRAKE TO RELEASE PARK BRAKE will be displayed. The EPB is released when the parking brake status light is off.

If the parking brake warning light is on, the EPB has detected an error in another system and is operating with reduced functionality. To release the EPB when this light is on, push down on the EPB switch and hold it in the down position. EPB release may take a longer period of time than normal when this light is on. Continue to hold the switch until the parking brake status light is off. If the light is on, see your dealer.

Notice: **Driving with the parking brake on can overheat the brake system and cause premature wear or damage to brake system parts. Make sure that the parking brake is fully released and the brake warning light is off before driving.**

Automatic EPB Release

The EPB will automatically release if the vehicle is running, placed into gear, and an attempt is made to drive away. Avoid rapid acceleration when the EPB is applied, to preserve parking brake lining life.

If you are towing a trailer and parking on a hill, see *Driving Characteristics and Towing Tips on page 9-53* for more information.

Brake Assist

This vehicle has a brake assist feature designed to assist the driver in stopping or decreasing vehicle speed in emergency driving conditions. This feature uses the stability system hydraulic brake control module to supplement the power brake system under conditions where the driver has quickly and forcefully applied the brake pedal in an attempt to quickly stop or slow down the vehicle. The stability system hydraulic brake control module increases brake pressure at each corner of the vehicle until the ABS activates. Minor brake pedal pulsation or pedal movement during this time is normal and the driver should continue to apply the brake pedal as the driving situation dictates. The brake assist feature will automatically disengage when the brake pedal is released or brake pedal pressure is quickly decreased.

Hill Start Assist (HSA)

This vehicle has a Hill Start Assist (HSA) feature, which may be useful when the vehicle is stopped on a grade. This feature is designed to prevent the vehicle from rolling, either forward or rearward, during vehicle drive off. After the driver completely stops and holds the vehicle in a complete standstill on a grade, HSA will be automatically activated. During the transition period between when the driver releases the brake pedal and starts to accelerate to drive off on a grade, HSA holds the braking pressure to ensure that there is no rolling. The brakes will automatically release when the accelerator pedal is applied within the two-second window. It will not activate if the vehicle is in a drive gear and facing downhill or if the vehicle is facing uphill and in R (Reverse).

Ride Control Systems

Traction Control System (TCS)

The vehicle has a Traction Control System (TCS) that limits wheel spin. On a front-wheel-drive vehicle, the system operates if it senses that one or both of the front wheels are spinning or beginning to lose traction. On an All-Wheel-Drive (AWD) vehicle, the system will operate if it senses that any of the wheels are spinning or beginning to lose traction. When this happens, the system brakes the spinning wheel(s) and/or reduces engine power to limit wheel spin.

The system may be heard or felt while it is working, but this is normal.

TCS is on whenever the vehicle is started. To limit wheel spin, especially in slippery road conditions, the system should always be left on. But, TCS can be turned off if needed.

flashes to indicate that the traction control system is active.

If there is a problem detected with TCS, SERVICE TRACTION CONTROL and SERVICE STABILITRAK may be displayed on the Driver Information Center (DIC) and will be on. See *Ride Control System Messages on page 5-37*.

When this message is displayed and comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly.

Notice: **Do not repeatedly brake or accelerate heavily when TCS is off. The vehicle's driveline could be damaged.**

If comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If still comes on and stays on at a speed above 20 km/h (13 mph), see your dealer for service.

A chime may also sound when the light comes on steady.

The is located on the console.

The TCS off light comes on and TRACTION CONTROL OFF is displayed on the Driver Information Center (DIC) to indicate that the traction control system has been turned off. See *Ride Control System Messages on page 5-37*.

TCS can be turned off by pressing and releasing . When TCS is turned off, comes on and the system will not limit wheel spin. Driving should be adjusted accordingly. Press and release again to turn the system back on.

When TCS is turned off on AWD vehicles, the system may still make noise. This is normal and necessary with AWD hardware.

It may be necessary to turn the system off if the vehicle ever gets stuck in sand, mud, or snow and rocking the vehicle is required. See *If the Vehicle Is Stuck on page 9-10* for more information. See also *Winter Driving on page 9-8* for information on using TCS when driving in snowy or icy conditions.

If cruise control is being used when TCS activates, cruise control will automatically disengage. Press the cruise control button to re-engage when road conditions allow. See *Cruise Control on page 9-36*.

Adding non-GM accessories can affect the vehicle's performance. See *Accessories and Modifications on page 10-4* for more information.

StabiliTrak® System

The vehicle has a vehicle stability enhancement system called StabiliTrak. It is an advanced computer controlled system that assists with directional control of the vehicle in difficult driving conditions.

StabiliTrak activates when the computer senses a difference between the intended path and the direction the vehicle is actually traveling. StabiliTrak selectively applies braking pressure to the vehicle's brakes to help steer the vehicle in the intended direction.

StabiliTrak is on automatically whenever the vehicle is started. To assist with directional control of the vehicle, the system should always be left on. Trailer Sway Control (TSC) is also on automatically when the vehicle is started. See *Trailer Sway Control (TSC) on page 9-61* for more information.

When the stability control system activates, the Traction Control System (TCS)/StabiliTrak light will flash on the instrument panel. This also occurs when traction control or TSC is activated. A noise may be heard or vibration may be felt in the brake pedal. This is normal. Continue to steer the vehicle in the intended direction.

If there is a problem detected with StabiliTrak, SERVICE STABILITRAK is displayed on the Driver Information Center (DIC) and will stay on. See *Ride Control System Messages on page 5-37*.

When this message is displayed and/or comes on and stays on, the vehicle is safe to drive but the system is not operational. Driving should be adjusted accordingly.

If comes on and stays on, reset the system by:

1. Stopping the vehicle.
2. Turning the engine off and waiting 15 seconds.
3. Starting the engine.

If still comes on and stays on at a speed above 20 km/h (13 mph), see your dealer for service.

OFF

is located on the console.

Both StabiliTrak and Traction Control can be turned off if needed by pressing and holding until and come on the instrument panel. This will also disable the TSC feature. When StabiliTrak is turned off, the system will not assist with directional control of the vehicle or limit wheel spin. Driving should be adjusted accordingly. Press and release again to turn the system back on.

If cruise control is being used when StabiliTrak activates, the cruise control will automatically disengage. Press the cruise control button to re-engage when road conditions allow. See *Cruise Control on page 9-36* for more information.

Limited-Slip Rear Axle

Vehicles with a limited-slip rear axle can give more traction on snow, mud, ice, sand, or gravel. When traction is low, this feature allows the drive wheel with the most traction to move the vehicle. The limited-slip rear axle also gives the driver enhanced control when cornering hard or completing a maneuver, such as a lane change.

Selective Ride Control

The vehicle may have a ride control system called Selective Ride Control. The setting can be changed at any time. Based on road conditions, steering wheel angle, and the vehicle speed, the system automatically adjusts to provide the best handling while providing a smooth ride. The Tour and Sport modes will feel similar on a smooth road.

To switch from TOUR to SPORT mode, move the shift lever to the left while the transmission is in D (Drive).

TOUR: Use for normal city and highway driving. This setting provides a smooth, soft ride.

SPORT: Use where road conditions or personal preference demand more control. This setting provides more "feel," or response to road conditions through increased steering effort and suspension control. Transmission shift points and shift firmness are also enhanced. See *Manual Mode on page 9-26* under Automatic Transmission.

If there is a problem detected with Selective Ride Control, SERVICE SUSPENSION SYSTEM displays on the Driver Information Center (DIC). See *Ride Control System Messages on page 5-37*. Driving should be adjusted accordingly.

Cruise Control

⚠ WARNING

Cruise control can be dangerous where you cannot drive safely at a steady speed. So, do not use the cruise control on winding roads or in heavy traffic.

Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause excessive wheel slip, and you could lose control. Do not use cruise control on slippery roads.

With cruise control, a speed of about 40 km/h (25 mph) or more can be maintained without keeping your foot on the accelerator. Cruise control does not work at speeds below about 40 km/h (25 mph).

If the brakes are applied, the cruise control shuts off.

If the vehicle has the StabiliTrak® system and begins to limit wheel spin while using cruise control, the cruise control automatically disengages. See *StabiliTrak® System on page 9-34* or *Traction Control System (TCS) on page 9-32*. When road conditions allow the cruise control to be safely used, you can apply the cruise control again.

Cruise Control

(On/Off): Press to turn the system on and off.

+ RES (Resume/Accelerate): Press briefly to make the vehicle resume to a previously set speed or press and hold to accelerate.

−SET (Set/Coast): Press to set the speed and activate cruise control or make the vehicle decelerate.

OFF (Cancel): Press to disengage cruise control without erasing the set speed from memory.

Setting Cruise Control

If the cruise button is on when not in use, it could get bumped and go into cruise when not desired. Keep the cruise control switch off when cruise is not being used.

The cruise control light on the instrument panel cluster comes on after the cruise control has been set to the desired speed.

1. Press .
2. Get up to the desired speed.
3. Press and release the −SET button located on the steering wheel.
4. Take your foot off the accelerator.

Resuming a Set Speed

If the cruise control is set at a desired speed and then the brakes are applied, the cruise control is disengaged without erasing the set speed from memory.

Once the vehicle speed reaches about 40 km/h (25 mph) or more, press the +RES button on the steering wheel. The vehicle returns to the previous set speed and stays there.

Increasing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated,

- Press and hold the +RES button on the steering wheel until the desired speed is reached, then release it.
- To increase vehicle speed in small amounts, press the +RES button. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) faster.

Reducing Speed While Cruise Control is at a Set Speed

If the cruise control system is already activated,

- Press and hold the −SET button on the steering wheel until the desired lower speed is reached, then release it.

- To slow down in small amounts, press the −SET button on the steering wheel briefly. Each time this is done, the vehicle goes about 1.6 km/h (1 mph) slower.

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle speed. When you take your foot off the pedal, the vehicle will slow down to the previous set cruise speed.

Using Cruise Control on Hills

How well the cruise control will work on hills depends upon the vehicle speed, load, and the steepness of the hills. When going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle speed. When going downhill, you might have to brake or shift to a lower gear to keep the vehicle speed down. If the brake is applied the cruise control disengages.

Ending Cruise Control

There are three ways to end cruise control:

- Step lightly on the brake pedal.
- Press the OFF button on the steering wheel.
- Press the button on the steering wheel.

Erasing Speed Memory

The cruise control set speed is erased from memory by pressing the button or if the ignition is turned off.

Object Detection Systems

Ultrasonic Parking Assist

If available, the Ultrasonic Front and Rear Parking Assist (UFRPA) system assists the driver with parking and avoiding objects. UFRPA operates at speeds less than 8 km/h (5 mph). The sensors on the front and rear bumper detect objects up to 1.2 m (4 ft) in front of the vehicle, and 2.5 m (8 ft) behind the vehicle, and at least 25 cm (10 in) off the ground.

⚠ WARNING

The UFRPA system does not detect pedestrians, bicyclists, animals, or any other objects located below the bumper or that are too close or too far from the vehicle. To prevent injury, death, or vehicle damage, even with UFRPA, always check the area around the vehicle and check all mirrors before moving forward or backing.

How the System Works

When the vehicle is shifted into R (Reverse) the front and rear sensors are automatically turned on. After the vehicle is shifted out of R (Reverse), the rear sensors are turned off and the front sensors stay on until the vehicle is above a speed of 8 km/h (5 mph). For the front park assist system to be active again without shifting into R (Reverse), the park assist button next to the shift lever must be pressed. See "Turning the System On and Off" later in this section.

UFRPA operates only at speeds less than 8 km/h (5 mph).

When the vehicle is in N (Neutral), the system may be active. If the vehicle is in a car wash, the sensors may detect objects in the car wash. See "Turning the System On and Off" later in this section to turn the system off.

High-toned beeps from the front speakers are for objects detected near the front bumper. Low-toned beeps from the rear speakers are for objects detected near the rear bumper. The interval between the beeps becomes shorter as the vehicle gets closer to the obstacle. When the distance is less than 30 cm (12 in) the beeping is a continuous tone for five seconds.

To be detected, objects must be at least 25 cm (10 in) off the ground and below liftgate level. Objects must also be within 1.2 m (4 ft) in front of the vehicle and 2.5 m (8 ft) from the rear bumper. This distance may be less during warmer or humid weather.

Front Display

The front display is located in the instrument panel in the center of the speedometer and has four bars to provide distance and system information.

The following describes how the UFRPA front display lights appear as the vehicle gets closer to a detected object:

Description	Metric	English
one amber bar	1.2 m	4 ft
two amber bars	1.0 m	40 in
three amber bars	0.6 m	23 in
three amber bars and one red bar	0.3 m	1 ft

Objects Detected by Both the Front and Rear Sensors

In general, if objects are detected at the same time near both the front and rear bumpers while backing up, the beeps only sound to indicate that objects are close to the rear bumper.

However, if an object comes within 0.3 m (1 ft) of the front bumper while the vehicle is backing up and at the same time there is another object further than 0.3 m (1 ft) from the rear bumper, then the beeps only sound to indicate the object that is closer to the front bumper.

Turning the System On and Off

The UFRPA system can be turned on and off by pressing the park assist button located next to the shift lever.

The LED next to the park assist button lights up when the system is on and turns off when it has been disabled.

When the system is off, PARK ASSIST OFF displays on the Driver Information Center (DIC). The message disappears after a short period of time.

UFRPA defaults to the on setting each time the vehicle is started.

When the System Does Not Seem to Work Properly

The following messages may be displayed on the DIC:

SERVICE PARKING ASSIST: If this message occurs, take the vehicle to your dealer to repair the system.

PARK ASSIST OFF: If the UFRPA system does not activate due to a temporary condition, the message displays on the DIC. This can occur under the following conditions:

- The driver has disabled the system.
- The ultrasonic sensors are not clean. Keep the vehicle's bumpers free of mud, dirt, snow, ice and slush. For cleaning instructions, see *Exterior Care on page 10-97*.
- The park assist sensors are covered by frost or ice. Frost or ice can form around and behind the sensors and may not always be seen; this can occur after washing the vehicle in cold weather. The message may not clear until the frost or ice has melted.
- A trailer was attached to the vehicle, or an object was hanging out of the liftgate during the last drive cycle. Once the attached object is removed, UFRPA will return to normal operation.
- An object or cover is attached to the front of the vehicle.
- A tow bar is attached to the vehicle.
- The bumper is damaged. Take the vehicle to your dealer to repair the system.
- Other conditions, such as vibrations from a jackhammer or the compression of air brakes on a very large truck, are affecting system performance.

Rear Vision Camera (RVC)

The vehicle may have a Rear Vision Camera (RVC) system. Read this entire section before using it.

The RVC system can assist the driver when backing up by displaying a view of the area behind the vehicle.

⚠ WARNING

The RVC system does not display pedestrians, bicyclists, animals, or any other object located outside the camera's field of view, below the bumper, or under the vehicle.

(Continued)

WARNING (Continued)

Do not back the vehicle using only the RVC screen, such as during longer, higher speed backing maneuvers, or where there could be cross-traffic. Perceived distances may be different from actual distances.

Failure to use proper care before backing may result in injury, death, or vehicle damage. Always check before backing by checking behind and around the vehicle.

Vehicles With a Navigation System

An image appears on the navigation screen with the message "Check Surroundings for Safety" when the vehicle is shifted into R (Reverse). The navigation screen goes to the previous screen after approximately 10 seconds once the vehicle is shifted out of R (Reverse).

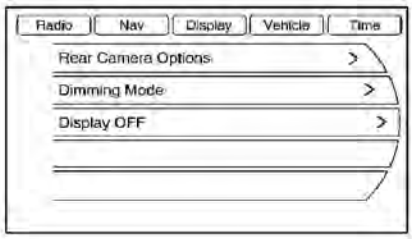
To cancel the delay, do one of the following:

- Press a hard key on the navigation system.
- Shift into P (Park).
- Reach a vehicle speed of 8 km/h (5 mph).

Turning the Rear Vision Camera System On or Off

To turn the rear vision camera system on or off:

1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.



4. Select Camera. When a checkmark appears next to the Camera option, the RVC system is on.

Symbols

The navigation system may have a feature that lets the driver view symbols on the navigation screen while using the rear vision camera. The Ultrasonic Front and Rear Parking Assist (UFRPA) system must not be disabled to use the caution symbols. The error message "Rear Parking Assist Symbols Unavailable" may display if UFRPA has been disabled and the symbols have been turned on. See *Ultrasonic Parking Assist on page 9-38*.

The symbols appear and may cover an object when viewing the navigation screen when an object is detected by the UFRPA system.

To turn the symbols on or off:

1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.
4. Select Symbols. When a checkmark appears next to the Symbols option, symbols will appear.

Guidelines

The RVC system has a guideline overlay that can help the driver align the vehicle when backing into a parking spot.

To turn the guidelines on or off:

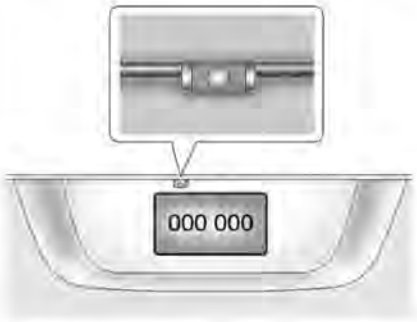
1. Shift into P (Park).
2. Press the CONFIG button.
3. Select Display.
4. Select Guidelines. When a checkmark appears next to the Guidelines option, guidelines will appear.

Rear Vision Camera Error Messages

SERVICE REAR VISION CAMERA SYSTEM: This message can display when the system is not receiving information it requires from other vehicle systems.

If any other problem occurs or if a problem persists, see your dealer.

Rear Vision Camera Location

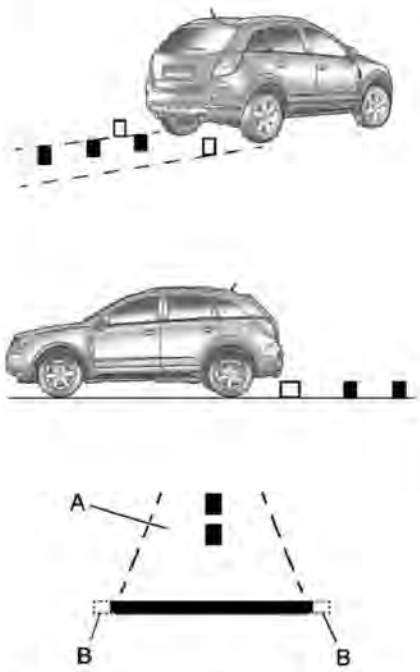


The camera is located above the license plate.

The area displayed by the camera is limited.

It does not display objects that are close to either corner or under the bumper and can vary depending on vehicle orientation or road conditions. The distance of the image that appears on the screen is different from the actual distance.

The following illustration shows the field of view that the camera provides.



A. View displayed by the camera.
B. Corner of the rear bumper.

When the System Does Not Seem to Work Properly

The rear vision camera system may not work properly or display a clear image if:

- The RVC is turned off. See "Turning the Rear Vision Camera System On or Off" earlier in this section.
- It is dark.
- The sun or the beam of headlamps is shining directly into the camera lens.
- Ice, snow, mud, or anything else builds up on the camera lens. Clean the lens, rinse it with water, and wipe it with a soft cloth.
- The back of the vehicle is in an accident. The position and mounting angle of the camera can change or the camera can be affected. Be sure to have the camera and its position and mounting angle checked at your dealer.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of this vehicle. To help keep the engine clean and maintain optimum vehicle performance, we recommend the use of gasoline advertised as TOP TIER Detergent Gasoline.

Look for the TOP TIER label on the fuel pump to ensure gasoline meets enhanced detergency standards developed by auto companies. A list of marketers providing TOP TIER Detergent Gasoline can be found at www.toptiergas.com.

TOP TIER
Detergent Gasoline

CATEGORIE SUPERIEURE
Essences Détergentes

The eighth digit of the Vehicle Identification Number (VIN) shows the code letter or number that identifies the vehicle's engine. The VIN is at the top left of the instrument panel. See *Vehicle Identification Number (VIN) on page 12-1*.

Vehicles that have a FlexFuel badge and a yellow fuel cap can use either unleaded gasoline or ethanol fuel containing up to 85% ethanol (E85). See *Fuel E85 (85% Ethanol) on page 9-49*. For all other vehicles, use only the unleaded gasoline described under *Recommended Fuel on page 9-46*.

Recommended Fuel

Use regular unleaded gasoline with a posted octane rating of 87 or higher. If the octane rating is less than 87, an audible knocking noise, commonly referred to as spark knock, might be heard when driving. If this occurs, use a gasoline rated at 87 octane or higher as soon as possible. If heavy knocking is heard when using gasoline rated at 87 octane or higher, the engine needs service.

Gasoline Specifications (U.S. and Canada Only)

At a minimum, gasoline should meet ASTM specification D 4814 in the United States or CAN/CGSB-3.5 or 3.511 in Canada. Some gasolines contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT). We recommend against the use of gasolines containing MMT. See *Fuel Additives on page 9-48* for additional information.

California Fuel Requirements

If the vehicle is certified to meet California Emissions Standards, it is designed to operate on fuels that meet California specifications. See the underhood emission control label. If this fuel is not available in states adopting California Emissions Standards, the vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system performance might be affected. The malfunction indicator lamp could turn on and the vehicle might fail a smog-check test. See *Malfunction Indicator Lamp on page 5-18*. If this occurs, return to your authorized dealer for diagnosis. If it is determined that the condition is caused by the type of fuel used, repairs might not be covered by the vehicle warranty.

Fuels in Foreign Countries

Never use leaded gasoline or any other fuel not recommended in the previous text on fuel. Costly repairs caused by use of improper fuel would not be covered by the vehicle warranty.

To check the fuel availability, ask an auto club, or contact a major oil company that does business in the country where you will be driving.

Fuel Additives

To provide cleaner air, all gasolines in the United States are now required to contain additives that help prevent engine and fuel system deposits from forming, allowing the emission control system to work properly. In most cases, nothing should have to be added to the fuel. However, some gasolines contain only the minimum amount of additive required to meet U.S. Environmental Protection Agency regulations. To help keep fuel injectors and intake valves clean and avoid problems due to dirty injectors or valves, look for gasoline that is advertised as TOP TIER Detergent Gasoline. Look for the TOP TIER label on the fuel pump to ensure gasoline meets enhanced detergency standards developed by the auto companies. A list of marketers providing TOP TIER Detergent Gasoline can be found at www.toptiergas.com.

For customers who do not use TOP TIER Detergent Gasoline regularly, one bottle of GM Fuel System Treatment PLUS, added to the fuel tank at every engine oil change, can help clean deposits from fuel injectors and intake valves. GM Fuel System Treatment PLUS is the only gasoline additive recommended by General Motors. It is available at your dealer.

Gasolines containing oxygenates, such as ethers and ethanol, and reformulated gasolines might be available in your area. We recommend that you use these gasolines, if they comply with the specifications described earlier. However, E85 (85% ethanol) and other fuels containing more than 15% ethanol must not be used in vehicles that were not designed for those fuels.

Notice: **This vehicle was not designed for fuel that contains methanol. Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.**

Some gasolines that are not reformulated for low emissions can contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT); ask the attendant where you buy gasoline whether the fuel contains MMT. We recommend against the use of such gasolines. Fuels containing MMT can reduce spark plug life and affect emission control system performance. The malfunction indicator lamp might turn on. If this occurs, return to your dealer for service.

Fuel E85 (85% Ethanol)

Vehicles that have a FlexFuel badge and a yellow fuel cap can use either unleaded gasoline or ethanol fuel containing up to 85% ethanol (E85). For all other vehicles, use only the unleaded gasoline described under *Recommended Fuel on page 9-46*.

We encourage the use of E85 in vehicles that are designed to use it. The ethanol in E85 is a "renewable" fuel, meaning it is made from renewable sources such as corn and other crops.

Many service stations will not have an 85% ethanol fuel (E85) pump available. The U.S. Department of Energy has an alternative fuels website (www.afdc.energy.gov/afdc/locator/stations/) that can help you find E85 fuel. Those stations that do have E85 should have a label indicating ethanol content. Do not use the fuel if the ethanol content is greater than 85%.

At a minimum, E85 should meet ASTM Specification D 5798 or CGSB Specification 3.512. Filling the tank with fuel mixtures that do not meet ASTM or CGSB specifications can affect driveability and could cause the malfunction indicator lamp to come on. As the outside temperature approaches freezing, ethanol fuel distributors should supply winter grade ethanol, the same as with unleaded gasoline.

The starting characteristics of E85 fuel make it unsuitable for use when temperatures fall below −18°C (0°F). In the range of −18°C (0°F) to 0°C (32°F), it may take more time to start the engine.

E85 has less energy per liter (gallon) than gasoline, so you will need to refill the fuel tank more often when using E85 than when you are using gasoline. See *Filling the Tank on page 9-50*.

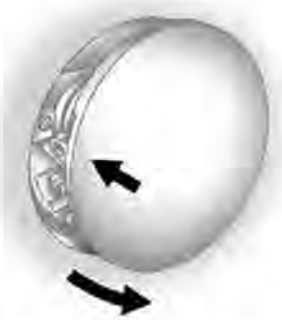
Notice: **Some additives are not compatible with E85 fuel and can harm the vehicle's fuel system. Do not add anything to E85. Damage caused by additives would not be covered by the vehicle warranty.**

Notice: **This vehicle was not designed for fuel that contains methanol. Do not use fuel containing methanol. It can corrode metal parts in the fuel system and also damage plastic and rubber parts. That damage would not be covered under the vehicle warranty.**

Filling the Tank

⚠ WARNING

Fuel vapor burns violently and a fuel fire can cause bad injuries. To help avoid injuries to you and others, read and follow all the instructions on the fuel pump island. Turn off the engine when refueling. Do not smoke near fuel or when refueling the vehicle. Do not use cellular phones. Keep sparks, flames, and smoking materials away from fuel. Do not leave the fuel pump unattended when refueling the vehicle. This is against the law in some places. Do not re-enter the vehicle while pumping fuel. Keep children away from the fuel pump; never let children pump fuel.



The tethered fuel cap is located behind a hinged fuel door on the passenger side of the vehicle.

To open the fuel door, push the rearward center edge in and release and it will open.

To remove the fuel cap, turn it slowly counterclockwise.

While refueling, hang the tethered fuel cap from the hook on the fuel door.

When reinstalling the cap, turn it clockwise until it clicks once, otherwise the malfunction indicator lamp could turn on. See *Malfunction Indicator Lamp on page 5-18*.

⚠ WARNING

Fuel can spray out on you if you open the fuel cap too quickly. If you spill fuel and then something ignites it, you could be badly burned. This spray can happen if the tank is nearly full, and is more likely in hot weather. Open the fuel cap slowly and wait for any hiss noise to stop. Then unscrew the cap all the way.

Be careful not to spill fuel. Do not top off or overfill the tank and wait a few seconds after you have finished pumping before removing the nozzle. Clean fuel from painted surfaces as soon as possible. See *Exterior Care on page 10-97*.

When replacing the fuel cap, turn it clockwise until it clicks once. Make sure the cap is fully installed. The diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See *Malfunction Indicator Lamp on page 5-18*.

⚠ WARNING

If a fire starts while you are refueling, do not remove the nozzle. Shut off the flow of fuel by shutting off the pump or by notifying the station attendant. Leave the area immediately.

Notice: **If a new fuel cap is needed, be sure to get the right type of cap from your dealer. The wrong type of fuel cap might not fit properly, might cause the malfunction indicator lamp to light, and could damage the fuel tank and emissions system. See *Malfunction Indicator Lamp on page 5-18*.**

Filling a Portable Fuel Container

⚠ WARNING

Never fill a portable fuel container while it is in the vehicle. Static electricity discharge from the container can ignite the fuel vapor. You can be badly burned and the vehicle damaged if this occurs. To help avoid injury to you and others:

- Dispense fuel only into approved containers.
- Do not fill a container while it is inside a vehicle, in a vehicle's trunk, pickup bed, or on any surface other than the ground.

(Continued)

WARNING (Continued)

- Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Contact should be maintained until the filling is complete.
- Do not smoke while pumping fuel.
- Do not use a cellular phone while pumping fuel.

Towing

General Towing Information

Only use towing equipment that has been designed for the vehicle. Contact your dealer or trailering dealer for assistance with preparing the vehicle for towing a trailer.

See the following trailer towing information in this section:

- For information on driving while towing a trailer, see "Driving Characteristics and Towing Tips."
- For maximum vehicle and trailer weights, see "Trailer Towing."
- For information on equipment to tow a trailer, see "Towing Equipment."

For information on towing a disabled vehicle, see *Towing the Vehicle on page 10-93*. For information on towing the vehicle behind another vehicle such as a motor home, see *Recreational Vehicle Towing on page 10-93*.

Driving Characteristics and Towing Tips

⚠ WARNING

The driver can lose control when pulling a trailer if the correct equipment is not used or the vehicle is not driven properly. For example, if the trailer is too heavy, the brakes may not work well — or even at all.

(Continued)

WARNING (Continued)

The driver and passengers could be seriously injured. The vehicle may also be damaged; the resulting repairs would not be covered by the vehicle warranty. Pull a trailer only if all the steps in this section have been followed. Ask your dealer for advice and information about towing a trailer with the vehicle.

The vehicle can tow a trailer when equipped with the proper trailer towing equipment.

For trailering capacity, see *Trailer Towing on page 9-57*. Trailering changes handling, acceleration, braking, durability and fuel economy. With the added weight, the engine, transmission, wheel assemblies and tires are forced to work harder and under greater loads. The trailer also adds wind resistance, increasing the pulling requirements. For safe trailering, correctly use the proper trailering equipment.

The following information has important trailering tips and rules for your safety and that of your passengers. Read this section carefully before pulling a trailer.

Pulling a Trailer

Here are some important points:

- There are many laws, including speed limit restrictions that apply to trailering. Check for legal requirements.
- Do not tow a trailer at all during the first 1 600 km (1,000 miles) the new vehicle is driven. The engine, axle or other parts could be damaged.
- During the first 800 km (500 miles) that a trailer is towed, do not drive over 80 km/h (50 mph) and do not make starts at full throttle. This reduces wear on the vehicle.
- The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.
- Do not use the Fuel Economy Mode when towing.
- Obey speed limit restrictions. Do not drive faster than the maximum posted speed for trailers, or no more than 90 km/h (55 mph), to reduce wear on the vehicle.

Driving with a Trailer

Towing a trailer requires experience. Get familiar with handling and braking with the added trailer weight. The vehicle is now longer and not as responsive as the vehicle is by itself.

Check all trailer hitch parts and attachments, safety chains, electrical connectors, lamps, tires and mirror adjustments. If the trailer has electric brakes, start the vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working.

During the trip, check regularly to be sure that the load is secure, and the lamps and trailer brakes are working properly.

Towing with a Stability Control System

When towing, the sound of the stability control system might be heard. The system is reacting to the vehicle movement caused by the trailer, which mainly occurs during cornering. This is normal when towing heavier trailers.

Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving the vehicle without a trailer. This can help to avoid situations that require heavy braking and sudden turns.

Passing

More passing distance is needed when towing a trailer. Because the rig is longer, it is necessary to go farther beyond the passed vehicle before returning to the lane.

Backing Up

Hold the bottom of the steering wheel with one hand. To move the trailer to the left, move that hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

Making Turns

Notice: **Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. The vehicle could be damaged. Avoid making very sharp turns while trailering.**

When turning with a trailer, make wider turns than normal so the trailer will not strike soft shoulders, curbs, road signs, trees or other objects. Use the turn signal well in advance and avoid jerky or sudden maneuvers.

Turn Signals When Towing a Trailer

The turn signal indicators on the instrument panel flash whenever signaling a turn or lane change. Properly hooked up, the trailer lamps also flash, telling other drivers the vehicle is turning, changing lanes or stopping.

When towing a trailer, the arrows on the instrument panel flash for turns even if the bulbs on the trailer are burned out. Check occasionally to be sure the trailer bulbs are still working.

Driving on Grades

Reduce speed and shift to a lower gear before starting down a long or steep downgrade. If the transmission is not shifted down, the brakes might have to be used so much that they would get hot and no longer work well.

The vehicle can tow in D (Drive). Use a lower gear if the transmission shifts too often.

When towing at high altitude on steep uphill grades, engine coolant boils at a lower temperature than at normal altitudes. If the engine is turned off immediately after towing at high altitude on steep uphill grades, the vehicle could show signs similar to engine overheating. To avoid this, let the engine run while parked, preferably on level ground, with the transmission in P (Park) for a few minutes before turning the engine off. If the overheat warning comes on, see *Engine Overheating on page 10-18*.

Parking on Hills

⚠ WARNING

Parking the vehicle on a hill with the trailer attached can be dangerous. If something goes wrong, the rig could start to move. People can be injured, and both the vehicle and the trailer can be damaged. When possible, always park the rig on a flat surface.

If parking the rig on a hill:

1. Press the brake pedal, but do not shift into P (Park) yet. Turn the wheels into the curb if facing downhill or into traffic if facing uphill.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the brake pedal until the chocks absorb the load.
4. Reapply the brake pedal. Then apply the parking brake and shift into P (Park).
5. Release the brake pedal.

Leaving After Parking on a Hill

1. Apply and hold the brake pedal while you:
   - Start the engine.
   - Shift into a gear.
   - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Maintenance When Trailer Towing

The vehicle needs service more often when pulling a trailer. See this manual's Maintenance Schedule or index for more information. Things that are especially important in trailer operation are automatic transmission fluid, engine oil, axle lubricant, belts, cooling system and brake system. Inspect these before and during the trip.

Check periodically to see that all hitch nuts and bolts are tight.

Engine Cooling When Trailer Towing

The cooling system may temporarily overheat during severe operating conditions. See *Engine Overheating on page 10-18*.

Trailer Towing

Before pulling a trailer, there are three important considerations that have to do with weight:

- The weight of the trailer
- The weight of the trailer tongue
- The total weight on the vehicle's tires

Weight of the Trailer

How heavy can a trailer safely be?

It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature and how much the vehicle is used to pull a trailer are all important.

It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry. See "Weight of the Trailer Tongue" later in this section for more information.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Use the following chart to determine how much the vehicle can weigh, based upon the vehicle model and options.

Vehicle	Maximum Trailer Weight	GCWR*	Maximum Tongue Weight
3.6L Engine, FWD without Trailering Package	1 134 kg (2,500 lbs)	3 185 kg (7,022 lbs)	113 kg (250 lbs)
3.6L Engine, FWD with Trailering Package	1 588 kg (3,500 lbs)	3 640 kg (8,025 lbs)	159 kg (350 lbs)
3.6L Engine, AWD without Trailering Package	1 134 kg (2,500 lbs)	3 270 kg (7,209 lbs)	159 kg (350 lbs)
3.6L Engine, AWD with Trailering Package	1 588 kg (3,500 lbs)	3 725 kg (8,212 lbs)	159 kg (350 lbs)
*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversions. The GCWR for the vehicle should not be exceeded.			

Ask your dealer for trailering information or advice.
See *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-5* for more information.

Weight of the Trailer Tongue

The tongue load (A) of any trailer is an important weight to measure because it affects the total gross weight of the vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo carried in it, and the people who will be riding in the vehicle. If there are a lot of options, equipment, passengers or cargo in the vehicle, it will reduce the tongue weight the vehicle can carry, which will also reduce the trailer weight the vehicle can tow. If towing a trailer, the tongue load must be added to the GVW because the vehicle will be carrying that weight, too. See *Vehicle Load Limits on page 9-10* for more information about the vehicle's maximum load capacity.

A B

If a weight-carrying hitch or a weight-distributing hitch is being used, the trailer tongue (A) should weigh 10-15 percent of the total loaded trailer weight (B).

After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they are not, adjustments might be made by moving some items around in the trailer.

Trailering may be limited by the vehicle's ability to carry tongue weight. Tongue weight cannot cause the vehicle to exceed the GVWR (Gross Vehicle Weight Rating) or the RGAWR (Rear Gross Axle Weight Rating). The effect of additional weight may reduce the trailering capacity more than the total of the additional weight.

It is important that the vehicle does not exceed any of its ratings — GCWR, GVWR, RGAWR, Maximum Trailer Rating or Tongue Weight. The only way to be sure it is not exceeding any of these ratings is to weigh the vehicle and trailer.

Total Weight on the Vehicle's Tires

Be sure the vehicle's tires are inflated to the upper limit for cold tires. These numbers can be found on the Certification label or see *Vehicle Load Limits on page 9-10* for more information. Make sure not to go over the GVW limit for the vehicle, or the GAWR, including the weight of the trailer tongue. If using a weight distributing hitch, make sure not to go over the rear axle limit before applying the weight distribution spring bars.

Towing Equipment

Hitches

It is important to have the correct hitch equipment. Crosswinds, large trucks going by and rough roads are a few reasons why the right hitch is needed.

- The rear bumper on the vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will any holes be made in the body of the vehicle when the trailer hitch is installed? If there are, then be sure to seal the holes later when the hitch is removed. If the holes are not sealed, dirt, water, and deadly carbon monoxide (CO) from the exhaust can get into the vehicle. See *Engine Exhaust on page 9-23.*

Hitch Cover

The vehicle may have a hitch cover. To remove the hitch cover:

1. Turn the fasteners on the lower tabs 90 degrees counterclockwise.
2. Lift the lower edge of the cover about 45 degrees.
3. Pull the cover downward to disengage the upper attachments.

To reinstall the hitch cover:

1. Hold the cover at a 45 degree angle to the vehicle and push the upper tabs in the hitch cover into the slots in the fascia.
2. Move the bottom of the cover forward until the lower tabs line up with the lower fascia slots.
3. Snap the hitch cover into place by pushing the upper corners forward.
4. Turn the fasteners on the lower tabs 90 degrees clockwise to lock the cover in place.

Safety Chains

Always attach chains between the vehicle and the trailer. Cross the safety chains under the tongue of the trailer to help prevent the tongue from contacting the road if it becomes separated from the hitch. Always leave just enough slack so the rig can turn. Never allow safety chains to drag on the ground.

Trailer Brakes

A loaded trailer that weighs more than 450 kg (1,000 lbs) needs to have its own brake system that is adequate for the weight of the trailer. Be sure to read and follow the instructions for the trailer brakes so they are installed, adjusted and maintained properly.

Because the vehicle has anti-lock brakes, do not tap into the vehicle's brake system. If you do, both brake systems will not work well, or at all.

Trailer Sway Control (TSC)

The vehicle has a Trailer Sway Control (TSC) feature as part of the StabiliTrak system. If TSC detects that the trailer is swaying, the vehicle's brakes are automatically applied.

When TSC is applying the brakes, the TCS/StabiliTrak indicator light flashes to notify the driver to reduce speed. If the trailer continues to sway, StabiliTrak will reduce engine torque to help slow the vehicle.

TSC will not function if StabiliTrak is turned off. See *StabiliTrak® System on page 9-34* for more information.

Conversions and Add-Ons

Add-On Electrical Equipment

Notice: **Do not add anything electrical to the vehicle unless you check with your dealer first. Some electrical equipment can damage the vehicle and the damage would not be covered by the vehicle's warranty. Some add-on electrical equipment can keep other components from working as they should.**

Add-on equipment can drain the vehicle's 12-volt battery, even if the vehicle is not operating.

The vehicle has an airbag system. Before attempting to add anything electrical to the vehicle, see *Servicing the Airbag-Equipped Vehicle on page 3-34* and *Adding Equipment to the Airbag-Equipped Vehicle on page 3-35*.

✍ NOTES

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General Information

For service and parts needs, visit your dealer. You will receive genuine GM parts and GM-trained and supported service people.

Genuine GM parts have one of these marks:

ACDelco

Genuine GM | Parts

GM Accessories

California Proposition 65 Warning

Most motor vehicles, including this one, contain and/or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Engine exhaust, many parts and systems, many fluids, and some component wear by-products contain and/or emit these chemicals.

California Perchlorate Materials Requirements

Certain types of automotive applications, such as airbag initiators, safety belt pretensioners, and lithium batteries contained in Remote Keyless Entry transmitters, may contain perchlorate materials. Special handling may be necessary. For additional information, see www.dtsc.ca.gov/hazardouswaste/perchlorate.

Accessories and Modifications

Adding non-dealer accessories or making modifications to the vehicle can affect vehicle performance and safety, including such things as airbags, braking, stability, ride and handling, emissions systems, aerodynamics, durability, and electronic systems like antilock brakes, traction control, and stability control. These accessories or modifications could even cause malfunction or damage not covered by the vehicle warranty.

Damage to vehicle components resulting from modifications or the installation or use of non-GM certified parts, including control module or software modifications, is not covered under the terms of the vehicle warranty and may affect remaining warranty coverage for affected parts.

GM Accessories are designed to complement and function with other systems on the vehicle. See your dealer to accessorize the vehicle using genuine GM Accessories installed by a dealer technician.

Also, see *Adding Equipment to the Airbag-Equipped Vehicle on page 3-35*.

Vehicle Checks

Doing Your Own Service Work

⚠ WARNING

It can be dangerous to work on your vehicle if you do not have the proper knowledge, service manual, tools, or parts. Always follow owner manual procedures and consult the service manual for your vehicle before doing any service work.

If doing some of your own service work, use the proper service manual. It tells you much more about how to service the vehicle than this manual can.

To order the proper service manual, see *Service Publications Ordering Information on page 13-18*.

This vehicle has an airbag system. Before attempting to do your own service work, see *Servicing the Airbag-Equipped Vehicle on page 3-34*.

Keep a record with all parts receipts and list the mileage and the date of any service work performed. See *Maintenance Records on page 11-15*.

Hood

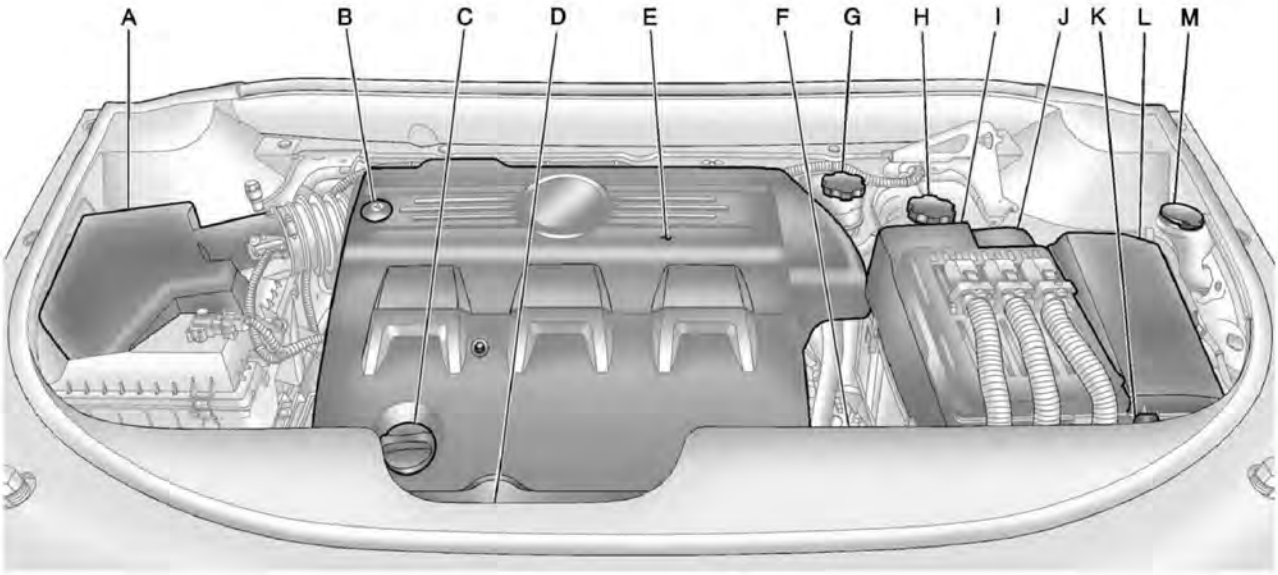
To open the hood:

1. Pull the release handle with the above symbol on it. It is located below the instrument panel to the left of the steering wheel.

2. Move the secondary hood release lever up to release the striker. The lever is located near the middle of the hood.
3. Lift the hood.

Before closing the hood, be sure all the filler caps are on properly.

Engine Compartment Overview



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A. *Engine Air Cleaner/Filter on page 10-12.*

B. Power Steering Reservoir and Cap (Under Engine Cover). See *Power Steering Fluid on page 10-20.*

C. Engine Oil Fill Cap. See *Engine Oil on page 10-8.*

D. Engine Oil Dipstick (Out of View). See *Engine Oil on page 10-8.*

E. *Engine Cover on page 10-7.*

F. Transmission Fluid Cap and Dipstick (Out of View). See *Automatic Transmission Fluid on page 10-12.*

G. Brake Master Cylinder Reservoir. See *Brakes on page 10-22.*

H. Engine Coolant Surge Tank and Pressure Cap. See *Engine Coolant on page 10-15.*

I. Battery (Out of View). See *Battery on page 10-24.*

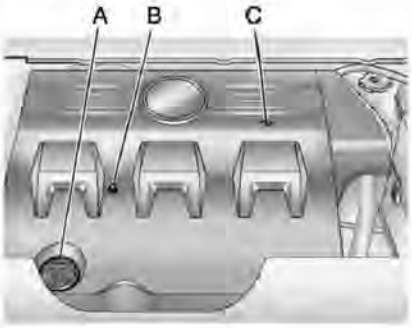
J. Remote Positive (+) Terminal. See *Jump Starting on page 10-88.*

K. Remote Negative (−) Terminal (Out of View). See *Jump Starting on page 10-88.*

L. *Engine Compartment Fuse Block on page 10-42.*

M. Windshield Washer Fluid Reservoir. See *Washer Fluid on page 10-21.*

Engine Cover



A. Oil Fill Cap

B. Engine Cover Bolt

C. Engine Cover

To remove:

1. Remove the oil fill cap (A).
2. Remove the engine cover bolt (B).
3. Raise the engine cover (C) to release from the retainers.
4. Lift and remove the engine cover.
5. Reverse Steps 1 through 4 to reinstall engine cover.

Engine Oil

To ensure proper engine performance and long life, careful attention must be paid to engine oil. Following these simple, but important steps will help protect your investment:

- Always use engine oil approved to the proper specification and of the proper viscosity grade. See "Selecting the Right Engine Oil" in this section.
- Check the engine oil level regularly and maintain the proper oil level. See "Checking Engine Oil" and "When to Add Engine Oil" in this section.
- Change the engine oil at the appropriate time. See *Engine Oil Life System on page 10-10*.
- Always dispose of engine oil properly. See "What to Do with Used Oil" in this section.

Checking Engine Oil

It is a good idea to check the engine oil level at each fuel fill. In order to get an accurate reading, the vehicle must be on level ground. The engine oil dipstick handle is a yellow loop. See *Engine Compartment Overview on page 10-6* for the location of the engine oil dipstick.

1. If the engine has been running recently, turn off the engine and allow several minutes for the oil to drain back into the oil pan. Checking the oil level too soon after engine shutoff will not provide an accurate oil level reading.
2. Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

When to Add Engine Oil

If the oil is below the cross-hatched area at the tip of the dipstick, add 1 L (1 qt) of the recommended oil and then recheck the level. See "Selecting the Right Engine Oil" in this section for an explanation of what kind of oil to use. For engine oil crankcase capacity, see *Capacities and Specifications on page 12-2*.

Notice: **Do not add too much oil. Oil levels above or below the acceptable operating range shown on the dipstick are harmful to the engine. If you find that you have an oil level above the operating range, i.e., the engine has so much oil that the oil level gets above the cross-hatched area that shows the proper operating range, the engine could be damaged. You should drain out the excess oil or limit driving of the vehicle and seek a service professional to remove the excess amount of oil.**

See *Engine Compartment Overview on page 10-6* for the location of the engine oil fill cap.

Add enough oil to put the level somewhere in the proper operating range. Push the dipstick all the way back in when through.

Selecting the Right Engine Oil

Selecting the right engine oil depends on both the proper oil specification and viscosity grade. See *Recommended Fluids and Lubricants on page 11-13*.

Specification

Use and ask for licensed engine oils with the dexos1™ approved certification mark. Engine oils meeting the requirements for the vehicle should have the dexos1 approved certification mark. This certification mark indicates that the oil has been approved to the dexos1 specification.

Notice: **Failure to use the recommended engine oil or equivalent can result in engine damage not covered by the vehicle warranty. Check with your dealer or service provider on whether the oil is approved to the dexos1 specification.**

Viscosity Grade

SAE 5W-30 is the best viscosity grade for the vehicle. Do not use other viscosity grade oils such as SAE 10W-30, 10W-40, or 20W-50.

If in an area of extreme cold, where the temperature falls below −20°F (−29°C), an SAE 0W-30 oil should be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, always select an oil that meets the dexos1 specification or equivalent. See "Specification" for more information.

Engine Oil Additives/Engine Oil Flushes

Do not add anything to the oil. The recommended oils with the dexos specification and displaying the dexos certification mark are all that is needed for good performance and engine protection.

Engine oil system flushes are not recommended and could cause engine damage not covered by the vehicle warranty.

What to Do with Used Oil

Used engine oil contains certain elements that can be unhealthy for your skin and could even cause cancer. Do not let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly dispose of clothing or rags containing used engine oil. See the manufacturer's warnings about the use and disposal of oil products.

Used oil can be a threat to the environment. If you change your own oil, be sure to drain all the oil from the filter before disposal. Never dispose of oil by putting it in the trash or pouring it on the ground, into sewers, or into streams or bodies of water. Recycle it by taking it to a place that collects used oil.

Engine Oil Life System

When to Change Engine Oil

This vehicle has a computer system that indicates when to change the engine oil and filter. This is based on a combination of factors which include engine revolutions, engine temperature, and miles driven. Based on driving conditions, the mileage at which an oil change is indicated can vary considerably. For the oil life system to work properly, the system must be reset every time the oil is changed.

When the system has calculated that oil life has been diminished, it indicates that an oil change is necessary. A CHANGE ENGINE OIL SOON message comes on.

See *Engine Oil Messages on page 5-35.* Change the oil as soon as possible within the next 1 000 km (600 mi). It is possible that, if driving under the best conditions, the oil life system might indicate that an oil change is not necessary for up to a year. The engine oil and filter must be changed at least once a year and at this time the system must be reset. Your dealer has trained service people who will perform this work and reset the system. It is also important to check the oil regularly over the course of an oil drain interval and keep it at the proper level.

If the system is ever reset accidentally, the oil must be changed at 5 000 km (3,000 mi) since the last oil change. Remember to reset the oil life system whenever the oil is changed.

How to Reset the Engine Oil Life System

Reset the system whenever the engine oil is changed so that the system can calculate the next engine oil change. To reset the system:

1. Using the DIC MENU button and thumbwheel on the turn signal lever, display REMAINING OIL LIFE on the DIC. See *Driver Information Center (DIC) on page 5-27* and *Engine Oil Messages on page 5-35.*
2. Press the SET/CLR button to reset the oil life at 100%.

   Be careful not to reset the oil life display accidentally at any time other than after the oil is changed. It cannot be reset accurately until the next oil change.

The oil life system can also be reset as follows:

1. Turn the ignition on with the engine off.
2. Fully press and release the accelerator pedal three times within five seconds.

   If the CHANGE ENGINE OIL SOON message is not on, the system is reset.

The system is reset when the CHANGE ENGINE OIL SOON message is off.

If the CHANGE ENGINE OIL SOON message comes back on when the vehicle is started, the engine oil life system has not been reset. Repeat the procedure.

Automatic Transmission Fluid

How to Check Automatic Transmission Fluid

It is not necessary to check the transmission fluid level. A transmission fluid leak is the only reason for fluid loss. If a leak occurs, take the vehicle to your dealer and have it repaired as soon as possible.

There is a special procedure for checking and changing the transmission fluid. Because this procedure is difficult, you should have this done at your dealer. Contact your dealer for additional information or the procedure can be found in the service manual. To purchase a service manual, see *Service Publications Ordering Information on page 13-18*.

Change the fluid and filter at the intervals listed in *Maintenance Schedule on page 11-4*, and be sure to use the fluid listed in *Recommended Fluids and Lubricants on page 11-13*.

Engine Air Cleaner/Filter

See *Engine Compartment Overview on page 10-6* for the location of the engine air cleaner/filter.

When to Inspect the Engine Air Cleaner/Filter

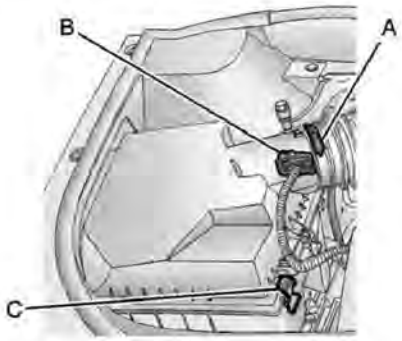
Inspect the air cleaner/filter at the scheduled maintenance intervals and replace it at the first oil change after each 80 000 km (50,000 mi) interval. See *Maintenance Schedule on page 11-4* for more information. If driving in dusty/dirty conditions, inspect the filter at each engine oil change.

How to Inspect the Engine Air Cleaner/Filter

To inspect the air cleaner/filter, remove the filter from the vehicle and lightly shake the filter to release loose dust and dirt. If the filter remains covered with dirt, a new filter is required. Never use compressed air to clean the filter.

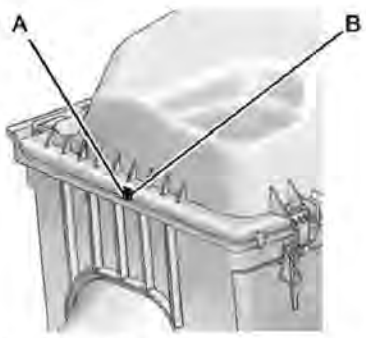
To inspect or replace the engine air cleaner/filter:

1. Open the hood. See *Hood on page 10-5*.
2. Locate the air filter housing on the front of the passenger side of the engine compartment. See *Engine Compartment Overview on page 10-6*.



A. Air Duct Clamp
B. Electrical Connector
C. Retaining Clips

3. Disconnect the outlet duct by loosening the air duct clamp (A).
4. Disconnect the electrical connector (B).
5. Lift the 3 retaining clips (C) on the air filter housing.
6. Tilt and lift the cover slightly upwards and slide the cover away from outside edge of the vehicle. Remove the air filter.



A. Cover Cut Outs
B. Air Filter Tabs

7. To install the air filter, place filter inside box where the pleats fit in between the tabs located inside the lower box. Ensure that the cover cut outs (A) on both sides match the air filter tabs (B) on both sides.
8. Replace air cleaner cover by inserting the 4 tabs into the 4 slots. Lower cover to meet bottom of box. Place the 3 clips on retention features and clip closed.
9. Retighten the air duct clamp.
10. Reconnect the electrical connector.

⚠ WARNING

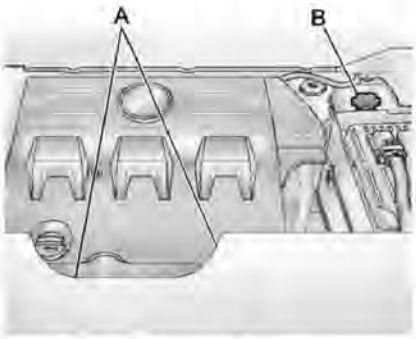
Operating the engine with the air cleaner/filter off can cause you or others to be burned. The air cleaner not only cleans the air; it helps to stop flames if the engine backfires. Use caution when working on the engine and do not drive with the air cleaner/filter off.

Notice: **If the air cleaner/filter is off, dirt can easily get into the engine, which could damage it. Always have the air cleaner/filter in place when you are driving.**

Notice: **Installing an air cleaner different than the one recommended in Maintenance Replacement Parts may cause engine damage not covered by the vehicle warranty.**

Cooling System

When it is safe to lift the hood:



A. Engine Cooling Fan (Out of View)

B. Engine Coolant Surge Tank and Pressure Cap

⚠ WARNING

An electric engine cooling fan under the hood can start up even when the engine is not running and can cause injury. Keep hands, clothing, and tools away from any underhood electric fan.

If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. The vehicle should be parked on a level surface.

The coolant level should be between the MIN and MAX lines. If it is not, the vehicle may have a leak at the radiator hoses, heater hoses, radiator, water pump, or somewhere else in the cooling system.

⚠ WARNING

Heater and radiator hoses, and other engine parts, can be very hot. Do not touch them. If you do, you can be burned.

Do not run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.

If there seems to be no leak, with the engine on, check to see if the electric engine cooling fan is running. If the engine is overheating, the fan should be running. If it is not, the vehicle needs service. Turn off the engine.

Notice: **Using coolant other than DEX-COOL® can cause premature engine, heater core, or radiator corrosion. In addition, the engine coolant could require changing sooner, at 50 000 km (30,000 mi) or 24 months, whichever occurs first. Any repairs would not be covered by the vehicle warranty. Always use DEX-COOL (silicate-free) coolant in the vehicle.**

Engine Coolant

The cooling system in the vehicle is filled with DEX-COOL® engine coolant. This coolant is designed to remain in the vehicle for 5 years or 240 000 km (150,000 mi), whichever occurs first.

The following explains the cooling system and how to check and add coolant when it is low. If there is a problem with engine overheating, see *Engine Overheating on page 10-18*

What to Use

⚠ WARNING

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant. If using this mixture, nothing else needs to be added. This mixture:

- Gives freezing protection down to −37°C (−34°F), outside temperature.
- Gives boiling protection up to 129°C (265°F), engine temperature.
- Protects against rust and corrosion.
- Will not damage aluminum parts.
- Helps keep the proper engine temperature.

Notice: **If an improper coolant mixture is used, the engine could overheat and be badly damaged. The repair cost would not be covered by the vehicle warranty. Too much water in the mixture can freeze and crack the engine, radiator, heater core, and other parts.**

Never dispose of engine coolant by putting it in the trash, pouring it on the ground, or into sewers, streams, or bodies of water. Have the coolant changed by an authorized service center, familiar with legal requirements regarding used coolant disposal. This will help protect the environment and your health.

Checking Coolant

The vehicle must be on a level surface when checking the coolant level.

Check to see if coolant is visible in the coolant surge tank. If the coolant inside the coolant surge tank is boiling, do not do anything else until it cools down. If coolant is visible but the coolant level is not at the indicated mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system is cool before this is done. See *Engine Overheating on page 10-18* for more information.

The coolant surge tank is located in the engine compartment on the driver side of the vehicle. See *Engine Compartment Overview on page 10-6* for more information on location.

How to Add Coolant to the Coolant Surge Tank

Notice: **This vehicle has a specific coolant fill procedure. Failure to follow this procedure could cause the engine to overheat and be severely damaged.**

If no problem is found, check to see if coolant is visible in the coolant surge tank. If coolant is visible but the coolant level is not at the indicated level mark, add a 50/50 mixture of clean, drinkable water and DEX-COOL coolant at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it.

⚠ WARNING

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. They are under pressure, and if you turn the coolant surge tank pressure cap — even a little — they can come out at high speed. Never turn the cap when the cooling system, including the coolant surge tank pressure cap, is hot. Wait for the cooling system and coolant surge tank pressure cap to cool if you ever have to turn the pressure cap.

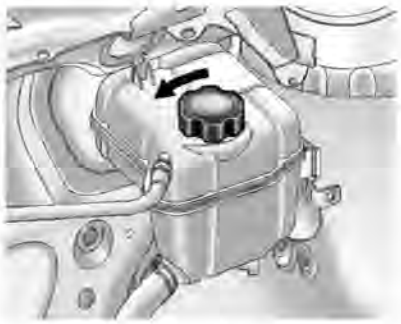
⚠ WARNING

Adding only plain water or some other liquid to the cooling system can be dangerous. Plain water and other liquids, can boil before the proper coolant mixture will. The coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, the engine could get too hot but you would not get the overheat warning. The engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean, drinkable water and DEX-COOL coolant.

Notice: **In cold weather, water can freeze and crack the engine, radiator, heater core and other parts. Use the recommended coolant and the proper coolant mixture.**

⚠ WARNING

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Do not spill coolant on a hot engine.



1. Remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

   Turn the pressure cap slowly counterclockwise about one-quarter of a turn. If you hear a hiss, wait for that to stop. This will allow any pressure still left to be vented out the discharge hose.
2. Then keep turning the pressure cap slowly and remove it.

3. Fill the coolant surge tank with the proper DEX-COOL coolant mixture to the indicated level mark.
4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fan.

   By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper DEX-COOL® coolant mixture to the coolant surge tank until the level reaches the indicated level mark.
5. Then replace the pressure cap. Be sure the pressure cap is hand-tight.

Check the level in the coolant surge tank when the cooling system has cooled down. If the coolant is not at the proper level, repeat Steps 1 through 3 and reinstall the pressure cap. If the coolant still is not at the proper level when the system cools down again, see your dealer.

Engine Overheating

The vehicle has an indicator to warn of engine overheating.

There is an engine coolant temperature warning light on the vehicle's instrument panel. See *Engine Coolant Temperature Gauge on page 5-14*.

If the decision is made not to lift the hood when this warning appears, but instead get service help right away. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-10*.

If the decision is made to lift the hood, make sure the vehicle is parked on a level surface.

Then check to see if the engine cooling fans are running. If the engine is overheating, both fans should be running. If they are not, do not continue to run the engine and have the vehicle serviced.

Notice: **Engine damage from running the engine without coolant is not covered by the warranty.**

Notice: **If the engine catches fire because of being driven with no coolant, the vehicle can be badly damaged. The costly repairs would not be covered by the vehicle warranty.**

If Steam Is Coming from the Engine Compartment

⚠ WARNING

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down. Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when the engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop the engine if it overheats, and get out of the vehicle until the engine is cool.

If No Steam Is Coming from the Engine Compartment

If an engine overheat warning is displayed but no steam can be seen or heard, the problem may not be too serious. Sometimes the engine can get a little too hot when the vehicle:

- Climbs a long hill on a hot day
- Stops after high-speed driving
- Idles for long periods in traffic
- Tows a trailer

If the overheat warning displays with no sign of steam:

1. Turn the air off.
2. Turn the heater on to the highest temperature and to the highest fan speed. Open the windows as necessary.
3. In heavy traffic, let the engine idle in N (Neutral) while stopped. If it is safe to do so, pull off the road, shift to P (Park) or N (Neutral) and let the engine idle.

If the temperature overheat gauge is no longer in the overheat zone or an overheat warning no longer displays, the vehicle can be driven. Continue to drive the vehicle slowly for about 10 minutes. Keep a safe vehicle distance from the vehicle in front. If the warning does not come back on, continue to drive normally.

If the warning continues, pull over, stop, and park the vehicle right away.

If there is no sign of steam, idle the engine for three minutes while parked. If the warning is still displayed, turn off the engine until it cools down.

Power Steering Fluid

See *Engine Compartment Overview on page 10-6* for reservoir location.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless a leak is suspected in the system or unusual noise is heard. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How to Check Power Steering Fluid

Notice: **Extremely small amounts of contamination can cause steering system damage and cause it to not work properly. Do not allow contaminants to contact the fluid side of the reservoir cap/dipstick or to enter the reservoir.**

To check the power steering fluid:

1. Turn the engine off and let the engine compartment cool down.
2. Remove the engine cover, if required. See *Engine Cover on page 10-7*.
3. Wipe the cap and the top of the reservoir clean.
4. Unscrew the cap and wipe the dipstick with a clean rag.
5. Replace the cap and completely tighten it.
6. Remove the cap again and look at the fluid level on the dipstick.

The level should be within the HOT mark. If necessary, add only enough fluid to bring the level within the mark.

What to Use

To determine what kind of fluid to use, see *Recommended Fluids and Lubricants on page 11-13*. Always use the proper fluid.

Washer Fluid

What to Use

When windshield washer fluid is needed, be sure to read the manufacturer's instructions before use. If operating the vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Washer Fluid

The WASHER FLUID LOW ADD FLUID message appears on the Driver Information Center (DIC) when the fluid level is low.

Open the cap with the washer symbol on it. Add washer fluid up to the fill mark. See *Engine Compartment Overview on page 10-6* for reservoir location.

Notice

- **When using concentrated washer fluid, follow the manufacturer's instructions for adding water.**
- **Do not mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage the washer fluid tank and other parts of the washer system.**
- **Fill the washer fluid tank only three-quarters full when it is very cold. This allows for fluid expansion if freezing occurs, which could damage the tank if it is completely full.**
- **Do not use engine coolant (antifreeze) in the windshield washer. It can damage the windshield washer system and paint.**

Brakes

This vehicle has disc brakes. Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound can come and go or be heard all the time the vehicle is moving, except when applying the brake pedal firmly.

⚠ WARNING

The brake wear warning sound means that soon the brakes will not work well. That could lead to a crash. When the brake wear warning sound is heard, have the vehicle serviced.

Notice: **Continuing to drive with worn-out brake pads could result in costly brake repair.**

Some driving conditions or climates can cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with the brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly tighten wheel nuts in the proper sequence to torque specifications in *Capacities and Specifications on page 12-2*.

Brake linings should always be replaced as complete axle sets.

Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign that brake service might be required.

Brake Adjustment

Every time the brakes are applied, with or without the vehicle moving, the brakes adjust for wear.

Replacing Brake System Parts

The braking system on a vehicle is complex. Its many parts have to be of top quality and work well together if the vehicle is to have really good braking. The vehicle was designed and tested with top-quality brake parts. When parts of the braking system are replaced, be sure to get new, approved replacement parts. If this is not done, the brakes might not work properly. For example, installing disc brake pads that are wrong for the vehicle, can change the balance between the front and rear brakes — for the worse. The braking performance expected can change in many other ways if the wrong replacement brake parts are installed.

Brake Fluid

The brake master cylinder reservoir is filled with DOT 3 brake fluid as indicated on the reservoir cap. See *Engine Compartment Overview on page 10-6* for the location of the reservoir.

There are only two reasons why the brake fluid level in the reservoir might go down:

- The brake fluid level goes down because of normal brake lining wear. When new linings are installed, the fluid level goes back up.
- A fluid leak in the brake hydraulic system can also cause a low fluid level. Have the brake hydraulic system fixed, since a leak means that sooner or later the brakes will not work well.

Do not top off the brake fluid. Adding fluid does not correct a leak. If fluid is added when the linings are worn, there will be too much fluid when new brake linings are installed. Add or remove brake fluid, as necessary, only when work is done on the brake hydraulic system.

⚠ WARNING

If too much brake fluid is added, it can spill on the engine and burn, if the engine is hot enough. You or others could be burned, and the vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.

When the brake fluid falls to a low level, the brake warning light comes on. See *Brake System Warning Light on page 5-21.*

What to Add

Use only new DOT 3 brake fluid from a sealed container. See *Recommended Fluids and Lubricants on page 11-13*.

Always clean the brake fluid reservoir cap and the area around the cap before removing it. This helps keep dirt from entering the reservoir.

⚠ WARNING

With the wrong kind of fluid in the brake hydraulic system, the brakes might not work well. This could cause a crash. Always use the proper brake fluid.

Notice

- **Using the wrong fluid can badly damage brake hydraulic system parts. For example, just a few drops of mineral-based oil, such as engine oil, in the brake hydraulic system can damage brake hydraulic system parts so badly that they will have to be replaced. Do not let someone put in the wrong kind of fluid.**
- **If brake fluid is spilled on the vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on the vehicle. If you do, wash it off immediately.**

Battery

Refer to the replacement number shown on the original battery label when a new battery is needed. See *Engine Compartment Overview on page 10-6* for battery location.

⚠ WARNING

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Vehicle Storage

⚠ WARNING

Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you are not careful. See *Jump Starting on page 10-88* for tips on working around a battery without getting hurt.

Infrequent Usage: Remove the black, negative (−) cable from the battery to keep the battery from running down.

Extended Storage: Remove the black, negative (−) cable from the battery or use a battery trickle charger.

All-Wheel Drive

Transfer Case

When to Check and Change Lubricant

The transfer case is filled with oil during manufacture, which then does not require changing. It is not necessary to regularly check the transfer case fluid unless there is a leak suspected or an unusual noise is heard. A fluid loss could indicate a problem. It is recommended to have the transfer case serviced at your dealer.

Starter Switch Check

⚠ WARNING

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle.
2. Firmly apply both the parking brake and the regular brake. See *Parking Brake on page 9-30*.

   Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The vehicle should start only in P (Park) or N (Neutral). If the vehicle starts in any other position, contact your dealer for service.

Automatic Transmission Shift Lock Control Function Check

⚠ WARNING

When you are doing this inspection, the vehicle could move suddenly. If the vehicle moves, you or others could be injured.

1. Before starting this check, be sure there is enough room around the vehicle. It should be parked on a level surface.
2. Firmly apply the parking brake. See *Parking Brake on page 9-30*.

   Be ready to apply the regular brake immediately if the vehicle begins to move.
3. With the engine off, turn the ignition on, but do not start the engine. Without applying the regular brake, try to move the shift lever out of P (Park) with normal effort. If the shift lever moves out of P (Park), contact your dealer for service.

Park Brake and P (Park) Mechanism Check

⚠ WARNING

When you are doing this check, the vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of the vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake's holding ability: With the engine running and the transmission in N (Neutral), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the P (Park) mechanism's holding ability: With the engine running, shift to P (Park). Then release the parking brake followed by the regular brake.

Contact your dealer if service is required.

Wiper Blade Replacement

Windshield wiper blades should be inspected for wear or cracking. See *Maintenance Schedule on page 11-4* for more information.

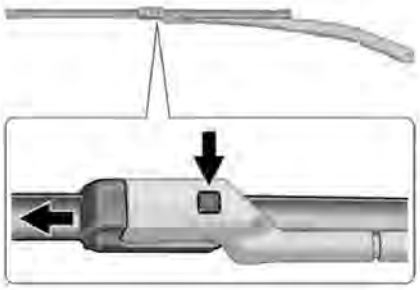
It is a good idea to clean or replace the wiper blade assembly on a regular basis or when worn. For proper windshield wiper blade length and type, see *Maintenance Replacement Parts on page 11-14*.

Notice: **Allowing the wiper arm to touch the windshield when no wiper blade is installed could damage the windshield. Any damage that occurs would not be covered by your warranty. Do not allow the wiper arm to touch the windshield.**

Front Wiper Blade Replacement

To replace the wiper blade assembly:

1. Pull the windshield wiper assembly away from the windshield.



2. Press the button in the middle of the wiper arm connector, and pull the wiper blade away from the arm connector.
3. Remove the wiper blade.
4. Reverse steps 1 through 3 for wiper blade replacement.

Rear Wiper Blade Replacement

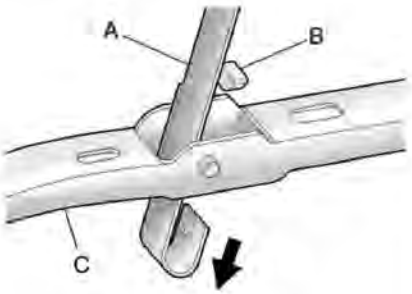
The rear wiper blade and wiper arm have a cover for protection. The cover must be removed before the wiper blade can be replaced.

To remove the cover:

1. Slide a plastic tool under cover and push upward to unsnap.
2. Slide cover towards wiper blade tip to unhook from blade assembly.
3. Remove the cover.
4. After wiper blade replacement, ensure that cover hook slides into slot in blade assembly.
5. Snap cover down to secure.

To remove the wiper blade:

1. Lift the wiper arm away from the windshield.



A. Wiper Arm
B. Release Lever
C. Blade Assembly

2. Push the release lever (B) to disengage the hook and push the wiper arm (A) out of the blade assembly (C).
3. Push the new blade assembly securely on the wiper arm until the release lever clicks into place.
4. Replace wiper cover.

Headlamp Aiming

The headlamp aiming system has been preset at the factory.

If the vehicle is damaged in an accident, the aim of the headlamps can be affected and adjustment could be necessary.

It is recommended that a dealer adjust the headlamps. To re-aim the headlamps yourself, use the following procedure.

The vehicle should be properly prepared as follows:

- The vehicle should be placed so the headlamps are 7.6 m (25 ft) from a light-colored wall.
- The vehicle must have all four tires on a level surface which is level all the way to the wall.

- The vehicle should be placed so it is perpendicular to the wall.
- The vehicle should not have any snow, ice, or mud on it.
- The vehicle should be fully assembled and all other work stopped while headlamp aiming is being performed.
- The vehicle should be normally loaded with a full tank of fuel and one person or 75 kg (160 lbs) sitting on the driver seat.
- Tires should be properly inflated.

Headlamp aiming is done with the vehicle's low-beam headlamps. The high-beam headlamps will be correctly aimed if the low-beam headlamps are aimed properly.

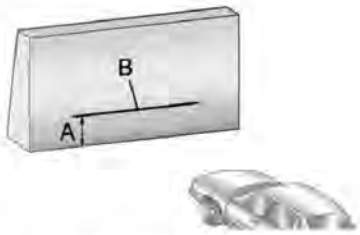
To adjust the vertical aim:

1. Open the hood. See *Hood on page 10-5* for more information.

Base Vehicle

Up-level Vehicle

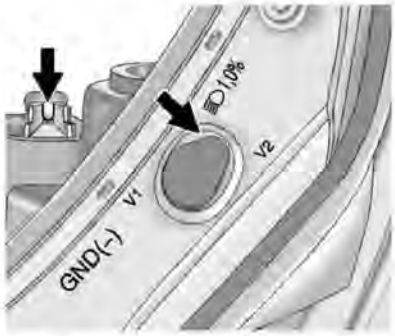
2. Locate the aim point at the center inner projector condensing lens of the low-beam headlamp, not the outer lens.
3. Measure the distance from the ground to the aim dot on the low-beam headlamp. Record the distance.



4. At the wall, measure from the ground upward (A) to the recorded distance from Step 3 and mark it.
5. Draw or tape a horizontal line (B) on the wall the width of the vehicle at the height of the mark in Step 4.

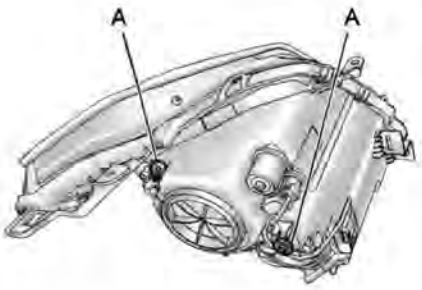
Notice: **Do not cover a headlamp to improve beam cut-off when aiming. Covering a headlamp may cause excessive heat build-up which may cause damage to the headlamp.**

6. Turn on the low-beam headlamps and place a piece of cardboard or equivalent in front of the headlamp not being adjusted. This allows only the beam of light from the headlamp being adjusted to be seen on the flat surface.



7. Locate the vertical headlamp adjusters, which are under the hood near each headlamp assembly.

   For the vehicle equipped with a base level lamp (halogen bulb), there will be one vertical headlamp adjuster (V1).

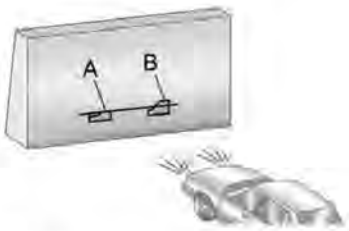


For the vehicle equipped with an up-level headlamp (HID), there will be two vertical headlamp adjusters for V1 and V2 (A).

Some vehicles have funnel-shaped caps on the adjusters for easier access of a Number 2 Phillips screwdriver to turn the adjusters.

8. For the base vehicle, turn the vertical adjuster (V1) until the headlamp beam is aimed to the horizontal tape line. Turn it clockwise or counterclockwise to raise or lower the angle of the beam.

   For the up-level vehicle, turn the vertical adjusters (V1 and V2) simultaneously until the headlamp beam is aimed to the horizontal tape line. Turn them clockwise or counterclockwise to raise or lower the angle of the beam.



9. Make sure that the light from the headlamp is positioned at the bottom edge of the horizontal tape line. The lamp on the left (A) shows the correct headlamp aim. The lamp on the right (B) shows the incorrect headlamp aim.
10. Repeat Steps 7–9 for the opposite headlamp.

Bulb Replacement

For the proper type of replacement bulbs, see *Replacement Bulbs on page 10-40*.

For any bulb changing procedure not listed in this section, contact your dealer.

Halogen Bulbs

⚠ WARNING

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

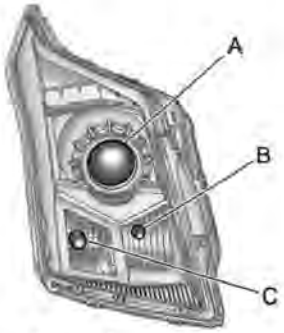
High Intensity Discharge (HID) Lighting

⚠ WARNING

The low beam high intensity discharge lighting system operates at a very high voltage. If you try to service any of the system components, you could be seriously injured. Have your dealer or a qualified technician service them.

After an HID headlamp bulb has been replaced, the beam might be a slightly different shade than it was originally. This is normal.

Headlamps

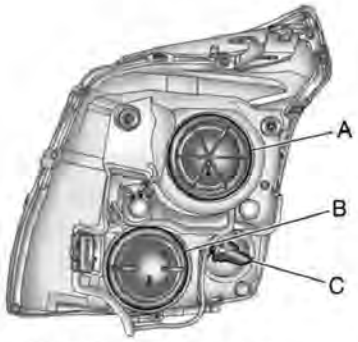


Base Headlamp Assembly (Front View Passenger Side)

A. Low-Beam Headlamp/Daytime Running Lamp (DRL)

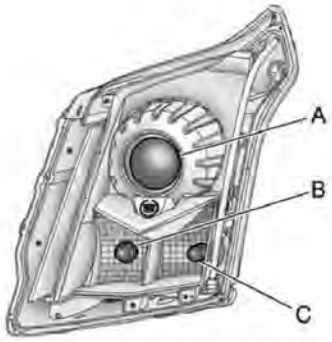
B. High-Beam Headlamp

C. Turn Signal Lamp



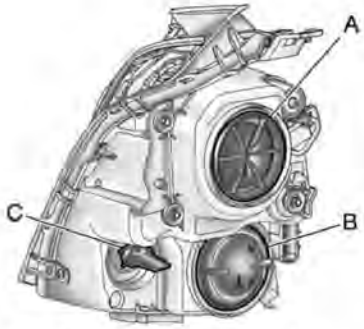
Base Headlamp Assembly (Rear View Passenger Side)

A. Low-Beam Headlamp/Daytime Running Lamp (DRL)
B. High-Beam Headlamp
C. Turn Signal Lamp



Uplevel Headlamp Assembly (Front View Driver Side)

A. High/Low-Beam Headlamp (To be replaced at dealer only)
B. Daytime Running Lamp (DRL)
C. Turn Signal Lamp



Uplevel Headlamp Assembly (Rear View Driver Side)

A. High/Low-Beam Headlamp (To be replaced at dealer only)
B. Daytime Running Lamp (DRL)
C. Turn Signal Lamp

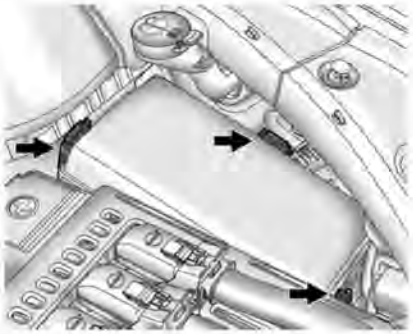
Driver Side

The removal of the underhood electrical center is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-5*.

⚠ WARNING

Liquids from environment or spillage and/or tools placed on top of or used in the underhood electrical center while the cover is removed can pose a risk of electrical shock/burn to anyone in the vicinity. These conditions can also cause damage to electrical components on the vehicle. Keep liquids and tools away from the underhood electrical center when the cover is removed.



2. Unlatch three clips and lift up the underhood electrical center cover to remove.

Passenger Side

The removal of the air filter/cleaner assembly and base is required for the replacement of one of these bulbs:

1. Open the hood. See *Hood on page 10-5*.

A. Air Duct Clamp
B. Connector Lock
C. Sensor Connectors
D. Retaining Clips

2. Disconnect the outlet duct by loosening the air duct clamp (A).

3. Remove the connector lock (B) located at the bottom of the sensor connector (C).
4. Press on the top and bottom of the sensor connectors (C) and remove.
5. Lift the three retaining clips (D) on the air filter housing.
6. Turn and tilt cover slightly upwards and slide cover away from outside edge of vehicle. Lift the cover away from base.

7. Lift the air cleaner/filter base to disengage from three pins.

Low-Beam Headlamps/Daytime Running Lamps (DRL), High-Beam Headlamps (Base)

1. From the back side of the headlamp assembly, remove the top cap to replace the low-beam headlamp/DRL bulb.

2. From the back side of the headlamp assembly, remove the bottom cap to replace the high-beam headlamp bulb.
3. Disconnect electrical connector.
4. Remove the bulb socket from the headlamp assembly.
5. Replace the bulb in the bulb socket.
6. Install the bulb socket in the headlamp assembly.
7. Connect the electrical connector.

8. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
9. For driver side, reinstall the underhood electrical center cover by latching three clips.
10. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

High/Low-Beam Headlamps (Uplevel)

The high/low beam headlamps on the uplevel are High Intensity Discharge (HID) and should be replaced at the dealer.

Daytime Running Lamp (DRL) (Uplevel)

1. From the back side of the headlamp assembly, remove the bottom cap to replace the DRL bulb.
2. Disconnect electrical connector.
3. Remove the DRL bulb socket from the headlamp assembly.
4. Replace the bulb in the bulb socket.
5. Install the bulb socket in the headlamp assembly.
6. Connect the electrical connector.
7. Install the cap with the down arrow pointing down in the back of the headlamp assembly.
8. For driver side, reinstall the underhood electrical center cover by latching three clips.
9. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat. Verify the base is seated securely, then install the engine air filter/cleaner assembly.

Front Turn Signal Lamp (Base and Uplevel)

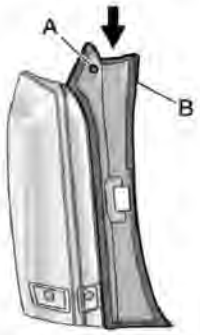
To replace the Front Turn Signal Lamp:

1. Remove the turn signal lamp bulb socket from the headlamp assembly.
2. Remove the turn signal lamp bulb from the socket.
3. Replace the bulb in the bulb socket.
4. Install the bulb socket in the headlamp assembly.
5. For driver side, reinstall the underhood electrical center cover by latching three clips.
6. For passenger side, reinstall the air filter/cleaner assembly base by pushing to seat . Verify the base is seated securely, then install the engine air filter/ cleaner assembly.

Turn Signal Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-14*.

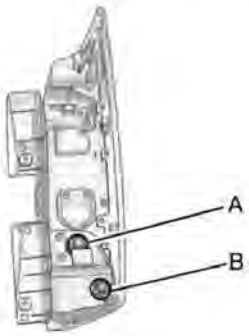


A. Push Pin

B. Taillamp Cover

2. Pull on push pin (A) to release the taillamp cover (B).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.



A. Turn Signal Lamp

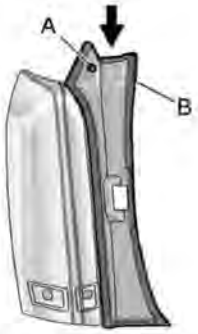
B. Back-Up Bulb/Socket

6. Turn the turn signal lamp (A) bulb socket counterclockwise to remove it from the taillamp assembly.
7. Pull the bulb straight out from the socket.
8. Press a new bulb into the socket, insert it into the taillamp assembly and turn the bulb socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

Back-Up Lamps

To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-14*.

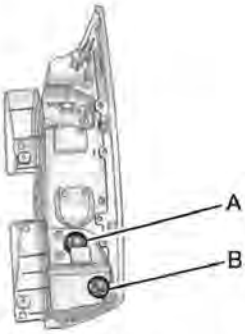


A. Push Pin

B. Taillamp Cover

2. Pull on push pin (A) to release the taillamp cover (B).
3. Remove the taillamp cover from the lamp assembly by pulling rearward from the top to unfasten from snap tabs.

4. Remove the two screws from the taillamp assembly.
5. Pull the taillamp assembly straight back to remove.



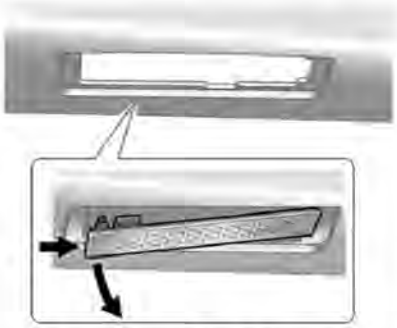
A. Turn Signal Lamp
B. Back–Up Bulb/Socket Assembly

6. Disconnect the wire harness from the back–up bulb/socket (B).
7. Turn the back–up bulb socket counterclockwise to remove it from the taillamp assembly.
8. Install a new bulb/socket assembly into the taillamp assembly and turn the bulb/socket clockwise until it clicks.
9. Reinstall the taillamp assembly and tighten the screws.
10. Reinstall the taillamp cover by snapping it into place.
11. Push the push pin to secure the taillamp cover.

License Plate Lamp

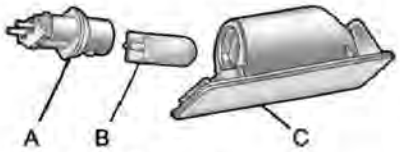
To replace one of these bulbs:

1. Open the liftgate. See *Liftgate on page 2-14* for more information.



Passenger Side Shown, Driver Side Similar

2. Push the left end of the lamp assembly towards the right.
3. Turn the lamp assembly down to remove from liftgate.



A. Bulb Socket
B. Bulb
C. Lamp Assembly

4. Turn the bulb socket (A) counterclockwise to remove from lamp assembly (C).
5. Pull the bulb (B) straight out of the bulb socket.
6. Push the replacement bulb straight into the bulb socket and turn the bulb socket clockwise to install into lamp assembly.
7. Turn the lamp assembly into the liftgate engaging the clip side first.
8. Push on the lamp side opposite the clip until the lamp assembly snaps into place.

Replacement Bulbs

Exterior Lamp	Bulb Number
Back-up Lamp	Hyperclick PH16W
Daytime Running Lamp	7443
Headlamp High-Beam	9005
Headlamp Low-Beam	H10
License Plate Lamp	194LL
Turn Signal Front	7440
Tail/Turn Signal Rear	W21W

For replacement bulbs not listed here, contact your dealer.

Electrical System

Electrical System Overload

The vehicle has fuses and circuit breakers to protect against an electrical system overload.

When the current electrical load is too heavy, the circuit breaker opens and closes, protecting the circuit until the current load returns to normal or the problem is fixed. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Fuses and circuit breakers protect power devices in the vehicle.

Replace a bad fuse with a new one of the identical size and rating.

If there is a problem on the road and a fuse needs to be replaced, the same amperage fuse can be borrowed. Choose some feature of the vehicle that is not needed to use and replace it as soon as possible.

Headlamp Wiring

An electrical overload may cause the lamps to go on and off, or in some cases to remain off. Have the headlamp wiring checked right away if the lamps go on and off or remain off.

Windshield Wipers

If the wiper motor overheats due to heavy snow or ice, the windshield wipers will stop until the motor cools and will then restart.

Although the circuit is protected from electrical overload, overload due to heavy snow or ice may cause wiper linkage damage. Always clear ice and heavy snow from the windshield before using the windshield wipers.

If the overload is caused by an electrical problem and not snow or ice, be sure to get it fixed.

Fuses and Circuit Breakers

The wiring circuits in the vehicle are protected from short circuits by a combination of fuses and circuit breakers. This greatly reduces the chance of damage caused by electrical problems.

To check a fuse, look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure to replace a bad fuse with a new one of the identical size and rating.

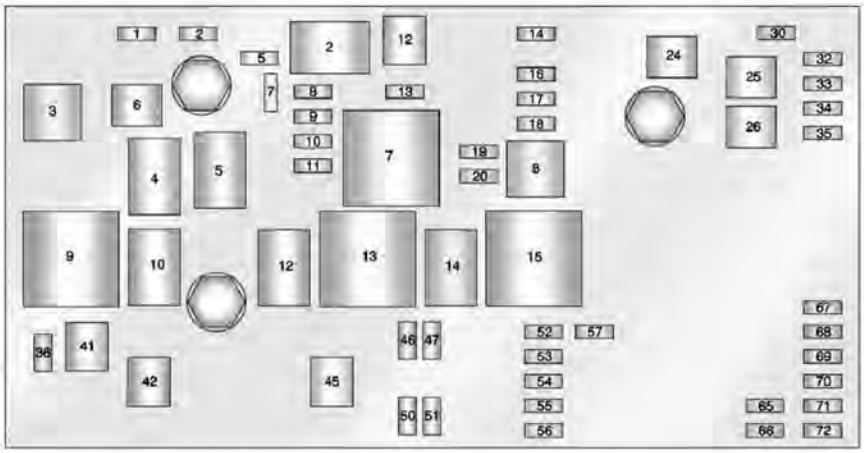
Fuses of the same amperage can be temporarily borrowed from another fuse location, if a fuse goes out. Replace the fuse as soon as you can.

To identify and check fuses, circuit breakers, and relays, see *Engine Compartment Fuse Block on page 10-42* and *Rear Compartment Fuse Block on page 10-46*.

Engine Compartment Fuse Block

To remove the fuse block cover, press the clips on the cover and lift it straight up.

Notice: **Spilling liquid on any electrical component on the vehicle may damage it. Always keep the covers on any electrical component.**



Engine Compartment Fuse Block

The vehicle may not be equipped with all of the fuses, relays, and features shown.

J-Case Fuses	Usage
6	Wiper
12	Vacuum Pump

J-Case Fuses	Usage
24	Antilock Brake System Pump
25	Rear Electrical Center 1

J-Case Fuses	Usage
26	Rear Electrical Center 2
41	Cooling Fan 2
42	Starter
45	Cooling Fan 1

Mini Fuses	Usage
1	Engine Control Module Battery
2	Transmission Control Module Battery
5	Engine Control Module Run Crank
7	Post–Catalytic Converter O2 Sensor
8	Pre–Catalytic Converter O2 Sensor

Mini Fuses	Usage
9	Engine Control Module Powertrain
10	Fuel Injectors–Even
11	Fuel Injectors-Odd
13	Washer
14	Heated Steering Wheel
16	Instrument Panel Cluster/Malfunction Indicator Lamp/ Ignition
17	Air Quality Sensor
18	Headlamp Washer
19	Transmission Control Module Run Crank
20	Rear Electrical Center Run Crank
30	Switch Back Light

Mini Fuses	Usage
32	Battery Sense (Regulated Voltage Control)
33	Adaptive Forward Lighting/Adaptive Headlamp Leveling Module
34	Body Control Module 7
35	Electronic Brake Control Module
36	Air Conditioning Compressor Clutch
46	Low-Beam Headlamp-Right
47	Low-Beam Headlamp-Left
50	Front Fog Lamps
51	Horn
52	Fuel System Control Module
53	Headlamp Level

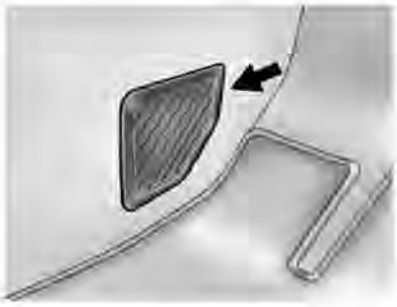
Mini Fuses	Usage
54	Sensing Diagnostic Module Ignition
55	High-Beam Headlamp-Right
56	High-Beam Headlamp-Left
57	Ignition Steering Column Lock
65	Trailer Right Stoplamp
66	Trailer Left Stoplamp
67	Spare
68	Spare
69	Spare
70	Spare
71	Spare
72	Spare

Mini Relays	Usage
7	Powertrain
9	Cooling Fan 2
13	Cooling Fan 1
15	Run/Crank

Micro Relays	Usage
2	Vacuum Pump
4	Wiper Control
5	Wiper Speed
10	Starter
12	Cool Fan 3
14	Low Beam/HID

U Micro Relays	Usage
3	Air Conditioning Compressor Clutch
8	Headlamp Washer

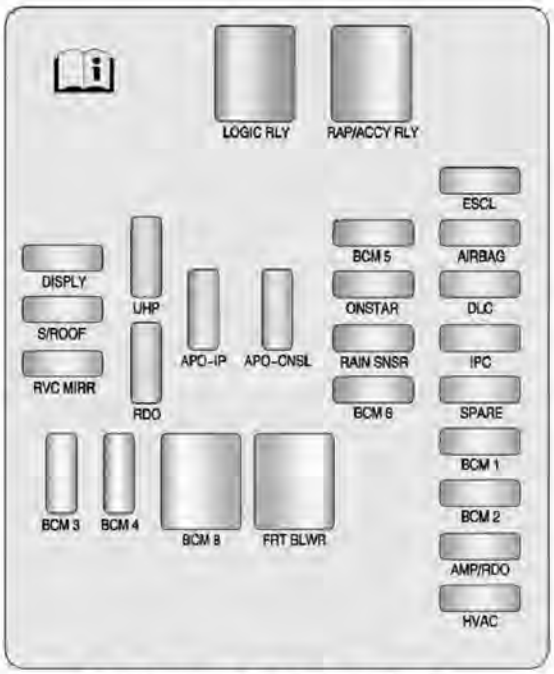
Instrument Panel Fuse Block



The instrument panel fuse block is located in the center console between the driver and passenger seats. To access the fuses, open the fuse panel door from the passenger side by pulling it out.

To reinstall the door, push the door back into its original location.

The vehicle may not be equipped with all of the fuses, relays and features shown.



Instrument Panel Fuse Block

Mini Fuses	Usage
DISPLY	Display
S/ROOF	Sunroof
RVC MIRR	Rear Vision Camera Mirror
UHP	Universal Handsfree Phone
RDO	Radio
APO- IP	Auxiliary Power Outlet- Instrument Panel
APO- CNSL	Auxiliary Power Outlet- Floor Console
BCM 3	Body Control Module 3
BCM 4	Body Control Module 4
BCM 5	Body Control Module 5
ONSTAR	OnStar® System (If Equipped)

Mini Fuses	Usage
RAIN SNSR	Rain Sensor
BCM 6	Body Control Module 6
ESCL	Electronic Steering Column Lock
AIRBAG	Sensing and Diagnostic Module
DLC	Data Link Connector
IPC	Instrument Panel Cluster
SPARE	Not Used
BCM 1	Body Control Module 1
BCM 2	Body Control Module 2
AMP/RDO	Amplifier/Radio
HVAC	Heating Ventilation & Air Conditioning

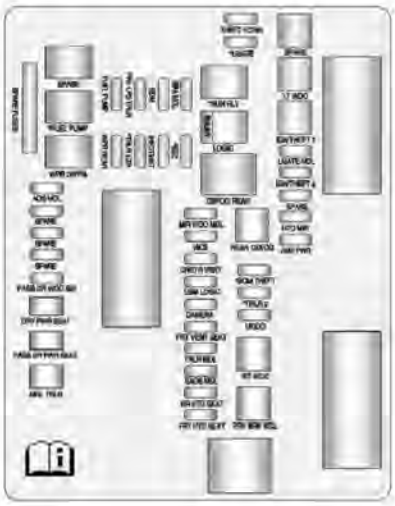
J-Case Fuses	Usage
BCM 8	Body Control Module 8
FRT BLWR	Front Blower

Relays	Usage
LOGIC RLY	Logistics Relay
RAP/ ACCY RLY	Retained Accessory Power/ Accessory Relay

Rear Compartment Fuse Block

The rear compartment fuse block is located in the cargo area, on the driver side of the vehicle behind the lower trim panel. To open, turn the latch with a flat bladed tool and pull the trim panel from the edges to fold it down.

The vehicle may not be equipped with all of the fuses, relays, and features shown.



Rear Compartment Fuse Block

Fuses	Usage
SPARE FUSES	Spare Fuses
AOS MDL	Automatic Occupant Sensing Module
SPARE	Not Used
SPARE	Not Used
SPARE	Not Used
PASS DR WDO SW	Passenger Door Window Switch
DRV PWR SEAT	Driver Power Seat
PASS DR PWR SEAT	Passenger/Driver Power Seats
MDL TRLR	Trailer Module
RPA MDL	Rear Parking Assist Module
RDM	Rear Drive Module
PRK LPS TRLR	Trailer Park Lamps
FUEL PUMP	Fuel Pump

Fuses	Usage
* SEC	Security
INFOTMNT	Infotainment
* TRLR EXP	Trailer Export
WPR REAR	Rear Wiper
MIR WDO MDL	Mirror Window Module
VICS	Vehicle Information Communications System (Export)
CNSTR VENT	Canister Vent
LGM LOGIC	Lift Gate Module Logic
CAMERA	Rear Vision Camera
FRT VENT SEAT	Front Ventilated Seats
TRLR MDL	Trailer Module
SADS MDL	Semi Active Damping System Module

Fuses	Usage
RR HTD SEAT	Rear Heated Seats
FRT HTD SEAT	Front Heated Seats
THEFT HORN	Theft Horn
* LGATE	Liftgate
SHUNT	Shunt
REAR DEFOG	Rear Defog
* BCM THEFT	Body Control Module Theft
* TRLR 2	Trailer 2
UGDO	Universal Garage Door Opener

Fuses	Usage
RT WDO	Right Window
PRK BRK MDL	Park Brake Module
SPARE	Not Used
LT WDO	Left Window
IGN/ THEFT 1	Ignition/Theft 1
LGATE MDL	Liftgate Module
IGN/ THEFT 2	Ignition/Theft 2
SPARE	Not Used
HTD MIR	Heated Mirror
AUX PWR	Auxiliary Power Outlet

Relays	Usage
SPARE	Not Used
* FUEL PUMP	Fuel Pump
WPR CONTRL	Wiper Control
* RUN RLY	Run Relay
LOGIC	Logistic Relay (Export)
DEFOG REAR	Rear Window Defogger

*Denotes uplevel content.

Wheels and Tires

Tires

Every new GM vehicle has high-quality tires made by a leading tire manufacturer. See the warranty manual for information regarding the tire warranty and where to get service. For additional information refer to the tire manufacturer.

⚠ WARNING

- Poorly maintained and improperly used tires are dangerous.
- Overloading the tires can cause overheating as a result of too much flexing. There could be a blowout and a serious crash. See *Vehicle Load Limits on page 9-10.*

(Continued)

WARNING (Continued)

- Underinflated tires pose the same danger as overloaded tires. The resulting crash could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when the tires are cold.
- Overinflated tires are more likely to be cut, punctured, or broken by a sudden impact— such as when hitting a pothole. Keep tires at the recommended pressure.
- Worn or old tires can cause a crash. If the tread is badly worn, replace them.
- Replace any tires that have been damaged by impacts with potholes, curbs, etc.

(Continued)

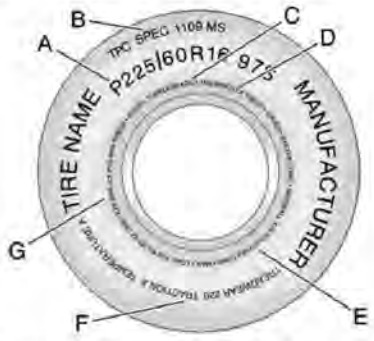
WARNING (Continued)

- Improperly repaired tires can cause a crash. Only the dealer or an authorized tire service center should repair, replace, dismount, and mount the tires.
- Do not spin the tires in excess of 56 km/h (35 mph) on slippery surfaces such as snow, mud, ice, etc. Excessive spinning may cause the tires to explode.

See *Tire Pressure for High-Speed Operation on page 10-57* for inflation pressure adjustment for high-speed driving.

Tire Sidewall Labeling

Useful information about a tire is molded into its sidewall. The examples show a typical passenger vehicle tire and a compact spare tire sidewall.



Passenger (P-Metric) Tire Example

(A) Tire Size: The tire size is a combination of letters and numbers used to define a particular tire's width, height, aspect ratio, construction type, and service description. See the "Tire Size" illustration later in this section for more detail.

(B) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

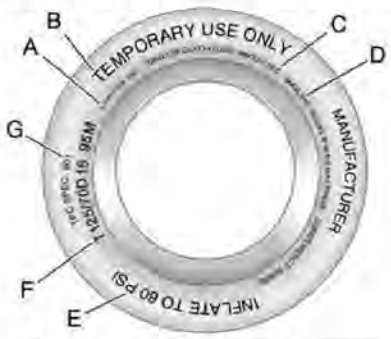
(C) DOT (Department of Transportation): The Department of Transportation (DOT) code indicates that the tire is in compliance with the U.S. Department of Transportation Motor Vehicle Safety Standards.

(D) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(E) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(F) Uniform Tire Quality Grading (UTQG): Tire manufacturers are required to grade tires based on three performance factors: treadwear, traction, and temperature resistance. For more information see *Uniform Tire Quality Grading on page 10-67.*

(G) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.



Compact Spare Tire Example

(A) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(B) Temporary Use Only: The compact spare tire or temporary use tire has a tread life of approximately 5 000 km (3,000 mi) and should not be driven at speeds over 105 km/h (65 mph). The compact spare tire is for emergency use when a regular road tire has lost air and gone flat. If the vehicle has a compact spare tire, see *Compact Spare Tire on page 10-88* and *If a Tire Goes Flat on page 10-71*.

(C) Tire Identification Number (TIN): The letters and numbers following the DOT (Department of Transportation) code are the Tire Identification Number (TIN). The TIN shows the manufacturer and plant code, tire size, and date the tire was manufactured. The TIN is molded onto both sides of the tire, although only one side may have the date of manufacture.

(D) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.

(E) Tire Inflation: The temporary use tire or compact spare tire should be inflated to 420 kPa (60 psi). For more information on tire pressure and inflation see *Tire Pressure on page 10-56*.

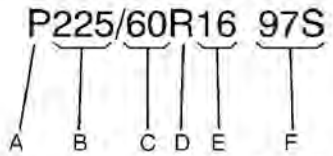
(F) Tire Size: A combination of letters and numbers define a tire's width, height, aspect ratio, construction type, and service description. The letter T as the first character in the tire size means the tire is for temporary use only.

(G) TPC Spec (Tire Performance Criteria Specification): Original equipment tires designed to GM's specific tire performance criteria have a TPC specification code molded onto the sidewall. GM's TPC specifications meet or exceed all federal safety guidelines.

Tire Designations

Tire Size

The following is an example of a typical passenger vehicle tire size.



(A) Passenger (P-Metric) Tire: The United States version of a metric tire sizing system. The letter P as the first character in the tire size means a passenger vehicle tire engineered to standards set by the U.S. Tire and Rim Association.

(B) Tire Width: The three-digit number indicates the tire section width in millimeters from sidewall to sidewall.

(C) Aspect Ratio: A two-digit number that indicates the tire height-to-width measurements. For example, if the tire size aspect ratio is 60, as shown in item C of the illustration, it would mean that the tire's sidewall is 60 percent as high as it is wide.

(D) Construction Code: A letter code is used to indicate the type of ply construction in the tire. The letter R means radial ply construction; the letter D means diagonal or bias ply construction; and the letter B means belted-bias ply construction.

(E) Rim Diameter: Diameter of the wheel in inches.

(F) Service Description: These characters represent the load index and speed rating of the tire. The load index represents the load carrying capacity a tire is certified to carry. The speed rating is the maximum speed a tire is certified to carry a load.

Tire Terminology and Definitions

Air Pressure: The amount of air inside the tire pressing outward on each square inch of the tire. Air pressure is expressed in kPa (kilopascal) or psi (pounds per square inch).

Accessory Weight: The combined weight of optional accessories. Some examples of optional accessories are automatic transmission, power steering, power brakes, power windows, power seats, and air conditioning.

Aspect Ratio: The relationship of a tire's height to its width.

Belt: A rubber coated layer of cords that is located between the plies and the tread. Cords may be made from steel or other reinforcing materials.

Bead: The tire bead contains steel wires wrapped by steel cords that hold the tire onto the rim.

Bias Ply Tire: A pneumatic tire in which the plies are laid at alternate angles less than 90 degrees to the centerline of the tread.

Cold Tire Pressure: The amount of air pressure in a tire, measured in kPa (kilopascal) or psi (pounds per square inch) before a tire has built up heat from driving. See *Tire Pressure on page 10-56*.

Curb Weight: The weight of a motor vehicle with standard and optional equipment including the maximum capacity of fuel, oil, and coolant, but without passengers and cargo.

DOT Markings: A code molded into the sidewall of a tire signifying that the tire is in compliance with the U.S. Department of Transportation (DOT) Motor Vehicle Safety Standards. The DOT code includes the Tire Identification Number (TIN), an alphanumeric designator which can also identify the tire manufacturer, production plant, brand, and date of production.

GVWR: Gross Vehicle Weight Rating. See *Vehicle Load Limits on page 9-10*.

GAWR FRT: Gross Axle Weight Rating for the front axle. See *Vehicle Load Limits on page 9-10*.

GAWR RR: Gross Axle Weight Rating for the rear axle. See *Vehicle Load Limits on page 9-10*.

Intended Outboard Sidewall: The side of an asymmetrical tire, that must always face outward when mounted on a vehicle.

Kilopascal (kPa): The metric unit for air pressure.

Light Truck (LT-Metric) Tire: A tire used on light duty trucks and some multipurpose passenger vehicles.

Load Index: An assigned number ranging from 1 to 279 that corresponds to the load carrying capacity of a tire.

Maximum Inflation Pressure: The maximum air pressure to which a cold tire can be inflated. The maximum air pressure is molded onto the sidewall.

Maximum Load Rating: The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum Loaded Vehicle Weight: The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Normal Occupant Weight: The number of occupants a vehicle is designed to seat multiplied by 68 kg (150 lbs). See *Vehicle Load Limits on page 9-10*.

Occupant Distribution: Designated seating positions.

Outward Facing Sidewall: The side of an asymmetrical tire that has a particular side that faces outward when mounted on a vehicle. The side of the tire that contains a whitewall, bears white lettering, or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same moldings on the other sidewall of the tire.

Passenger (P-Metric) Tire: A tire used on passenger cars and some light duty trucks and multipurpose vehicles.

Recommended Inflation Pressure: Vehicle manufacturer's recommended tire inflation pressure as shown on the tire placard. See *Tire Pressure on page 10-56* and *Vehicle Load Limits on page 9-10*.

Radial Ply Tire: A pneumatic tire in which the ply cords that extend to the beads are laid at 90 degrees to the centerline of the tread.

Rim: A metal support for a tire and upon which the tire beads are seated.

Sidewall: The portion of a tire between the tread and the bead.

Speed Rating: An alphanumeric code assigned to a tire indicating the maximum speed at which a tire can operate.

Traction: The friction between the tire and the road surface. The amount of grip provided.

Tread: The portion of a tire that comes into contact with the road.

Treadwear Indicators: Narrow bands, sometimes called wear bars, that show across the tread of a tire when only 1.6 mm (1/16 in) of tread remains. See *When It Is Time for New Tires on page 10-64*.

UTQGS (Uniform Tire Quality Grading Standards): A tire information system that provides consumers with ratings for a tire's traction, temperature, and treadwear. Ratings are determined by tire manufacturers using government testing procedures. The ratings are molded into the sidewall of the tire. See *Uniform Tire Quality Grading on page 10-67*.

Vehicle Capacity Weight: The number of designated seating positions multiplied by 68 kg (150 lbs) plus the rated cargo load. See *Vehicle Load Limits on page 9-10*.

Vehicle Maximum Load on the Tire: Load on an individual tire due to curb weight, accessory weight, occupant weight, and cargo weight.

Vehicle Placard: A label permanently attached to a vehicle showing the vehicle capacity weight and the original equipment tire size and recommended inflation pressure. See "Tire and Loading Information Label" under *Vehicle Load Limits on page 9-10*.

Tire Pressure

Tires need the correct amount of air pressure to operate effectively.

Notice: **Neither tire underinflation nor overinflation is good. Underinflated tires, or tires that do not have enough air, can result in:**

- **Tire overloading and overheating which could lead to a blowout.**
- **Premature or irregular wear.**
- **Poor handling.**
- **Reduced fuel economy.**

Overinflated tires, or tires that have too much air, can result in:

- **Unusual wear.**
- **Poor handling.**
- **Rough ride.**
- **Needless damage from road hazards.**

The Tire and Loading Information label on the vehicle indicates the original equipment tires and the correct cold tire inflation pressures. The recommended pressure is the minimum air pressure needed to support the vehicle's maximum load carrying capacity.

For additional information regarding how much weight the vehicle can carry, and an example of the Tire and Loading Information label, see *Vehicle Load Limits on page 9-10*. How the vehicle is loaded affects vehicle handling and ride comfort. Never load the vehicle with more weight than it was designed to carry.

When to Check

Check the tires once a month or more. Do not forget the compact spare tire, if the vehicle has one. The cold compact spare should be at 420 kPa (60 psi). See *Compact Spare Tire on page 10-88*.

How to Check

Use a good quality pocket-type gauge to check tire pressure. Proper tire inflation cannot be determined by looking at the tire. Check the tire inflation pressure when the tires are cold, meaning the vehicle has not been driven for at least three hours or no more than 1.6 km (1 mi).

Remove the valve cap from the tire valve stem. Press the tire gauge firmly onto the valve to get a pressure measurement.

If the cold tire inflation pressure matches the recommended pressure on the Tire and Loading Information label, no further adjustment is necessary. If the inflation pressure is low, add air until the recommended pressure is reached. If the inflation pressure is high, press on the metal stem in the center of the tire valve to release air.

Recheck the tire pressure with the tire gauge.

Return the valve caps on the valve stems to prevent leaks and keep out dirt and moisture.

Tire Pressure for High-Speed Operation

⚠ WARNING

Driving at high speeds, 160 km/h (100 mph) or higher, puts an additional strain on tires. Sustained high-speed driving causes excessive heat buildup and can cause sudden tire failure. You could have a crash and you or others could be killed. Some high-speed rated tires require inflation pressure adjustment for high-speed operation. When speed limits and road conditions are such that a vehicle can be driven at high speeds, make sure the tires are rated for high-speed operation, in excellent condition, and set to the correct cold tire inflation pressure for the vehicle load.

Vehicles with P235/65R18, P235/55R20, or 235/55R20 size tires require inflation pressure adjustment when driving the vehicle at speeds of 160 km/h (100 mph) or higher. Set the cold inflation pressure to the maximum inflation pressure shown on the tire sidewall, or 260 kPa (38 psi), whichever is lower. Return the tires to the recommended cold tire inflation pressure when high-speed driving has ended. See *Vehicle Load Limits on page 9-10* and *Tire Pressure on page 10-56*.

The maximum load and inflation pressure is molded on the tire sidewall, in small letters, near the rim flange. It will read something like this: Maximum load 690 kg (1521 lbs) 300 kPa (44 psi) Max. Press.

Tire Pressure Monitor System

The Tire Pressure Monitor System (TPMS) uses radio and sensor technology to check tire pressure levels. The TPMS sensors monitor the air pressure in your tires and transmit tire pressure readings to a receiver located in the vehicle.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated.

Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists.

When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

See *Tire Pressure Monitor Operation on page 10-59* for additional information.

Federal Communications Commission (FCC) Rules and with Industry Canada Standards

See *Radio Frequency Statement on page 13-23* for information regarding Part 15 of the Federal Communications Commission (FCC) Rules and with Industry Canada Standards RSS-GEN/210/220/310.

Tire Pressure Monitor Operation

This vehicle may have a Tire Pressure Monitor System (TPMS). The TPMS is designed to warn the driver when a low tire pressure condition exists. TPMS sensors are mounted onto each tire and wheel assembly, excluding the spare tire and wheel assembly. The TPMS sensors monitor the air pressure in the tires and transmit the tire pressure readings to a receiver located in the vehicle.

When a low tire pressure condition is detected, the TPMS illuminates the low tire pressure warning light located on the instrument cluster. If the warning light comes on, stop as soon as possible and inflate the tires to the recommended pressure shown on the tire loading information label. See *Vehicle Load Limits on page 9-10*.

A message to check the pressure displays in the Driver Information Center (DIC). The low tire pressure warning light and the DIC warning message come on at each ignition cycle until the tires are inflated to the correct inflation pressure.

Using the DIC, tire pressure levels can be viewed. For additional information and details about the DIC operation and displays see *Driver Information Center (DIC) on page 5-27*.

The low tire pressure warning light may come on in cool weather when the vehicle is first started, and then turn off as the vehicle is driven. This could be an early indicator that the air pressure is getting low and needs to be inflated to the proper pressure.

A Tire and Loading Information label shows the size of the original equipment tires and the correct inflation pressure for the tires when they are cold. See *Vehicle Load Limits on page 9-10*, for an example of the Tire and Loading Information label and its location. Also see *Tire Pressure on page 10-56*.

The TPMS can warn about a low tire pressure condition but it does not replace normal tire maintenance. See *Tire Inspection on page 10-62*, *Tire Rotation on page 10-63* and *Tires on page 10-49*.

Notice: **Tire sealant materials are not all the same. A non-approved tire sealant could damage the TPMS sensors. TPMS sensor damage caused by using an incorrect tire sealant is not covered by the vehicle warranty. Always use only the GM-approved tire sealant available through your dealer or included in the vehicle.**

Factory-installed Tire Inflator Kits use a GM approved liquid tire sealant. Using non-approved tire sealants could damage the TPMS sensors. See *Tire Sealant and Compressor Kit on page 10-73* for information regarding the inflator kit materials and instructions.

TPMS Malfunction Light and Message

The TPMS will not function properly if one or more of the TPMS sensors are missing or inoperable. When the system detects a malfunction, the low tire pressure warning light flashes for about one minute and then stays on for the remainder of the ignition cycle. A DIC warning message also displays. The malfunction light and DIC warning message come on at each ignition cycle until the problem is corrected. Some of the conditions that can cause these to come on are:

- One of the road tires has been replaced with the spare tire. The spare tire does not have a TPMS sensor. The malfunction light and the DIC message should go off after the road tire is replaced and the sensor matching process is performed successfully. See "TPMS Sensor Matching Process" later in this section.
- The TPMS sensor matching process was not done or not completed successfully after rotating the tires. The malfunction light and the DIC message should go off after successfully completing the sensor matching process. See "TPMS Sensor Matching Process" later in this section.
- One or more TPMS sensors are missing or damaged. The malfunction light and the DIC message should go off when the TPMS sensors are installed and the sensor matching process is performed successfully. See your dealer for service.

- Replacement tires or wheels do not match the original equipment tires or wheels. Tires and wheels other than those recommended could prevent the TPMS from functioning properly. See *Buying New Tires on page 10-65*.
- Operating electronic devices or being near facilities using radio wave frequencies similar to the TPMS could cause the TPMS sensors to malfunction.

If the TPMS is not functioning properly, it cannot detect or signal a low tire condition. See your dealer for service if the TPMS malfunction light and DIC message come on and stay on.

TPMS Sensor Matching Process

Each TPMS sensor has a unique identification code. The identification code needs to be matched to a new tire/wheel position after rotating the vehicle's tires or replacing one or more of the TPMS sensors. Also, the TPMS sensor matching process should be performed after replacing a spare tire with a road tire containing the TPMS sensor. The malfunction light and the DIC message should go off at the next ignition cycle. The sensors are matched to the tire/wheel positions, using a TPMS relearn tool, in the following order: driver side front tire, passenger side front tire, passenger side rear tire, and driver side rear. See your dealer for service or to purchase a relearn tool.

There are two minutes to match the first tire/wheel position, and five minutes overall to match all four tire/wheel positions. If it takes longer, the matching process stops and must be restarted.

The TPMS sensor matching process is:

1. Set the parking brake.
2. Place the vehicle power mode in ON/RUN/START. See *Ignition Positions on page 9-17*.
3. Select the vehicle information menu using the menu button.
4. Select the tire pressure screen using the up/down thumbwheel.
5. Press and hold SET/CLR to begin the sensor matching process.

6. Press SET/CLR to confirm selection. The horn sounds twice to signal the receiver is in relearn mode and TIRE LEARNING ACTIVE message displays on the DIC screen.
7. Start with the driver side front tire.
8. Place the relearn tool against the tire sidewall, near the valve stem. Then press the button to activate the TPMS sensor. A horn chirp confirms that the sensor identification code has been matched to this tire and wheel position.
9. Proceed to the passenger side front tire, and repeat the procedure in Step 8.
10. Proceed to the passenger side rear tire, and repeat the procedure in Step 8.
11. Proceed to the driver side rear tire, and repeat the procedure in Step 8. The horn sounds two times to indicate the sensor identification code has been matched to the driver side rear tire, and the TPMS sensor matching process is no longer active. The TIRE LEARNING ACTIVE message on the DIC display screen goes off.
12. Press STOP to turn the ignition off.
13. Set all four tires to the recommended air pressure level as indicated on the Tire and Loading Information label.

Tire Inspection

We recommend that the tires, including the spare tire, if the vehicle has one, be inspected for signs of wear or damage at least once a month.

Replace the tire if:

- The indicators at three or more places around the tire can be seen.
- There is cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut, or snagged deep enough to show cord or fabric.

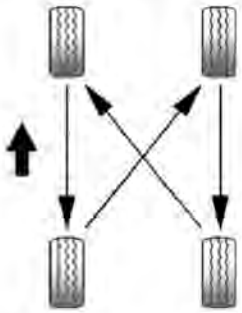
- The tire has a bump, bulge, or split.
- The tire has a puncture, cut, or other damage that cannot be repaired well because of the size or location of the damage.

Tire Rotation

Tires should be rotated every 12 000 km (7,500 mi). See *Maintenance Schedule on page 11-4*.

Tires are rotated to achieve a uniform wear for all tires. The first rotation is the most important.

Any time unusual wear is noticed, rotate the tires as soon as possible and check the wheel alignment. Also check for damaged tires or wheels. See *When It Is Time for New Tires on page 10-64* and *Wheel Replacement on page 10-69*.



Use this rotation pattern when rotating the tires.

Do not include the compact spare tire in the tire rotation.

Adjust the front and rear tires to the recommended inflation pressure on the Tire and Loading Information label after the tires have been rotated. See *Tire Pressure on page 10-56* and *Vehicle Load Limits on page 9-10*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 10-59*.

Check that all wheel nuts are properly tightened. See "Wheel Nut Torque" under *Capacities and Specifications on page 12-2*.

⚠ WARNING

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

Lightly coat the center of the wheel hub with wheel bearing grease after a wheel change or tire rotation to prevent corrosion or rust build-up. Do not get grease on the flat wheel mounting surface or on the wheel nuts or bolts.

When It Is Time for New Tires

Factors such as maintenance, temperatures, driving speeds, vehicle loading, and road conditions affect the wear rate of the tires.

Treadwear indicators are one way to tell when it is time for new tires. Treadwear indicators appear when the tires have only 1.6 mm (1/16 in) or less of tread remaining.

See *Tire Inspection on page 10-62* and *Tire Rotation on page 10-63* for more information.

The rubber in tires ages over time. This also applies for the spare tire, if the vehicle has one, even if it is never used. Multiple conditions including temperatures, loading conditions, and inflation pressure maintenance affect how fast aging takes place. Tires will typically need to be replaced due to wear before they may need to be replaced due to age. Consult the tire manufacturer for more information on when tires should be replaced.

Vehicle Storage

Tires age when stored normally mounted on a parked vehicle. Park a vehicle that will be stored for at least a month in a cool, dry, clean area away from direct sunlight to slow aging. This area should be free of grease, gasoline, or other substances that can deteriorate rubber.

Parking for an extended period can cause flat spots on the tires that may result in vibrations while driving. When storing a vehicle for at least a month, remove the tires or raise the vehicle to reduce the weight from the tires.

Buying New Tires

GM has developed and matched specific tires for the vehicle. The original equipment tires installed were designed to meet General Motors Tire Performance Criteria Specification (TPC Spec) system rating. When replacement tires are needed, GM strongly recommends buying tires with the same TPC Spec rating.

GM's exclusive TPC Spec system considers over a dozen critical specifications that impact the overall performance of the vehicle, including brake system performance, ride and handling, traction control, and tire pressure monitoring performance.

GM's TPC Spec number is molded onto the tire's sidewall near the tire size. If the tires have an all-season tread design, the TPC Spec number will be followed by MS for mud and snow. See *Tire Sidewall Labeling on page 10-50* for additional information.

GM recommends replacing all the tires at the same time. Uniform tread depth on all tires will help to maintain the performance of the vehicle. Braking and handling performance may be adversely affected if all the tires are not replaced at the same time. See *Tire Inspection on page 10-62* and *Tire Rotation on page 10-63* for information on proper tire rotation.

⚠ WARNING

Tires could explode during improper service. Attempting to mount or dismount a tire could cause injury or death. Only your dealer or authorized tire service center should mount or dismount the tires.

⚠ WARNING

Mixing tires of different sizes, brands, or types may cause loss of control of the vehicle, resulting in a crash or other vehicle damage. Use the correct size, brand, and type of tires on all wheels.

⚠ WARNING

Using bias-ply tires on the vehicle may cause the wheel rim flanges to develop cracks after many miles of driving. A tire and/or wheel could fail suddenly and cause a crash. Use only radial-ply tires with the wheels on the vehicle.

If the vehicle tires must be replaced with a tire that does not have a TPC Spec number, make sure they are the same size, load range, speed rating, and construction (radial) as the original tires.

Vehicles that have a tire pressure monitoring system could give an inaccurate low-pressure warning if non-TPC Spec rated tires are installed. See *Tire Pressure Monitor System on page 10-58*.

The Tire and Loading Information label indicates the original equipment tires on the vehicle. See *Vehicle Load Limits on page 9-10* for the label location and more information about the Tire and Loading Information label.

Different Size Tires and Wheels

If wheels or tires are installed that are a different size than the original equipment wheels and tires, vehicle performance, including its braking, ride and handling characteristics, stability, and resistance to rollover may be affected. If the vehicle has electronic systems such as antilock brakes, rollover airbags, traction control, and electronic stability control, the performance of these systems can also be affected.

⚠ WARNING

If different sized wheels are used, there may not be an acceptable level of performance and safety if tires not recommended for those wheels are selected. This increases the chance of a crash and serious injury. Only use GM specific wheel and tire systems developed for the vehicle, and have them properly installed by a GM certified technician.

See *Buying New Tires on page 10-65* and *Accessories and Modifications on page 10-4*.

Uniform Tire Quality Grading

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

The following information relates to the system developed by the United States National Highway Traffic Safety Administration (NHTSA), which grades tires by treadwear, traction, and temperature performance. This applies only to vehicles sold in the United States.

The grades are molded on the sidewalls of most passenger car tires. The Uniform Tire Quality Grading (UTQG) system does not apply to deep tread, winter tires, compact spare tires, tires with nominal rim diameters of 10 to 12 inches (25 to 30 cm), or to some limited-production tires.

While the tires available on General Motors passenger cars and light trucks may vary with respect to these grades, they must also conform to federal safety requirements and additional General Motors Tire Performance Criteria (TPC) standards.

All Passenger Car Tires Must Conform to Federal Safety Requirements In Addition To These Grades.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and a half (1½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

Traction – AA, A, B, C

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature – A, B, C

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

Wheel Alignment and Tire Balance

The tires and wheels were aligned and balanced at the factory to provide the longest tire life and best overall performance. Adjustments to wheel alignment and tire balancing will not be necessary on a regular basis. However, check the alignment if there is unusual tire wear or if the vehicle is pulling to one side or the other. If the vehicle vibrates when driving on a smooth road, the tires and wheels might need to be rebalanced. See your dealer for proper diagnosis.

Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it. Some aluminum wheels can be repaired. See your dealer if any of these conditions exist.

Your dealer will know the kind of wheel that is needed.

Each new wheel should have the same load-carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

Replace wheels, wheel bolts, wheel nuts, or Tire Pressure Monitor System (TPMS) sensors with new GM original equipment parts.

⚠ WARNING

Using the wrong replacement wheels, wheel bolts, or wheel nuts can be dangerous. It could affect the braking and handling of the vehicle. Tires can lose air, and cause loss of control, causing a crash. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.

Notice: **The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tire or tire chain clearance to the body and chassis.**

Used Replacement Wheels

⚠ WARNING

Replacing a wheel with a used one is dangerous. How it has been used or how far it has been driven may be unknown. It could fail suddenly and cause a crash. When replacing wheels, use a new GM original equipment wheel.

Tire Chains

⚠ WARNING

Do not use tire chains. There is not enough clearance. Tire chains used on a vehicle without the proper amount of clearance can cause damage to the brakes, suspension, or other vehicle parts. The area damaged by the tire chains could cause loss of control and a crash.

Use another type of traction device only if its manufacturer recommends it for the vehicle's tire size combination and road conditions. Follow that manufacturer's instructions. To avoid vehicle damage, drive slow and readjust or remove the traction device if it contacts the vehicle. Do not spin the wheels. If traction devices are used, install them on the front tires.

If a Tire Goes Flat

It is unusual for a tire to blow out while driving, especially if the tires are maintained properly. See *Tires on page 10-49*. If air goes out of a tire, it is much more likely to leak out slowly. But if there is ever a blowout, here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire creates a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop, well off the road, if possible.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction as used in a skid. Stop pressing the accelerator pedal and steer to straighten the vehicle. It may be very bumpy and noisy. Gently brake to a stop, well off the road, if possible.

⚠ WARNING

Driving on a flat tire will cause permanent damage to the tire. Re-inflating a tire after it has been driven on while severely underinflated or flat may cause a blowout and a serious crash. Never attempt to re-inflate a tire that has been driven on while severely underinflated or flat. Have your dealer or an authorized tire service center repair or replace the flat tire as soon as possible.

⚠ WARNING

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place, well off the road, if possible. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-5*.

⚠ WARNING

Changing a tire can be dangerous. The vehicle can slip off the jack and roll over or fall causing injury or death. Find a level place to change the tire. To help prevent the vehicle from moving:

1. Set the parking brake firmly.
2. Put an automatic transmission in P (Park) or a manual transmission in 1 (First) or R (Reverse).
3. Turn off the engine and do not restart while the vehicle is raised.

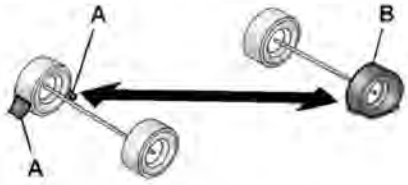
(Continued)

WARNING (Continued)

4. Do not allow passengers to remain in the vehicle.
5. Place wheel blocks on both sides of the tire at the opposite corner of the tire being changed.

This vehicle may come with a jack and spare tire or a tire sealant and compressor kit. To use the jacking equipment to change a spare tire safely, follow the instructions below. Then see *Tire Changing on page 10-81*. To use the tire sealant and compressor kit, see *Tire Sealant and Compressor Kit on page 10-73*.

When the vehicle has a flat tire (B), use the following example as a guide to assist you in the placement of wheel blocks (A).



A. Wheel Block

B. Flat Tire

The following information explains how to repair or change a tire.

Tire Sealant and Compressor Kit

⚠ WARNING

Idling a vehicle in an enclosed area with poor ventilation is dangerous. Engine exhaust may enter the vehicle. Engine exhaust contains carbon monoxide (CO) which cannot be seen or smelled. It can cause unconsciousness and even death. Never run the engine in an enclosed area that has no fresh air ventilation. For more information, see *Engine Exhaust on page 9-23*.

⚠ WARNING

Overinflating a tire could cause the tire to rupture and you or others could be injured. Be sure to read and follow the tire sealant and compressor kit instructions and inflate the tire to its recommended pressure. Do not exceed the recommended pressure.

⚠ WARNING

Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

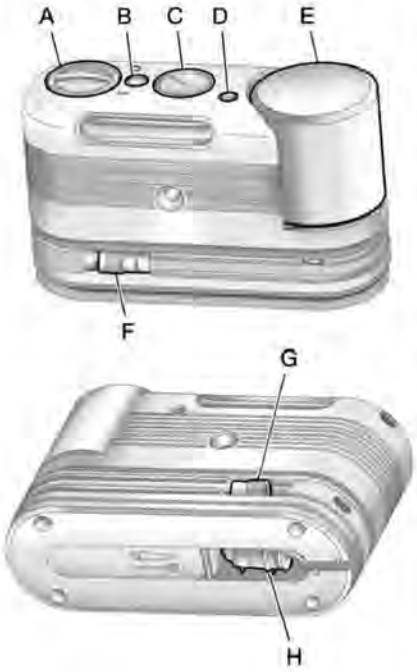
If this vehicle has a tire sealant and compressor kit, there may not be a spare tire, tire changing equipment, and on some vehicles there may not be a place to store a tire.

The tire sealant and compressor can be used to temporarily seal punctures up to 6 mm (0.25 in) in the tread area of the tire. It can also be used to inflate an under inflated tire.

If the tire has been separated from the wheel, has damaged sidewalls, or has a large puncture, the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-10*.

Read and follow all of the tire sealant and compressor kit instructions.

The kit includes:



A. Selector Switch (Sealant/Air or Air Only)
B. On/Off Button
C. Pressure Gauge
D. Pressure Deflation Button
E. Tire Sealant Canister
F. Sealant/Air Hose (Clear)
G. Air Only Hose (Black)
H. Power Plug

Tire Sealant

Read and follow the safe handling instructions on the label adhered to the sealant canister.

Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date.

Replacement sealant canisters are available at your local dealer. See "Removal and Installation of the Sealant Canister" following.

There is only enough sealant to seal one tire. After usage, the sealant canister and sealant/air hose assembly must be replaced. See "Removal and Installation of the Sealant Canister" following.

Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.

When using the tire sealant and compressor kit during cold temperatures, warm the kit in a heated environment for five minutes. This will help to inflate the tire faster.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-5*.

See *If a Tire Goes Flat on page 10-71* for other important safety warnings.

Do not remove any objects that have penetrated the tire.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-80*.
2. Unwrap the sealant/air hose (F) and the power plug (H).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.
4. Remove the valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the sealant/air hose (F) onto the tire valve stem. Turn it clockwise until it is tight.
6. Plug the power plug (H) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-9*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Press and turn the selector switch (A) counterclockwise to the Sealant + Air position.

9. Press the on/off button (B) to turn the tire sealant and compressor kit on.

   The compressor will inject sealant and air into the tire.

   The pressure gauge (C) will initially show a high pressure while the compressor pushes the sealant into the tire. Once the sealant is completely dispersed into the tire, the pressure will quickly drop and start to rise again as the tire inflates with air only.

10. Inflate the tire to the recommended inflation pressure using the pressure gauge (C). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-56*.

    The pressure gauge (C) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate pressure reading. The compressor may be turned on/off until the correct pressure is reached.

Notice: **If the recommended pressure cannot be reached after approximately 25 minutes, the vehicle should not be driven farther. The tire is too severely damaged and the tire sealant and compressor kit cannot inflate the tire. Remove the power plug from the accessory power outlet and unscrew the inflating hose from the tire valve. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-10*.**

11. Press the on/off button (B) to turn the tire sealant and compressor kit off.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire, therefore, Steps 12–18 must be done immediately after Step 11.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.

12. Unplug the power plug (H) from the accessory power outlet in the vehicle.

13. Turn the sealant/air hose (F) counterclockwise to remove it from the tire valve stem.

14. Replace the tire valve stem cap.
15. Replace the sealant/air hose (F), and the power plug (H) back in their original location.

16. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (E) and place it in a highly visible location. Do not exceed the speed on this label until the damaged tire is repaired or replaced.
17. Return the equipment to its original storage location in the vehicle.
18. Immediately drive the vehicle 8 km (5 mi) to distribute the sealant in the tire.
19. Stop at a safe location and check the tire pressure. Refer to Steps 1–11 under "Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)."

    If the tire pressure has fallen more than 68 kPa (10 psi) below the recommended inflation pressure, stop driving the vehicle. The tire is too severely damaged and the tire sealant cannot seal the tire.

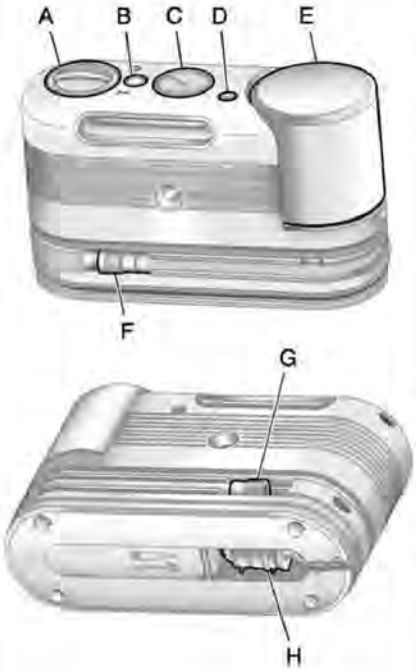
    See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-10*.

    If the tire pressure has not dropped more than 68 kPa (10 psi) from the recommended inflation pressure, inflate the tire to the recommended inflation pressure.
20. Wipe off any sealant from the wheel, tire, and vehicle.
21. Dispose of the used sealant canister (E) and sealant/air hose (F) assembly at a local dealer or in accordance with local state codes and practices.

22. Replace with a new canister assembly available from your dealer.
23. After temporarily sealing the tire using the tire sealant and compressor kit, take the vehicle to an authorized dealer within 161 km (100 mi) of driving to have the tire repaired or replaced.

Using the Tire Sealant and Compressor Kit without Sealant to Inflate a Tire (Not Punctured)

To use the air compressor to inflate a tire with air only and not sealant:



If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 6-5*.

See *If a Tire Goes Flat on page 10-71* for other important safety warnings.

1. Remove the tire sealant and compressor kit from its storage location. See *Storing the Tire Sealant and Compressor Kit on page 10-80*.
2. Unwrap the air only hose (G) and the power plug (H).
3. Place the kit on the ground.

   Make sure the tire valve stem is positioned close to the ground so the hose will reach it.

4. Remove the tire valve stem cap from the flat tire by turning it counterclockwise.
5. Attach the air only hose (G) onto the tire valve stem by turning it clockwise until it is tight.
6. Plug the power plug (H) into the accessory power outlet in the vehicle. Unplug all items from other accessory power outlets. See *Power Outlets on page 5-9*.

   If the vehicle has an accessory power outlet, do not use the cigarette lighter.

   If the vehicle only has a cigarette lighter, use the cigarette lighter.

   Do not pinch the power plug cord in the door or window.
7. Start the vehicle. The vehicle must be running while using the air compressor.
8. Press and turn the selector switch (A) clockwise to the Air Only position.
9. Press the on/off button (B) to turn the compressor on.

   The compressor will inflate the tire with air only.
10. Inflate the tire to the recommended inflation pressure using the pressure gauge (C). The recommended inflation pressure can be found on the Tire and Loading Information label. See *Tire Pressure on page 10-56*.

    The pressure gauge (C) may read higher than the actual tire pressure while the compressor is on. Turn the compressor off to get an accurate reading. The compressor may be turned on/off until the correct pressure is reached.

    If you inflate the tire higher than the recommended pressure you can adjust the excess pressure by pressing the pressure deflation button (D) until the proper pressure reading is reached.

    This option is only functional when using the air only hose (G).
11. Press the on/off button (B) to turn the tire sealant and compressor kit off.

    Be careful while handling the tire sealant and compressor kit as it could be warm after usage.
12. Unplug the power plug (H) from the accessory power outlet in the vehicle.
13. Disconnect the air only hose (G) from the tire valve stem, by turning it counterclockwise, and replace the tire valve stem cap.
14. Replace the air only hose (G) and the power plug (H) and cord back in its original location.
15. Place the equipment in the original storage location in the vehicle.

The tire sealant and compressor kit has an accessory adapter located in a compartment on the bottom of its housing that may be used to inflate air mattresses, balls, etc.

Removal and Installation of the Sealant Canister

To remove the sealant canister:

1. Unwrap the sealant hose.
2. Press the canister release button.
3. Pull up and remove the canister.
4. Replace with a new canister which is available from your dealer.
5. Push the new canister into place.

Storing the Tire Sealant and Compressor Kit

This vehicle may have a tire sealant and compressor kit in place of a jack or spare tire. It is located in a foam container in the rear compartment storage area. If the vehicle has a cargo cover, see *Cargo Management System on page 4-4* for instructions on how to access the tire sealant and compressor kit.

Tire Changing

Removing the Spare Tire and Tools

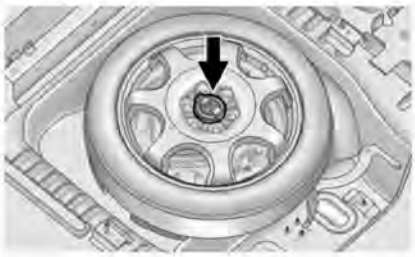
To access the spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-14*.

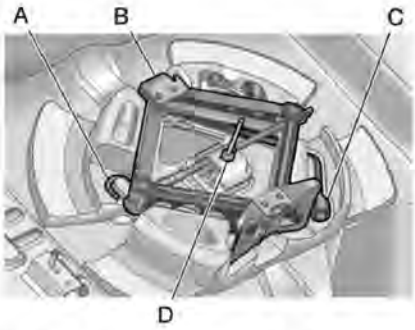
2. Press on the bottom of the handle assembly to unlatch it and lift up on the handle.

   The prop rod locks into place when open.

3. Remove the spare tire cover.



4. Remove the nut retaining the spare tire.
5. Remove the spare tire and place it next to the tire being changed.



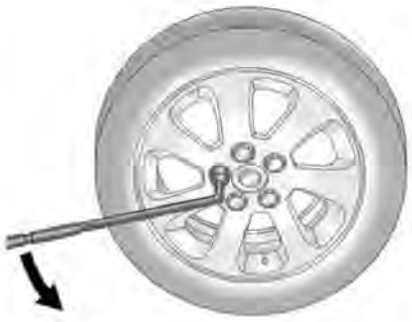
6. Remove the wing nut (D).
7. Remove the extension (A), jack (B) and wheel wrench (C) and place them near the tire being changed.

Removing the Flat Tire and Installing the Spare Tire

Take off the wheel cover or center cap, if the vehicle has one, to reach the wheel bolts.

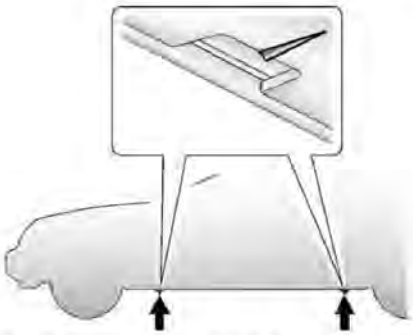
1. Do a safety check before proceeding. See *If a Tire Goes Flat on page 10-71* for more information.
2. Turn the wheel wrench counterclockwise to loosen and remove the wheel nut caps.

   Do not try to remove plastic caps from the cover or center cap.
3. Pull the cover or center cap away from the wheel. Store the wheel cover in the cargo area until you have the flat tire repaired or replaced.



4. Turn the wheel wrench counterclockwise to loosen all the wheel nuts, but do not remove them yet.
5. Place the jack near the flat tire.

Notice: **Make sure that the jack lift head is in the correct position or you may damage your vehicle. The repairs would not be covered by your warranty.**



6. Position the jack lift head at the jack location nearest the flat tire.

   The jacking location is indicated by a V-shaped notch in the plastic molding. The jack must not be used in any other position.

7. Insert the hooked end of the extension handle through the jack and the flat end through the wheel wrench.

⚠ WARNING

Getting under a vehicle when it is lifted on a jack is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

⚠ WARNING

Raising the vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

⚠ WARNING

Lifting a vehicle and getting under it to do maintenance or repairs is dangerous without the appropriate safety equipment and training. If a jack is provided with the vehicle, it is designed only for changing a flat tire. If it is used for anything else, you or others could be badly injured or killed if the vehicle slips off the jack. If a jack is provided with the vehicle, only use it for changing a flat tire.

8. Turn the extension with the wheel wrench clockwise to raise the jack lift head until the jack just fits under the vehicle.

9. Raise the vehicle by turning the wheel wrench clockwise until the slots in the jack head fit into the metal flange located behind the triangle on the plastic moulding.

Notice: **Using a jack to raise the vehicle without positioning it correctly could damage your vehicle. When raising your vehicle on a jack, be sure to position it correctly under the frame and avoid contact with the plastic molding.**

10. Put the compact spare tire near you.

Remove all of the wheel nuts.

11. Remove the flat tire.

⚠ WARNING

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after time. The wheel could come off and cause an accident. When changing a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, a cloth or a paper towel can be used; however, use a scraper or wire brush later to remove all rust or dirt.

12. Remove any rust or dirt from the wheel bolts, mounting surfaces, and spare wheel.
13. Place the compact spare tire on the wheel-mounting surface.

⚠ WARNING

Never use oil or grease on bolts or nuts because the nuts might come loose. The vehicle's wheel could fall off, causing a crash.

14. Reinstall the wheel nuts. Tighten each nut by hand until the wheel is held against the hub.
15. Lower the vehicle by turning the jack handle counterclockwise.

⚠ WARNING

Wheel nuts that are improperly or incorrectly tightened can cause the wheels to become loose or come off. The wheel nuts should be tightened with a torque wrench to the proper torque specification after replacing. Follow the torque specification supplied by the aftermarket manufacturer when using accessory locking wheel nuts. See *Capacities and Specifications on page 12-2* for original equipment wheel nut torque specifications.

***Notice:* Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. To avoid expensive brake repairs, evenly tighten the wheel nuts in the proper sequence and to the proper torque specification. See *Capacities and Specifications on page 12-2* for the wheel nut torque specification.**

16. Tighten the wheel nuts firmly in a crisscross sequence, as shown.
17. Lower the jack all the way and remove the jack from under the vehicle.
18. Tighten the wheel nuts firmly with the wheel wrench.

When reinstalling the wheel cover or center cap on the full-size tire, tighten all five plastic caps hand snug with the aid of the wheel wrench and tighten them with the wheel wrench an additional one-quarter of a turn.

***Notice:* Wheel covers will not fit on the vehicle's compact spare. If you try to put a wheel cover on the compact spare, the cover or the spare could be damaged.**

Storing a Flat or Spare Tire and Tools

⚠ WARNING

Storing a jack, a tire, or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.

To store the flat or spare tire and tools:

1. Open the liftgate. See *Liftgate on page 2-14* for more information.
2. Put back all tools as they were stored in the rear storage compartment and put the compartment cover back on. For more information, see "Storing the Compact Spare Tire and Tools" next in this section.
3. Install the cargo cover. For more information, see *Cargo Management System on page 4-4*.
4. Place the tire, lying flat, in the rear storage compartment.

5. Attach the strap to the cargo tie-down in the rear of the vehicle.

6. Route the strap through the wheel, as shown.
7. Attach the strap to the other cargo tie-down in the rear of the vehicle.
8. Tighten the strap.

The compact spare is for temporary use only. Replace the compact spare tire with a full-size tire as soon as you can.

Compact Spare Tire

⚠ WARNING

Driving with more than one compact spare tire at a time could result in loss of braking and handling. This could lead to a crash and you or others could be injured. Use only one compact spare tire at a time.

If this vehicle has a compact spare tire, it was fully inflated when the vehicle was new; however, it can lose air after a time. Check the inflation pressure regularly. It should be 420 kPa (60 psi).

Stop as soon as possible and check that the spare tire is correctly inflated after installing the spare on the vehicle. The compact spare is designed to perform well at speeds up to 105 km/h (65 mph) for distances up to 5 000 km (3,000 mi), so a trip can be completed and the full-size tire repaired or replaced when possible. However, the compact spare tire will last longer and be in good shape if it is replaced as soon as possible.

Notice: **When the compact spare is installed, do not take the vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails which can damage the tire, wheel, and other parts of the vehicle.**

Do not use the compact spare on other vehicles.

Do not mix the compact spare tire or wheel with other wheels or tires. They will not fit. Keep the spare tire and its wheel together.

Notice: **Tire chains will not fit the compact spare. Using them can damage the vehicle and can damage the chains too. Do not use tire chains on the compact spare.**

Jump Starting

For more information about the vehicle battery, see *Battery on page 10-24.*

If the vehicle battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. Be sure to use the following steps to do it safely.

⚠ WARNING

Batteries can hurt you. They can be dangerous because:

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

If you do not follow these steps exactly, some or all of these things can hurt you.

Notice: **Ignoring these steps could result in costly damage to the vehicle that would not be covered by the warranty.**

Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

Notice: **Only use a vehicle that has a 12-volt system with a negative ground for jump starting. If the other vehicle does not have a 12-volt system with a negative ground, both vehicles can be damaged.**

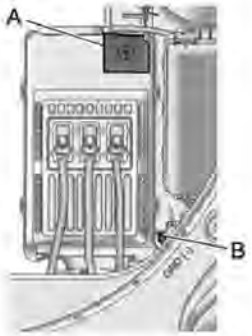
2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection you do not want. You would not be able to start your vehicle, and the bad grounding could damage the electrical systems.

   To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the transmission in P (Park) before setting the parking brake.

Notice: **If any accessories are left on or plugged in during the jump starting procedure, they could be damaged. The repairs would not be covered by the vehicle warranty. Whenever possible, turn off or unplug all accessories on either vehicle when jump starting the vehicle.**

3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or the accessory power outlet. Turn off the radio and all lamps that are not needed. This will avoid sparks, helping save both batteries and the radio.
4. Open the hood on the other vehicle and locate the positive (+) and negative (−) terminal locations on that vehicle.

   Open the hood on your vehicle and find the remote positive (+) and remote negative (−) jump starting terminals.



Your vehicle is equipped with a remote positive (+) terminal (A) and a remote negative (−) terminal (B). The remote positive (+) terminal is located in the engine compartment on the driver side of the vehicle, above the rear of the battery.

The remote negative (−) terminal is a stud located in the engine compartment on the driver side of the vehicle, on the front tie bar. See *Engine Compartment Overview on page 10-6* for more information on location.

To uncover the remote positive (+) terminal, lift open the access panel on the battery cover indicated by the (+) sign.

⚠ WARNING

An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.

⚠ WARNING

Using an open flame near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.

Be sure the battery has enough water. You do not need to add water to the battery installed in your new vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you do not, explosive gas could be present.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.

⚠ WARNING

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.

5. Check that the jumper cables do not have loose or missing insulation. If they do, you could get a shock. The vehicles could also be damaged.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) or to a remote positive (+) terminal if the vehicle has one. Negative (−) will go to a heavy, unpainted metal engine part or to a remote negative (−) terminal if the vehicle has one.

   Do not connect positive (+) to negative (−) or you will get a short that would damage the battery and maybe other parts.

   Do not connect the negative (−) cable to the negative (−) terminal on the dead battery because this can cause sparks.

6. Connect the red positive (+) cable to the positive (+) terminal on the vehicle with the dead battery. Use a remote positive (+) terminal if the vehicle has one.

7. Do not let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.

8. Now connect the black negative (−) cable to the negative (−) terminal of the good battery. Use a remote negative (−) terminal if the vehicle has one.

   Do not let the other end touch anything until the next step. The other end of the negative (−) cable does not go to the dead battery. It goes to a heavy, unpainted metal engine part or to a remote negative (−) terminal on the vehicle with the dead battery.

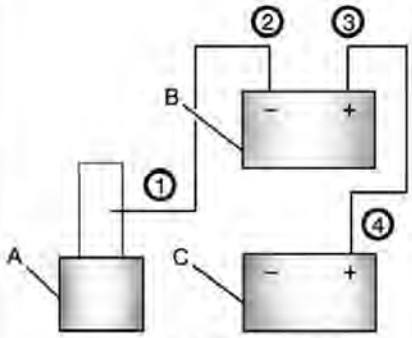
9. Connect the other end of the negative (−) cable away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, and the chance of sparks getting back to the battery is much less.

   Your vehicle has a remote (−) terminal for this purpose.

10. Now start the vehicle with the good battery and run the engine for a while.

11. Try to start the vehicle that had the dead battery. If it will not start after a few tries, it probably needs service.

Notice: **If the jumper cables are connected or removed in the wrong order, electrical shorting may occur and damage the vehicle. The repairs would not be covered by the vehicle warranty. Always connect and remove the jumper cables in the correct order, making sure that the cables do not touch each other or other metal.**



Jumper Cable Removal

A. Heavy, Unpainted Metal Engine Part or Remote Negative (−) Terminal

B. Good Battery or Remote Positive (+) and Remote Negative (−) Terminals

C. Dead Battery or Remote Positive (+) Terminal

To disconnect the jumper cables from both vehicles, do the following:

1. Disconnect the black negative (−) cable from the vehicle that had the dead battery.
2. Disconnect the black negative (−) cable from the vehicle with the good battery.
3. Disconnect the red positive (+) cable from the vehicle with the good battery.
4. Disconnect the red positive (+) cable from the other vehicle.
5. Close the access panel on the battery cover, if applicable.

Towing

Towing the Vehicle

***Notice:* To avoid damage, the disabled vehicle should be towed with all four wheels off the ground. Care must be taken with vehicles that have low ground clearance and/or special equipment. Always flatbed on a car carrier.**

Consult your dealer or a professional towing service if the disabled vehicle must be towed. See *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-10*.

To tow the vehicle behind another vehicle for recreational purposes, such as behind a motor home, see "Recreational Vehicle Towing" in this section.

Recreational Vehicle Towing

Recreational vehicle towing means towing the vehicle behind another vehicle – such as behind a motor home. The two most common types of recreational vehicle towing are known as dinghy towing and dolly towing. Dinghy towing is towing the vehicle with all four wheels on the ground. Dolly towing is towing the vehicle with two wheels on the ground and two wheels up on a device known as a dolly.

Here are some important things to consider before recreational vehicle towing:

- What is the towing capacity of the towing vehicle? Be sure to read the tow vehicle manufacturer's recommendations.
- What is the distance that will be travelled? Some vehicles have restrictions on how far and how long they can tow.
- Is the proper towing equipment going to be used? See your dealer or trailering professional for additional advice and equipment recommendations.
- Is the vehicle ready to be towed? Just as preparing the vehicle for a long trip, make sure the vehicle is prepared to be towed.

Dinghy Towing

Front-wheel-drive and all-wheel-drive vehicles may be dinghy towed from the front. These vehicles can also be towed by placing them on a platform trailer with all four wheels off of the ground. For other towing options, see "Dolly Towing" following in this section.

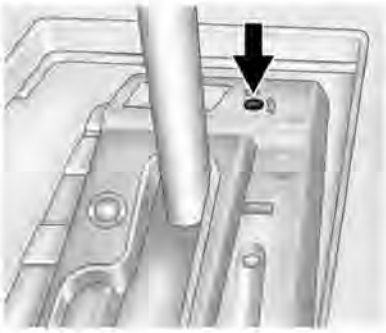
Notice: **If 105 km/h (65 mph) is exceeded while towing the vehicle, it could be damaged. Never exceed 105 km/h (65 mph) while towing the vehicle.**

For vehicles being dinghy towed, the vehicle should be run at the beginning of each day and at each RV fuel stop for about five minutes. This will ensure proper lubrication of transmission components.

To tow the vehicle from the front with all four wheels on the ground:

1. Position the vehicle that will be towed and secure it to the towing vehicle.

2. Remove the shift lever boot by pulling up on the rear of the trim plate.



3. Use a small screw driver or tool to press and hold the manual release button on the front right.
4. Put the vehicle in N (Neutral).

Notice: **If the vehicle is towed without performing each of the steps listed under "Dinghy Towing," the automatic transmission could be damaged. Be sure to follow all steps of the dinghy towing procedure prior to and after towing the vehicle.**

Once the destination has been reached:

1. Shift the vehicle to P (Park).
2. Reinstall the shift lever boot by inserting the front edge and pressing the rear of the trim plate until it snaps into place.
3. Start the engine and let it idle for more than three minutes before driving the vehicle.

Notice: **Too much or too little fluid can damage the transmission. Be sure that the transmission fluid is at the proper level before towing with all four wheels on the ground.**

Notice: **Do not tow a vehicle with the front drive wheels on the ground if one of the front tires is a compact spare tire. Towing with two different tire sizes on the front of the vehicle can cause severe damage to the transmission.**

Dolly Towing (All-Wheel-Drive Vehicles)

All-wheel-drive vehicles should not be towed with two wheels on the ground. To properly tow these vehicles, they should be placed on a platform trailer with all four wheels off of the ground or dinghy towed from the front. See Dinghy Towing earlier in this section.

Dolly Towing (Front-Wheel-Drive Vehicles)

To tow the vehicle from the front with the rear wheels on the ground, do the following:

1. Put the front wheels on a dolly.
2. Move the shift lever to P (Park). See *Shifting Into Park on page 9-21.*
3. Set the parking brake.
4. Secure the vehicle to the dolly.
5. Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.
6. Release the parking brake.

Towing the Vehicle From the Rear

Notice: **Towing the vehicle from the rear could damage it. Also, repairs would not be covered by the vehicle warranty. Never have the vehicle towed from the rear.**

Appearance Care

Exterior Care

Washing the Vehicle

To preserve the vehicle's finish, wash it often and out of direct sunlight.

Notice: **Do not use petroleum based, acidic, or abrasive cleaning agents as they can damage the vehicle's paint, metal, or plastic parts. If damage occurs, it would not be covered by the vehicle's warranty. Approved cleaning products can be obtained from your dealer. Follow all manufacturer directions regarding correct product usage, necessary safety precautions, and appropriate disposal of any vehicle care product.**

Notice: **Avoid using high pressure washes closer than 30 cm (12 in) to the surface of the vehicle. Use of power washers exceeding 8,274 kPa (1,200 psi) can result in damage or removal of paint and decals.**

Rinse the vehicle well, before washing and after, to remove all cleaning agents completely. If they are allowed to dry on the surface, they could stain.

Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

Finish Care

Application of aftermarket clearcoat sealant/wax materials is not recommended. If painted surfaces are damaged, see your dealer to have the damage assessed and repaired. Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Occasional hand waxing or mild polishing should be done to remove residue from the paint finish. See your dealer for approved cleaning products.

Notice: **Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may damage it. Use only non-abrasive waxes and polishes that are made for a basecoat/ clearcoat paint finish on the vehicle.**

To keep the paint finish looking new, keep the vehicle garaged or covered whenever possible.

Protecting Exterior Bright Metal Parts

Regularly clean bright metal parts with water or chrome polish on chrome or stainless steel trim, if necessary.

For aluminum, never use auto or chrome polish, steam, or caustic soap to clean. A coating of wax, rubbed to a high polish, is recommended for all bright metal parts.

Cleaning Exterior Lamps/Lenses and Emblems

Use only lukewarm or cold water, a soft cloth, and a car washing soap to clean exterior lamps and lenses. Follow instructions under "Washing the Vehicle" later in this section.

Windshield and Wiper Blades

Clean the outside of the windshield with glass cleaner.

Clean rubber blades using a lint-free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking.

Replace the wiper blades if they are worn or damaged. Damage can be caused by extreme dusty conditions, sand, salt, heat, sun, snow, and ice.

Weatherstrips

Apply silicone grease on weatherstrips to make them last longer, seal better, and not stick or squeak. See *Recommended Fluids and Lubricants on page 11-13*.

Tires

Use a stiff brush with tire cleaner to clean the tires.

Notice: **Using petroleum-based tire dressing products on the vehicle may damage the paint finish and/or tires. When applying a tire dressing, always wipe off any overspray from all painted surfaces on the vehicle.**

Wheels and Trim — Aluminum or Chrome

Use a soft, clean cloth with mild soap and water to clean the wheels. After rinsing thoroughly with clean water, dry with a soft, clean towel. A wax may then be applied.

Notice: **Chrome wheels and other chrome trim may be damaged if the vehicle is not washed after driving on roads that have been sprayed with magnesium, calcium, or sodium chloride. These chlorides are used on roads for conditions such as ice and dust. Always wash the chrome with soap and water after exposure.**

Notice: **To avoid surface damage, do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels. Use only approved cleaners. Also, never drive a vehicle with aluminum or chrome-plated wheels through an automatic car wash that uses silicone carbide tire cleaning brushes. Damage could occur and the repairs would not be covered by the vehicle warranty.**

Steering, Suspension, and Chassis Components

Visually inspect front and rear suspension and steering system for damaged, loose, or missing parts or signs of wear. Inspect the power steering for proper hook-up, binding, leaks, cracks, chafing, etc. Visually check constant velocity joints, rubber boots, and axle seals for leaks.

Body Component Lubrication

Lubricate all key lock cylinders, hood hinges, liftgate hinges, and the steel fuel door hinge unless the components are plastic. Applying silicone grease on weatherstrips with a clean cloth will make them last longer, seal better, and not stick or squeak.

Underbody Maintenance

Use plain water to flush dirt and debris from the vehicle's underbody. Your dealer or an underbody car washing system can do this. If not removed, rust and corrosion can develop.

Sheet Metal Damage

If the vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to parts repaired or replaced to restore corrosion protection.

Original manufacturer replacement parts will provide the corrosion protection while maintaining the vehicle warranty.

Finish Damage

Quickly repair minor chips and scratches with touch-up materials available from your dealer to avoid corrosion. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

Chemical Paint Spotting

Airborne pollutants can fall upon and attack painted vehicle surfaces causing blotchy, ring-shaped discolorations, and small, irregular dark spots etched into the paint surface.

Interior Care

To prevent dirt particle abrasions, regularly clean the vehicle's interior. Immediately remove any soils. Note that newspapers or dark garments that can transfer color to home furnishings can also permanently transfer color to the vehicle's interior.

Use a soft bristle brush to remove dust from knobs and crevices on the instrument cluster. Using a mild soap solution, immediately remove hand lotions, sunscreen, and insect repellant from all interior surfaces or permanent damage may result.

Your dealer may have products for cleaning the interior. Use cleaners specifically designed for the surfaces being cleaned to prevent permanent damage. To prevent overspray, apply all cleaners directly to the cleaning cloth. Cleaners should be removed quickly. Never allow cleaners to remain on the surface being cleaned for extended periods of time.

Cleaners may contain solvents that can become concentrated in the interior. Before using cleaners, read and adhere to all safety instructions on the label. While cleaning the interior, maintain adequate ventilation by opening the doors and windows.

To prevent damage, do not clean the interior using the following cleaners or techniques:

- Never use a razor or any other sharp object to remove a soil from any interior surface.
- Never use a brush with stiff bristles.
- Never rub any surface aggressively or with excessive pressure.
- Do not use laundry detergents or dishwashing soaps with degreasers. For liquid cleaners, use approximately 20 drops per 3.78 L (1 gal) of water. A concentrated soap solution will leave a residue that creates streaks and attracts dirt. Do not use solutions that contain strong or caustic soap.
- Do not heavily saturate the upholstery when cleaning.
- Do not use solvents or cleaners containing solvents.

Interior Glass

To clean, use a terry cloth fabric dampened with water. Wipe droplets left behind with a clean dry cloth. Commercial glass cleaners may be used, if necessary, after cleaning the interior glass with plain water.

Notice: **To prevent scratching, never use abrasive cleaners on automotive glass. Abrasive cleaners or aggressive cleaning may damage the rear window defogger.**

Fabric/Carpet

Start by vacuuming the surface using a soft brush attachment. If a rotating brush attachment is being used during vacuuming, only use it on the floor carpet. Before cleaning, gently remove as much of the soil as possible using one of the following techniques:

- Gently blot liquids with a paper towel. Continue blotting until no more soil can be removed.
- For solid soils, remove as much as possible prior to vacuuming.

To clean:

1. Saturate a clean lint-free colorfast cloth with water or club soda. Microfiber cloth is recommended to prevent lint transfer to the fabric or carpet.
2. Remove excess moisture by gently wringing until water does not drip from the cleaning cloth.

3. Start on the outside edge of the soil and gently rub toward the center. Fold the cleaning cloth to a clean area frequently to prevent forcing the soil in to the fabric.
4. Continue gently rubbing the soiled area until there is no longer any color transfer from the soil to the cleaning cloth.
5. If the soil is not completely removed, use a mild soap solution followed only by club soda or plain water.

If the soil is not completely removed, it may be necessary to use a commercial upholstery cleaner or spot lifter. Test a small hidden area for colorfastness before using a commercial upholstery cleaner or spot lifter. If ring formation occurs, clean the entire fabric or carpet.

Following the cleaning process, a paper towel can be used to blot excess moisture.

Instrument Panel, Vinyl, and Other Plastic Surfaces

Use a soft microfiber cloth dampened with water to remove dust and loose dirt. For a more thorough cleaning, use a soft microfiber cloth dampened with a mild soap solution.

Notice: **Soaking or saturating leather, especially perforated leather, as well as other interior surfaces, may cause permanent damage. Wipe excess moisture from these surfaces after cleaning and allow them to dry naturally. Never use heat, steam, spot lifters or spot removers. Do not use cleaners that contain silicone or wax-based products. Cleaners containing these solvents can permanently change the appearance and feel of leather or soft trim and are not recommended.**

Do not use cleaners that increase gloss, especially on the instrument panel. Reflected glare can decrease visibility through the windshield under certain conditions.

Notice: **Use of air fresheners may cause permanent damage to plastics and painted surfaces. If an air freshener comes in contact with any plastic or painted surface in the vehicle, blot immediately and clean with a soft cloth dampened with a mild soap solution. Damage caused by air fresheners would not be covered by the vehicle warranty.**

Floor Mats

⚠ WARNING

If a floor mat is the wrong size or is not properly installed, it can interfere with the pedals. Interference with the pedals can cause unintended acceleration and/or increased stopping distance which can cause a crash and injury. Make sure the floor mat does not interfere with the pedals.

Use the following guidelines for proper floor mat usage.

- The original equipment floor mats were designed for your vehicle. If the floor mats need replacing, it is recommended that certified floor mats be purchased. Non-certified floor mats may not fit properly and may interfere with the pedals. Always check that the floor mats do not interfere with the pedals.
- Use the floor mat with the correct side up. Do not turn it over.
- Do not place anything on top of the driver side floor mat.
- Use only a single floor mat on the driver side.
- Do not place one floor mat on top of another.

Removing and Replacing the Floor Mats

The driver side floor mat is held in place by two button-type retainers. The passenger side floor mat is held in place by one button-type retainer.

1. Pull up on the rear of the floor mat to unlock each retainer and remove.
2. Reinstall by lining up the floor mat retainer openings over the carpet retainers and snapping into position.
3. Make sure the floor mat is properly secured and verify that it does not interfere with the pedals.

✍ NOTES

Service and Maintenance

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General Information

Your vehicle is an important investment. This section describes the required maintenance for the vehicle. Follow this schedule to help protect against major repair expenses resulting from neglect or inadequate maintenance. It may also help to maintain the value of the vehicle if it is sold. It is the responsibility of the owner to have all required maintenance performed.

Your dealer has trained technicians who can perform required maintenance using genuine replacement parts. They have up-to-date tools and equipment for fast and accurate diagnostics. Many dealers have extended evening and Saturday hours, courtesy transportation, and online scheduling to assist with service needs.

Your dealer recognizes the importance of providing competitively priced maintenance and repair services. With trained technicians, the dealer is the place for routine maintenance such as oil changes and tire rotations and additional maintenance items like tires, brakes, batteries, and wiper blades.

Notice: **Damage caused by improper maintenance can lead to costly repairs and may not be covered by the vehicle warranty. Maintenance intervals, checks, inspections, recommended fluids, and lubricants are important to keep the vehicle in good working condition.**

The Tire Rotation and Required Services are the responsibility of the vehicle owner. It is recommended to have your dealer perform these services every 12 000 km/7,500 mi. Proper vehicle maintenance helps to keep the vehicle in good working condition, improves fuel economy, and reduces vehicle emissions.

Because of the way people use vehicles, maintenance needs vary. There may need to be more frequent checks and services. The Additional Required Services - Normal are for vehicles that:

- Carry passengers and cargo within recommended limits on the Tire and Loading Information label. See *Vehicle Load Limits on page 9-10*.
- Are driven on reasonable road surfaces within legal driving limits.
- Use the recommended fuel. See *Recommended Fuel on page 9-46*.

Refer to the information in the Maintenance Schedule Additional Required Services - Normal chart.

The Additional Required Services - Severe are for vehicles that are:

- Mainly driven in heavy city traffic in hot weather.
- Mainly driven in hilly or mountainous terrain.
- Frequently towing a trailer.
- Used for high speed or competitive driving.
- Used for taxi, police, or delivery service.

Refer to the information in the Maintenance Schedule Additional Required Services - Severe chart.

⚠ WARNING

Performing maintenance work can be dangerous and can cause serious injury. Perform maintenance work only if the required information, proper tools, and equipment are available. If they are not, see your dealer to have a trained technician do the work. See *Doing Your Own Service Work on page 10-4*.

Cadillac Premium Care Maintenance

Your vehicle comes with the Cadillac Premium Care Maintenance. It is a maintenance program that covers select maintenance services during the first 4 years or 80 000 km (50,000 mi), whichever comes first.

Cadillac Premium Care Maintenance covers routine maintenance services, when scheduled in accordance with the owner manual, including:

- Oil changes based on the vehicle's oil life monitor system.
- Tire rotation every 12 000 km (7,500 mi).
- Engine air cleaner filter replacement.
- Passenger compartment air filter replacement.
- Multi-point vehicle inspection (MPVI) performed by a qualified technician.

Cadillac requires that all Cadillac Premium Care Maintenance services be performed by a Cadillac authorized service dealer.

Maintenance Schedule

Owner Checks and Services

At Each Fuel Stop

- Check the engine oil level. See *Engine Oil on page 10-8*.

Once a Month

- Check the tire inflation pressures. See *Tire Pressure on page 10-56*.
- Inspect the tires for wear. See *Tire Inspection on page 10-62*.
- Check the windshield washer fluid level. See *Washer Fluid on page 10-21*.

Engine Oil Change

When the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km/600 mi. If driven under the best conditions, the engine oil life system might not indicate the need for vehicle service for more than a year. The engine oil and filter must be changed at least once a year and the oil life system must be reset. Your trained dealer technician can perform this work. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 mi since the last service. Reset the oil life system when the oil is changed. See *Engine Oil Life System on page 10-10*.

Tire Rotation and Required Services Every 12 000 km/7,500 mi

Rotate the tires, if recommended for the vehicle, and perform the following services. See *Tire Rotation on page 10-63*.

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system. See *Engine Oil on page 10-8* and *Engine Oil Life System on page 10-10*.
- Check engine coolant level. See *Engine Coolant on page 10-15*.
- Check windshield washer fluid level. See *Washer Fluid on page 10-21*.

- Visually inspect windshield wiper blades for wear, cracking, or contamination. See *Exterior Care on page 10-97*. Replace worn or damaged wiper blades. See *Wiper Blade Replacement on page 10-27*.
- Check tire inflation pressures. See *Tire Pressure on page 10-56*.
- Inspect tire wear. See *Tire Inspection on page 10-62*.
- Visually check for fluid leaks.
- Inspect engine air cleaner filter. See *Engine Air Cleaner/Filter on page 10-12*.
- Inspect brake system.
- Visually inspect steering, suspension, and chassis components for damaged, loose, or missing parts or signs of wear. See *Exterior Care on page 10-97*.
- Check restraint system components. See *Safety System Check on page 3-21*.
- Visually inspect fuel system for damage or leaks.
- Visually inspect exhaust system and nearby heat shields for loose or damaged parts.
- Lubricate body components. See *Exterior Care on page 10-97*.
- Check starter switch. See *Starter Switch Check on page 10-25*.
- Check automatic transmission shift lock control function. See *Automatic Transmission Shift Lock Control Function Check on page 10-26*.
- Check parking brake and automatic transmission park mechanism. See *Park Brake and P (Park) Mechanism Check on page 10-26*.
- Check accelerator pedal for damage, high effort, or binding. Replace if needed.
- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. See your dealer if service is required.
- Check tire sealant expiration date, if equipped. See *Tire Sealant and Compressor Kit on page 10-73*.
- Inspect sunroof track and seal, if equipped. See *Sunroof on page 2-27*.

Maintenance Schedule Additional Required Services – Normal	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter, if equipped. (a)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (b)						✓						✓						✓		
Replace engine air cleaner filter. (c)						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Change automatic transmission fluid, if equipped. If filter is serviceable, change filter.													✓							
Change transfer case fluid, if equipped with AWD. (d)													✓							
Drain, flush, and fill engine cooling system. (e)																				✓
Visually inspect accessory drive belts. (f)																				✓

Footnotes — Maintenance Schedule Additional Required Services — Normal

a) Or every two years, whichever comes first. More frequent replacement may be needed if the vehicle is driven in areas with heavy traffic, areas with poor air quality, or areas with high dust levels. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

b) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition. Check that the purge valve, if the vehicle has one, works properly. Replace as needed.

c) Or every four years, whichever comes first.

d) Do not directly power wash the transfer case output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and should be replaced.

e) Or every five years, whichever comes first. See *Cooling System on page 10-14*.

f) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

Maintenance Schedule Additional Required Services – Severe	12 000 km/7,500 mi	24 000 km/15,000 mi	36 000 km/22,500 mi	48 000 km/30,000 mi	60 000 km/37,500 mi	72 000 km/45,000 mi	84 000 km/52,500 mi	96 000 km/60,000 mi	108 000 km/67,500 mi	120 000 km/75,000 mi	132 000 km/82,500 mi	144 000 km/90,000 mi	156 000 km/97,500 mi	168 000 km/105,000 mi	180 000 km/112,500 mi	192 000 km/120,000 mi	204 000 km/127,500 mi	216 000 km/135,000 mi	228 000 km/142,500 mi	240 000 km/150,000 mi
Rotate tires and perform Required Services. Check engine oil level and oil life percentage. Change engine oil and filter, if needed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace passenger compartment air filter, if equipped. (a)			✓			✓			✓			✓			✓			✓		
Inspect evaporative control system. (b)						✓						✓						✓		
Replace engine air cleaner filter. (c)						✓						✓						✓		
Change automatic transmission fluid, if equipped. If filter is serviceable, change filter.						✓						✓						✓		
Change transfer case fluid, if equipped with AWD. (d)						✓						✓						✓		
Replace spark plugs. Inspect spark plug wires.													✓							
Drain, flush, and fill engine cooling system. (e)																				✓
Visually inspect accessory drive belts. (f)																				✓

Footnotes — Maintenance Schedule Additional Required Services — Severe

a) Or every two years, whichever comes first.

b) Check all fuel and vapor lines and hoses for proper hook-up, routing, and condition. Check that the purge valve, if the vehicle has one, works properly. Replace as needed.

c) Or every four years, whichever comes first.

d) Do not directly power wash the transfer case output seals. High pressure water can overcome the seals and contaminate the transfer case fluid. Contaminated fluid will decrease the life of the transfer case and should be replaced.

e) Or every five years, whichever comes first. See *Cooling System on page 10-14*.

f) Or every 10 years, whichever comes first. Inspect for fraying, excessive cracking, or damage; replace, if needed.

Special Application Services

- Severe Commercial Use Vehicles Only: Lubricate chassis components every 5 000 km/3,000 mi.
- Have underbody flushing service performed once a year.

Additional Maintenance and Care

Your vehicle is an important investment and caring for it properly may help to avoid future costly repairs. To maintain vehicle performance, additional maintenance services may be required. It is recommended that your dealer perform these services — their trained dealer technicians know your vehicle best. Your dealer can also perform a thorough assessment with a multi-point inspection to recommend when your vehicle may need attention. The following list is intended to explain the services and conditions to look for that may indicate services are required.

Battery

The battery supplies power to start the engine and operate any additional electrical accessories.

- To avoid break-down or failure to start the vehicle, maintain a battery with full cranking power.
- Trained dealer technicians have the diagnostic equipment to test the battery and ensure that the connections and cables are corrosion-free.

Belts

- Belts may need replacing if they squeak or show signs of cracking or splitting.
- Trained dealer technicians can inspect the belts and recommend replacement when necessary.

Brakes

Brakes stop the vehicle and are crucial to safe driving.

- Signs of brake wear may include chirping, grinding, or squealing noises, or difficulty stopping.
- Trained dealer technicians have access to tools and equipment to inspect the brakes and recommend quality parts engineered for the vehicle.

Fluids

Proper fluid levels and approved fluids protect the vehicle's systems and components. See *Recommended Fluids and Lubricants on page 11-13* for GM approved fluids.

- Engine oil and windshield washer fluid levels should be checked at every fuel fill.
- Instrument cluster lights may come on to indicate that fluids may be low and need to be filled.

Hoses

Hoses transport fluids and should be regularly inspected to ensure that there are no cracks or leaks. With a multi-point inspection, your dealer can inspect the hoses and advise if replacement is needed.

Lamps

Properly working headlamps, taillamps, and brake lamps are important to see and be seen on the road.

- Signs that the headlamps need attention include dimming, failure to light, cracking, or damage. The brake lamps need to be checked periodically to ensure that they light when braking.
- With a multi-point inspection, your dealer can check the lamps and note any concerns.

Shocks and Struts

Shocks and struts help aid in control for a smoother ride.

- Signs of wear may include steering wheel vibration, bounce/sway while braking, longer stopping distance, or uneven tire wear.
- As part of the multi-point inspection, trained dealer technicians can visually inspect the shocks and struts for signs of leaking, blown seals, or damage, and can advise when service is needed.

Tires

Tires need to be properly inflated, rotated, and balanced. Maintaining the tires can save money, fuel, and can reduce the risk of tire failure.

- Signs that the tires need to be replaced include three or more visible treadwear indicators; cord or fabric showing through the rubber; cracks or cuts in the tread or sidewall; or a bulge or split in the tire.
- Trained dealer technicians can inspect and recommend the right tires. Your dealer can also provide tire/wheel balancing services to ensure smooth vehicle operation at all speeds. Your dealer sells and services name brand tires.

Vehicle Care

To help keep the vehicle looking like new, vehicle care products are available from your dealer. For information on how to clean and protect the vehicle's interior and exterior, see *Interior Care on page 10-100* and *Exterior Care on page 10-97*.

Wheel Alignment

Wheel alignment is critical for ensuring that the tires deliver optimal wear and performance.

- Signs that the alignment may need to be adjusted include pulling, improper vehicle handling, or unusual tire wear.
- Your dealer has the required equipment to ensure proper wheel alignment.

Windshield

For safety, appearance, and the best viewing, keep the windshield clean and clear.

- Signs of damage include scratches, cracks, and chips.
- Trained dealer technicians can inspect the windshield and recommend proper replacement if needed.

Wiper Blades

Wiper blades need to be cleaned and kept in good condition to provide a clear view.

- Signs of wear include streaking, skipping across the windshield, and worn or split rubber.
- Trained dealer technicians can check the wiper blades and replace them when needed.

Recommended Fluids, Lubricants, and Parts

Recommended Fluids and Lubricants

Usage	Fluid/Lubricant
Engine Oil	Use only engine oil licensed to the dexos1 specfication, or equivalent, of the proper SAE viscosity grade. ACDelco dexos1 Synthetic Blend is recommended. See *Engine Oil on page 10-8*.
Engine Coolant	50/50 mixture of clean, drinkable water and use only DEX-COOL Coolant. See *Engine Coolant on page 10-15*.
Hydraulic Brake System	DOT 3 Hydraulic Brake Fluid (GM Part No. 88863461, in Canada 88863462).
Hydraulic Power Steering System	DEXRON®-VI Automatic Transmission Fluid.
Automatic Transmission	DEXRON®-VI Automatic Transmission Fluid.
Chassis Lubrication	Chassis Lubricant (GM Part No. 12377985, in Canada 88901242) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.
Key Lock Cylinders	Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).
Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor, and Release Pawl	Lubriplate Lubricant Aerosol (GM Part No. 12346293, in Canada 992723) or lubricant meeting requirements of NLGI #2, Category LB or GC-LB.

Usage	Fluid/Lubricant
Hood and Door Hinges	Multi-Purpose Lubricant, Superlube (GM Part No. 12346241, in Canada 10953474).
Power Liftgate Actuator Ball Joint	Multi-Purpose Lubricant (GM Part No. 89021668, in Canada 89021674).
Weatherstrip Conditioning	Weatherstrip Lubricant (GM Part No. 3634770, in Canada 10953518) or Dielectric Silicone Grease (GM Part No. 12345579, in Canada 992887).

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your dealer.

Part	GM Part Number	ACDelco Part Number
Engine Air Cleaner/Filter	20897358	A3147C
Engine Oil Filter	89017525	PF63
Passenger Compartment Air Filter Element	13271191	CF176
Spark Plugs	12622561	41–109
Wiper Blades		
Driver Side – 65.0 cm (25.6 in)	25979378	—
Passenger Side – 42.5 cm (16.7 in)	25979379	—
Rear – 30.0 cm (11.8 in)	20825882	—

Maintenance Records

After the scheduled services are performed, record the date, odometer reading, who performed the service, and the type of services performed in the boxes provided. Retain all maintenance receipts.

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

Date	Odometer Reading	Serviced By	Maintenance Stamp	Services Performed

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Vehicle Identification

Vehicle Identification Number (VIN)

This legal identifier is in the front corner of the instrument panel, on the left side of the vehicle. It can be seen through the windshield from outside. The VIN also appears on the Vehicle Certification and Service Parts labels and certificates of title and registration.

Engine Identification

The eighth character in the VIN is the engine code. This code identifies the vehicle's engine, specifications, and replacement parts. See "Engine Specifications" under *Capacities and Specifications on page 12-2* for the vehicle's engine code.

Service Parts Identification Label

This label, on the inside of the rear side cargo management cover, has the following information:

- Vehicle Identification Number (VIN).
- Model designation.
- Paint information.
- Production options and special equipment.

Do not remove this label from the vehicle.

Vehicle Data

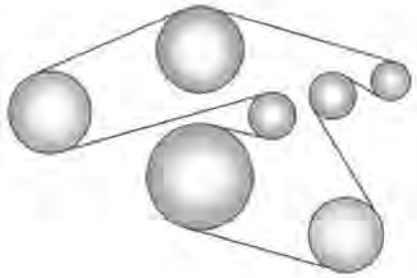
Capacities and Specifications

Application	Capacities	
	Metric	English
Air Conditioning Refrigerant R134a	For the air conditioning system refrigerant charge amount, see the refrigerant label located under the hood. See your dealer for more information.	
Engine Cooling System		
3.6L V6 Engine	12.8 L	13.5 qt
Engine Oil with Filter	5.7 L	6.0 qt
Fuel Tank	79.5 L	21.0 gal
Transmission Fluid	5.0 L	5.3 qt
Wheel Nut Torque	150 N•m	110 ft lb
*See *Automatic Transmission Fluid on page 10-12* for information on checking fluid level.		
All capacities are approximate. When adding, be sure to fill to the approximate level, as recommended in this manual. Recheck fluid level after filling.		

Engine Specifications

Engine	VIN Code	Transmission	Spark Plug Gap
3.6L V6 (LFX)	3	Automatic	1.10 mm (0.043 in)

Engine Drive Belt Routing



✍ NOTES

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Customer Information

Customer Satisfaction Procedure (U.S. and Canada)

Your satisfaction and goodwill are important to your dealer and to Cadillac. Normally, any concerns with the sales transaction or the operation of the vehicle will be resolved by your dealer's sales or service departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

STEP ONE: Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service or parts manager, contact the owner of your dealership or the general manager.

STEP TWO: If after contacting a member of dealership management, it appears your concern cannot be resolved by your dealership without further help, in the U.S., call the Cadillac Customer Assistance Center at 1-800-458-8006. In Canada, call the Canadian Cadillac Customer Care Centre at 1-888-446-2000.

We encourage you to call the toll-free number in order to give your inquiry prompt attention. Have the following information available to give the Customer Assistance representative:

- Vehicle Identification Number (VIN). This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.
- Dealership name and location.
- Vehicle delivery date and present mileage.

When contacting Cadillac, remember that your concern will likely be resolved at a dealer's facility. That is why we suggest following Step One first.

STEP THREE — U.S. Owners: Both General Motors and your dealer are committed to making sure you are completely satisfied with the new vehicle. However, if you continue to remain unsatisfied after following the procedure outlined in Steps One and Two, you can file with the Better Business Bureau (BBB) Auto Line® Program to enforce your rights.

The BBB Auto Line Program is an out-of-court program administered by the Council of Better Business Bureaus to settle automotive disputes regarding vehicle repairs or the interpretation of the New Vehicle Limited Warranty. Although you may be required to resort to this informal dispute resolution program prior to filing a court action, use of the program is free of charge and your case will generally be heard within 40 days. If you do not agree with the decision given in your case, you may reject it and proceed with any other venue for relief available to you.

You may contact the BBB Auto Line Program using the toll-free telephone number or write them at the following address:

BBB Auto Line Program
Council of Better Business Bureaus, Inc.
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203-1838

Telephone: 1-800-955-5100
www.dr.bbb.org/goauto

This program is available in all 50 states and the District of Columbia. Eligibility is limited by vehicle age, mileage, and other factors. General Motors reserves the right to change eligibility limitations and/or discontinue its participation in this program.

STEP THREE — Canadian Owners: In the event that you do not feel your concerns have been addressed after following the procedure outlined in Steps One and Two, General Motors of Canada Limited wants you to be aware of its participation in a no-charge mediation/arbitration program. General Motors of Canada Limited has committed to binding arbitration of owner disputes involving factory-related vehicle service claims. The program provides for the review of the facts involved by an impartial third party arbiter, and may include an informal hearing before the arbiter. The program is designed so that the entire dispute settlement process, from the time you file your complaint to the final decision, should be completed in approximately 70 days.

We believe our impartial program offers advantages over courts in most jurisdictions because it is informal, quick, and free of charge.

For further information concerning eligibility in the Canadian Motor Vehicle Arbitration Plan (CAMVAP), call toll-free 1-800-207-0685, or call the General Motors Customer Care Centre, 1-800-263-3777 (English), 1-800-263-7854 (French), or write to:

Mediation/Arbitration Program
c/o Customer Care Centre
General Motors of Canada Limited
Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

The inquiry should be accompanied by the Vehicle Identification Number (VIN).

Customer Satisfaction Procedure (Mexico)

Did you get the Warranty Extension Plan? This plan is recommended by General Motors to supplement the warranty included with the new vehicle purchase.

See your dealer for details.

Customer Assistance Procedure

Owner satisfaction and goodwill are very important to your dealer and General Motors.

Normally, any problem with the transaction, sale, or usage of the vehicle must be handled by your dealer sales or service departments. However, we recognize that despite the good intentions of all parties involved, sometimes a misunderstanding may occur.

If you have a problem that has not been satisfactorily handled through the normal means, we suggest the following steps:

STEP ONE

Explain your case to your dealer service agent, service manager, dealer sales agent, or sales manager, depending on your case.

Make sure that they have all necessary information. They are interested in your continual satisfaction.

STEP TWO

If you are not satisfied, please contact the general manager or your dealership owner to ask for their help. If they are not able to resolve your case, ask them to contact the right people at General Motors for support, if needed.

STEP THREE

If your case is not resolved in a reasonable amount of time by your dealer, please call the General Motors Customer Assistance Center (CAC) and provide the following information:

- Name
- Address
- Phone number
- Model year
- Brand
- Vehicle Identification Number (VIN)
- Mileage
- Delivery date
- Description of the problem
- Dealership name
- Dealership address

See *Customer Assistance Offices (U.S. and Canada) on page 13-5* or *Customer Assistance Offices (Mexico) on page 13-5*.

Customer Assistance Offices (U.S. and Canada)

Cadillac encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Cadillac, the letter should be addressed to:

United States

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169
www.Cadillac.com

1-800-458-8006
1-800-833-2622 (For Text Telephone devices (TTYs))
Roadside Service: 1-800-882-1112

From Puerto Rico:

1-800-496-9992 (English)
1-800-496-9993 (Spanish)

From U.S. Virgin Islands:

1-800-496-9994

Canada

General Motors of Canada Limited
Canadian Cadillac Customer Care Centre, Mail Code: CA1-163-005
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7
www.gm.ca

1-888-446-2000
1-800-263-3830 (For Text Telephone devices (TTYs))
Roadside Service: 1-800-882-1112

Overseas

Please contact the local General Motors Business Unit.

Mexico, Central America and Caribbean Islands/Countries (Except Puerto Rico and U.S. Virgin Islands)

General Motors de Mexico, S. de R.L. de C.V.
Customer Assistance Center
Av. Ejercito Nacional #843
Col. Granada
C.P. 11520, Mexico, D.F.

01-800-466-0805
Long Distance: 011-52-53 29 0805

Customer Assistance Offices (Mexico)

To contact the Customer Assistance Center (CAC), use the phone numbers listed in this section. Customer assistance is available Monday through Friday, 08:00 to 20:00 hours, and Saturdays from 08:00 to 15:00 hours.

All e-mail inquiries to the Customer Assistance Center (CAC) should be sent to: cac.cadillac@gm.com.

Mexico

From Mexico City

5329-0816

From Other Mexico Locations

01-800-466-0816

United States and Canada

1-866-466-8195

Costa Rica

00-800-052-1005

Guatemala

1-800-999-5252

Panama

00-800-052-0001

Dominican Republic

1-888-751-5301

El Salvador

800-6273

Honduras

800-0122-6101

Customer Assistance for Text Telephone (TTY) Users (U.S. and Canada)

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Cadillac has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Cadillac by dialing: 1-800-833-2622. TTY users in Canada can dial 1-800-263-3830.

Online Owner Center

Manage your vehicle (U.S.) at cadillac.com. Click on "Owners," then "Manage my Cadillac/Owners Login."

Information and services customized for your specific vehicle — all in one convenient place.

- Digital owner manual, warranty information, and more.
- Storage for online service and maintenance records.
- Cadillac dealer locator for service nationwide.
- Exclusive privileges and offers.
- Recall notices for your specific vehicle.
- OnStar and GM Cardmember Services Earnings summaries.

Other Helpful Links:

Cadillac — www.cadillac.com

Cadillac Merchandise — www.cadillaccollection.com

Help Center — www.cadillac.com/pages/mds/helpcenter/faq.do

- FAQ (Frequently Asked Questions)
- Contact Us

Cadillac Owner Centre (Canada) cadillacowner.ca

Take a trip to the Cadillac Owner Centre:

- Chat live with online help representatives.
- Use the Vehicle Tools section.
- Access third party enthusiast sites and social media networks.
- Locate owner resources such as lease-end, financing, and warranty information.
- Retrieve your favorite articles, quizzes, tips and multimedia galleries organized into the Features and Auto Care Sections.
- Download the owner manual for your vehicle, quickly and easily.
- Find the Cadillac-recommended maintenance services for your vehicle.

GM Mobility Reimbursement Program (U.S. and Canada)

GM MOBILITY

This program is available to qualified applicants for cost reimbursement of eligible aftermarket adaptive equipment required for the vehicle, such as hand controls or a wheelchair/scooter lift for the vehicle.

For more information on the limited offer, visit www.gmmobility.com or call the GM Mobility Assistance Center at 1-800-323-9935. Text Telephone (TTY) users, call 1-800-833-9935.

General Motors of Canada also has a Mobility Program. Call 1-800-GM-DRIVE (463-7483) for details. TTY users call 1-800-263-3830.

Roadside Service (U.S. and Canada)

U.S.: **1-800-224-1400**

Canada: **1-800-882-1112**.

Text Telephone (TTY) Users (U.S. Only): **1-888-889-2438**.

Service is available 24 hours a day, 365 days a year.

Calling for Service

When calling Roadside Service, have the following information ready:

- Your name, home address, and home telephone number.
- Telephone number of your location.
- Location of the vehicle.
- Model, year, color, and license plate number of the vehicle.
- Odometer reading, Vehicle Identification Number (VIN), and delivery date of the vehicle.
- Description of the problem.

Coverage

Services are provided up to 5 years/160 000 km (100,000 mi), whichever comes first.

In the U.S., anyone driving the vehicle is covered. In Canada, a person driving the vehicle without permission from the owner is not covered.

Roadside Service is not a part of the New Vehicle Limited Warranty. Cadillac and General Motors of Canada Limited reserve the right to make any changes or discontinue the Roadside Service program at any time without notification.

Cadillac and General Motors of Canada Limited reserve the right to limit services or payment to an owner or driver if they decide the claims are made too often, or the same type of claim is made many times.

Cadillac Owner Privileges™

- **Emergency Fuel Delivery:** Delivery of enough fuel for the vehicle to get to the nearest service station.
- **Lock-Out Service:** Service to unlock the vehicle if you are locked out. A remote unlock may be available if you have OnStar. For security reasons, the driver must present identification before this service is given.
- **Emergency Tow from a Public Road or Highway:** Tow to the nearest Cadillac dealer for warranty service, or if the vehicle was in a crash and cannot be driven. Assistance is also given when the vehicle is stuck in the sand, mud, or snow.
- **Flat Tire Change:** Service to change a flat tire with spare tire. The spare tire, if equipped, must be in good condition and properly inflated. It is your responsibility for the repair or replacement of the tire if it is not covered by the warranty.
- **Battery Jump Start:** Service to jump start a dead battery.
- **Trip Routing Service:** Detailed maps of North America are provided when requested either with the most direct route or the most scenic route. Additional travel information is also available. Allow three weeks for delivery.
- **Trip Interruption Benefits and Service:** If your trip is interrupted due to a warranty failure, incidental expenses may be reimbursed during the 5 years/160 000 km (100,000 mi) Powertrain warranty period. Items considered are hotel, meals, and rental car.

Cadillac Technician Roadside Service (U.S. Only)

Cadillac's exceptional Roadside Service is more than an auto club or towing service. It provides every Cadillac owner in the United States with the advantage of contacting a Cadillac advisor and, where available, a Cadillac trained dealer technician who can provide on-site service.

A dealer technician will travel to your location within a 30 mile radius of a participating Cadillac dealership. If beyond this radius, we will arrange to have your car towed to the nearest Cadillac dealership. Each technician travels with a specially equipped service vehicle complete with the necessary Cadillac parts and tools required to handle most roadside repairs.

Services Not Included in Roadside Service

- Impound towing caused by violation of any laws.
- Legal fines.
- Mounting, dismounting, or changing of snow tires, chains, or other traction devices.
- Towing or services for vehicles driven on a non-public road or highway.

Services Specific to Canadian-Purchased Vehicles

- **Fuel delivery:** Reimbursement is approximately $5 Canadian. Diesel fuel delivery may be restricted. Propane and other fuels are not provided through this service.
- **Lock-Out Service:** Vehicle registration is required.
- **Trip Routing Service:** Limit of six requests per year.
- **Trip Interruption Benefits and Service:** Pre-authorization, original detailed receipts, and a copy of the repair orders are required. Once authorization has been received, the Roadside Service advisor will help you make arrangements and explain how to receive payment.
- **Alternative Service:** If assistance cannot be provided right away, the Roadside Service advisor may give you permission to get local emergency road service. You will receive payment, up to $100, after sending the original receipt to Roadside Service. Mechanical failures may be covered, however any cost for parts and labor for repairs not covered by the warranty are the owner responsibility.

Roadside Service (Mexico)

As a new owner, your vehicle is automatically enrolled in the Roadside Assistance program. The services are available at no cost under the terms and conditions of the program. The Roadside Assistance program is not part of, or included, in the coverage provided by the new vehicle limited warranty.

Roadside Assistance provides assistance to the driver and passengers while driving the vehicle within your city of residence or on any passable road in Mexico, the United States, and Canada. Services are subject to the limitations described in the following pages. Program coverage varies by country.

Roadside Assistance is available 24 hours a day, 365 days of the year.

This program expires two years from the date of the invoice for the vehicle, regardless of vehicle mileage and changes in vehicle ownership.

For more information about the renewal of this program at the end of its term, contact the Cadillac Customer Assistance Center at 01-800-466-0805.

Services Provided

- **Flat Tire Change**: If unable to change a flat tire, Roadside Assistance will provide towing service to the nearest authorized Cadillac dealership. It is the owner's responsibility for the repair or replacement of the tire. This service is limited to the transfer of the vehicle to the repair facility.
- **Emergency Fuel Delivery**: Delivery of enough fuel for the vehicle to get to the nearest service station.
- **Lock-Out Service**: Service to unlock the vehicle if you are locked out.
- **Battery Jump Start**: Service to jump start a dead battery.
- ***Emergency Messages**: Transmission of urgent phone messages.
- ***Emergency Calls**: Call for emergency services.
- ***Dealership Location Assistance**: Information regarding addresses and telephone numbers for Cadillac dealers.
- **Emergency Towing**: Tow to the nearest dealer for warranty service if the vehicle cannot be driven.

  If the vehicle is involved in an accident during the commission of a crime, administrative violation, or breach of traffic regulations, Roadside Assistance will not provide service.

When the vehicle is not accessible to be towed, all maneuvers required to access it will be at the owner's expense.

If the vehicle is in another city outside of your residence, Roadside Assistance is limited to moving the vehicle to the nearest dealer. If you would like the vehicle moved to a different dealer, you will be asked to cover the difference in cost at the time of the move.

If the vehicle cannot be received by the nearest Cadillac dealer due to scheduling conflicts, the vehicle will be taken to a safe place where it will remain for up to 48 hours until it can be taken to the dealer. If the storage costs exceed the amount authorized, the owner is responsible to pay the difference at the time of service. Contact Roadside Assistance for more information on authorized amounts.

- ***Trip Interruption**: This service is provided if you are prevented from further usage of your vehicle while traveling and it is not possible for the nearest Cadillac dealership to repair the vehicle the same day, requiring the vehicle to stay at the dealership for a night or more. If this happens, in addition to the previously listed services and prior to confirmation by the dealership, you are entitled to choose one of the following alternatives, within the limits of existing Roadside Assistance program guidelines. If the costs exceed the amount authorized for these services, you must pay the difference at the time of service.

  Roadside Assistance will coordinate hotel accommodations for all vehicle travelers for up to two nights.

  A rental car will be provided for up to two days and the vehicle must be returned to its original destination, excluding vehicles with a carrying capacity greater than 3.5 tons.

  Complimentary Transportation: If you prefer to continue your trip to the intended destination or return to your place of residence, and the trip requires more than eight hours driving on the road, transportation for the driver and passengers by first class bus or coach commercial airline will be provided to a location chosen by Roadside Assistance, depending on availability at the chosen destination. Restrictions apply based on vehicle specifications.

  If you are on the road, taxi service to the nearest bus station or airport will be provided.

- ***Complimentary Transportation for Vehicle Pick Up**: Transportation to pick up your vehicle after repairs are complete. Once the dealer has reported that the vehicle has been repaired, Roadside Assistance will provide bus or commercial airline one-way service (subject to availability) for the person designated by you to collect your vehicle at the dealership's location if you or the designated person are not in the same town or city as the dealership.

*These services are not provided for U.S. or Canada residents. All services provided in the U.S. and Canada are at the owner's expense and will be reimbursed by Roadside Assistance.

Services Not Included in Roadside Assistance

Roadside Assistance does not cover or reimburse services for the following:

- Events caused by fraud or bad faith by the driver.
- Vehicle immobilization situations due to a major force or unforeseen circumstances, such as natural phenomena of an extraordinary nature, earthquakes, volcanic eruptions, and other cyclonic storms.
- Vehicle immobilization situations arising from car accidents caused by the driver of the vehicle or third parties. This means any occurrence that causes physical injury to the occupants and/or the vehicle caused by external forces.
- Acts of terrorism, riot or uproar, armed forces or police actions which prevent timely delivery of assistance services.
- Food service, beverages, telephone calls, or other extra costs. Accommodation costs apply only to Mexico per the terms and conditions of the Roadside Assistance program.
- Any damage to the vehicle without intent, derived from the services provided.
- Cost of towing a trailer when choosing a Cadillac dealer that is nearest to the temporary storage facility for the disabled vehicle.
- Cost of all maneuvers required to access the vehicle when it is not available to be towed.
- Cost of fuel provided.

Routine vehicle repair costs are not covered by the Roadside Assistance program. For more information, see your new vehicle warranty.

Contacting Roadside Assistance

Roadside Assistance services are of no cost to you and available 24 hours a day, 365 days a year. Costs are only incurred in situations that exceed the limits of the program, some of which are listed previously in this section.

To contact Roadside Assistance by phone, use the following numbers:

Mexico

01-800-466-0805

United States

1-866-466-8906

Canada

1-800-268-6800

E-mail

asistencia.cadillac@gm.com

Cadillac reserves the right to make any changes or discontinue the Roadside Assistance program at any time without notification.

Scheduling Service Appointments (U.S. and Canada)

When the vehicle requires warranty service, contact your dealer and request an appointment. By scheduling a service appointment and advising the service consultant of your transportation needs, your dealer can help minimize your inconvenience.

If the vehicle cannot be scheduled into the service department immediately, keep driving it until it can be scheduled for service, unless, of course, the problem is safety related. If it is, please call your dealership, let them know this, and ask for instructions.

If your dealer requests you to bring the vehicle for service, you are urged to do so as early in the work day as possible to allow for same-day repair.

Courtesy Transportation Program (U.S. and Canada)

To enhance your ownership experience, we and our participating dealers are proud to offer Courtesy Transportation, a customer support program for vehicles with the Bumper-to-Bumper (Base Warranty Coverage period in Canada), extended powertrain, and/or hybrid-specific warranties in both the U.S. and Canada.

Several Courtesy Transportation options are available to assist in reducing inconvenience when warranty repairs are required.

Courtesy Transportation is not a part of the New Vehicle Limited Warranty. A separate booklet entitled "Limited Warranty and Owner Assistance Information" furnished with each new vehicle provides detailed warranty coverage information.

Transportation Options

Warranty service can generally be completed while you wait. However, if you are unable to wait, GM helps to minimize inconvenience by providing several transportation options. Depending on the circumstances, your dealer can offer one of the following:

Shuttle Service

Shuttle service is the preferred means of offering Courtesy Transportation. Dealers may provide shuttle service to get you to your destination with minimal interruption of your daily schedule. This includes one-way or round-trip shuttle service within reasonable time and distance parameters of your dealer's area.

Public Transportation or Fuel Reimbursement

If the vehicle requires overnight warranty repairs, and public transportation is used instead of your dealer's shuttle service, the expense must be supported by original receipts and can only be up to the maximum amount allowed by GM for shuttle service. In addition, for U.S. customers, should you arrange transportation through a friend or relative, limited reimbursement for reasonable fuel expenses may be available. Claim amounts should reflect actual costs and be supported by original receipts. See your dealer for information regarding the allowance amounts for reimbursement of fuel or other transportation costs.

Courtesy Rental Vehicle

Your dealer may arrange to provide you with a courtesy rental vehicle or reimburse you for a rental vehicle that you obtain if the vehicle is kept for an overnight warranty repair. Rental reimbursement will be limited and must be supported by original receipts. This requires that you sign and complete a rental agreement and meet state/provincial, local, and rental vehicle provider requirements. Requirements vary and may include minimum age requirements, insurance coverage, credit card, etc. You are responsible for fuel usage charges and may also be responsible for taxes, levies, usage fees, excessive mileage, or rental usage beyond the completion of the repair.

It may not be possible to provide a like vehicle as a courtesy rental.

Additional Program Information

All program options, such as shuttle service, may not be available at every dealer. Please contact your dealer for specific information about availability. All Courtesy Transportation arrangements will be administered by appropriate dealer personnel.

General Motors reserves the right to unilaterally modify, change, or discontinue Courtesy Transportation at any time and to resolve all questions of claim eligibility pursuant to the terms and conditions described herein at its sole discretion.

Collision Damage Repair (U.S. and Canada)

If the vehicle is involved in a collision and it is damaged, have the damage repaired by a qualified technician using the proper equipment and quality replacement parts. Poorly performed collision repairs diminish the vehicle resale value, and safety performance can be compromised in subsequent collisions.

Collision Parts

Genuine GM Collision parts are new parts made with the same materials and construction methods as the parts with which the vehicle was originally built. Genuine GM Collision parts are the best choice to ensure that the vehicle's designed appearance, durability, and safety are preserved. The use of Genuine GM parts can help maintain the GM New Vehicle Limited Warranty.

Recycled original equipment parts may also be used for repair. These parts are typically removed from vehicles that were total losses in prior crashes. In most cases, the parts being recycled are from undamaged sections of the vehicle. A recycled original equipment GM part may be an acceptable choice to maintain the vehicle's originally designed appearance and safety performance; however, the history of these parts is not known. Such parts are not covered by the GM New Vehicle Limited Warranty, and any related failures are not covered by that warranty.

Aftermarket collision parts are also available. These are made by companies other than GM and may not have been tested for the vehicle. As a result, these parts may fit poorly, exhibit premature durability/corrosion problems, and may not perform properly in subsequent collisions. Aftermarket parts are not covered by the GM New Vehicle Limited Warranty, and any vehicle failure related to such parts is not covered by that warranty.

Repair Facility

GM also recommends that you choose a collision repair facility that meets your needs before you ever need collision repairs. Your dealer may have a collision repair center with GM-trained technicians and state-of-the-art equipment, or be able to recommend a collision repair center that has GM-trained technicians and comparable equipment.

Insuring the Vehicle

Protect your investment in the GM vehicle with comprehensive and collision insurance coverage. There are significant differences in the quality of coverage afforded by various insurance policy terms. Many insurance policies provide reduced protection to the GM vehicle by limiting compensation for damage repairs by using aftermarket collision parts. Some insurance companies will not specify aftermarket collision parts. When purchasing insurance, we recommend that you ensure that the vehicle will be repaired with GM original equipment collision parts. If such insurance coverage is not available from your current insurance carrier, consider switching to another insurance carrier.

If the vehicle is leased, the leasing company may require you to have insurance that ensures repairs with Genuine GM Original Equipment Manufacturer (OEM) parts or Genuine Manufacturer replacement parts. Read the lease carefully, as you may be charged at the end of the lease for poor quality repairs.

If a Crash Occurs

If there has been an injury, call emergency services for help. Do not leave the scene of a crash until all matters have been taken care of. Move the vehicle only if its position puts you in danger, or you are instructed to move it by a police officer.

Give only the necessary information to police and other parties involved in the crash.

For emergency towing see *Roadside Service (U.S. and Canada) on page 13-8* or *Roadside Service (Mexico) on page 13-10*.

Gather the following information:

- Driver name, address, and telephone number.
- Driver license number.
- Owner name, address, and telephone number.
- Vehicle license plate number.
- Vehicle make, model, and model year.
- Vehicle Identification Number (VIN).
- Insurance company and policy number.
- General description of the damage to the other vehicle.

Choose a reputable repair facility that uses quality replacement parts. See "Collision Parts" earlier in this section.

If the airbag has inflated, see *What Will You See after an Airbag Inflates? on page 3-28*.

Managing the Vehicle Damage Repair Process

In the event that the vehicle requires damage repairs, GM recommends that you take an active role in its repair. If you have a pre-determined repair facility of choice, take the vehicle there, or have it towed there. Specify to the facility that any required replacement collision parts be original equipment parts, either new Genuine GM parts or recycled original GM parts. Remember, recycled parts will not be covered by the GM vehicle warranty.

Insurance pays the bill for the repair, but you must live with the repair. Depending on your policy limits, your insurance company may initially value the repair using aftermarket parts. Discuss this with the repair professional, and insist on Genuine GM parts. Remember, if the vehicle is leased, you may be obligated to have the vehicle repaired with Genuine GM parts, even if your insurance coverage does not pay the full cost.

If another party's insurance company is paying for the repairs, you are not obligated to accept a repair valuation based on that insurance company's collision policy repair limits, as you have no contractual limits with that company. In such cases, you can have control of the repair and parts choices as long as the cost stays within reasonable limits.

Service Publications Ordering Information

Service Manuals

Service Manuals have the diagnosis and repair information on the engines, transmission, axle, suspension, brakes, electrical, steering, body, etc.

Service Bulletins

Service Bulletins give additional technical service information needed to knowledgeably service General Motors cars and trucks. Each bulletin contains instructions to assist in the diagnosis and service of the vehicle.

Owner Information

Owner publications are written specifically for owners and intended to provide basic operational information about the vehicle. The Owner Manual includes the Maintenance Schedule for all models.

In-Portfolio: Includes a Portfolio, Owner Manual, and Warranty Booklet.

RETAIL SELL PRICE: $35.00 (U.S.) plus handling and shipping fees.

Without Portfolio: Owner Manual only.

RETAIL SELL PRICE: $25.00 (U.S.) plus handling and shipping fees.

Current and Past Models

Technical Service Bulletins and Manuals are available for current and past model GM vehicles.

ORDER TOLL FREE:
1-800-551-4123 Monday – Friday
8:00 AM – 6:00 PM Eastern Time

For Credit Card Orders Only (VISA-MasterCard-Discover), visit Helm, Inc. at: www.helminc.com.

Or write to:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Prices are subject to change without notice and without incurring obligation. Allow ample time for delivery.

All listed prices are quoted in U.S. funds. Make checks payable in U.S. funds.

Reporting Safety Defects

Reporting Safety Defects to the United States Government

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign.

However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to *http://www.safercar.gov*; or write to:

Administrator, NHTSA
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from *http://www.safercar.gov*.

Reporting Safety Defects to the Canadian Government

If you live in Canada, and you believe that the vehicle has a safety defect, notify Transport Canada immediately, and notify General Motors of Canada Limited. Call Transport Canada at 1-800-333-0510 or write to:

Transport Canada
Road Safety Branch
80 rue Noel
Gatineau, QC J8Z 0A1

Reporting Safety Defects to General Motors

In addition to notifying NHTSA (or Transport Canada) in a situation like this, notify General Motors.

Call 1-800-458-8006, or write:

Cadillac Customer Assistance Center
Cadillac Motor Car Division
P.O. Box 33169
Detroit, MI 48232-5169

In Canada, call 1-888-446-2000, or write:

Canadian Cadillac Customer Care Centre, Mail Code: CA1-163-005
General Motors of Canada Limited
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Vehicle Data Recording and Privacy

This GM vehicle has a number of sophisticated computers that record information about the vehicle's performance and how it is driven. For example, the vehicle uses computer modules to monitor and control engine and transmission performance, to monitor the conditions for airbag deployment and deploy airbags in a crash, and, if so equipped, to provide antilock braking to help the driver control the vehicle. These modules may store data to help your dealer technician service the vehicle. Some modules may also store data about how you operate the vehicle, such as rate of fuel consumption or average speed. These modules may also retain the owner's personal preferences, such as radio presets, seat positions, and temperature settings.

Event Data Recorders

This vehicle has an Event Data Recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an airbag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in the vehicle were operating.
- Whether or not the driver and passenger safety belts were buckled/fastened.
- How far, if at all, the driver was pressing the accelerator and/or brake pedal.
- How fast the vehicle was traveling.

This data can help provide a better understanding of the circumstances in which crashes and injuries occur.

Important: EDR data is recorded by the vehicle only if a non-trivial crash situation occurs; no data is recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) is recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

GM will not access this data or share it with others except: with the consent of the vehicle owner or, if the vehicle is leased, with the consent of the lessee; in response to an official request by police or similar government office; as part of GM's defense of litigation through the discovery process; or, as required by law. Data that GM collects or receives may also be used for GM research needs or may be made available to others for research purposes, where a need is shown and the data is not tied to a specific vehicle or vehicle owner.

OnStar®

If the vehicle is equipped with an active OnStar system, that system may also record data in crash or near crash-like situations. The OnStar Terms and Conditions provides information on data collection and use and is available at www.onstar.com (U.S.) or www.onstar.ca (Canada), or by pressing the button and speaking to an advisor. See *OnStar Overview on page 14-1*.

Navigation System

If the vehicle has a navigation system, use of the system may result in the storage of destinations, addresses, telephone numbers, and other trip information. Refer to the navigation manual for information on stored data and for deletion instructions.

Radio Frequency Identification (RFID)

RFID technology is used in some vehicles for functions such as tire pressure monitoring and ignition system security, as well as in connection with conveniences such as key fobs for remote door locking/unlocking and starting, and in-vehicle transmitters for garage door openers. RFID technology in GM vehicles does not use or record personal information or link with any other GM system containing personal information.

Radio Frequency Statement

This vehicle has systems that operate on a radio frequency that comply with Part 15 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-GEN/210/220/310.

Operation is subject to the following two conditions:

1. The device may not cause harmful interference.
2. The device must accept any interference received, including interference that may cause undesired operation of the device.

Changes or modifications to any of these systems by other than an authorized service facility could void authorization to use this equipment.

✍ NOTES

OnStar

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OnStar Overview

If equipped, this vehicle has a comprehensive, in-vehicle system that can connect to a live Advisor for Emergency, Security, Navigation, Connection, and Diagnostic Services.

The OnStar system status light is next to the OnStar buttons. If the status light is:

- Solid Green: System is ready.
- Flashing Green: On a call.
- Red: Indicates a problem.

Push or call 1-888-4-ONSTAR (1-888-466-7827) to speak to an Advisor.

Push to:

- Make a call, end a call, or answer an incoming call.
- Give OnStar Hands-Free Calling voice commands.
- Give OnStar Turn-by-Turn Navigation voice commands. Requires the available Directions and Connections service plan.

Push to connect to a live Advisor to:

- Verify account information or update contact information.
- Get driving directions. Requires the available Directions and Connections service plan.
- Receive On-Demand Diagnostics for a check on the vehicle's key operating systems.
- Receive Roadside Assistance.

Push to get a priority connection to an Emergency Advisor available 24/7 to:

- Get help for an emergency.
- Be a Good Samaritan or respond to an AMBER Alert.
- Get crisis assistance and evacuation routes.

OnStar Services

Emergency

With Automatic Crash Response, the built-in system can automatically connect to help in a crash even if you cannot ask for it.

Push to connect to an Emergency Advisor. GPS technology is used to identify the vehicle location and can provide critical information to emergency personnel. The Advisor is also trained to offer critical assistance in emergency situations.

Security

OnStar provides services like Stolen Vehicle Assistance, Remote Ignition Block, and Roadside Assistance, if the vehicle is equipped with these services. OnStar can unlock the vehicle doors remotely, if it is equipped with automatic door locks, and can help police locate the vehicle if it is stolen.

Navigation

OnStar navigation requires the Directions and Connections service plan.

Push to receive directions or have them sent to the vehicle navigation screen. Destinations can also be forwarded to the vehicle from Google Maps™ or MapQuest.com. The OnStar mapping database is continuously updated. Visit www.onstar.com for coverage maps.

Turn-by-Turn Navigation

1. Push to connect to a live Advisor.
2. Request directions.
3. Directions are downloaded to the vehicle.
4. Follow the voice-guided commands.

Using Voice Commands During a Planned Route

Cancel Route

1. Push . System responds: "OnStar ready," then a tone. Say "Cancel route." System responds: "Would you like to cancel route directions to your destination?"
2. Say "Yes." System responds: "OK, route canceled."
3. Say "Goodbye." Exits voice commands.

Route Preview

1. Push . System responds: "OnStar ready," then a tone.
2. Say "Route Preview." System responds with the next three maneuvers.
3. Say "Goodbye." Exits voice commands.

Repeat

1. Push . System responds: "OnStar ready," then a tone.
2. Say "Repeat." System responds with the last direction given, then responds with "OnStar ready," then a tone.
3. Say "Goodbye." Exits voice commands.

Get My Destination

1. Push . System responds: "OnStar ready," then a tone.
2. Say "Get my destination." System responds with miles to the destination, then responds with "OnStar ready," then a tone.
3. Say "Goodbye." Exits voice commands.

Other Navigation Services Available from OnStar

OnStar eNav: Allows subscribers to send destinations from Google Maps and MapQuest.com to their Turn-by-Turn Navigation or screen-based navigation system. When ready, the directions will be downloaded to the vehicle.

Destination Download:
Push , then request the Advisor to download directions to the navigation system in the vehicle. After the call ends, push the "Go" button on the navigation screen to begin driving directions.

Destinations can also be downloaded on the go. For information about eNav, Destination Download, and coverage maps visit www.onstar.com.

Connections

OnStar Hands-Free Calling allows calls to be made and received from the vehicle. The vehicle can also be controlled from a cell phone through the OnStar mobile app. See www.onstar.com for coverage maps.

Hands-Free Calling

1. Push . System responds: "OnStar ready."
2. Say "Dial." System responds: "Please say the name or number to call."
3. Say the entire number without pausing, including a "1" and the area code. System responds: "OK calling."

Retrieve My Number

1. Push . System responds: "OnStar ready."
2. Say "My Number." System responds: "Your OnStar Hands-Free Calling number is."

End a Call

Push . System responds: "Call ended."

Store a Name Tag for Speed Dialing

1. Push . System responds: "OnStar ready."
2. Say "Store." System responds: "Please say the number you would like to store."
3. Say the entire number without pausing. System responds: "Please say the name tag."
4. Pick a name tag. "System responds: "About to store <name tag>. Does that sound OK?"
5. Say "Yes" or "No" to try again. System responds: "OK, storing <name tag>."

Place a Call Using a Stored Number

1. Push . System responds: "OnStar ready."
2. Say "Call <name tag>." System responds: "OK, calling <name tag>."

Verify Minutes and Expiration

Push and say "minutes" then "verify" to check how many minutes remain and their expiration date.

OnStar Mobile App

With an iPhone® or Android™-based mobile device, an OnStar mobile app can be downloaded. The vehicle can be remote started, if equipped, or the doors can be unlocked from anywhere there is cell phone service. It can also check the fuel level, tire pressure, and oil life. It can connect to an OnStar Advisor anytime. For OnStar mobile app compatibility or further information, see www.onstar.com.

Diagnostics

OnStar Vehicle Diagnostics will perform a vehicle check every month. It will check the engine, transmission, antilock brakes, and major vehicle systems. It also checks the tire pressures, if the vehicle is equipped with the Tire Pressure Monitoring System. If a diagnostics check is needed between e-mails, push , and an Advisor can run a check.

OnStar Additional Information

Transferring Service

Push to request account transfer eligibility information. The Advisor can assist in canceling or removing account information. If OnStar receives information that vehicle ownership has changed, OnStar may send a voice message to the vehicle, requesting updated account information.

Reactivation for Subsequent Owners

Push and follow the prompts to speak to an Advisor as soon as possible after acquiring the vehicle. The Advisor will update vehicle records and will explain the OnStar service offers and options available.

How OnStar Service Works

Automatic Crash Response, Emergency Services, Crisis Assist, Stolen Vehicle Assistance, Vehicle Diagnostics, Remote Door Unlock, Roadside Assistance, Turn-by-Turn Navigation, and Hands-Free Calling are available on most vehicles. Not all OnStar services are available everywhere or on all vehicles. For more information, a full description of OnStar services, system limitations, and OnStar terms and conditions, see www.onstar.com (U.S.) or www.onstar.ca (Canada); contact OnStar at 1-888-4-ONSTAR (1-888-466-7827) or TTY 1-877-248-2080; or push to speak with an Advisor.

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

OnStar service cannot work unless your vehicle is in a place where OnStar has an agreement with a wireless service provider for service in that area, and the wireless service provider has coverage, network capacity, reception, and technology compatible with OnStar's service. Service involving location information about the vehicle cannot work unless GPS signals are available, unobstructed, and compatible with the OnStar hardware. OnStar service may not work if the OnStar equipment is not properly installed or it has not been properly maintained. If equipment or software is added, connected, or modified, OnStar service may not work. Other problems beyond OnStar's control may prevent service such as hills, tall buildings, tunnels, weather, electrical system design and architecture of the vehicle, damage to the vehicle in a crash, or wireless phone network congestion or jamming.

See *Radio Frequency Statement on page 13-23* for information regarding Part 15 of the Federal Communications Commission (FCC) rules and Industry Canada Standards RSS-GEN/210/220/310.

Services for People with Disabilities

Advisors provide services to help subscribers with physical disabilities and medical conditions.

Push for help with:

- Locating a gas station with an attendant to pump gas.
- Finding a hotel, restaurant, etc., that meets accessibility needs.
- Providing directions to the closest hospital or pharmacy in urgent situations.

TTY Users

OnStar has the ability to communicate to the deaf, hard-of-hearing, or speech-impaired customers while in the vehicle. The available dealer-installed TTY system can provide in-vehicle access to all of the OnStar services, except Virtual Advisor and OnStar Turn-by-Turn Navigation.

Onstar.com

The website provides access to account information, manages the OnStar subscription, and allows viewing of videos of each service. Get subscription plan pricing and sign up for OnStar Vehicle Diagnostics. Click on the "My Account" tab on the home page.

OnStar Personal Identification Number (PIN)

A PIN is needed to access some of the OnStar services, like Remote Door Unlock and Stolen Vehicle Assistance. You will be prompted to change the PIN the first time when speaking with an Advisor. To change the OnStar PIN, call OnStar and provide the Advisor with the current number.

Warranty

OnStar equipment may be warranted as part of the new-vehicle limited warranty. The manufacturer of the vehicle furnishes detailed warranty information.

Languages

The vehicle can be programmed to respond in French or Spanish. Push and ask an Advisor. Advisors can speak French or Spanish.

Potential Issues

Some OnStar services are disabled after five days. OnStar cannot perform Remote Door Unlock or Stolen Vehicle Assistance after the vehicle has been off continuously for five days. After five days, OnStar can contact Roadside Assistance and a locksmith to help gain access to the vehicle.

Global Positioning System (GPS)

- Obstruction of the GPS can occur in a large city with tall buildings; in parking garages; around airports; in tunnels, underpasses, or parking garages; or in an area with very dense trees. If GPS signals are not available, the OnStar system should still operate to call OnStar. However, OnStar could have difficulty identifying the exact location.

- In emergency situations, OnStar can use the last stored GPS location to send to emergency responders.
- A temporary loss of GPS can cause loss of the ability to send a Turn-by-Turn Navigation route. The Advisor may give a verbal route or may ask for a call back after the vehicle is driven into an open area.

Cellular and GPS Antennas

Avoid placing items over or near the antenna to prevent blocking cellular and GPS signal reception. Cellular reception is required for OnStar to send remote signals to the vehicle.

Unable to Connect to OnStar Message

If there is limited cellular coverage or the cellular network has reached maximum capacity, this message may come on. Push to try the call again or try again after driving a few miles into another cellular area.

Vehicle and Power Issues

OnStar services require a vehicle electrical system, wireless service, and GPS satellite technologies to be available and operating for features to function properly. These systems may not operate if the battery is discharged or disconnected.

Add-on Electrical Equipment

The OnStar system is integrated into the electrical architecture of the vehicle. Do not add any electrical equipment. See *Add-On Electrical Equipment on page 9-61*. Added electrical equipment may interfere with the operation of the OnStar system and cause it to not operate.

Privacy

The complete OnStar Privacy Statement may be found at www.onstar.com. Privacy-sensitive users of wireless communications are cautioned that the privacy of any information sent via wireless cellular communications cannot be assured. Third parties may unlawfully intercept or access transmissions and private communications without consent.

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INFORMATION REDACTED PURSUANT TOTHE FREEDOM OF INFORMATION ACT (FOIA), 5 U.S.C.552(B)(6)

Recall Bulletin

PRODUCT SAFETY RECALL

SUBJECT: **Rear Toe Link Adjuster Lock Nut Torque**

MODELS: **2010-2015 Cadillac SRX**
2011-2012 Saab 9-4X

This bulletin has been revised to add a note in the Service Procedure section (see Step 4). Please discard all copies of bulletin 14457B.

Owners of Saab 9-4X vehicles delivered in the U.S. or Canada will receive a separate notification and be addressed by Saab Authorized Service Centers. This bulletin applies to Saab vehicles delivered outside of the U.S. and Canada that are subject to this recall.

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

All involved vehicles that are in dealer inventory must be held and not delivered to customers, dealer traded, or used for demonstration purposes until the repair contained in this bulletin has been performed on the vehicle.

CONDITION

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2010-2015 model year Cadillac SRX vehicles and 2011-2012 Saab 9-4X vehicles. On some of these vehicles, the jam nut in the rear suspension toe adjuster link may not be torqued to the proper specification. A loose toe adjuster link can cause the vehicle to sway or wander at highway speed, activate the vehicle's electronic stability control system, and cause excessive wear to the threads in the link. Additionally, the rear suspension may make loud metallic noises, particularly when the vehicle is travelling over bumps or potholes. If the threads in the link become worn, the link may separate. If separation occurs while the vehicle is being driven, it would create sudden vehicle instability, increasing the risk of a crash.

CORRECTION

On vehicles in dealer inventory, dealers must inspect the left and right rear toe link adjuster lock nuts for proper torque and tighten the nuts if necessary. On customer vehicles, dealers must inspect the left and right rear toe link and replace the parts if there is evidence of damage or a loose link. If the rear toe links pass the inspection, then the dealer should torque the adjuster jam nuts to specification.

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VEHICLES INVOLVED

All involved vehicles are identified by Vehicle Identification Number on the Investigate Vehicle History screen in GM Global Warranty Management system. Dealership service personnel should always check this site to confirm vehicle involvement prior to beginning any required inspections and/or repairs. It is important to routinely use this tool to verify eligibility because not all similar vehicles may be involved regardless of description or option content.

For dealers with involved vehicles, a listing with involved vehicles containing the complete vehicle identification number, customer name, and address information has been prepared and will be provided to US and Canadian dealers through the GM GlobalConnect Recall Reports, or sent directly to export dealers. Dealers will not have a report available if they have no involved vehicles currently assigned.

The listing may contain customer names and addresses obtained from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any purpose other than follow-up necessary to complete this recall is a violation of law in several states/provinces/countries. Accordingly, you are urged to limit the use of this report to the follow-up necessary to complete this recall.

PART INFORMATION

Parts Pre-Ship Information – For US and Canada

Important: An initial supply of Rear Suspension Adjustment Links required to complete this recall will be pre-shipped to involved dealers of record. This pre-shipment is scheduled to begin the weeks of October 6, 13 and 20, 2014. Pre-shipped parts will be charged to dealer's open parts account.

Beginning the week of October 27, 2014, additional parts, if required, are to be obtained from GMCC&A. Please refer to your "involved vehicles listing" before ordering parts. Normal orders should be placed on a DRO = Daily Replenishment Order. In an emergency situation, parts should be ordered on a CSO = Customer Special Order.

Important: It is estimated that only 20% of involved vehicles will require link replacement. Please order parts accordingly.

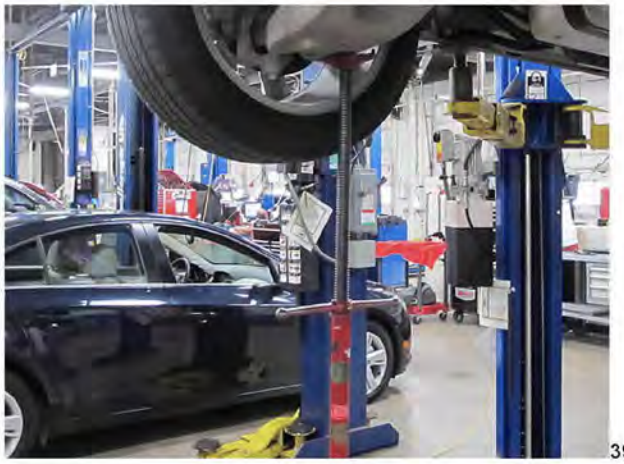
Part Number	Description	Quantity/Vehicle
20867273	LINK, REAR SUSPENSION ADJUSTMENT	1-2 (if required)

SERVICE PROCEDURE

Note: For new unsold vehicles, proceed directly to the tightening procedure (step 5). It is not necessary to inspect or replace the rear suspension adjustment link on new unsold vehicles. For all sold and delivered vehicles perform all 5 steps.

Use the following steps to inspect the left and right rear suspension adjustment links:

1. Lift the vehicle on a hoist. Refer to *Lifting and Jacking the Vehicle* in SI.


3980939

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Note: Load the suspension so the wheels are in the same position they would be if the vehicle was on the ground.

2. Place tall threaded jack stands under the left and right control arms at the shock absorber mount as shown. Using the threaded jack stands, raise the left and right control arms to the ride height level.
3. Inspect the left and right rear suspension links as follows:

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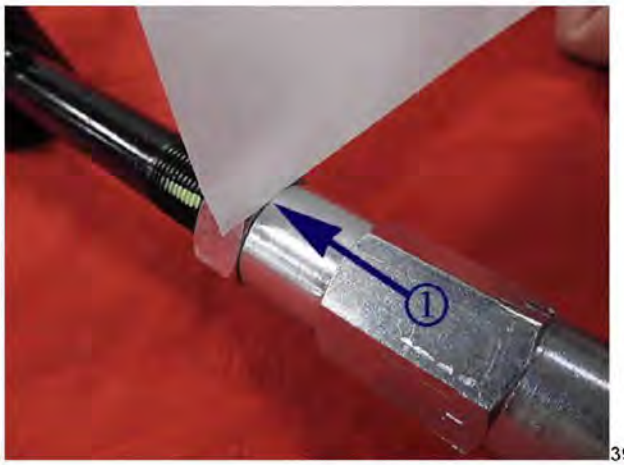
- Grasp the adjustment collar and push up and pull down firmly, note any movement in the link assembly components (the ends are rubber mounted and will have some movement)



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(1) Paper does NOT fit between jam nut and rear suspension adjustment link. (2) Paper fits between jam nut and rear suspension adjustment link.

- Inspect the toe link assembly for loosened jam nuts. Use a piece of paper to determine if there is a gap between the jam nut and the adjustment collar.

4. If the adjustment link fails any of the above tests, replace the adjustment link assembly. Refer to *Adjust Link Replacement* in SI.

Note: The following steps use a 26mm crows foot wrench attached to a torque wrench. The orientation of the crows foot to the torque wrench should be as close to inline as possible to obtain accurate readings.

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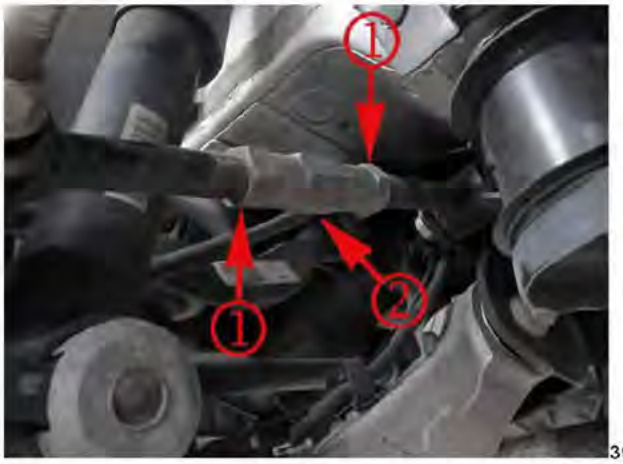

3979310

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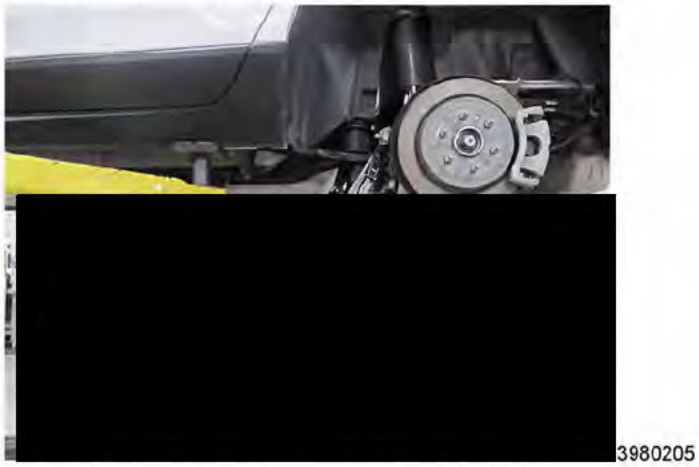
Note: Ensure the open end wrench is on the adjustment collar (2) while the jam nut (1) is checked with the torque wrench.

5. Use the following steps to verify the tightness of the adjustment link jam nuts (1) and adjustment collar (2).
   - Remove the two jack stands.


3980205

   - On the left hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the torque of the jam nuts using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be

checked by pushing torque wrench handle toward the rear of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

- On the right hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the jam nut torque using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be checked by pulling torque wrench handle toward the front of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

CUSTOMER REIMBURSEMENT - For US

Customer requests for reimbursement of previously paid repairs for the recall condition are to be submitted to the dealer by November 30, 2015, unless otherwise specified by state law. If this is not convenient for the customer, they may mail the completed Customer Reimbursement Request Form and all required documents to the GM Customer Assistance Center.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

When a customer requests reimbursement, they must provide the following:

- A completed Customer Reimbursement Request Form. This form is mailed to the customer or can be obtained through GM GlobalConnect.
- The name and address of the person who paid for the repair.
- Paid receipt confirming the amount of the repair expense, a description of the repair, and the person or entity performing the repair.

IMPORTANT: GM requires dealers to approve or deny a reimbursement request within 30 days of receipt. If a reimbursement request is approved, the dealer should immediately issue a check to the customer and submit an appropriate warranty transaction for the incurred expense. If a reimbursement request is denied, the dealer MUST provide the customer with a clear and concise explanation, in writing, as to why the request was denied. The bottom portion of the Customer Reimbursement Request Form may be used for this purpose. If the denial was due to missing documents, the customer can resubmit the request when the missing documents are obtained, as long as it is still within the allowed reimbursement period.

Warranty transactions for customer reimbursement of previously paid repairs are to be submitted as required by GM Global Warranty Management. Additional information can also be found in Warranty Administration Bulletin 11-00-89-004.

CUSTOMER REIMBURSEMENT - For Canada and Export

Customer requests for reimbursement of previously paid repairs to correct the condition described in this bulletin are to be submitted to the dealer prior to or by November 30, 2015.

When a customer requests reimbursement, they must provide the following:

- Proof of ownership at time of repair.
- Original paid receipt confirming the amount of unreimbursed repair expense(s) (including Service Contract deductibles), a description of the repair, and the person or entity performing the repair.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

COURTESY TRANSPORTATION – For US and Canada

The General Motors Courtesy Transportation program is intended to minimize customer inconvenience when a vehicle requires a repair that is covered by the New Vehicle Limited Warranties. The availability of courtesy transportation to customers whose vehicles are within the warranty coverage period and involved in a product program is very important in maintaining customer satisfaction. Dealers are to ensure that these customers understand that shuttle service or some other form of courtesy transportation is available and will be provided at no charge. Dealers should refer to the General Motors Service Policies and Procedures Manual for Courtesy Transportation guidelines.

WARRANTY TRANSACTION INFORMATION

Submit a transaction using the table below. All transactions should be submitted as a ZFAT transaction type, unless noted otherwise.

Note: *To avoid having to "H" route the customer reimbursement transaction for approval, it must be submitted prior to the repair transaction.*

Labor Code	Description	Labor Time	Net Item
9100933	Inspect & Tighten Right & Left Rear Suspension Adjustment Links	0.3	N/A
9100934	Inspect & Install One Toe Rear Suspension Adjustment Link (incl. resetting rear toe) – Not for Use on Inventory Vehicles	1.5	N/A
9100935	Inspect & Install Both Toe Rear Suspension Adjustment Link (inc. resetting rear toe) – Not for Use on Inventory Vehicles	1.9	N/A
9100936	Customer Reimbursement Approved	0.2	*
9100937	Customer Reimbursement Denied - For US dealers only	0.1	N/A

Note: Customer reimbursement will not close this recall. The service procedure must also be performed on the vehicle.

* The amount identified in "Net Item" should represent the dollar amount reimbursed to the customer.

CUSTOMER NOTIFICATION – For US and Canada

General Motors will notify customers of this recall on their vehicle.

CUSTOMER NOTIFICATION – For Export

Letters will be sent to known owners of record located within areas covered by the US National Traffic and Motor Vehicle Safety Act.

DEALER RECALL RESPONSIBILITY – For US and Export (US States, Territories, and Possessions)

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

The US National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the US

National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

DEALER RECALL RESPONSIBILITY – All

All unsold new vehicles in dealers' possession and subject to this recall must be held and inspected/repaired per the service procedure of this recall bulletin before customers take possession of these vehicles.

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

Customers who have recently purchased vehicles sold from your vehicle inventory, and for which there is no customer information indicated on the dealer listing, are to be contacted by the dealer. Arrangements are to be made to make the required correction according to the instructions contained in this bulletin. Recall follow-up cards should not be used for this purpose, since the customer may not as yet have received the notification letter.

In summary, whenever a vehicle subject to this recall enters your vehicle inventory, or is in your dealership for service in the future, you must take the steps necessary to be sure the recall correction has been made before selling or releasing the vehicle.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the tools, equipment, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your dealer for information on whether your vehicle may benefit from the information.

We Support Voluntary Technician Certification

IMPORTANT SAFETY RECALL

October 2014

Dear General Motors Customer:

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act.

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2010-2015 model year Cadillac SRX vehicles and 2011-2012 Saab 9-4X vehicles. As a result, GM is conducting a safety recall. We apologize for this inconvenience. However, we are concerned about your safety and continued satisfaction with our products.

IMPORTANT

- This notice applies to your 2010-2015 model year Cadillac SRX vehicles or 2011-2012 Saab 9-4X vehicle, **VIN** _____.
- Your vehicle is involved in GM recall 14457.
- Schedule an appointment with your dealer on or after November 10, 2014.
- This service will be performed for you at **no charge**.

Why is your vehicle being recalled?

The jam nut in the rear suspension toe adjuster link may not be torqued to the proper specification. A loose toe adjuster link can cause the vehicle to sway or wander at highway speed, activate the vehicle's electronic stability control system, and cause excessive wear to the threads in the link. Additionally, the rear suspension may make loud metallic noises, particularly when the vehicle is travelling over bumps or potholes. If the threads in the link become worn, the link may separate. If separation occurs while the vehicle is being driven, it would create sudden vehicle instability, increasing the risk of a crash.

What will we do?

PARTS ARE NOT CURRENTLY AVAILABLE, but when parts are available, your dealer will inspect the left and right rear toe link and replace the parts if there is evidence of damage or a loose link. If the rear toe links pass the inspection, then your dealer will torque the adjuster jam nuts to specification. This service will be performed for you at **no charge**. Because of service scheduling requirements, it is likely that your dealer will need your vehicle longer than the actual inspection time of approximately 20 minutes. If part replacement is required an additional 1 hour and 20 minutes to 1 hour and 40 minutes may be needed.

We are working as quickly as possible to correct this condition and expect to have sufficient parts to begin repairs by November 10, 2014.

What should you do?

You should contact your dealer to arrange a service appointment on or after November 10, 2014.

If you experience any sway or wandering while the vehicle is at speed, or hear any loud metallic or other unusual noises from the rear suspension, you should have the vehicle towed to a GM dealership for inspection and repair, and should not drive the vehicle until the recall repairs have been performed.

Did you already pay for this repair?

Even though you may have already had repairs for this condition, you will still need to take your vehicle to your dealer for additional repairs. If you have paid for repairs for the condition described in this letter, please complete the enclosed reimbursement form and present it to your dealer with all required documents. Working with your dealer will expedite your request, however, if this is not convenient, you may mail the completed reimbursement form and all required documents to Reimbursement Department, PO Box 33170, Detroit, MI 48232-5170. The completed form and required documents must be presented to your dealer or received by the Reimbursement Department by November 30, 2015, unless state law specifies a longer reimbursement period.

Do you have questions?

If you have questions or concerns that your dealer is unable to resolve, please contact the appropriate Customer Assistance Center at the number listed below.

Division	Number	Text Telephones (TTY)
Cadillac	1-800-458-8006	1-800-833-2622
Saab	1-855-880-0808	
Guam	65-6267-1752	
Puerto Rico – English	1-800-496-9992	
Puerto Rico – Español	1-800-496-9993	
Virgin Islands	1-800-496-9994	
GM Medium Duty Truck	1-800-862-4389	

If after contacting your dealer and the Customer Assistance Center, you are still not satisfied we have done our best to remedy this condition without charge and within a reasonable time, you may wish to write the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590, or call the toll-free Vehicle Safety Hotline at 1.888.327.4236 (TTY 1.800.424.9153), or go to http://www.safercar.gov. The National Highway Traffic Safety Administration Campaign ID Number for this recall is 14V571.

Federal regulation requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Jeffrey M. Boyer
Vice President
Global Vehicle Safety

Enclosure
GM Recall #14457

Bulletin No.: 14457
Date: September 2014

Recall Bulletin

PRODUCT SAFETY RECALL

SUBJECT: **Rear Toe Link Adjuster Lock Nut Torque**

MODELS: **2010-2015 Cadillac SRX**
2011-2012 Saab 9-4X

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

All involved vehicles that are in dealer inventory must be held and not delivered to customers, dealer traded, or used for demonstration purposes until the repair contained in this bulletin has been performed on the vehicle.

CONDITION

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2010-2015 model year Cadillac SRX vehicles and 2011-2012 Saab 9-4X vehicles. On some of these vehicles, the jam nut in the rear suspension toe adjuster link may not be torqued to the proper specification. A loose toe adjuster link can cause the vehicle to sway or wander at highway speed, activate the vehicle's electronic stability control system, and cause excessive wear to the threads in the link. Additionally, the rear suspension may make loud metallic noises, particularly when the vehicle is travelling over bumps or potholes. If the threads in the link become worn, the link may separate. If separation occurs while the vehicle is being driven, it would create sudden vehicle instability, increasing the risk of a crash.

CORRECTION

On vehicles in dealer inventory, dealers must inspect the left and right rear toe link adjuster lock nuts for proper torque and tighten the nuts if necessary. On customer vehicles, dealers must inspect the left and right rear toe link and replace the parts if there is evidence of damage or a loose link. If the rear toe links pass the inspection, then the dealer should torque the adjuster jam nuts to specification.

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VEHICLES INVOLVED

All involved vehicles are identified by Vehicle Identification Number on the Investigate Vehicle History screen in GM Global Warranty Management system. Dealership service personnel should always check this site to confirm vehicle involvement prior to beginning any required inspections and/or repairs. It is important to routinely use this tool to verify eligibility because not all similar vehicles may be involved regardless of description or option content.

For dealers with involved vehicles, a listing with involved vehicles containing the complete vehicle identification number, customer name, and address information has been prepared and will be provided to US and Canadian dealers through the GM GlobalConnect Recall Reports, or sent directly to export dealers. Dealers will not have a report available if they have no involved vehicles currently assigned.

The listing may contain customer names and addresses obtained from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any purpose other than follow-up necessary to complete this recall is a violation of law in several states/provinces/countries. Accordingly, you are urged to limit the use of this report to the follow-up necessary to complete this recall.

PART INFORMATION

Parts required to complete this recall are to be obtained from General Motors Customer Care and Aftersales (GMCC&A). Please refer to your "involved vehicles listing" before ordering parts. Normal orders should be placed on a DRO = Daily Replenishment Order. In an emergency situation, parts should be ordered on a CSO = Customer Special Order.

Important: It is estimated that only 20% of involved vehicles will require link replacement. Please order parts accordingly.

Part Number	Description	Quantity/Vehicle
20867273	LINK, REAR SUSPENSION ADJUSTMENT	1-2 (if Req'd)

SERVICE PROCEDURE

Note: For new unsold vehicles, proceed directly to the tightening procedure (step # 6). It is not necessary to inspect or replace the rear suspension adjustment link on new unsold vehicles. For all sold and delivered vehicles perform all 6 steps.

Use the following steps to inspect the left and right rear suspension adjustment links:

1. Lift the vehicle on a hoist. Refer to *Lifting and Jacking the Vehicle* in SI.

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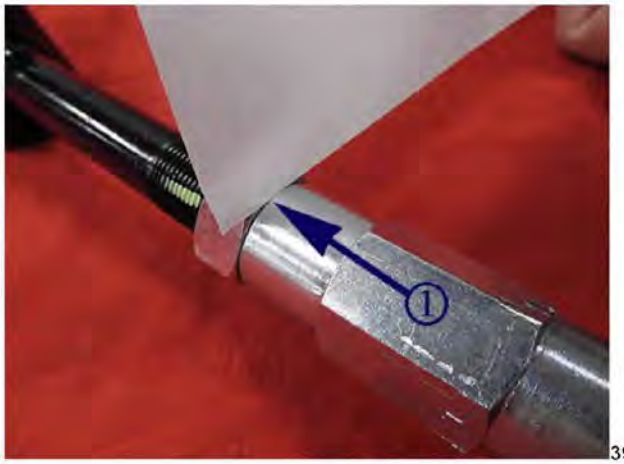
Note: Load the suspension so the wheels are in the same position they would be if the vehicle was on the ground.

2. Place tall threaded jack stands under the left and right control arms at the shock absorber mount as shown. Using the treaded jack stands, raise the left and right control arms to the ride height level.
3. Inspect the left and right rear suspension links as follows:

3979306

- Grasp the adjustment collar and push up and pull down firmly, note any movement in the link assembly components (the ends are rubber mounted and will have some movement)



3980941

3980942

(1) Paper does NOT fit between jam nut and rear suspension adjustment link. (2) Paper fits between jam nut and rear suspension adjustment link.

- Inspect the toe link assembly for loosened jam nuts. Use a piece of paper to determine if there is a gap between the jam nut and the adjustment collar.

5. If the adjustment link fails any of the above tests, replace the adjustment link assembly. Refer to *Adjust Link Replacement* in SI.

Note: The following steps use a 26mm crows foot wrench attached to a torque wrench. The oreintation of the crows foot to the torque wrench should be as close to inline as possible to obtain accurate readings.

3979310

6. Use the following steps to verify the tightness of the adjustment link jam nuts (1) and adjustment collar (2).
   - Remove the two jack stands.

3980205

   - On the left hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the torque of the jam nuts using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be checked by pushing torque wrench handle toward the rear of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

- On the right hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the jam nut torque using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be checked by pulling torque wrench handle toward the front of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

CUSTOMER REIMBURSEMENT - For US

Customer requests for reimbursement of previously paid repairs for the recall condition are to be submitted to the dealer by October 31, 2015, unless otherwise specified by state law. If this is not convenient for the customer, they may mail the completed Customer Reimbursement Request Form and all required documents to the GM Customer Assistance Center.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

When a customer requests reimbursement, they must provide the following:

- A completed Customer Reimbursement Request Form. This form is mailed to the customer or can be obtained through GM GlobalConnect.
- The name and address of the person who paid for the repair.
- Paid receipt confirming the amount of the repair expense, a description of the repair, and the person or entity performing the repair.

IMPORTANT: GM requires dealers to approve or deny a reimbursement request within 30 days of receipt. If a reimbursement request is approved, the dealer should immediately issue a check to the customer and submit an appropriate warranty transaction for the incurred expense. If a reimbursement request is denied, the dealer MUST provide the customer with a clear and concise explanation, in writing, as to why the request was denied. The bottom portion of the Customer Reimbursement Request Form may be used for this purpose. If the denial was due to missing documents, the customer can resubmit the request when the missing documents are obtained, as long as it is still within the allowed reimbursement period.

Warranty transactions for customer reimbursement of previously paid repairs are to be submitted as required by GM Global Warranty Management. Additional information can also be found in Warranty Administration Bulletin 11-00-89-004.

CUSTOMER REIMBURSEMENT - For Canada and Export

Customer requests for reimbursement of previously paid repairs to correct the condition described in this bulletin are to be submitted to the dealer prior to or by October 31, 2015.

When a customer requests reimbursement, they must provide the following:

- Proof of ownership at time of repair.
- Original paid receipt confirming the amount of unreimbursed repair expense(s) (including Service Contract deductibles), a description of the repair, and the person or entity performing the repair.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

COURTESY TRANSPORTATION – For US and Canada

The General Motors Courtesy Transportation program is intended to minimize customer inconvenience when a vehicle requires a repair that is covered by the New Vehicle Limited Warranties. The availability of courtesy transportation to customers whose vehicles are within the warranty coverage period and involved in a product program is very important in maintaining customer satisfaction. Dealers are to ensure that these customers understand that shuttle service or some other form of courtesy transportation is available and will be provided at no charge. Dealers should refer to the General Motors Service Policies and Procedures Manual for Courtesy Transportation guidelines.

WARRANTY TRANSACTION INFORMATION

Submit a transaction using the table below. All transactions should be submitted as a ZFAT transaction type, unless noted otherwise.

Note: *To avoid having to "H" route the customer reimbursement transaction for approval, it must be submitted prior to the repair transaction.*

Labor Code	Description	Labor Time	Net Item
9100933	Inspect & Tighten Right & Left Rear Suspension Adjustment Links	0.3	N/A
9100934	Inspect & Install One Toe Rear Suspension Adjustment Link (inc. resetting rear toe) – Not for Use on Inventory Vehicles	1.5	N/A
9100935	Inspect & Install Both Toe Rear Suspension Adjustment Link (inc. resetting rear toe) – Not for Use on Inventory Vehicles	1.9	N/A
9100936	Customer Reimbursement Approved	0.2	*
9100937	Customer Reimbursement Denied - For US dealers only	0.1	N/A

Note: Customer reimbursement will not close this recall. The service procedure must also be performed on the vehicle.

* The amount identified in "Net Item" should represent the dollar amount reimbursed to the customer.

CUSTOMER NOTIFICATION – For US and Canada

General Motors will notify customers of this recall on their vehicle.

CUSTOMER NOTIFICATION – For Export

Letters will be sent to known owners of record located within areas covered by the US National Traffic and Motor Vehicle Safety Act.

DEALER RECALL RESPONSIBILITY – For US and Export (US States, Territories, and Possessions)

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

The US National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the US National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

DEALER RECALL RESPONSIBILITY – All

All unsold new vehicles in dealers' possession and subject to this recall must be held and inspected/repaired per the service procedure of this recall bulletin before customers take possession of these vehicles.

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

Customers who have recently purchased vehicles sold from your vehicle inventory, and for which there is no customer information indicated on the dealer listing, are to be contacted by the dealer. Arrangements are to be made to make the required correction according to the instructions contained in this bulletin. Recall follow-up cards should not be used for this purpose, since the customer may not as yet have received the notification letter.

In summary, whenever a vehicle subject to this recall enters your vehicle inventory, or is in your dealership for service in the future, you must take the steps necessary to be sure the recall correction has been made before selling or releasing the vehicle.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the tools, equipment, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your dealer for information on whether your vehicle may benefit from the information.

We Support Voluntary Technician Certification

Bulletin No.: 14457A
Date: October 2014

Recall Bulletin

PRODUCT SAFETY RECALL

SUBJECT: **Rear Toe Link Adjuster Lock Nut Torque**

MODELS: **2010-2015 Cadillac SRX**
2011-2012 Saab 9-4X

The Part Information section in this bulletin has been revised. Parts will be pre-shipped to dealers. This bulletin has also been revised to include a copy of the customer letter. Please discard all copies of bulletin 14457.

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

All involved vehicles that are in dealer inventory must be held and not delivered to customers, dealer traded, or used for demonstration purposes until the repair contained in this bulletin has been performed on the vehicle.

CONDITION

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2010-2015 model year Cadillac SRX vehicles and 2011-2012 Saab 9-4X vehicles. On some of these vehicles, the jam nut in the rear suspension toe adjuster link may not be torqued to the proper specification. A loose toe adjuster link can cause the vehicle to sway or wander at highway speed, activate the vehicle's electronic stability control system, and cause excessive wear to the threads in the link. Additionally, the rear suspension may make loud metallic noises, particularly when the vehicle is travelling over bumps or potholes. If the threads in the link become worn, the link may separate. If separation occurs while the vehicle is being driven, it would create sudden vehicle instability, increasing the risk of a crash.

CORRECTION

On vehicles in dealer inventory, dealers must inspect the left and right rear toe link adjuster lock nuts for proper torque and tighten the nuts if necessary. On customer vehicles, dealers must inspect the left and right rear toe link and replace the parts if there is evidence of damage or a loose link. If the rear toe links pass the inspection, then the dealer should torque the adjuster jam nuts to specification.

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VEHICLES INVOLVED

All involved vehicles are identified by Vehicle Identification Number on the Investigate Vehicle History screen in GM Global Warranty Management system. Dealership service personnel should always check this site to confirm vehicle involvement prior to beginning any required inspections and/or repairs. It is important to routinely use this tool to verify eligibility because not all similar vehicles may be involved regardless of description or option content.

For dealers with involved vehicles, a listing with involved vehicles containing the complete vehicle identification number, customer name, and address information has been prepared and will be provided to US and Canadian dealers through the GM GlobalConnect Recall Reports, or sent directly to export dealers. Dealers will not have a report available if they have no involved vehicles currently assigned.

The listing may contain customer names and addresses obtained from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any purpose other than follow-up necessary to complete this recall is a violation of law in several states/provinces/countries. Accordingly, you are urged to limit the use of this report to the follow-up necessary to complete this recall.

PART INFORMATION

Parts Pre-Ship Information – For US and Canada

Important: An initial supply of Rear Suspension Adjustment Links required to complete this recall will be pre-shipped to involved dealers of record. This pre-shipment is scheduled to begin the weeks of October 6, 13 and 20, 2014. Pre-shipped parts will be charged to dealer's open parts account.

Beginning the week of October 27, 2014, additional parts, if required, are to be obtained from GMCC&A. Please refer to your "involved vehicles listing" before ordering parts. Normal orders should be placed on a DRO = Daily Replenishment Order. In an emergency situation, parts should be ordered on a CSO = Customer Special Order.

Important: It is estimated that only 20% of involved vehicles will require link replacement. Please order parts accordingly.

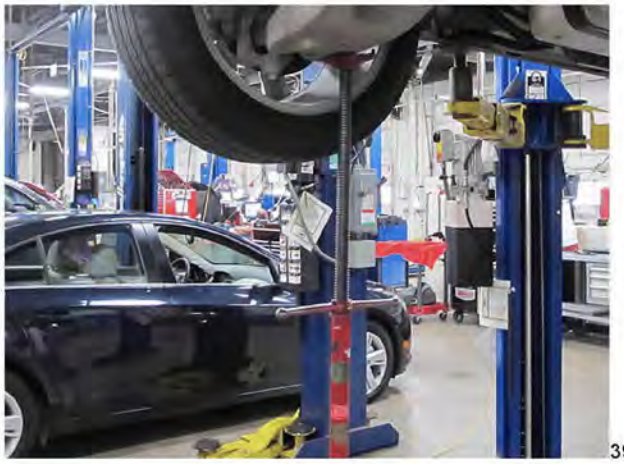
Part Number	Description	Quantity/Vehicle
20867273	LINK, REAR SUSPENSION ADJUSTMENT	1-2 (if Req'd)

SERVICE PROCEDURE

Note: For new unsold vehicles, proceed directly to the tightening procedure (step # 6). It is not necessary to inspect or replace the rear suspension adjustment link on new unsold vehicles. For all sold and delivered vehicles perform all 6 steps.

Use the following steps to inspect the left and right rear suspension adjustment links:

1. Lift the vehicle on a hoist. Refer to *Lifting and Jacking the Vehicle* in SI.


3980939

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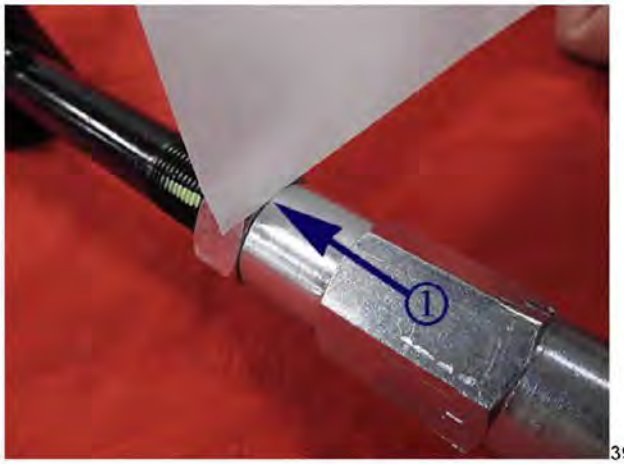
Note: Load the suspension so the wheels are in the same position they would be if the vehicle was on the ground.

2. Place tall threaded jack stands under the left and right control arms at the shock absorber mount as shown. Using the treaded jack stands, raise the left and right control arms to the ride height level.
3. Inspect the left and right rear suspension links as follows:

3979306

- Grasp the adjustment collar and push up and pull down firmly, note any movement in the link assembly components (the ends are rubber mounted and will have some movement)



3980941

3980942

(1) Paper does NOT fit between jam nut and rear suspension adjustment link. (2) Paper fits between jam nut and rear suspension adjustment link.

- Inspect the toe link assembly for loosened jam nuts. Use a piece of paper to determine if there is a gap between the jam nut and the adjustment collar.

5. If the adjustment link fails any of the above tests, replace the adjustment link assembly. Refer to *Adjust Link Replacement* in SI.

Note: The following steps use a 26mm crows foot wrench attached to a torque wrench. The oreintation of the crows foot to the torque wrench should be as close to inline as possible to obtain accurate readings.

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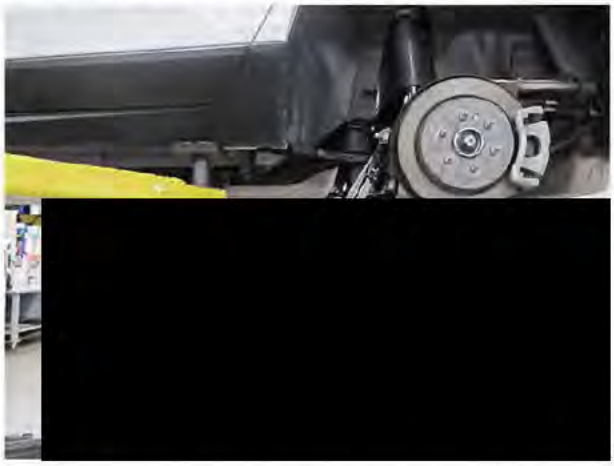
3979310

6. Use the following steps to verify the tightness of the adjustment link jam nuts (1) and adjustment collar (2).
   - Remove the two jack stands.


3980205

   - On the left hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the torque of the jam nuts using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be checked by pushing torque wrench handle toward the rear of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

980206

- On the right hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the jam nut torque using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be checked by pulling torque wrench handle toward the front of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

CUSTOMER REIMBURSEMENT - For US

Customer requests for reimbursement of previously paid repairs for the recall condition are to be submitted to the dealer by November 30, 2015, unless otherwise specified by state law. If this is not convenient for the customer, they may mail the completed Customer Reimbursement Request Form and all required documents to the GM Customer Assistance Center.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

When a customer requests reimbursement, they must provide the following:

- A completed Customer Reimbursement Request Form. This form is mailed to the customer or can be obtained through GM GlobalConnect.
- The name and address of the person who paid for the repair.
- Paid receipt confirming the amount of the repair expense, a description of the repair, and the person or entity performing the repair.

IMPORTANT: GM requires dealers to approve or deny a reimbursement request within 30 days of receipt. If a reimbursement request is approved, the dealer should immediately issue a check to the customer and submit an appropriate warranty transaction for the incurred expense. If a reimbursement request is denied, the dealer MUST provide the customer with a clear and concise explanation, in writing, as to why the request was denied. The bottom portion of the Customer Reimbursement Request Form may be used for this purpose. If the denial was due to missing documents, the customer can resubmit the request when the missing documents are obtained, as long as it is still within the allowed reimbursement period.

Warranty transactions for customer reimbursement of previously paid repairs are to be submitted as required by GM Global Warranty Management. Additional information can also be found in Warranty Administration Bulletin 11-00-89-004.

CUSTOMER REIMBURSEMENT - For Canada and Export

Customer requests for reimbursement of previously paid repairs to correct the condition described in this bulletin are to be submitted to the dealer prior to or by November 30, 2015.

When a customer requests reimbursement, they must provide the following:

- Proof of ownership at time of repair.
- Original paid receipt confirming the amount of unreimbursed repair expense(s) (including Service Contract deductibles), a description of the repair, and the person or entity performing the repair.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

COURTESY TRANSPORTATION – For US and Canada

The General Motors Courtesy Transportation program is intended to minimize customer inconvenience when a vehicle requires a repair that is covered by the New Vehicle Limited Warranties. The availability of courtesy transportation to customers whose vehicles are within the warranty coverage period and involved in a product program is very important in maintaining customer satisfaction. Dealers are to ensure that these customers understand that shuttle service or some other form of courtesy transportation is available and will be provided at no charge. Dealers should refer to the General Motors Service Policies and Procedures Manual for Courtesy Transportation guidelines.

WARRANTY TRANSACTION INFORMATION

Submit a transaction using the table below. All transactions should be submitted as a ZFAT transaction type, unless noted otherwise.

Note: *To avoid having to "H" route the customer reimbursement transaction for approval, it must be submitted prior to the repair transaction.*

Labor Code	Description	Labor Time	Net Item
9100933	Inspect & Tighten Right & Left Rear Suspension Adjustment Links	0.3	N/A
9100934	Inspect & Install One Toe Rear Suspension Adjustment Link (incl. resetting rear toe) – Not for Use on Inventory Vehicles	1.5	N/A
9100935	Inspect & Install Both Toe Rear Suspension Adjustment Link (inc. resetting rear toe) – Not for Use on Inventory Vehicles	1.9	N/A
9100936	Customer Reimbursement Approved	0.2	*
9100937	Customer Reimbursement Denied - For US dealers only	0.1	N/A

Note: Customer reimbursement will not close this recall. The service procedure must also be performed on the vehicle.

* The amount identified in "Net Item" should represent the dollar amount reimbursed to the customer.

CUSTOMER NOTIFICATION – For US and Canada

General Motors will notify customers of this recall on their vehicle.

CUSTOMER NOTIFICATION – For Export

Letters will be sent to known owners of record located within areas covered by the US National Traffic and Motor Vehicle Safety Act.

DEALER RECALL RESPONSIBILITY – For US and Export (US States, Territories, and Possessions)

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

The US National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the US National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

DEALER RECALL RESPONSIBILITY – All

All unsold new vehicles in dealers' possession and subject to this recall must be held and inspected/repaired per the service procedure of this recall bulletin before customers take possession of these vehicles.

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

Customers who have recently purchased vehicles sold from your vehicle inventory, and for which there is no customer information indicated on the dealer listing, are to be contacted by the dealer. Arrangements are to be made to make the required correction according to the instructions contained in this bulletin. Recall follow-up cards should not be used for this purpose, since the customer may not as yet have received the notification letter.

In summary, whenever a vehicle subject to this recall enters your vehicle inventory, or is in your dealership for service in the future, you must take the steps necessary to be sure the recall correction has been made before selling or releasing the vehicle.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the tools, equipment, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your dealer for information on whether your vehicle may benefit from the information.

We Support Voluntary Technician Certification

IMPORTANT SAFETY RECALL

October 2014

Dear General Motors Customer:

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act.

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2010-2015 model year Cadillac SRX vehicles and 2011-2012 Saab 9-4X vehicles. As a result, GM is conducting a safety recall. We apologize for this inconvenience. However, we are concerned about your safety and continued satisfaction with our products.

IMPORTANT

- This notice applies to your 2010-2015 model year Cadillac SRX vehicles or 2011-2012 Saab 9-4X vehicle, **VIN** _____.
- Your vehicle is involved in GM recall 14457.
- Schedule an appointment with your dealer on or after November 10, 2014.
- This service will be performed for you at **no charge**.

Why is your vehicle being recalled?

The jam nut in the rear suspension toe adjuster link may not be torqued to the proper specification. A loose toe adjuster link can cause the vehicle to sway or wander at highway speed, activate the vehicle's electronic stability control system, and cause excessive wear to the threads in the link. Additionally, the rear suspension may make loud metallic noises, particularly when the vehicle is travelling over bumps or potholes. If the threads in the link become worn, the link may separate. If separation occurs while the vehicle is being driven, it would create sudden vehicle instability, increasing the risk of a crash.

What will we do?

PARTS ARE NOT CURRENTLY AVAILABLE, but when parts are available, your dealer will inspect the left and right rear toe link and replace the parts if there is evidence of damage or a loose link. If the rear toe links pass the inspection, then your dealer will torque the adjuster jam nuts to specification. This service will be performed for you at **no charge**. Because of service scheduling requirements, it is likely that your dealer will need your vehicle longer than the actual inspection time of approximately 20 minutes. If part replacement is required an additional 1 hour and 20 minutes to 1 hour and 40 minutes may be needed.

We are working as quickly as possible to correct this condition and expect to have sufficient parts to begin repairs by November 10, 2014.

What should you do?

You should contact your dealer to arrange a service appointment on or after November 10, 2014.

If you experience any sway or wandering while the vehicle is at speed, or hear any loud metallic or other unusual noises from the rear suspension, you should have the vehicle towed to a GM dealership for inspection and repair, and should not drive the vehicle until the recall repairs have been performed.

Did you already pay for this repair?

Even though you may have already had repairs for this condition, you will still need to take your vehicle to your dealer for additional repairs. If you have paid for repairs for the condition described in this letter, please complete the enclosed reimbursement form and present it to your dealer with all required documents. Working with your dealer will expedite your request, however, if this is not convenient, you may mail the completed reimbursement form and all required documents to Reimbursement Department, PO Box 33170, Detroit, MI 48232-5170. The completed form and required documents must be presented to your dealer or received by the Reimbursement Department by November 30, 2015, unless state law specifies a longer reimbursement period.

Do you have questions?

If you have questions or concerns that your dealer is unable to resolve, please contact the appropriate Customer Assistance Center at the number listed below.

Division	Number	Text Telephones (TTY)
Cadillac	1-800-458-8006	1-800-833-2622
Saab	1-855-880-0808	
Guam	65-6267-1752	
Puerto Rico – English	1-800-496-9992	
Puerto Rico – Español	1-800-496-9993	
Virgin Islands	1-800-496-9994	
GM Medium Duty Truck	1-800-862-4389	

If after contacting your dealer and the Customer Assistance Center, you are still not satisfied we have done our best to remedy this condition without charge and within a reasonable time, you may wish to write the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590, or call the toll-free Vehicle Safety Hotline at 1.888.327.4236 (TTY 1.800.424.9153), or go to http://www.safercar.gov. The National Highway Traffic Safety Administration Campaign ID Number for this recall is 14V571.

Federal regulation requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Jeffrey M. Boyer
Vice President
Global Vehicle Safety

Enclosure
GM Recall #14457

Bulletin No.: 14457B
Date: November 2014

Recall Bulletin

PRODUCT SAFETY RECALL

SUBJECT: **Rear Toe Link Adjuster Lock Nut Torque**

MODELS: **2010-2015 Cadillac SRX**
2011-2012 Saab 9-4X

This bulletin has been revised to inform dealers that owners of Saab 9-4X vehicles delivered in the U.S. or Canada will receive a separate notification and be addressed by Saab Authorized Service Centers. This bulletin applies to Saab vehicles delivered outside of the U.S. and Canada that are subject to this recall. Please discard all copies of bulletin 14457A.

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

All involved vehicles that are in dealer inventory must be held and not delivered to customers, dealer traded, or used for demonstration purposes until the repair contained in this bulletin has been performed on the vehicle.

CONDITION

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2010-2015 model year Cadillac SRX vehicles and 2011-2012 Saab 9-4X vehicles. On some of these vehicles, the jam nut in the rear suspension toe adjuster link may not be torqued to the proper specification. A loose toe adjuster link can cause the vehicle to sway or wander at highway speed, activate the vehicle's electronic stability control system, and cause excessive wear to the threads in the link. Additionally, the rear suspension may make loud metallic noises, particularly when the vehicle is travelling over bumps or potholes. If the threads in the link become worn, the link may separate. If separation occurs while the vehicle is being driven, it would create sudden vehicle instability, increasing the risk of a crash.

CORRECTION

On vehicles in dealer inventory, dealers must inspect the left and right rear toe link adjuster lock nuts for proper torque and tighten the nuts if necessary. On customer vehicles, dealers must inspect the left and right rear toe link and replace the parts if there is evidence of damage or a loose link. If the rear toe links pass the inspection, then the dealer should torque the adjuster jam nuts to specification.

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VEHICLES INVOLVED

All involved vehicles are identified by Vehicle Identification Number on the Investigate Vehicle History screen in GM Global Warranty Management system. Dealership service personnel should always check this site to confirm vehicle involvement prior to beginning any required inspections and/or repairs. It is important to routinely use this tool to verify eligibility because not all similar vehicles may be involved regardless of description or option content.

For dealers with involved vehicles, a listing with involved vehicles containing the complete vehicle identification number, customer name, and address information has been prepared and will be provided to US and Canadian dealers through the GM GlobalConnect Recall Reports, or sent directly to export dealers. Dealers will not have a report available if they have no involved vehicles currently assigned.

The listing may contain customer names and addresses obtained from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any purpose other than follow-up necessary to complete this recall is a violation of law in several states/provinces/countries. Accordingly, you are urged to limit the use of this report to the follow-up necessary to complete this recall.

PART INFORMATION

Parts Pre-Ship Information – For US and Canada

Important: An initial supply of Rear Suspension Adjustment Links required to complete this recall will be pre-shipped to involved dealers of record. This pre-shipment is scheduled to begin the weeks of October 6, 13 and 20, 2014. Pre-shipped parts will be charged to dealer's open parts account.

Beginning the week of October 27, 2014, additional parts, if required, are to be obtained from GMCC&A. Please refer to your "involved vehicles listing" before ordering parts. Normal orders should be placed on a DRO = Daily Replenishment Order. In an emergency situation, parts should be ordered on a CSO = Customer Special Order.

Important: It is estimated that only 20% of involved vehicles will require link replacement. Please order parts accordingly.

Part Number	Description	Quantity/Vehicle
20867273	LINK, REAR SUSPENSION ADJUSTMENT	1-2 (if Req'd)

SERVICE PROCEDURE

Note: For new unsold vehicles, proceed directly to the tightening procedure (step # 6). It is not necessary to inspect or replace the rear suspension adjustment link on new unsold vehicles. For all sold and delivered vehicles perform all 6 steps.

Use the following steps to inspect the left and right rear suspension adjustment links:

1. Lift the vehicle on a hoist. Refer to *Lifting and Jacking the Vehicle* in SI.

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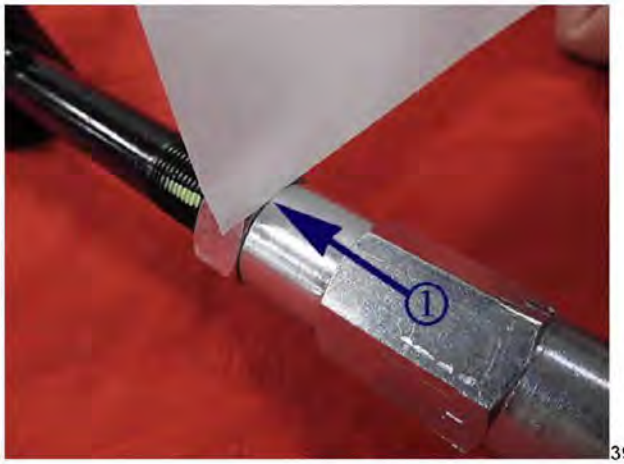
Note: Load the suspension so the wheels are in the same position they would be if the vehicle was on the ground.

2. Place tall threaded jack stands under the left and right control arms at the shock absorber mount as shown. Using the threaded jack stands, raise the left and right control arms to the ride height level.
3. Inspect the left and right rear suspension links as follows:

3979306

- Grasp the adjustment collar and push up and pull down firmly, note any movement in the link assembly components (the ends are rubber mounted and will have some movement)



3980941

3980942

(1) Paper does NOT fit between jam nut and rear suspension adjustment link. (2) Paper fits between jam nut and rear suspension adjustment link.

- Inspect the toe link assembly for loosened jam nuts. Use a piece of paper to determine if there is a gap between the jam nut and the adjustment collar.

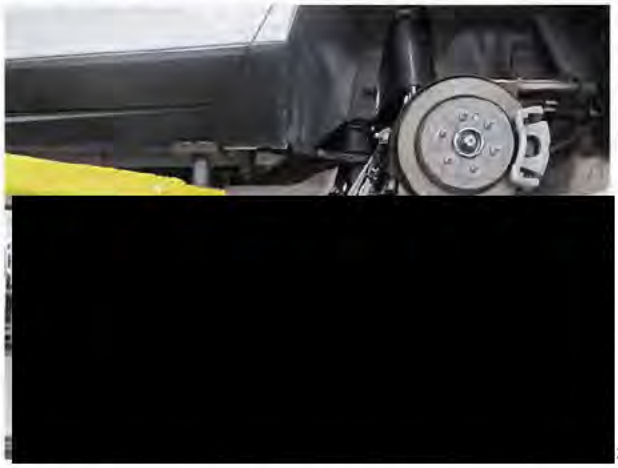
5. If the adjustment link fails any of the above tests, replace the adjustment link assembly. Refer to *Adjust Link Replacement* in SI.

Note: The following steps use a 26mm crows foot wrench attached to a torque wrench. The orientation of the crows foot to the torque wrench should be as close to inline as possible to obtain accurate readings.

3980937

3979310

6. Use the following steps to verify the tightness of the adjustment link jam nuts (1) and adjustment collar (2).
   - Remove the two jack stands.


3980205

   - On the left hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the torque of the jam nuts using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be checked by pushing torque wrench handle toward the rear of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

- On the right hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the jam nut torque using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be checked by pulling torque wrench handle toward the front of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

CUSTOMER REIMBURSEMENT - For US

Customer requests for reimbursement of previously paid repairs for the recall condition are to be submitted to the dealer by November 30, 2015, unless otherwise specified by state law. If this is not convenient for the customer, they may mail the completed Customer Reimbursement Request Form and all required documents to the GM Customer Assistance Center.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

When a customer requests reimbursement, they must provide the following:

- A completed Customer Reimbursement Request Form. This form is mailed to the customer or can be obtained through GM GlobalConnect.
- The name and address of the person who paid for the repair.
- Paid receipt confirming the amount of the repair expense, a description of the repair, and the person or entity performing the repair.

IMPORTANT: GM requires dealers to approve or deny a reimbursement request within 30 days of receipt. If a reimbursement request is approved, the dealer should immediately issue a check to the customer and submit an appropriate warranty transaction for the incurred expense. If a reimbursement request is denied, the dealer MUST provide the customer with a clear and concise explanation, in writing, as to why the request was denied. The bottom portion of the Customer Reimbursement Request Form may be used for this purpose. If the denial was due to missing documents, the customer can resubmit the request when the missing documents are obtained, as long as it is still within the allowed reimbursement period.

Warranty transactions for customer reimbursement of previously paid repairs are to be submitted as required by GM Global Warranty Management. Additional information can also be found in Warranty Administration Bulletin 11-00-89-004.

CUSTOMER REIMBURSEMENT - For Canada and Export

Customer requests for reimbursement of previously paid repairs to correct the condition described in this bulletin are to be submitted to the dealer prior to or by November 30, 2015.

When a customer requests reimbursement, they must provide the following:

- Proof of ownership at time of repair.
- Original paid receipt confirming the amount of unreimbursed repair expense(s) (including Service Contract deductibles), a description of the repair, and the person or entity performing the repair.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

COURTESY TRANSPORTATION – For US and Canada

The General Motors Courtesy Transportation program is intended to minimize customer inconvenience when a vehicle requires a repair that is covered by the New Vehicle Limited Warranties. The availability of courtesy transportation to customers whose vehicles are within the warranty coverage period and involved in a product program is very important in maintaining customer satisfaction. Dealers are to ensure that these customers understand that shuttle service or some other form of courtesy transportation is available and will be provided at no charge. Dealers should refer to the General Motors Service Policies and Procedures Manual for Courtesy Transportation guidelines.

WARRANTY TRANSACTION INFORMATION

Submit a transaction using the table below. All transactions should be submitted as a ZFAT transaction type, unless noted otherwise.

Note: *To avoid having to "H" route the customer reimbursement transaction for approval, it must be submitted prior to the repair transaction.*

Labor Code	Description	Labor Time	Net Item
9100933	Inspect & Tighten Right & Left Rear Suspension Adjustment Links	0.3	N/A
9100934	Inspect & Install One Toe Rear Suspension Adjustment Link (incl. resetting rear toe) – Not for Use on Inventory Vehicles	1.5	N/A
9100935	Inspect & Install Both Toe Rear Suspension Adjustment Link (inc. resetting rear toe) – Not for Use on Inventory Vehicles	1.9	N/A
9100936	Customer Reimbursement Approved	0.2	*
9100937	Customer Reimbursement Denied - For US dealers only	0.1	N/A

Note: Customer reimbursement will not close this recall. The service procedure must also be performed on the vehicle.

* The amount identified in "Net Item" should represent the dollar amount reimbursed to the customer.

CUSTOMER NOTIFICATION – For US and Canada

General Motors will notify customers of this recall on their vehicle.

CUSTOMER NOTIFICATION – For Export

Letters will be sent to known owners of record located within areas covered by the US National Traffic and Motor Vehicle Safety Act.

DEALER RECALL RESPONSIBILITY – For US and Export (US States, Territories, and Possessions)

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

The US National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the US National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

DEALER RECALL RESPONSIBILITY – All

All unsold new vehicles in dealers' possession and subject to this recall must be held and inspected/repaired per the service procedure of this recall bulletin before customers take possession of these vehicles.

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

Customers who have recently purchased vehicles sold from your vehicle inventory, and for which there is no customer information indicated on the dealer listing, are to be contacted by the dealer. Arrangements are to be made to make the required correction according to the instructions contained in this bulletin. Recall follow-up cards should not be used for this purpose, since the customer may not as yet have received the notification letter.

In summary, whenever a vehicle subject to this recall enters your vehicle inventory, or is in your dealership for service in the future, you must take the steps necessary to be sure the recall correction has been made before selling or releasing the vehicle.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the tools, equipment, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your dealer for information on whether your vehicle may benefit from the information.

We Support Voluntary Technician Certification

IMPORTANT SAFETY RECALL

October 2014

Dear General Motors Customer:

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act.

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2010-2015 model year Cadillac SRX vehicles and 2011-2012 Saab 9-4X vehicles. As a result, GM is conducting a safety recall. We apologize for this inconvenience. However, we are concerned about your safety and continued satisfaction with our products.

IMPORTANT

- This notice applies to your 2010-2015 model year Cadillac SRX vehicles or 2011-2012 Saab 9-4X vehicle, **VIN** _____.
- Your vehicle is involved in GM recall 14457.
- Schedule an appointment with your dealer on or after November 10, 2014.
- This service will be performed for you at **no charge**.

Why is your vehicle being recalled?

The jam nut in the rear suspension toe adjuster link may not be torqued to the proper specification. A loose toe adjuster link can cause the vehicle to sway or wander at highway speed, activate the vehicle's electronic stability control system, and cause excessive wear to the threads in the link. Additionally, the rear suspension may make loud metallic noises, particularly when the vehicle is travelling over bumps or potholes. If the threads in the link become worn, the link may separate. If separation occurs while the vehicle is being driven, it would create sudden vehicle instability, increasing the risk of a crash.

What will we do?

PARTS ARE NOT CURRENTLY AVAILABLE, but when parts are available, your dealer will inspect the left and right rear toe link and replace the parts if there is evidence of damage or a loose link. If the rear toe links pass the inspection, then your dealer will torque the adjuster jam nuts to specification. This service will be performed for you at **no charge**. Because of service scheduling requirements, it is likely that your dealer will need your vehicle longer than the actual inspection time of approximately 20 minutes. If part replacement is required an additional 1 hour and 20 minutes to 1 hour and 40 minutes may be needed.

We are working as quickly as possible to correct this condition and expect to have sufficient parts to begin repairs by November 10, 2014.

What should you do?

You should contact your dealer to arrange a service appointment on or after November 10, 2014.

If you experience any sway or wandering while the vehicle is at speed, or hear any loud metallic or other unusual noises from the rear suspension, you should have the vehicle towed to a GM dealership for inspection and repair, and should not drive the vehicle until the recall repairs have been performed.

Did you already pay for this repair?

Even though you may have already had repairs for this condition, you will still need to take your vehicle to your dealer for additional repairs. If you have paid for repairs for the condition described in this letter, please complete the enclosed reimbursement form and present it to your dealer with all required documents. Working with your dealer will expedite your request, however, if this is not convenient, you may mail the completed reimbursement form and all required documents to Reimbursement Department, PO Box 33170, Detroit, MI 48232-5170. The completed form and required documents must be presented to your dealer or received by the Reimbursement Department by November 30, 2015, unless state law specifies a longer reimbursement period.

Do you have questions?

If you have questions or concerns that your dealer is unable to resolve, please contact the appropriate Customer Assistance Center at the number listed below.

Division	Number	Text Telephones (TTY)
Cadillac	1-800-458-8006	1-800-833-2622
Saab	1-855-880-0808	
Guam	65-6267-1752	
Puerto Rico – English	1-800-496-9992	
Puerto Rico – Español	1-800-496-9993	
Virgin Islands	1-800-496-9994	
GM Medium Duty Truck	1-800-862-4389	

If after contacting your dealer and the Customer Assistance Center, you are still not satisfied we have done our best to remedy this condition without charge and within a reasonable time, you may wish to write the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590, or call the toll-free Vehicle Safety Hotline at 1.888.327.4236 (TTY 1.800.424.9153), or go to http://www.safercar.gov. The National Highway Traffic Safety Administration Campaign ID Number for this recall is 14V571.

Federal regulation requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Jeffrey M. Boyer
Vice President
Global Vehicle Safety

Enclosure
GM Recall #14457

Document Provided in Native Format

File Name: 226310 2013-16 18VINS PROVIDED GART AA WARRANTY.XLSX

Detroit, MI

CARFAX® Vehicle History Report™

US $39.99

An independent company established in 1986

Vehicle Information:
2013 CADILLAC SRX
VIN: 3GYFNAE34DS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
FRONT WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- Damage reported
- CARFAX 1-Owner vehicle
- **12** Service history records
- Personal vehicle
- **35,404** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:58:13 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1
Year purchased	2014
Type of owner	Personal
Estimated length of ownership	5 yrs. 4 mo.
Owned in the following states/provinces	Tennessee
Estimated miles driven per year	22,127/yr
Last reported odometer reading	35,404

CARFAX 1 OWNER

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem

BUYBACK GUARANTEE

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1
Total Loss No total loss reported to CARFAX.	✓ No Issues Reported
Structural Damage No structural damage reported to CARFAX.	✓ No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	No Issues Reported
Odometer Check No indication of an odometer rollback.	No Issues Indicated
Accident / Damage Damage reported on 05/09/2019.	Damage Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**

CARFAX Detailed History

Owner 1
Purchased: 2013
Type: Personal
Where: Tennessee
Est. Mileage: 12,770
Est. Length: 1 year(s)
Owned: 1 year(s)
(5 yrs, 4 mos)

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
12/05/2012		Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Vehicle offered for sale
12/22/2012	6	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Pre-delivery inspection completed
02/25/2013	7	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Vehicle serviced
06/07/2013	233	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Vehicle serviced
01/08/2014	3,172	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Recommended maintenance performed Drive belts checked Fluids checked Oil and filter changed Tire condition and pressure checked
03/25/2014	3,963	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com	Vehicle sold

		4.7 6 Verified Reviews	
03/25/2014		Tennessee Motor Vehicle Dept.	Vehicle purchase reported Titled or registered as personal vehicle
04/02/2014		Tennessee Motor Vehicle Dept. Kingsport, TN Title #93817047	Title or registration issued First owner reported Vehicle color noted as Silver
04/25/2014	6,318	Voss Village Cadillac Centerville, OH 937-433-4811 vosscadillac.com/ 4.5 29 Verified Reviews	Maintenance inspection completed Battery charged Engine electrical system checked
06/30/2014	9,910	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Maintenance inspection completed Recommended maintenance performed Drive belts checked Fluids checked Oil and filter changed Tire condition and pressure checked Tires rotated
10/17/2014	16,496	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Maintenance inspection completed Oil and filter changed Tire condition and pressure checked Tires rotated
11/25/2014	19,350	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Vehicle serviced
03/03/2015		Tennessee Motor Vehicle Dept. Kingsport, TN Title #93817047	Registration issued or renewed Loan or lien reported Vehicle color noted as Silver
03/27/2015	22,225	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Maintenance inspection completed Air filter replaced Tire condition and pressure checked Tires rotated Oil and filter changed
07/08/2015	28,642	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Maintenance inspection completed Wiper(s) replaced Tire condition and pressure checked Tires rotated Oil and filter changed Interior trim checked
07/28/2015	30,413	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121 championjc.com 4.7 6 Verified Reviews	Vehicle serviced
10/30/2015	35,404	Champion Chevrolet Cadillac Inc. Johnson City, TN 423-282-2121	Maintenance inspection completed Tire condition and pressure checked Tires rotated Wiper(s) replaced

	championjc.com 4.7 6 Verified Reviews	Oil and filter changed Interior trim checked
03/03/2016	Tennessee Motor Vehicle Dept. Kingsport, TN Title #93817047	Registration issued or renewed Loan or lien reported Vehicle color noted as Silver
03/06/2017	Tennessee Motor Vehicle Dept. Kingsport, TN Title #93817047	Registration issued or renewed Loan or lien reported Vehicle color noted as Silver
03/07/2018	Tennessee Motor Vehicle Dept. Kingsport, TN Title #93817047	Registration issued or renewed Loan or lien reported Vehicle color noted as Silver
03/29/2019	Tennessee Motor Vehicle Dept. Kingsport, TN Title #93817047	Title or registration issued Loan or lien reported Vehicle color noted as Silver

Avoid financial headaches. Make sure the loan has been paid off if you're buying from a private seller.

05/09/2019	Damage Report	Damage reported Damage to front

Not all damage is caused by an accident. Get the car inspected before you buy. Learn more

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

Damage Indicator
Damage can be a result of many different types of events. Examples include contact with objects (other cars, trees, traffic signs, road debris, etc), vandalism, or weather-related events. Not every damage event is reported to CARFAX. As details about the damage event become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

- This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:58:13 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Follow Us: facebook.com/CARFAX @CarfaxReports

CARFAX DEPENDS ON ITS SOURCES FOR THE ACCURACY AND RELIABILITY OF ITS INFORMATION. THEREFORE, NO RESPONSIBILITY IS ASSUMED BY CARFAX OR ITS AGENTS FOR ERRORS OR OMISSIONS IN THIS REPORT. CARFAX

FURTHER EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. CARFAX

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.

8/9/19 8:58:13 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2013 CADILLAC SRX
VIN: 3GYFNAE34DS[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: FRONT WHEEL DRIVE

CARFAX 1 OWNER

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners: CARFAX 1-OWNER

Last owned in the following state/province:	Tennessee

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

BUYBACK GUARANTEE CARFAX

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported

Damage reported on this vehicle. Please see the full CARFAX Vehicle History Report for more details.

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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Covered by United States Patent Nos. 7,113,863; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 8:58:13 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2013 CADILLAC SRX
VIN: 3GYFNAE34DS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
FRONT WHEEL DRIVE
Standard Equipment | **Safety Options**

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- Damage reported
- CARFAX 1-Owner vehicle
- **12** Service history records
- Personal vehicle
- **35,404** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 35,404 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Accident / Damage reported: You may want to have the dealer, a mechanic, or body shop inspect the repair.

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2013 CADILLAC SRX (3GYFNAE34DS[redacted]).

VIN:	3GYFNAE34DS[redacted]
Estimated start date of warranty:	03/25/2014
Last CARFAX reading reported on 10/30/2015:	35,404 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: Recalculate Warranty

Type of Coverage:	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	8 months or 34,596 miles
Emissions	96 months or 80,000 miles	32 months or 44,596 miles
Corrosion	72 months or unlimited mileage	8 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2013 CADILLAC SRX

VIN: 3GYFNAE34DS[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: FRONT WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNBE35ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
FRONT WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- Accident reported: minor damage
- **2** Previous owners
- **13** Service history records
- Types of owners: Personal lease, Personal
- Last owned in South Carolina
- **37,518** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:57:47 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2014	2018
Type of owner	Personal lease	Personal
Estimated length of ownership	3 yrs. 6 mo.	1 yr. 5 mo.
Owned in the following states/provinces	Florida, South Carolina	South Carolina
Estimated miles driven per year	9,331/yr	—
Last reported odometer reading	37,518	—

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss No total loss reported to CARFAX.	☑ No Issues Reported	☑ No Issues Reported
Structural Damage	No Issues Reported	No Issues Reported

No structural damage reported to CARFAX.	✓	✓
Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage Accident reported on 08/23/2014.	**Minor Damage**	No New Issues Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Owner 1
Purchased: 2014
Type: Personal lease
Where: Florida, South Carolina
Est. miles/year: 3,333/yr
Est. length: 3 yrs, 6 mos
owned: 10/2011 - 3 yrs, 6 mos

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

CADILLAC CERTIFIED PRE-OWNED

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
03/14/2014		Ed Morse Sawgrass Auto Mall Sunrise, FL 888-784-1283 edmorsesawgrass.com 4.6 ★★★★½ 216 Verified Reviews	Pre-delivery inspection completed
03/17/2014		Ed Morse Sawgrass Auto Mall Sunrise, FL 888-784-1283 edmorsesawgrass.com 4.6 ★★★★½ 216 Verified Reviews	Vehicle offered for sale
03/26/2014	6	Ed Morse Sawgrass Auto Mall Sunrise, FL 888-784-1283 edmorsesawgrass.com 4.6 ★★★★½ 216 Verified Reviews	Vehicle sold
03/26/2014		Florida Motor Vehicle Dept. Hollywood, FL	Vehicle purchase reported Registration issued or renewed Titled or registered as personal lease vehicle Vehicle color noted as Black
04/04/2014		Florida Motor Vehicle Dept. Oshkosh, WI Title #0114681919	Title issued or updated First owner reported Vehicle color noted as Silver
08/23/2014		Florida Damage Report	Accident reported Involving front impact Involving right front impact Right side primarily damaged Minor damage reported Estimated damage exceeds $1,000 Airbags did not deploy

Damage Severity Scale ⓘ

MINOR MODERATE SEVERE

Minor damage is usually cosmetic, including dents or scratches to the vehicle body.

09/03/2014	3,643	Sears Auto Center Boca Raton, FL 561-338-1128 searsauto.com **4.1** 35 Verified Reviews	Alignment performed
10/28/2014	5,145	Ed Morse Sawgrass Auto Mall Sunrise, FL 888-784-1283 edmorsesawgrass.com **4.6** 216 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
03/23/2015		Florida Motor Vehicle Dept. Hollywood, FL Title #0114681919	Registration issued or renewed Vehicle color noted as Silver
05/29/2015	10,955	Ed Morse Sawgrass Auto Mall Sunrise, FL 888-784-1283 edmorsesawgrass.com **4.6** 216 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
07/31/2015	12,432	Vera Cadillac Buick GMC Pembroke Pines, FL 954-436-3036 veracadillac.com **4.3** 143 Verified Reviews	Battery replaced
10/28/2015	15,142	Ed Morse Sawgrass Auto Mall Sunrise, FL 888-784-1283 edmorsesawgrass.com **4.6** 216 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
03/02/2016	18,367	Vera Cadillac Buick GMC Pembroke Pines, FL 954-436-3036 veracadillac.com **4.3** 143 Verified Reviews	Maintenance inspection completed Oil and filter changed Cabin air filter checked Tires rotated
04/14/2016		Florida Motor Vehicle Dept. Hollywood, FL Title #0114681919	Registration issued or renewed Vehicle color noted as Silver
08/12/2016	22,075	Vera Cadillac Buick GMC	Maintenance inspection completed Oil and filter changed

		Pembroke Pines, FL 954-436-3036 veracadillac.com 4.3 143 Verified Reviews	Tires rotated
10/17/2016	25,391	Vera Cadillac Buick GMC Pembroke Pines, FL 954-436-3036 veracadillac.com 4.3 143 Verified Reviews	Maintenance inspection completed Washer hose/line replaced/repaired
03/15/2017	29,196	Vera Cadillac Buick GMC Pembroke Pines, FL 954-436-3036 veracadillac.com 4.3 143 Verified Reviews	Maintenance inspection completed Air filter replaced Oil and filter changed
04/03/2017		Florida Motor Vehicle Dept. Hollywood, FL Title #0114681919	Registration issued or renewed Vehicle color noted as Silver
06/26/2017		Florida Motor Vehicle Dept. Fort Lauderdale, FL Title #0114681919	Registration issued or renewed Registration updated when owner moved the vehicle to a new location Vehicle color noted as Silver
10/09/2017	33,055	Auto Auction Florida	Vehicle sold Millions of used vehicles are bought and sold at auction every year.
10/10/2017			Vehicle offered for sale
10/12/2017		Richard Kay Superstore Anderson, SC 864-226-4000 richardkaysuperstore.com 4.2 22 Verified Reviews	Battery replaced Vehicle washed/detailed
01/13/2018	33,067	Cadillac Certified Dealer Anderson, SC	Sold as a Cadillac Certified Pre-Owned Vehicle
01/13/2018		Cadillac Certified Dealer Anderson, SC	Offered for sale as a Certified Pre-owned Cadillac
01/13/2018		South Carolina Motor Vehicle Dept.	Vehicle purchase reported
01/24/2018	33,146	South Carolina Motor Vehicle Dept. Pendleton, SC Title #772020341736532	Registration issued or renewed
02/05/2018	35,094	Richard Kay Superstore Anderson, SC 864-226-4000 richardkaysuperstore.com 4.2 22 Verified Reviews	Tire(s) balanced Tires rotated

	03/05/2018	37,518	Richard Kay Superstore Anderson, SC 864-226-4000 richardkaysuperstore.com 4.2 ★★★★½ 22 Verified Reviews	Maintenance inspection completed Drivability/performance checked

Owner 2

Date:	Mileage:	Source:	Comments:
03/07/2018		South Carolina Motor Vehicle Dept. Pendleton, SC Title #772020341736532	Title issued or updated New owner reported Loan or lien reported
11/01/2018		South Carolina Motor Vehicle Dept. Pendleton, SC Title #772020341736532	Registration issued or renewed

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CARFAX Glossary

Accident Indicator
CARFAX receives information about accidents in all 50 states, the District of Columbia and Canada.

Not every accident is reported to CARFAX. As details about the accident become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

- According to the National Safety Council, Injury Facts, 2015 edition, 8% of the 254 million registered vehicles in the U.S. were involved in an accident in 2013. Over 74% of these were considered minor or moderate.
- This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:57:47 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

Florida Damage Reports:

- Provide an estimate of the extent of damage in its accident reports for the following:
  - MINOR: The accident damage does not affect the operation of the vehicle and should not compromise vehicle safety.
  - FUNCTIONAL: The accident damage affects the operation of the vehicle and/or its parts. The vehicle could be driven from the accident location.
  - DISABLED: The vehicle cannot be driven from the accident scene due to damage. The vehicle had to be towed or hauled away from the accident location.
- Are required if the estimated damage exceeds $500

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Title Issued
A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used

as proof of ownership.

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8/9/19 8:57:47 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNBE35ES[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: FRONT WHEEL DRIVE
Certified on 01/13/2018

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	2
Last owned in the following state/province:	South Carolina
Annual average mileage:	9,509 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported

Minor damage reported on this vehicle. Please see the full CARFAX Vehicle History Report for more details.

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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8/9/19 8:57:47 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNBE35ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
FRONT WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- Accident reported: minor damage
- **2** Previous owners
- **13** Service history records
- Types of owners: Personal lease, Personal
- Last owned in South Carolina
- **37,518** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 37,518 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Minor damage reported: You may want to have the dealer, a mechanic, or body shop inspect the repair.

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2014 CADILLAC SRX LUXURY COLLECTION (3GYFNBE35ES[redacted].

VIN:	3GYFNBE35ES[redacted]
Estimated start date of warranty:	03/26/2014
Last CARFAX reading reported on 03/05/2018:	37,518 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	8 months or 32,482 miles
Emissions	96 months or 80,000 miles	32 months or 42,482 miles
Corrosion	72 months or unlimited mileage	8 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2014 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNBE35ES[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: FRONT WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE33ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **3** Previous owners
- **12** Service history records
- Types of owners: Corporate, Personal
- **74,718** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:55:58 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2	Owner 3
Year purchased	2014	2017	2019
Type of owner	Corporate	Personal	Personal
Estimated length of ownership	3 yrs. 2 mo.	1 yr. 9 mo.	14 days
Owned in the following states/provinces	Rhode Island, New York	New York	New York
Estimated miles driven per year	13,074/yr	15,475/yr	---
Last reported odometer reading	42,381	70,950	74,718

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2	Owner 3
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2	Owner 3
Total Loss No total loss reported to CARFAX.	No Issues Reported	No Issues Reported	No Issues Reported
Structural Damage	No Issues Reported	No Issues Reported	No Issues Reported

No structural damage reported to CARFAX.	✓	✓	✓
Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage No accidents or damage reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported	✓ No Issues Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2014
Type: Corporate
Where: Rhode Island, New York
Est. Miles/year: 13,270/yr
Est. length of ownership: 3 yrs, 2 mo.

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

CADILLAC CERTIFIED PRE-OWNED

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
12/11/2013	12	Dealer Inventory	Vehicle offered for sale
02/14/2014		Rhode Island Motor Vehicle Dept.	Vehicle purchase reported
03/28/2014	25	Rhode Island Motor Vehicle Dept. Oshkosh, WI Title #06725087	Title issued or updated Registration issued or renewed First owner reported Titled or registered as corporate vehicle Vehicle color noted as White
11/17/2015		Rhode Island Motor Vehicle Dept. Oshkosh, WI	Registration issued or renewed Vehicle color noted as White
04/24/2017	41,730	Auto Auction Eastern Region	Vehicle sold Millions of used vehicles are bought and sold at auction every year.
04/26/2017		Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 ★★★★★ 83 Verified Reviews	Vehicle offered for sale
04/27/2017		Auto Auction Connecticut	Vehicle sold
04/29/2017		Cadillac Certified Dealer Albany, NY	Offered for sale as a Cadillac Certified Pre-Owned Vehicle White exterior
05/10/2017		Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com	Vehicle washed/detailed Oil and filter changed Alignment checked

		4.9 83 Verified Reviews	
06/26/2017	41,732	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Brakes checked
07/28/2017	41,944	New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
07/29/2017		Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Vehicle sold
07/29/2017		New York Motor Vehicle Dept. Fort Edward, NY	Registration issued or renewed Passed safety inspection
07/30/2017		Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Vehicle washed/detailed One tire mounted One tire balanced
07/31/2017		Cadillac Certified Dealer	Sold as a Cadillac Certified Pre-Owned Vehicle
08/08/2017	42,381	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Vehicle serviced

Owner 2

Purchased: 2017
Type: Personal
Where: New York
Est. miles/year: 12,477
Est. origin: [illegible]
Owned: 8/31/19
([illegible])

Date:	Mileage:	Source:	Comments:
08/15/2017		New York Motor Vehicle Dept. Fort Edward, NY	Title issued or updated New owner reported Loan or lien reported
11/19/2017	46,641	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Oil and filter changed Tires rotated
11/28/2017	47,212	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Vehicle serviced
02/23/2018	51,024	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Recommended maintenance performed
07/25/2018	57,805	New York Inspection Station	Failed safety inspection Passed emissions inspection View what was inspected
07/25/2018		Otto Cadillac, Inc.	Recommended maintenance performed

		Albany, NY 518-869-5000 ottocars.com **4.9** ★★★★½ 83 Verified Reviews	Emissions inspection performed
08/01/2018	58,307	Valvoline Instant Oil Change Queensbury, NY 518-745-1731 vioc.com **4.6** ★★★★½ 38 Verified Reviews	Emissions inspection performed
08/01/2018		New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
03/21/2019		New York Motor Vehicle Dept. Fort Edward, NY	Registration issued or renewed Titled or registered as personal vehicle Passed safety inspection
05/31/2019		Krystal Chrysler Jeep Dodge Warrensburg, NY 518-623-3405 krystalchryslerjeepdodge.net **4.7** ★★★★½ 26 Verified Reviews	Vehicle offered for sale
06/14/2019	70,893	Krystal Chrysler Jeep Dodge Warrensburg, NY 518-623-3405 krystalchryslerjeepdodge.net **4.7** ★★★★½ 26 Verified Reviews	Pre-delivery inspection completed Maintenance inspection completed Brakes checked Vehicle washed/detailed Four tires mounted Oil and filter changed Rear brakes serviced/adjusted Wiper(s) replaced Air filter replaced Fluids checked Tire condition and pressure checked
06/28/2019	70,950	Krystal Chrysler Jeep Dodge Warrensburg, NY 518-623-3405 krystalchryslerjeepdodge.net **4.7** ★★★★½ 26 Verified Reviews	Vehicle sold
06/28/2019		Krystal Chrysler Jeep Dodge Warrensburg, NY 518-623-3405 krystalchryslerjeepdodge.net **4.7** ★★★★½ 26 Verified Reviews	Maintenance inspection completed Vehicle washed/detailed
06/28/2019		New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
06/28/2019		New York Motor Vehicle Dept. Gouverneur, NY	Registration issued or renewed Titled or registered as personal vehicle Passed safety inspection

Owner 3
Purchased: 2019
Type: Personal

Date:	Mileage:	Source:	Comments:
07/26/2019		New York	Title issued or updated

		Motor Vehicle Dept. Gouverneur, NY	New owner reported Loan or lien reported

Avoid financial headaches. Make sure the loan has been paid off if you're buying from a private seller.

08/01/2019	74,718	Krystal Chrysler Jeep Dodge Warrensburg, NY 518-623-3405 krystalchryslerjeepdodge.net 4.7 26 Verified Reviews	Vehicle serviced

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CARFAX Glossary

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When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

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8/9/19 8:55:58 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE33ES[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE
Certified on 07/31/2017

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	3
Last owned in the following state/province:	New York
Annual average mileage:	13,677 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported
Other Accidents / Damage	☑ No Issues Reported

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 8:55:58 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE33ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **3** Previous owners
- **12** Service history records
- Types of owners: Corporate, Personal
- **74,718** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 74,718 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Are the brakes and other safety equipment in good working order?

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2014 CADILLAC SRX LUXURY COLLECTION (3GYFNEE33ES[redacted]).

VIN:	3GYFNEE33ES[redacted]
Estimated start date of warranty:	02/14/2014
Last CARFAX reading reported on 08/01/2019:	74,718 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	Coverage expired
Emissions	96 months or 80,000 miles	31 months or 5,282 miles
Corrosion	72 months or unlimited mileage	7 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2014 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNEE33ES[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE35ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- Accident reported: structural damage
- Damage reported
- **3** Previous owners
- **10** Service history records
- Types of owners: Corporate fleet, Personal
- **56,469** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:56:51 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2	Owner 3
Year purchased	2014	2015	2016
Type of owner	Corporate fleet	Personal	Personal
Estimated length of ownership	9 months	6 months	3 yrs. 6 mo.
Owned in the following states/provinces	Michigan	Michigan	Ohio
Estimated miles driven per year	---	---	13,363/yr
Last reported odometer reading	6,114	8,152	56,469

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2	Owner 3
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2	Owner 3
Total Loss No total loss reported to CARFAX.	No Issues Reported	No Issues Reported	No Issues Reported
Structural Damage Structural damage reported on 10/26/2017.	No Issues Reported	No Issues Reported	Damage Reported

Airbag Deployment Airbag deployment reported on 10/26/2017.	✓ No Issues Reported	✓ No Issues Reported	⚠ Airbag Deployment
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage Damage reported on 08/31/2017. Accident reported on 10/26/2017.	✓ No Issues Reported	✓ No Issues Reported	⚠ Accident Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2014
Type: Corporate/Fleet
Where: Michigan
Est. length owned: 6/25/14 - 4/7/15 (3 months)

CADILLAC CERTIFIED PRE-OWNED

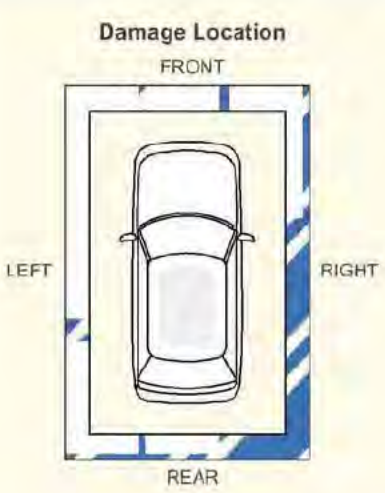
Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
06/25/2014	10	Michigan Motor Vehicle Dept. Warren, MI Title #801C1760044	Title or registration issued First owner reported Titled or registered as corporate fleet vehicle
04/07/2015	5,891	Auto Auction	Vehicle sold
04/07/2015	5,978	Al Serra Auto Plaza Grand Blanc, MI alserra.com 4.5 ★★★★½ 175 Verified Reviews	Vehicle offered for sale
04/09/2015	5,979	Al Serra Auto Plaza Grand Blanc, MI 810-694-5600 alserra.com 4.5 ★★★★½ 175 Verified Reviews	Oil and filter changed Safety inspection performed Vehicle washed/detailed
04/11/2015		Cadillac Certified Pre-Owned Dealer Grand Blanc, MI	Offered for sale as a Cadillac Certified Pre-Owned Vehicle
06/27/2015	6,114	Al Serra Auto Plaza Grand Blanc, MI 810-694-5600 alserra.com 4.5 ★★★★½ 175 Verified Reviews	Vehicle sold
06/27/2015		Service Plan Co. Livonia, MI	Service contract issued
06/30/2015		Cadillac Certified Dealer Grand Blanc, MI	Sold as a Certified Pre-owned Cadillac
06/30/2015		Michigan Motor Vehicle Dept. Livonia, MI	Registration issued or renewed
07/01/2015		Michigan Motor Vehicle Dept. Livonia, MI	Loan or lien reported

Owner 2

Date:	Mileage:	Source:	Comments:
07/01/2015		Michigan Motor Vehicle Dept. Livonia, MI Title #603D1810956	Title issued or updated New owner reported
08/26/2015	8,152	Al Serra Auto Plaza Grand Blanc, MI 810-694-5600 alserra.com **4.5** 175 Verified Reviews	Maintenance inspection completed Drivability/performance checked

Owner 3

Date:	Mileage:	Source:	Comments:
01/10/2016	9,202	Ohio Motor Vehicle Dept.	Vehicle purchase reported
01/22/2016		Ohio Motor Vehicle Dept. Brecksville, OH Title #1811054214	Title issued or updated Registration issued or renewed New owner reported Loan or lien reported
08/29/2016		Ohio Motor Vehicle Dept. Brecksville, OH Title #1811054214	Registration issued or renewed
05/17/2017	27,422	Central Cadillac Cleveland, OH 216-535-1840 centralcadillac.com **4.6** 22 Verified Reviews	Radio replaced Wiring repaired
06/27/2017	28,057	Central Cadillac Cleveland, OH 216-535-1840 centralcadillac.com **4.6** 22 Verified Reviews	Maintenance inspection completed Battery replaced
08/31/2017		Damage Report	Damage reported Damage to rear
08/31/2017	30,233	Central Cadillac Cleveland, OH 216-535-1840 centralcadillac.com **4.6** 22 Verified Reviews	Vehicle serviced
10/09/2017		Ohio Motor Vehicle Dept. Brecksville, OH Title #1811054214	Registration issued or renewed
10/26/2017		Ohio Damage Report	Accident reported Involving front or side impact Involving right side impact with another motor vehicle Right side primarily damaged Damage to right rear Damage to roof Disabling damage reported Vehicle towed Front & side airbag deployed Structural damage reported CARFAX Airbag Tips



Structural damage may impact vehicle safety and reliability. Get the unibody or frame of the vehicle inspected by a professional.

12/29/2017	34,174	Central Cadillac Cleveland, OH 216-535-1840 centralcadillac.com/ **4.6** ★★★★½ 56 Verified Reviews	Vehicle serviced
01/31/2018		Central Cadillac Cleveland, OH 216-535-1840 centralcadillac.com/ **4.6** ★★★★½ 56 Verified Reviews	Vehicle serviced
05/10/2018	38,009	Central Cadillac Cleveland, OH 216-535-1840 centralcadillac.com/ **4.6** ★★★★½ 56 Verified Reviews	Oil and filter changed
10/09/2018	46,000	Ohio Inspection Station	Passed emissions inspection
10/09/2018		Ohio Motor Vehicle Dept. Broadview Heights, OH Title #1811054214	Registration issued or renewed Registration updated when owner moved the vehicle to a new location
05/08/2019	52,957	Central Cadillac Cleveland, OH 216-535-1840 centralcadillac.com/ **4.6** ★★★★½ 56 Verified Reviews	Camshaft adjuster solenoid replaced Rear shock absorber(s) replaced
07/24/2019	56,469	Central Cadillac Cleveland, OH 216-535-1840 centralcadillac.com/ **4.6** ★★★★½ 56 Verified Reviews	Seat or seat upholstery repaired

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

Accident Indicator
CARFAX receives information about accidents in all 50 states, the District of Columbia and Canada.

Not every accident is reported to CARFAX. As details about the accident become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

- According to the National Safety Council, Injury Facts, 2015 edition, 8% of the 254 million registered vehicles in the U.S. were involved in an accident in 2013. Over 74% of these were considered minor or moderate.
- This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:56:51 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

Ohio Damage Reports:

- Provide an estimate of the extent of damage in its accident reports for the following:
  - SEVERE/TOTALED: The vehicle cannot be driven from the accident scene due to severe damage or an injury. This level of damage often results in a Salvage or Junk title.
  - DISABLING: The vehicle had to be towed or hauled away from the accident location.
  - FUNCTIONAL: Damage that affects the operation of the unit or its parts but is not disabling.
  - MINOR: The accident damage does not affect the operation of the vehicle and should not compromise vehicle safety. Examples include dented bumpers, fenders, grills and body panels.
  - NO DAMAGE: The vehicle was not damaged.
- Are required if the estimated damage exceeds $400

Airbag Deployment
Occurs when the driver, passenger or side airbag has been used or deployed during a crash or other incident. If an airbag has been deployed, it must be replaced by a qualified technician. Have this car inspected by a mechanic prior to purchase. Use CARFAX Airbag Tips to make sure this vehicle's airbag system is functional.

Damage Indicator
Damage can be a result of many different types of events. Examples include contact with objects (other cars, trees, traffic signs, road debris, etc), vandalism, or weather-related events. Not every damage event is reported to CARFAX. As details about the damage event become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

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First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

Fleet Vehicle
Vehicle was registered or sold to a company that manages vehicle fleets.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Structural Damage
When the main structure or any component designed to provide structural integrity of the vehicle is damaged. All levels of accidents, from minor to severe, can cause structural damage to a vehicle (i.e., damage to the frame or unibody). Having a structural inspection before purchase is recommended.

Title Issued

A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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CARFAX DEPENDS ON ITS SOURCES FOR THE ACCURACY AND RELIABILITY OF ITS INFORMATION. THEREFORE, NO RESPONSIBILITY IS ASSUMED BY CARFAX OR ITS AGENTS FOR ERRORS OR OMISSIONS IN THIS REPORT. CARFAX FURTHER EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. CARFAX

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8/9/19 8:56:51 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE35ES[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE
Certified on 06/30/2015

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	3
Last owned in the following state/province:	Ohio
Annual average mileage:	11,111 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported

Accident/Damage reported on this vehicle. Please see the full CARFAX Vehicle History Report for more details.

Ask your dealer for the full CARFAX® Vehicle History Report™

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8/9/19 8:55:51 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE35ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- Accident reported: structural damage
- Damage reported
- **3** Previous owners
- **10** Service history records
- Types of owners: Corporate fleet, Personal
- **56,469** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 56,469 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Structural damage reported: Get a structural inspection before purchase to make sure the structure has been repaired.

Airbag deployment reported: Ask a mechanic to verify the airbags were replaced properly and are in working order.

Does the vehicle appear to have been well maintained?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2014 CADILLAC SRX LUXURY COLLECTION (3GYFNEE35ES[redacted].

VIN:	3GYFNEE35ES[redacted]
Estimated start date of warranty:	06/25/2014
Last CARFAX reading reported on 07/24/2019:	56,469 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage:	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	11 months or 13,531 miles
Emissions	96 months or 80,000 miles	35 months or 23,531 miles
Corrosion	72 months or unlimited mileage	11 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2014 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNEE35ES[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE36ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- Damage reported
- **2** Previous owners
- Regular oil changes
- Types of owners: Personal lease, Personal
- **80,931** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:58:34 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2014	2017
Type of owner	Personal lease	Personal
Estimated length of ownership	2 yrs. 9 mo.	2 yrs. 5 mo.
Owned in the following states/provinces	New York	New York
Estimated miles driven per year	14,244/yr	16,344/yr
Last reported odometer reading	40,171	80,931

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss No total loss reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Structural Damage No structural damage reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage Damage reported on 08/01/2017.	✓ No Issues Reported	Damage Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2014
Type: Personal lease
Where: New York
Est. miles/year: 14,294/yr
Est. length: 3 (4)14
Owned: 1/5/17
(2 yrs, 9 mos)

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
02/14/2014	8	Valley Cadillac Rochester, NY 585-507-4206 valleycadillac.com **4.9** ★★★★½ 58 Verified Reviews	Pre-delivery inspection completed Vehicle washed/detailed
03/12/2014	190	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com **4.9** ★★★★½ 83 Verified Reviews	Vehicle offered for sale
03/14/2014	238	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com **4.9** ★★★★½ 83 Verified Reviews	Vehicle sold
03/14/2014		Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com **4.9** ★★★★½ 83 Verified Reviews	Pre-delivery inspection completed Safety inspection performed Vehicle washed/detailed Floor mats installed
03/14/2014		New York Inspection Station	Dealer had vehicle inspected to prepare it for sale Passed safety inspection Emissions inspection performed View what was inspected
03/14/2014		Service Plan Co. Troy, NY	Service contract issued
03/14/2014		New York Motor Vehicle Dept. Troy, NY	Registration issued or renewed Titled or registered as personal lease vehicle Passed safety inspection
04/15/2014		New York Motor Vehicle Dept. Oshkosh, WI	Title issued or updated First owner reported Loan or lien reported

06/27/2014		New York Motor Vehicle Dept. Troy, NY	Registration issued or renewed Passed safety inspection
07/03/2014	5,463	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Oil and filter changed
11/21/2014	11,698	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Oil and filter changed Tires rotated
03/13/2015	15,958	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Safety inspection performed Oil and filter changed Tires rotated Four wheel alignment performed Emissions inspection performed
03/13/2015		New York Inspection Station	Passed safety inspection Emissions inspection performed View what was inspected
03/30/2015	16,686	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Vehicle serviced
07/29/2015	21,256	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Oil and filter changed
12/07/2015	26,529	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
03/28/2016	30,527	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Oil and filter changed Emissions inspection performed
06/12/2016		New York Motor Vehicle Dept. Troy, NY	Registration issued or renewed Passed safety inspection
08/23/2016	35,910	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Oil and filter changed Tires rotated
11/21/2016	39,289	Otto Cadillac, Inc. Albany, NY 518-869-5000 ottocars.com 4.9 83 Verified Reviews	Vehicle serviced

01/06/2017	40,159	DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Vehicle offered for sale
01/07/2017		DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Pre-delivery inspection completed Wipers/washers checked Front brakes serviced Emissions inspection performed Emissions or safety inspection performed
01/10/2017	40,169	New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
01/23/2017	40,171	DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Vehicle sold
01/23/2017		DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Vehicle washed/detailed Undercoating/rustproofing applied
01/23/2017		New York Motor Vehicle Dept. Albany, NY	Registration issued or renewed Passed safety inspection

Owner 2

Purchased: [redacted]
Type: Personal
Where: New York
Est. Miles/Year: 15,241/yr
Est. length: 2 yrs 10 mos
Owned: Present (2 yrs, 5 mos)

Date:	Mileage:	Source:	Comments:
02/10/2017		New York Motor Vehicle Dept. Albany, NY	Title issued or updated New owner reported Loan or lien reported
05/02/2017	44,077	DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Maintenance inspection completed Tires rotated Trim checked Oil and filter changed Cabin air filter replaced/cleaned Air filter replaced
08/01/2017		Damage Report	Damage reported Damage to front

Not all damage is caused by an accident. Get the car inspected before you buy. Learn more

08/01/2017	50,082	DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Maintenance inspection completed Tires rotated Oil and filter changed CD player replaced
01/03/2018	56,328	DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Maintenance inspection completed 5,000 mile service performed Oil and filter changed Tires rotated Body lubricated Tire condition and pressure checked
02/01/2018	57,110	New York Inspection Station	Passed safety inspection Passed emissions inspection

			View what was inspected
05/16/2018	62,290	DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Maintenance inspection completed 5,000 mile service performed Drivability/performance checked Oil and filter changed Tires rotated Body lubricated Tire condition and pressure checked Alignment checked
07/31/2018		New York Motor Vehicle Dept. Albany, NY	Registration issued or renewed Titled or registered as personal vehicle Passed safety inspection Registration updated when owner moved the vehicle to a new location
11/09/2018	68,760	DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Recommended maintenance performed Maintenance inspection completed 5,000 mile service performed Oil and filter changed
11/23/2018		DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Window repaired
02/27/2019	72,023	New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
03/25/2019	73,583	DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Maintenance inspection completed Recommended maintenance performed 5,000 mile service performed Cabin air filter replaced/cleaned Oil and filter changed
08/03/2019	80,931	DePaula Chevrolet Albany, NY 518-489-5551 depaula.com 4.5 93 Verified Reviews	Maintenance inspection completed Recommended maintenance performed 5,000 mile service performed Oil and filter changed

This vehicle's oil change history, as reported to CARFAX, aligns with oil changes reported on other 2014 Cadillac SRX Luxury Collection vehicles - approximately every 6,500 miles. Track your service history for free at myCARFAX.com.

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

View Full Glossary

CARFAX Well Maintained - Regular Oil Changes
CARFAX identifies a "Well Maintained - Regular Oil Change" vehicle as having a regular oil change history when all its recommended oil changes, based on the vehicle's maintenance schedule, have been reported to CARFAX. CARFAX uses the manufacturer's schedule and assumes normal driving conditions. When an oil change schedule is not available, CARFAX may analyze reported service events to determine what is typical for the same make and model vehicle. Dealers and service shops may publish different recommended service schedules.

Damage Indicator

Damage can be a result of many different types of events. Examples include contact with objects (other cars, trees, traffic signs, road debris, etc), vandalism, or weather-related events. Not every damage event is reported to CARFAX. As details about the damage event become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

- This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:58:34 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Title Issued
A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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8/9/19 8:58:34 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE36ES[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	2
Last owned in the following state/province:	New York
Annual average mileage:	15,010

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported

Damage reported on this vehicle. Please see the full CARFAX Vehicle History Report for more details.

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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Covered by United States Patent Nos. 7,113,863; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 8:58:34 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE36ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- ☑ No accidents reported to CARFAX
- Damage reported
- **2** Previous owners
- Regular oil changes
- Types of owners: Personal lease, Personal
- **80,931** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

- ☐ Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

- ☐ Turn on the ignition without starting the car. Do all the warning lights and gauges work?
- ☐ Ensure the airbag light appears momentarily and goes out upon starting the vehicle.
- ☐ Is the odometer consistent with the last reading of 80,931 on the CARFAX report summary above?
- ☐ Do the tires appear to be in good shape and without uneven wear?
- ☐ Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

- ☐ **Accident / Damage reported:** You may want to have the dealer, a mechanic, or body shop inspect the repair.
- ☐ Does the vehicle appear to have been well maintained?
- ☐ When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2014 CADILLAC SRX LUXURY COLLECTION (3GYFNEE36ES614508).

VIN:	3GYFNEE36ES[redacted]
Estimated start date of warranty:	03/14/2014
Last CARFAX reading reported on 08/03/2019:	80,931 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage:	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	Coverage expired
Emissions	96 months or 80,000 miles	Coverage expired
Corrosion	72 months or unlimited mileage	8 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2014 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNEE36ES[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE38ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- Damage reported
- **2** Previous owners
- **9** Service history records
- Types of owners: Personal lease, Personal
- **39,139** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:59:51 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2014	2018
Type of owner	Personal lease	Personal
Estimated length of ownership	3 yrs. 2 mo.	1 yr. 6 mo.
Owned in the following states/provinces	New York	Connecticut
Estimated miles driven per year	6,329/yr	11,378/yr
Last reported odometer reading	22,730	39,139

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss No total loss reported to CARFAX.	No Issues Reported	No Issues Reported
Structural Damage No structural damage reported to CARFAX.	No Issues Reported	No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage Damage reported on 04/25/2019.	✓ No Issues Reported	Damage Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2014
Type: Personal lease
Where: New York
Est. miles/year: 6,129/yr
Est. length: 4/25/14 -
Owned: 7/20/17
(3 yrs, 3 mos)

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

CADILLAC CERTIFIED PRE-OWNED

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
04/05/2014		King O'Rourke Cadillac Buick GMC Smithtown, NY 631-724-4700 kingorourke.com 4.4 ★★★★½ 18 Verified Reviews	Vehicle offered for sale
04/14/2014	5	King O'Rourke Cadillac Buick GMC Smithtown, NY 631-724-4700 kingorourke.com 4.4 ★★★★½ 18 Verified Reviews	Pre-delivery inspection completed
04/17/2014		Dealer Inventory	Vehicle offered for sale
04/24/2014	31	New York Inspection Station	Dealer had vehicle inspected to prepare it for sale Passed safety inspection Emissions inspection performed View what was inspected
04/25/2014		New York Motor Vehicle Dept. East Meadow, NY	Registration issued or renewed Titled or registered as personal lease vehicle Passed safety inspection
05/20/2014		New York Motor Vehicle Dept. Oshkosh, WI	Title issued or updated First owner reported
05/01/2015	7,804	New York Inspection Station	Passed safety inspection Emissions inspection performed View what was inspected
02/03/2016		New York Motor Vehicle Dept. East Meadow, NY	Registration issued or renewed Passed safety inspection
06/01/2016	14,606	New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected

07/20/2017	20,497	Dealer Inventory	Vehicle offered for sale
10/13/2017		Cadillac Certified Dealer Farmingdale, NY	Offered for sale as a Cadillac Certified Pre-Owned Vehicle White exterior Ebony interior
11/08/2017	21,156	New York Inspection Station	Dealer had vehicle inspected to prepare it for sale Passed safety inspection Passed emissions inspection View what was inspected
12/19/2017	21,990	New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
12/23/2017		Cadillac Certified Dealer Farmingdale, NY	Sold as a Cadillac Certified Pre-Owned Vehicle
01/08/2018	22,677	Ingersoll Auto of Danbury Danbury, CT 203-730-5766 ingersollauto.com 4.9 ★★★★½ 104 Verified Reviews	Alignment performed
01/11/2018	22,730	Connecticut Inspection Station Danbury, CT	Passed emissions inspection

Owner 2

Purchased: [redacted]
Type: [redacted]
Where: [redacted]
Est. Length: [redacted]
Owned: [redacted]

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

Date:	Mileage:	Source:	Comments:
01/12/2018		Connecticut Motor Vehicle Dept. Danbury, CT Title #AA1733691	Title or registration issued New owner reported Vehicle color noted as White
03/10/2018	24,487	Ingersoll Auto of Danbury Danbury, CT 203-730-5766 ingersollauto.com 4.9 ★★★★½ 104 Verified Reviews	Vehicle serviced
04/07/2018	26,068	Ingersoll Auto of Danbury Danbury, CT 203-730-5766 ingersollauto.com 4.9 ★★★★½ 104 Verified Reviews	Maintenance inspection completed Fluids checked Oil and filter changed Maintenance reminder reset Tire condition and pressure checked Tires rotated Tire pressure monitoring system reset Body computer/module reprogrammed
10/12/2018	32,576	Ingersoll Auto of Danbury Danbury, CT 203-730-5766 ingersollauto.com 4.9 ★★★★½ 104 Verified Reviews	Maintenance inspection completed Fluids checked Oil and filter changed Maintenance reminder reset Tire condition and pressure checked Tires rotated Tire pressure monitoring system reset
04/10/2019	37,599	Ingersoll Auto of Danbury Danbury, CT 203-730-5766 ingersollauto.com 4.9 ★★★★½ 104 Verified Reviews	Maintenance inspection completed Fluids checked Oil and filter changed Maintenance reminder reset Tire condition and pressure checked Tires rotated Tire pressure monitoring system reset
04/25/2019		Damage Report	Damage reported Damage to rear

Damage to front

Not all damage is caused by an accident. Get the car inspected before you buy. Learn more

05/13/2019	38,182	Volvo of Danbury Danbury, CT 203-748-4600 thepremiercollection.com **4.0** 8 Verified Reviews	Four wheel alignment performed
05/23/2019	38,187	Ingersoll Auto of Danbury Danbury, CT 203-730-5766 ingersollauto.com **4.9** 104 Verified Reviews	Maintenance inspection completed
06/23/2019	39,139	Ingersoll Auto of Danbury Danbury, CT 203-730-5766 ingersollauto.com **4.9** 104 Verified Reviews	Maintenance inspection completed Alignment performed

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

View Full Glossary

Damage Indicator
Damage can be a result of many different types of events. Examples include contact with objects (other cars, trees, traffic signs, road debris, etc), vandalism, or weather-related events. Not every damage event is reported to CARFAX. As details about the damage event become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

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First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
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Title Issued
A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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8/9/19 8:59:51 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE38ES[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE
Certified on 12/23/2017

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	2
Last owned in the following state/province:	Connecticut
Annual average mileage:	7,578 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported

Damage reported on this vehicle. Please see the full CARFAX Vehicle History Report for more details.

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 8:59:51 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE38ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- Damage reported
- **2** Previous owners
- **9** Service history records
- Types of owners: Personal lease, Personal
- **39,139** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 39,139 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Accident / Damage reported: You may want to have the dealer, a mechanic, or body shop inspect the repair.

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2014 CADILLAC SRX LUXURY COLLECTION (3GYFNEE38ES642729).

VIN:	3GYFNEE38ES[redacted]
Estimated start date of warranty:	04/25/2014
Last CARFAX reading reported on 06/23/2019:	39,139 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	9 months or 30,861 miles
Emissions	96 months or 80,000 miles	33 months or 40,861 miles
Corrosion	72 months or unlimited mileage	9 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2014 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNEE38ES[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE39ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- No damage reported to CARFAX
- CARFAX 1-Owner vehicle
- Regular oil changes
- Personal lease vehicle
- **53,682** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:57:19 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1
Year purchased	2014
Type of owner	Personal lease
Estimated length of ownership	3 months
Owned in the following states/provinces	Connecticut
Estimated miles driven per year	---
Last reported odometer reading	53,682

CARFAX 1 OWNER

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem

BUYBACK GUARANTEE

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1
Total Loss No total loss reported to CARFAX.	✓ No Issues Reported
Structural Damage No structural damage reported to CARFAX.	✓ No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	☑ No Issues Reported
Odometer Check No indication of an odometer rollback.	☑ No Issues Indicated
Accident / Damage No accidents or damage reported to CARFAX.	☑ No Issues Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	☑ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**

CARFAX Detailed History

Owner 1
Purchased: 2014
Type: Personal lease
Where: [redacted]
Est. length: [redacted]
owned: [redacted]
[redacted] months

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
02/04/2014	10	R.C. Olsen Cadillac Woburn, MA 781-935-7000 olsencadillac.com **4.7** ★★★★½ 20 Verified Reviews	Vehicle offered for sale
04/08/2014		R.C. Olsen Cadillac Woburn, MA 781-897-0507 olsencadillac.com **4.7** ★★★★½ 20 Verified Reviews	Pre-delivery inspection completed Mud flaps/splash guards installed
04/19/2014	156	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com **4.7** ★★★★½ 58 Verified Reviews	Vehicle sold
04/19/2014		Connecticut Motor Vehicle Dept.	Vehicle purchase reported
04/21/2014		Connecticut Motor Vehicle Dept. Minneapolis, MN	Registration issued or renewed Titled or registered as personal lease vehicle Vehicle color noted as Black Two states? Vehicle leasing companies often title a car in one state but register it to be driven in another.
04/25/2014	209	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com **4.7** ★★★★½ 58 Verified Reviews	Drivability/performance checked Transfer case replaced Vehicle washed/detailed
05/08/2014		Connecticut Motor Vehicle Dept.	Title issued or updated First owner reported

		Minneapolis, MN Title #034651915	Loan or lien reported
05/09/2014	617	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Vehicle serviced
08/06/2014		Dealer Inventory	Vehicle offered for sale
08/11/2014	3,732	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed
10/02/2014	5,498	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Vehicle serviced
12/29/2014	8,058	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Tire condition and pressure checked Tires rotated Oil and filter changed Door locks checked
01/16/2015	8,353	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Door locks checked
04/15/2015	10,553	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Battery replaced
04/27/2015	11,070	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed
06/04/2015	12,587	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Battery replaced Oil and filter changed Engine oil/fluid leak checked
07/10/2015	13,616	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7	Cabin air filter replaced/cleaned

		58 Verified Reviews	
09/30/2015	15,563	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed Tire condition and pressure checked Tires rotated
10/14/2015	16,149	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Remote(s) programmed Body electrical system checked
12/11/2015	17,274	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Body electrical system checked Transmission checked
12/31/2015		Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Transmission checked Body electrical system checked
01/29/2016	18,545	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed
04/01/2016		Connecticut Motor Vehicle Dept. Terryville, CT Title #034651915	Registration issued or renewed Loan or lien reported Vehicle color noted as Black
06/07/2016	21,793	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Vehicle washed/detailed Cabin air filter replaced/cleaned Oil and filter changed Tires rotated
08/22/2016	23,848	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Vehicle serviced
12/19/2016	26,345	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Oil and filter changed Tires rotated
04/17/2017	29,195	Stephen Automall Centre Inc. Bristol, CT 860-583-3325	Maintenance inspection completed Oil and filter changed

		ctautomall.com 4.7 58 Verified Reviews	
07/19/2017	31,868	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Vehicle sold
07/24/2017	32,125	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Steering/suspension checked Three tires mounted Drivability/performance checked
08/17/2017		Connecticut Motor Vehicle Dept. Terryville, CT	Registration issued or renewed Loan or lien reported Vehicle color noted as Black
09/07/2017	33,397	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed
09/15/2017		Connecticut Motor Vehicle Dept. Terryville, CT Title #AA1457296	Registration issued or renewed Loan or lien reported Vehicle color noted as Black
01/24/2018	36,866	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated Tire condition and pressure checked
03/09/2018	38,159	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	A/C and heating system checked
03/19/2018	38,415	Connecticut Inspection Station Thomaston, CT	Passed emissions inspection
06/08/2018	41,439	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Recommended maintenance performed Maintenance inspection completed Tires rotated Noise checked Oil and filter changed
09/11/2018	44,858	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Battery/charging system checked Battery replaced
10/29/2018	46,242	Stephen Automall Centre Inc.	Maintenance inspection completed Oil and filter changed

		Bristol, CT 860-583-3325 clautomall.com 4.7 58 Verified Reviews	
03/01/2019	49,242	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 clautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed A/C and heating system checked Tires rotated Oil and filter changed
05/04/2019	51,367	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 clautomall.com 4.7 58 Verified Reviews	Four wheel alignment performed Rear suspension checked Steering/suspension checked Alignment performed Sensor replaced Computer(s) checked
06/21/2019	53,682	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 clautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed
07/01/2019		Connecticut Motor Vehicle Dept. Terryville, CT Title #AA1457296	Registration issued or renewed Loan or lien reported Vehicle color noted as Black

Avoid financial headaches. Make sure the loan has been paid off if you're buying from a private seller.

This vehicle's oil change history, as reported to CARFAX, aligns with oil changes reported on other 2014 Cadillac SRX Luxury Collection vehicles - approximately every 6,500 miles. Track your service history for free at myCARFAX.com.

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

View Full Glossary

CARFAX Well Maintained - Regular Oil Changes
CARFAX identifies a "Well Maintained - Regular Oil Change" vehicle as having a regular oil change history when all its recommended oil changes, based on the vehicle's maintenance schedule, have been reported to CARFAX. CARFAX uses the manufacturer's schedule and assumes normal driving conditions. When an oil change schedule is not available, CARFAX may analyze reported service events to determine what is typical for the same make and model vehicle. Dealers and service shops may publish different recommended service schedules.

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Title Issued

A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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8/9/19 8:57:19 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE39ES[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE

CARFAX 1 OWNER

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners: CARFAX 1-OWNER

Last owned in the following state/province:	Connecticut
Annual average mileage:	10,372 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

CARFAX BUYBACK GUARANTEE

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported
Other Accidents / Damage	☑ No Issues Reported

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 8:57:19 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2014 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE39ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- No damage reported to CARFAX
- CARFAX 1-Owner vehicle
- Regular oil changes
- Personal lease vehicle
- **53,682** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 53,682 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Are the brakes and other safety equipment in good working order?

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2014 CADILLAC SRX LUXURY COLLECTION (3GYFNEE39ES616169).

VIN:	3GYFNEE39ES[redacted]
Estimated start date of warranty:	04/19/2014
Last CARFAX reading reported on 06/21/2019:	53,682 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	9 months or 16,318 miles
Emissions	96 months or 80,000 miles	33 months or 26,318 miles
Corrosion	72 months or unlimited mileage	9 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2014 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNEE39ES[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

US $39.99

An independent company established in 1986

Vehicle Information:
2014 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNGE34ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- Damage reported
- CARFAX 1-Owner vehicle
- **16** Service history records
- Lease vehicle
- **88,887** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:54:34 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1
Year purchased	2013
Type of owner	Lease
Estimated length of ownership	5 yrs. 8 mo.
Owned in the following states/provinces	Alberta
Estimated miles driven per year	16,053/yr
Last reported odometer reading	88,887

CARFAX 1 OWNER

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem

BUYBACK GUARANTEE

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1
Total Loss No total loss reported to CARFAX.	No Issues Reported
Structural Damage No structural damage reported to CARFAX.	No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	No Issues Reported
Odometer Check No indication of an odometer rollback.	No Issues Indicated
Accident / Damage Damage reported on 01/16/2015.	Damage Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**

CARFAX Detailed History

Owner 1
Purchased: 2013
Type: [illegible]
Where: [illegible]
Est. odometer: [illegible]
Est. length: [illegible]
owned: [illegible]
[illegible]

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
12/06/2013	16	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Pre-delivery inspection completed Vehicle washed/detailed Odometer reported as 26 kilometers
12/07/2013		Alberta Motor Vehicle Dept. Calgary, AB	Registration issued or renewed First owner reported Registered as lease vehicle Vehicle color noted as Medium Gray
12/19/2013		Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Vehicle serviced
02/08/2014		Alberta Motor Vehicle Dept. Calgary, AB	Registration issued or renewed Registered as lease vehicle Vehicle color noted as Medium Gray
10/31/2014	10,694	Service Facility Calgary, AB	Vehicle serviced Odometer reported as 17,210 kilometers
01/16/2015		Damage Report Alberta	Damage reported Claim amount was CAD$1,334 Claim amount was updated on 03/10/2018.
			Not all damage is caused by an accident. Get the car inspected before you buy. Learn more
10/07/2015	28,686	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Oil and filter changed Odometer reported as 46,166 kilometers
10/22/2015	29,122	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/in	Transfer case replaced Odometer reported as 46,867 kilometers

		dex.htm	
11/18/2015		Alberta Motor Vehicle Dept. Calgary, AB	Registration issued or renewed Registered as lease vehicle Vehicle color noted as Medium Gray
04/19/2016	37,296	GSL GM City Calgary, AB 403-781-1530 gslchevcity.com	Maintenance inspection completed Oil and filter changed Tires rotated Odometer reported as 60,022 kilometers
10/08/2016	45,224	GSL GM City Calgary, AB 403-781-1530 gslchevcity.com	Cabin air filter replaced/cleaned Oil and filter changed Odometer reported as 72,781 kilometers
10/31/2016	45,968	GSL GM City Calgary, AB 403-781-1530 gslchevcity.com	Blower motor replaced/repaired Odometer reported as 73,978 kilometers
01/25/2017		Alberta Motor Vehicle Dept. Calgary, AB	Registration issued or renewed Registered as lease vehicle Vehicle color noted as Medium Gray
06/26/2017		Alberta Motor Vehicle Dept. Calgary, AB	Registration issued or renewed Registered as lease vehicle Vehicle color noted as Medium Gray
10/17/2017		Alberta Motor Vehicle Dept. Calgary, AB	Registration issued or renewed Registered as lease vehicle Vehicle color noted as Medium Gray
12/29/2017	57,538	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Alignment checked Steering gear replaced Odometer reported as 92,598 kilometers
03/13/2018		Alberta Motor Vehicle Dept. Calgary, AB	Registration issued or renewed Vehicle color noted as Medium Gray
05/02/2018	60,605	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Maintenance inspection completed Lights checked Heated seat repaired Odometer reported as 97,534 kilometers
08/17/2018	68,079	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Maintenance inspection completed Lights checked Odometer reported as 109,563 kilometers
12/11/2018	74,994	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Vehicle serviced Odometer reported as 120,691 kilometers
01/15/2019	77,130	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Tire repaired Odometer reported as 124,129 kilometers
02/02/2019		Alberta Motor Vehicle Dept. Calgary, AB	Registration issued or renewed Vehicle color noted as Medium Gray
02/13/2019	78,819	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Lights checked Thermostat housing/gasket replaced Odometer reported as 126,847 kilometers

06/04/2019	86,087	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Alignment checked Odometer reported as 138,544 kilometers
06/20/2019	88,887	Jack Carter Chevrolet Cadillac Buick GMC Calgary, AB 403-258-6300 jackcarterchev.ca/index.htm	Vehicle serviced Odometer reported as 143,050 kilometers

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

Canadian Damage Report
CARFAX receives damage reports for many accidents occurring in the following Canadian Provinces: Ontario, Alberta, Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland, Yukon territories, Northwest territories, and Nunavut. These reports may be completed following an accident or other incident. Some include a damage claim amount. This amount represents physical damage to the vehicle and depending on the accident, damage to other vehicles and/or property. It does not include expenses like towing, a rental car or any medical related items.

Damage Indicator
Damage can be a result of many different types of events. Examples include contact with objects (other cars, trees, traffic signs, road debris, etc), vandalism, or weather-related events. Not every damage event is reported to CARFAX. As details about the damage event become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

- This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:54:34 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

Lease
When someone leases a car from a dealer, the dealer actually sells the vehicle to a leasing company. The leasing company then collects payments for the vehicle from the new owner for 24, 36, 48 or more months. A leasing company can be an independent car dealer or a car manufacturer.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

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8/9/19 8:54:34 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2014 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNGE34ES[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE

CARFAX 1 OWNER

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners: CARFAX 1-OWNER

Last owned in the following state/province:	Alberta
Annual average mileage:	16,053

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

CARFAX BUYBACK GUARANTEE

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	**Guaranteed** No Problem
Not Actual Mileage, Exceeds Mechanical Limits	**Guaranteed** No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported

Damage reported on this vehicle. Please see the full CARFAX Vehicle History Report for more details.

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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8/9/19 8:54:34 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2014 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNGE34ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | **Safety Options**

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- Damage reported
- CARFAX 1-Owner vehicle
- **16** Service history records
- Lease vehicle
- **88,887** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 88,887 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Accident / Damage reported: You may want to have the dealer, a mechanic, or body shop inspect the repair.

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2014 CADILLAC SRX PREMIUM COLLECTION (3GYFNGE34ES[redacted].

VIN:	3GYFNGE34ES[redacted]
Estimated start date of warranty:	12/07/2013
Last CARFAX reading reported on 06/20/2019:	88,887 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	Coverage expired
Emissions	96 months or 80,000 miles	Coverage expired
Corrosion	72 months or unlimited mileage	4 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2014 CADILLAC SRX PREMIUM COLLECTION

VIN: 3GYFNGE34ES[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2014 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNGE36ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **2** Previous owners
- **20** Service history records
- Types of owners: Personal lease, Personal
- **56,559** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 8:55:15 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2013	2016
Type of owner	Personal lease	Personal
Estimated length of ownership	2 yrs. 2 mo.	2 yrs. 10 mo.
Owned in the following states/provinces	Michigan, Illinois	Illinois
Estimated miles driven per year	11,065/yr	11,731/yr
Last reported odometer reading	24,733	56,559

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss No total loss reported to CARFAX.	No Issues Reported	No Issues Reported
Structural Damage No structural damage reported to CARFAX.	No Issues Reported	No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage No accidents or damage reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2013
Type: Personal lease
Where: Michigan, Illinois
Est. miles/year: 11,065/yr
Est. length: 12/23/13 -
Owned: 2 yrs, 3 mos)

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

CADILLAC CERTIFIED PRE-OWNED

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
11/14/2013		Cadillac of Novi Novi, MI 248-476-4466 cadillacofnovi.com 4.3 ★★★★½ 32 Verified Reviews	Vehicle serviced
11/14/2013		Dealer Inventory	Vehicle offered for sale
11/15/2013		Dealer Inventory	Vehicle offered for sale
12/18/2013	16	Cadillac of Novi Novi, MI 248-476-4466 cadillacofnovi.com 4.3 ★★★★½ 32 Verified Reviews	Vehicle sold
12/23/2013		Michigan Motor Vehicle Dept. Farmington, MI Title #603B3571899	Title or registration issued First owner reported Titled or registered as personal lease vehicle
03/20/2014		Cadillac of Novi Novi, MI 248-476-4466 cadillacofnovi.com 4.3 ★★★★½ 32 Verified Reviews	Vehicle serviced
07/15/2014		Cadillac of Novi Novi, MI 248-476-4466 cadillacofnovi.com 4.3 ★★★★½ 32 Verified Reviews	Vehicle serviced
11/08/2014		Cadillac of Novi Novi, MI 248-476-4466 cadillacofnovi.com 4.3 ★★★★½ 32 Verified Reviews	Wheels checked Four wheel alignment performed
11/17/2014		Cadillac of Novi	Electrical system checked

		Novi, MI 248-476-4466 cadillacofnovi.com **4.3** 32 Verified Reviews	
11/25/2014		Michigan Motor Vehicle Dept. Farmington, MI	Registration issued or renewed
05/12/2015	21,554	Suburban Cadillac of Plymouth Plymouth, MI 734-453-7500 suburbancadillacofplymouth.com **4.8** 215 Verified Reviews	Maintenance inspection completed Electrical system checked
02/24/2016	24,041	Auto Auction Wisconsin	Vehicle sold Millions of used vehicles are bought and sold at auction every year.
02/24/2016		Glenview Mitsubishi Glenview, IL 847-832-1400 glenviewmitsubishi.com **4.1** 20 Verified Reviews	Vehicle offered for sale
03/08/2016	24,043	Glenview Mitsubishi Glenview, IL 847-832-1400 glenviewmitsubishi.com/search/used/tp/?utm_campaign=carfaxadpack **4.1** 20 Verified Reviews	Pre-delivery inspection completed Wheel locks installed Nitrogen fill tires
06/02/2016	24,556	Auto Auction	Vehicle sold
06/03/2016		Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ **4.3** 46 Verified Reviews	Vehicle offered for sale
06/06/2016		Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ **4.3** 46 Verified Reviews	Pre-delivery inspection completed Air filter replaced Oil and filter changed
07/06/2016	24,724	Joe Rizza Ford Lincoln Porsche Orland Park, IL 800-728-0866 rizzafordorlandpark.com/ **4.6** 255 Verified Reviews	Vehicle serviced

07/06/2016		Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Vehicle serviced
08/29/2016		Cadillac Certified Dealer Tinley Park, IL	Offered for sale as a Cadillac Certified Pre-Owned Vehicle Silver exterior
09/05/2016		Illinois Motor Vehicle Dept.	Vehicle purchase reported
09/14/2016	24,733	Cadillac Certified Dealer Tinley Park, IL	Sold as a Cadillac Certified Pre-Owned Vehicle
09/16/2016		Illinois Motor Vehicle Dept. Tinley Park, IL	Registration issued or renewed

Owner 2

Purchased: [redacted]
Type: Personal
Where: Illinois
Est. miles/year: 11,771/yr
Est. length: 2 yrs, 10 mos
Owned: [redacted]

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

Date:	Mileage:	Source:	Comments:
09/20/2016		Illinois Motor Vehicle Dept. Tinley Park, IL Title #162646922070	Title issued or updated New owner reported Vehicle color noted as Gray
09/30/2016		Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Interior trim checked
01/06/2017	28,692	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Tires rotated Air filter replaced Oil and filter changed Cabin air filter replaced/cleaned
01/31/2017	29,427	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Brakes checked Brake fluid flushed/changed
05/16/2017	32,944	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Tires rotated Oil and filter changed Steering/suspension lubricated
07/10/2017	34,749	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Vehicle serviced

09/29/2017		Illinois Motor Vehicle Dept. Tinley Park, IL	Registration issued or renewed
11/04/2017	38,662	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Tires rotated Tire condition and pressure checked Oil and filter changed Body electrical system checked Tire(s) replaced Steering/suspension lubricated Battery serviced
04/02/2018	42,829	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Four wheel alignment performed Oil and filter changed Tires rotated Tire condition and pressure checked Tire(s) replaced Anti-theft/keyless remote battery replaced
09/22/2018	48,000	Illinois Inspection Station Harvey, IL	Passed emissions inspection
09/25/2018		Illinois Motor Vehicle Dept. Tinley Park, IL	Registration issued or renewed
03/28/2019	54,837	The Car Spa Car Wash at Park Hills Tinley Park, IL 312-805-3205 https://parkhillscarspa.com/	Maintenance inspection completed Oil and filter changed Vehicle washed/detailed
05/23/2019	56,559	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Air filter replaced Cabin air filter replaced/cleaned Antifreeze/coolant flushed/changed Suspension serviced
05/24/2019		De Re Tire Orland Hills, IL 708-403-4500 deretire.com/ 4.4 7 Verified Reviews	Vehicle serviced

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CARFAX Glossary

View Full Glossary

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Title Issued

A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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8/9/19 8:55:15 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2014 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNGE36ES[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE
Certified on 09/14/2016

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	2
Last owned in the following state/province:	Illinois
Annual average mileage:	10,442 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported
Other Accidents / Damage	☑ No Issues Reported

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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8/9/19 8:55:15 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2014 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNGE36ES[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **2** Previous owners
- **20** Service history records
- Types of owners: Personal lease, Personal
- **56,559** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 56,559 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Are the brakes and other safety equipment in good working order?

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

Q8_000003537

CARFAX Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2014 CADILLAC SRX PREMIUM COLLECTION (3GYFNGE36ES[redacted].

VIN:	3GYFNGE36ES[redacted]
Estimated start date of warranty:	12/23/2013
Last CARFAX reading reported on 05/23/2019:	56,559 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	5 months or 13,441 miles
Emissions	96 months or 80,000 miles	29 months or 23,441 miles
Corrosion	72 months or unlimited mileage	5 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2014 CADILLAC SRX PREMIUM COLLECTION

VIN: 3GYFNGE36ES[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNBE38FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
FRONT WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- Damage reported
- **2** Previous owners
- **14** Service history records
- Types of owners: Personal lease, Personal
- **56,864** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:02:20 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2015	2017
Type of owner	Personal lease	Personal
Estimated length of ownership	2 yrs. 3 mo.	1 yr. 8 mo.
Owned in the following states/provinces	Illinois	Illinois
Estimated miles driven per year	10,285/yr	20,764/yr
Last reported odometer reading	23,254	56,864

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss No total loss reported to CARFAX.	No Issues Reported	No Issues Reported
Structural Damage No structural damage reported to CARFAX.	No Issues Reported	No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	No Issues Reported	No Issues Reported
Odometer Check No indication of an odometer rollback.	No Issues Indicated	No Issues Indicated
Accident / Damage Damage reported on: 07/27/2015, 07/31/2017 and 03/23/2018.	Damage Reported	Damage Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	No Recalls Reported	No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2015
Type: Personal lease
Where: Illinois
Est. miles/year: 10,765/yr
Est. length: 3/29/15 - 3/31/17
Owned: (2 yrs, 3 mos)

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

CADILLAC CERTIFIED PRE-OWNED

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
11/26/2014		Rizza Cadillac Buick Hummer Saab Tinley Park, IL 708-429-6600 rizza.com 4.3 ★★★★½ 46 Verified Reviews	Vehicle offered for sale
01/29/2015	3	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 ★★★★½ 46 Verified Reviews	Pre-delivery inspection completed
05/29/2015	2,990	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 ★★★★½ 46 Verified Reviews	Vehicle sold
05/29/2015		Illinois Motor Vehicle Dept.	Vehicle purchase reported Titled or registered as personal lease vehicle
06/16/2015		Illinois Motor Vehicle Dept. Dolton, IL Title #151676952710	Title issued or updated Registration issued or renewed First owner reported Loan or lien reported Vehicle color noted as Black
07/27/2015		Damage Report	Damage reported Damage to front
11/30/2015	7,267	Rizza Cadillac Buick	Maintenance inspection completed

Not all damage is caused by an accident. Get the car inspected before you buy. Learn more

		GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Tires rotated Oil and filter changed Internal transmission repaired
05/31/2016		Illinois Motor Vehicle Dept. Dolton, IL	Registration issued or renewed
11/09/2016	13,502	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Tires rotated Oil and filter changed
05/15/2017	17,115	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Interior trim checked Mud flaps/splash guards installed
05/18/2017		Illinois Motor Vehicle Dept. Dolton, IL	Registration issued or renewed
06/19/2017	19,974	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Tires rotated Air filter replaced Oil and filter changed Cabin air filter replaced/cleaned Steering/suspension lubricated
07/05/2017		Illinois Motor Vehicle Dept. Dolton, IL	Registration issued or renewed Correction to record
07/10/2017	22,076	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Exterior trim checked
07/11/2017		Illinois Motor Vehicle Dept. Dolton, IL Title #171926902190	Title issued or updated Correction to record Vehicle color noted as Black
07/31/2017		Damage Report	Damage reported This incident was first available for display by CARFAX on 11/29/2018.
			Not all damage is caused by an accident. Get the car inspected before you buy. Learn more
08/31/2017	23,247	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600	Vehicle offered for sale

		rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	
09/08/2017	23,254	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Pre-delivery inspection completed
09/09/2017		Cadillac Certified Dealer Tinley Park, IL	Offered for sale as a Cadillac Certified Pre-Owned Vehicle Black exterior
10/28/2017		Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Vehicle sold
10/28/2017		Illinois Motor Vehicle Dept.	Vehicle purchase reported
10/30/2017		Cadillac Certified Dealer Tinley Park, IL	Sold as a Cadillac Certified Pre-Owned Vehicle
11/17/2017		Illinois Motor Vehicle Dept. Monee, IL	Registration issued or renewed

Owner 2

Purchased: 2017
Type: Personal
Where: Illinois
Est. miles/year: 26,764/yr
Est. length: 11/30/17
Owned: (Closed)
(1 yr. 0 mo.)

Date:	Mileage:	Source:	Comments:
11/20/2017	23,300	Illinois Motor Vehicle Dept. Monee, IL Title #173247007000	Title issued or updated New owner reported Loan or lien reported Vehicle color noted as Black
			Avoid financial headaches. Make sure the loan has been paid off if you're buying from a private seller.
01/20/2018	27,407	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Recommended maintenance performed Tires rotated Oil and filter changed
03/23/2018		Damage Report	Damage reported Damage to right rear Damage to rear Damage to front
			Not all damage is caused by an accident. Get the car inspected before you buy. Learn more
06/18/2018	34,391	Rizza Cadillac Buick GMC	Maintenance inspection completed Recommended maintenance performed

		Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Tires rotated Oil and filter changed
10/13/2018	42,237	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Tires rotated Oil and filter changed Anti-theft/keyless remote battery replaced
02/18/2019	48,887	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
05/02/2019	53,274	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Suspension serviced
05/20/2019	54,183	Pep Boys Homewood, IL 708-647-0774 pepboys.com 4.5 19 Verified Reviews	Maintenance inspection completed Tire(s) balanced
07/03/2019	56,864	Rizza Cadillac Buick GMC Tinley Park, IL 708-429-6600 rizzabuickcadillacgmc.com/ 4.3 46 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

View Full Glossary

Damage Indicator
Damage can be a result of many different types of events. Examples include contact with objects (other cars, trees, traffic signs, road debris, etc), vandalism, or weather-related events. Not every damage event is reported to CARFAX. As details about the damage event become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

- This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:02:20 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported

When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Title Issued
A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512, 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 9:02:20 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNBE38FS[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: FRONT WHEEL DRIVE
Certified on 10/30/2017

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	2
Last owned in the following state/province:	Illinois
Annual average mileage:	13,873 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported

Damage reported on this vehicle. Please see the full CARFAX Vehicle History Report for more details.

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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Covered by United States Patent Nos. 7,113,863; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 9:02:20 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNBE38FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
FRONT WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- Damage reported
- **2** Previous owners
- **14** Service history records
- Types of owners: Personal lease, Personal
- **56,864** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 56,864 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Accident / Damage reported: You may want to have the dealer, a mechanic, or body shop inspect the repair.

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2015 CADILLAC SRX LUXURY COLLECTION (3GYFNBE38FS[redacted].

VIN:	3GYFNBE38FS[redacted]
Estimated start date of warranty:	05/29/2015
Last CARFAX reading reported on 07/03/2019:	56,864 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	22 months or 13,136 miles
Emissions	96 months or 80,000 miles	46 months or 23,136 miles
Corrosion	72 months or unlimited mileage	22 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2015 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNBE38FS[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: FRONT WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE30FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **2** Previous owners
- **13** Service history records
- Types of owners: Personal lease, Personal
- **49,653** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:01:10 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2015	2018
Type of owner	Personal lease	Personal
Estimated length of ownership	2 yrs. 8 mo.	4 days
Owned in the following states/provinces	Connecticut	Connecticut
Estimated miles driven per year	12,251/yr	—
Last reported odometer reading	32,766	49,653

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss No total loss reported to CARFAX.	No Issues Reported	No Issues Reported
Structural Damage No structural damage reported to CARFAX.	No Issues Reported	No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage No accidents or damage reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have 0 months or 347 miles remaining.	✓ Warranty Active	✓ Warranty Active

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2015
Type: Personal lease
Where: Connecticut
Est. miles/year: 12,257/yr
Est. length: 7/10/15 -
owned: 3/19/16
(2 yrs, 8 mo.)

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
05/19/2015	10	Stephen Automall Centre Inc. Bristol, CT 800-816-4607 ctautomall.com 4.7 ★★★★½ 58 Verified Reviews	Vehicle offered for sale
06/08/2015		Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 ★★★★½ 58 Verified Reviews	Pre-delivery inspection completed
07/10/2015	14	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 ★★★★½ 58 Verified Reviews	Vehicle sold
07/10/2015		Connecticut Motor Vehicle Dept.	Vehicle purchase reported
07/30/2015		Connecticut Motor Vehicle Dept. Arlington, TX Title #035461803	Title issued or updated Registration issued or renewed First owner reported Titled or registered as personal lease vehicle Loan or lien reported Vehicle color noted as Black
02/02/2016	8,039	Stephen Automall Centre Inc. Bristol, CT 860-583-3325	Maintenance inspection completed Oil and filter changed

Two states? Vehicle leasing companies often title a car in one state but register it to be driven in another.

		ctautomall.com 4.7 58 Verified Reviews	
10/04/2016	15,685	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Tires rotated Oil and filter changed
06/16/2017	25,255	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Cabin air filter replaced/cleaned Oil and filter changed Tires rotated Tire condition and pressure checked
09/19/2017	28,742	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Vehicle serviced
02/16/2018	32,260	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed
03/12/2018	32,760	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Vehicle offered for sale
03/13/2018	32,765	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed
05/09/2018	32,766	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Vehicle serviced

Owner 2
Purchased: 2018
Type: Personal
Where: Connecticut
Est. length: 2 mo (0 yrs)
owned: 5/23/18
(0 days)

Date:	Mileage:	Source:	Comments:
05/19/2018		Connecticut Motor Vehicle Dept. New Hartford, CT	Title or registration issued New owner reported Loan or lien reported Vehicle color noted as Black
05/23/2018	33,365	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 ctautomall.com 4.7 58 Verified Reviews	Vehicle sold

06/06/2018	34,292	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 clautomall.com 4.7 58 Verified Reviews	Transmission checked Rear compartment carpet replaced
06/08/2018		Connecticut Motor Vehicle Dept. New Hartford, CT Title #AA1981319	Title or registration issued Loan or lien reported Registration updated when owner moved the vehicle to a new location Vehicle color noted as Black Avoid financial headaches. Make sure the loan has been paid off if you're buying from a private seller.
08/17/2018	37,745	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 clautomall.com 4.7 58 Verified Reviews	Four wheel alignment performed Steering/suspension checked Tire condition and pressure checked Alignment performed Two tires mounted Two tires balanced
10/12/2018	41,019	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 clautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed
04/03/2019	45,901	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 clautomall.com 4.7 58 Verified Reviews	Maintenance inspection completed Oil and filter changed Cabin air filter replaced/cleaned Tires rotated Air filter replaced Tire condition and pressure checked
05/28/2019	47,704	Stephen Automall Centre Inc. Bristol, CT 860-583-3325 clautomall.com 4.7 58 Verified Reviews	Steering/suspension checked
07/16/2019	49,653	Connecticut Inspection Station Torrington, CT	Passed emissions inspection

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle

history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Title Issued
A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512, 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 9:01:10 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE30FS[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE

Original Manufacturer's Warranty:
Basic Warranty Active
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	2
Last owned in the following state/province:	Connecticut
Annual average mileage:	12,354 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported
Other Accidents / Damage	☑ No Issues Reported

Ask your dealer for the full CARFAX® Vehicle History Report™

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 9:01:10 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE30FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
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(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **2** Previous owners
- **13** Service history records
- Types of owners: Personal lease, Personal
- **49,653** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 49,653 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Are the brakes and other safety equipment in good working order?

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2015 CADILLAC SRX LUXURY COLLECTION (3GYFNEE30FS[redacted].

VIN:	3GYFNEE30FS[redacted]
Estimated start date of warranty:	07/10/2015
Last CARFAX reading reported on 07/16/2019:	49,653 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	24 months or 20,347 miles
Emissions	96 months or 80,000 miles	48 months or 30,347 miles
Corrosion	72 months or unlimited mileage	24 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2015 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNEE30FS[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE33FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
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Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- Damage reported
- **2** Previous owners
- Types of owners: Personal lease, Personal
- Last owned in Delaware
- **55,854** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:01:55 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2015	2018
Type of owner	Personal lease	Personal
Estimated length of ownership	3 years	1 yr. 1 mo.
Owned in the following states/provinces	New York, Pennsylvania	Delaware
Estimated miles driven per year	7,705/yr	---
Last reported odometer reading	24,955	55,854

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss No total loss reported to CARFAX.	No Issues Reported	No Issues Reported
Structural Damage	No Issues Reported	No Issues Reported

No structural damage reported to CARFAX.	✓	✓
Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage Damage reported on 02/04/2019.	✓ No Issues Reported	Damage Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2015
Type: Personal lease
Where: New York, Pennsylvania
Est. miles/year: 7,705/yr
Est. length: 2/16/15
owned: 2 yrs 11 m
(3 years)

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

CADILLAC CERTIFIED PRE-OWNED

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
01/16/2015	6	New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
01/16/2015		New York Motor Vehicle Dept. Buffalo, NY	Registration issued or renewed Titled or registered as personal lease vehicle Passed safety inspection
02/10/2015		New York Motor Vehicle Dept. Cockeysville, MD	Title issued or updated First owner reported Titled or registered as personal lease vehicle Loan or lien reported Two states? Vehicle leasing companies often title a car in one state but register it to be driven in another.
11/10/2015		New York Motor Vehicle Dept. Buffalo, NY	Registration issued or renewed Titled or registered as personal lease vehicle Passed safety inspection
01/28/2016	8,412	New York Inspection Station	Passed safety inspection Emissions inspection performed View what was inspected
02/01/2018	23,476	Auto Auction	Vehicle sold Millions of used vehicles are bought and sold at auction every year.
02/01/2018		Fairway Motors Hazle Township, PA 570-455-7701 fairwaymotors.com **4.6** ★★★★½ 42 Verified Reviews	Vehicle offered for sale

02/13/2018		Pennsylvania Motor Vehicle Dept. Hazleton, PA Title #7857660301 FA	Title issued or updated Dealer took title of this vehicle while it was in inventory
04/07/2018	23,762	Dealer Inventory	Vehicle offered for sale
04/10/2018		Cadillac Certified Dealer Wilmington, DE	Offered for sale as a Cadillac Certified Pre-Owned Vehicle White exterior
05/31/2018	24,955	Cadillac Certified Dealer Wilmington, DE	Sold as a Cadillac Certified Pre-Owned Vehicle

Owner 2

Date:	Mileage:	Source:	Comments:
06/16/2018		Delaware Motor Vehicle Dept. Smyrna, DE Title #PC054031	Title or registration issued New owner reported
02/04/2019		Damage Report	Damage reported
			Not all damage is caused by an accident. Get the car inspected before you buy. Learn more
08/07/2019	55,854	Delaware Motor Vehicle Dept. Smyrna, DE Title #PC054031	Registration issued or renewed

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

Damage Indicator
Damage can be a result of many different types of events. Examples include contact with objects (other cars, trees, traffic signs, road debris, etc), vandalism, or weather-related events. Not every damage event is reported to CARFAX. As details about the damage event become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

- This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:01:55 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Title Issued
A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512; 8,600,623; 8,595,079; 8,606,648; 7,505,838.

8/9/19 9:01:55 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE33FS[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE
Certified on 05/31/2018

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	2
Last owned in the following state/province:	Delaware
Annual average mileage:	12,251 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported

Damage reported on this vehicle. Please see the full CARFAX Vehicle History Report for more details.

Ask your dealer for the full CARFAX® Vehicle History Report™

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8/9/19 9:01:55 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE33FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
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(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- Damage reported
- **2** Previous owners
- Types of owners: Personal lease, Personal
- Last owned in Delaware
- **55,854** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 55,854 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Accident / Damage reported: You may want to have the dealer, a mechanic, or body shop inspect the repair.

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2015 CADILLAC SRX LUXURY COLLECTION (3GYFNEE33FS[redacted].

VIN:	3GYFNEE33FS[redacted]
Estimated start date of warranty:	01/16/2015
Last CARFAX reading reported on 08/07/2019:	55,854 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	18 months or 14,146 miles
Emissions	96 months or 80,000 miles	42 months or 24,146 miles
Corrosion	72 months or unlimited mileage	18 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2015 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNEE33FS[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE35FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
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- **Branded Titles: Reconstructed, Salvage**
- **2** Previous owners
- **3** Service history records
- Types of owners: Personal lease, Personal
- Last owned in New Jersey
- **51,398** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:05:53 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2015	2018
Type of owner	Personal lease	Personal
Estimated length of ownership	3 yrs. 3 mo.	9 months
Owned in the following states/provinces	New York, New Jersey	New Jersey
Estimated miles driven per year	5,449/yr	—
Last reported odometer reading	17,973	51,398

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	No Problem	Alert! Problem Found
Not Actual Mileage | Exceeds Mechanical Limits	No Problem	No Problem

ALERT!

Alert! Severe problems were reported by a state Department of Motor Vehicles (DMV). This vehicle does not qualify for the CARFAX Buyback Guarantee.

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss Total loss reported on 07/24/2019.	No Issues Reported	Total Loss Reported
Structural Damage Structural damage disclosed by seller on 08/08/2018.	Damage Reported	No New Issues Reported

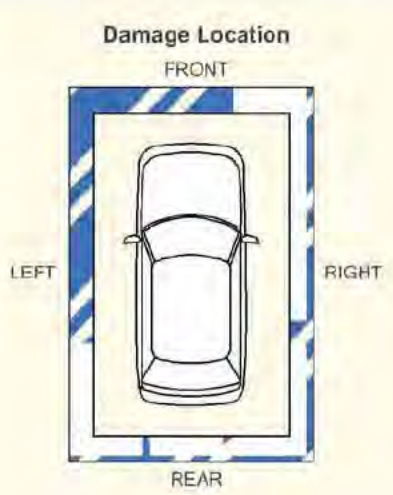
Airbag Deployment Airbag deployment reported on 05/18/2019.	No Issues Reported	Airbag Deployment
Odometer Check No indication of an odometer rollback.	No Issues Indicated	No Issues Indicated
Accident / Damage DMV title problems reported. Accidents reported on: 05/12/2017 and 05/18/2019.	Accident Reported	Severe Damage
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	No Recalls Reported	No Recalls Reported
Basic Warranty Original manufacturer warranty likely voided by manufacturer after vehicle was severely damaged.	Warranty Active	**Warranty Voided**

CARFAX Detailed History

Owner 1

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
09/24/2014		Dealer Inventory	Vehicle offered for sale
02/17/2015	6	New York Inspection Station	Dealer had vehicle inspected to prepare it for sale Passed safety inspection Passed emissions inspection View what was inspected
02/20/2015		New York Motor Vehicle Dept. Farmingdale, NY	Registration issued or renewed Titled or registered as personal lease vehicle Passed safety inspection
03/19/2015		New York Motor Vehicle Dept. Lutherville Timonium, MD	Title issued or updated First owner reported Titled or registered as personal lease vehicle Loan or lien reported
02/10/2016	5,530	New York Inspection Station	Passed safety inspection Emissions inspection performed View what was inspected
01/10/2017		New York Motor Vehicle Dept. Farmingdale, NY	Registration issued or renewed Titled or registered as personal lease vehicle Passed safety inspection
02/08/2017	10,534	New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
05/12/2017		New York Damage Report	Accident reported Involving left side impact with another motor vehicle Damage to left front Damage to front Vehicle towed

Two states? Vehicle leasing companies often title a car in one state but register it to be driven in another.



06/01/2017	11,915	King Bear Auto Service Lindenhurst, NY 631-226-1495 4.7 ★★★★½ 7 Verified Reviews	One tire mounted One tire balanced Alignment checked
03/12/2018	16,991	New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
06/06/2018	17,945	Vehicle Manufacturer Connecticut	Vehicle sold
08/08/2018	17,953	Damage Report Connecticut	Structural damage disclosed by seller based on results of a visual inspection Structural repairs disclosed by seller Vehicle sold
08/11/2018	17,962	Dealer Inventory	Vehicle offered for sale
08/17/2018	17,973	Gold Coast Cadillac Oakhurst, NJ 732-695-1400 goldcoastcadillac.com 4.7 ★★★★½ 65 Verified Reviews	Maintenance inspection completed Drivability/performance checked
10/18/2018		New Jersey Motor Vehicle Dept. Farmingdale, NJ Title #FR20182910030	Title issued or updated Dealer took title of this vehicle while it was in inventory Vehicle color noted as Gray
10/22/2018		New Jersey Motor Vehicle Dept. Brick, NJ	Registration issued or renewed Vehicle color noted as White

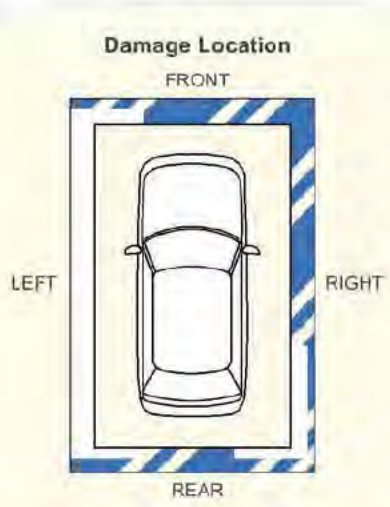
Structural damage may impact vehicle safety and reliability. Get the unibody or frame of the vehicle inspected by a professional.

Owner 2

Purchased: 2018
Type: Personal
Where: New Jersey
Est. length: 10/22/18 -

Date:	Mileage:	Source:	Comments:
10/22/2018		New Jersey Motor Vehicle Dept. Brick, NJ	Title issued or updated New owner reported Loan or lien reported Vehicle color noted as White

		Title #RV20182950525	
04/24/2019	27,816	Gold Coast Cadillac Oakhurst, NJ 732-695-1400 goldcoastcadillac.com 4.7 65 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
05/18/2019		New Jersey Damage Report	Accident reported Involving right front impact with another motor vehicle Right side primarily damaged Damage to rear Damage to front Vehicle disabled Vehicle towed Airbag deployed CARFAX Airbag Tips



07/24/2019		Damage Report	TOTAL LOSS VEHICLE
			There are many reasons an insurance company will declare a vehicle a total loss. Have this vehicle inspected by a qualified technician before you buy. Learn more
07/24/2019		New Jersey Motor Vehicle Dept.	Title or registration issued to insurance company
07/24/2019	51,398	New Jersey Motor Vehicle Dept. Trenton, NJ Title #ER20192050310	SALVAGE TITLE/CERTIFICATE ISSUED RECONSTRUCTED TITLE ISSUED Vehicle color noted as White

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CARFAX Glossary

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Accident Indicator
CARFAX receives information about accidents in all 50 states, the District of Columbia and Canada.

Not every accident is reported to CARFAX. As details about the accident become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

- According to the National Safety Council, Injury Facts, 2015 edition, 8% of the 254 million registered vehicles in the U.S. were involved in an accident in 2013. Over 74% of these were considered minor or moderate.
- This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:05:53 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

New York Damage Reports:

- Do not include an assessment of damage severity
- Are required if the estimated damage exceeds $1000

New Jersey Damage Reports:

- Do not include an assessment of damage severity
- Are required if the estimated damage exceeds $500

Airbag Deployment
Occurs when the driver, passenger or side airbag has been used or deployed during a crash or other incident. If an airbag has been deployed, it must be replaced by a qualified technician. Have this car inspected by a mechanic prior to purchase. Use CARFAX Airbag Tips to make sure this vehicle's airbag system is functional.

Auction Disclosures or Announcements
Dealers and institutions (i.e. fleet companies, rental car companies, and manufacturers) sell millions of cars at auction each year. Sellers often provide disclosures about a vehicle's damage, mileage, or repair history. These disclosures are made available to potential buyers in pre-sale lists and in auction announcements.

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Rebuilt/Reconstructed Title
A Rebuilt/Reconstructed vehicle is a salvage vehicle that has been repaired and restored to operation. These vehicles are often severely damaged before they are rebuilt and refurbished parts are typically used during reconstruction. In most states, an inspection of the vehicle is required before the vehicle is allowed to return to the road.

Salvage Title
A Salvage Title is issued on a vehicle damaged to the extent that the cost of repairing the vehicle exceeds approximately 75% of its pre-damage value. This damage threshold may vary by state. Some states treat Junk titles the same as Salvage but the majority use this title to indicate that a vehicle is not road worthy and cannot be titled again in that state. The following eleven states also use Salvage titles to identify stolen vehicles - AZ, FL, GA, IL, MD, MN, NJ, NM, NY, OK and OR.

Structural Damage
When the main structure or any component designed to provide structural integrity of the vehicle is damaged. All levels of accidents, from minor to severe, can cause structural damage to a vehicle (i.e., damage to the frame or unibody). Having a structural inspection before purchase is recommended.

Title Issued
A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

Total Loss Vehicle
An insurance or fleet company declares a vehicle a total loss when a claim exceeds approximately 75% of its pre-damage value or if the vehicle is stolen and not recovered. This damage threshold varies by company. These companies typically take possession and obtain the title. Not all total loss vehicles result in a DMV-reported branded title. This may occur when an insurance company's definition of a total loss is different than the state DMV's definition for a branded title or when the owner of the vehicle is a self-insured company, like a fleet or rental company.

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CARFAX DEPENDS ON ITS SOURCES FOR THE ACCURACY AND RELIABILITY OF ITS INFORMATION. THEREFORE, NO RESPONSIBILITY IS ASSUMED BY CARFAX OR ITS AGENTS FOR ERRORS OR OMISSIONS IN THIS REPORT. CARFAX FURTHER EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. CARFAX

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.

8/9/19 9:05:53 AM (CDT)

CARFAX® Warranty Check™

The original manufacturer warranty for this 2015 CADILLAC SRX LUXURY COLLECTION (3GYFNEE35FS[redacted]) was most likely voided when this vehicle was severely damaged.

VIN:	3GYFNEE35FS[redacted]
Estimated start date of warranty:	02/20/2015
Last CARFAX reading reported on 07/24/2019:	51,398 miles
Today's Date:	August 9, 2019

Type of Coverage:	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Void
Drivetrain	72 months or 70,000 miles	Void
Emissions	96 months or 80,000 miles	Void
Corrosion	72 months or unlimited mileage	Void
Transferable	No cost, unlimited owners covered	Void
Roadside Assistance	No data reported to CARFAX	Void
Safety belt & inflatable restraint	No data reported to CARFAX	Void
Specific Components	No data reported to CARFAX	Void
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE38FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- No damage reported to CARFAX
- CARFAX 1-Owner vehicle
- **1** Service history record
- Personal vehicle
- **26,874** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:05:05 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1
Year purchased	2015
Type of owner	Personal
Estimated length of ownership	4 yrs. 2 mo.
Owned in the following states/provinces	Pennsylvania
Estimated miles driven per year	8,492/yr
Last reported odometer reading	26,874

CARFAX 1 OWNER

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem

BUYBACK GUARANTEE

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1
Total Loss No total loss reported to CARFAX.	✓ No Issues Reported
Structural Damage No structural damage reported to CARFAX.	✓ No Issues Reported

Q8_000003574

Airbag Deployment No airbag deployment reported to CARFAX.	☑ No Issues Reported
Odometer Check No indication of an odometer rollback.	☑ No Issues Indicated
Accident / Damage No accidents or damage reported to CARFAX.	☑ No Issues Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	☑ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**

CARFAX Detailed History

Owner 1
Purchased: 2015
Type: Personal
Where: Pennsylvania
Est. miles/year: 5,455 mi
Est. length: 3 yrs 5 mos
Owned: current
(3 yrs, 2 mos)

Low mileage!
This owner drove less than the industry average of 15,000 miles per year.

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
12/09/2014		Inspection Station	Exempt from emissions inspection
04/24/2015	10	Inspection Station	Exempt from emissions inspection
05/13/2015		Pennsylvania Motor Vehicle Dept.	Vehicle purchase reported Titled or registered as personal vehicle
06/12/2015		Pennsylvania Motor Vehicle Dept. Havertown, PA Title #7479821401 PE	Title issued or updated First owner reported Loan or lien reported
04/12/2016	7,100	Inspection Station	Passed emissions inspection
06/06/2017	14,761	Inspection Station	Passed emissions inspection
07/11/2018	26,874	Burke Motor Group Cape May Court House, NJ 609-465-6000 burkevw.com/ 4.4 ★★★★½ 16 Verified Reviews	Battery/charging system checked
05/23/2019		Pennsylvania Motor Vehicle Dept. Havertown, PA Title #7479821401 PE	Registration issued or renewed

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CARFAX Glossary

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First Owner
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Title Issued
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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 9:05:05 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE38FS[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE

CARFAX 1 OWNER

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners: CARFAX 1-OWNER

Last owned in the following state/province:	Pennsylvania
Annual average mileage:	8,492 LOW MILEAGE*

*Below industry annual average of 15,000 miles

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

BUYBACK GUARANTEE CARFAX

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported
Other Accidents / Damage	☑ No Issues Reported

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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8/9/19 9:05:05 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2015 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE38FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- No damage reported to CARFAX
- CARFAX 1-Owner vehicle
- **1** Service history record
- Personal vehicle
- **26,874** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 26,874 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Are the brakes and other safety equipment in good working order?

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2015 CADILLAC SRX LUXURY COLLECTION (3GYFNEE38FS[redacted].

VIN:	3GYFNEE38FS[redacted]
Estimated start date of warranty:	05/13/2015
Last CARFAX reading reported on 07/11/2018:	26,874 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage:	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	22 months or 43,126 miles
Emissions	96 months or 80,000 miles	46 months or 53,126 miles
Corrosion	72 months or unlimited mileage	22 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2015 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNEE38FS[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2015 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNDE31FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
FRONT WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **2** Previous owners
- **22** Service history records
- Personal vehicle
- **57,443** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:04:39 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2015	2019
Type of owner	Personal	Personal
Estimated length of ownership	3 yrs. 4 mo.	2 months
Owned in the following states/provinces	Oklahoma	Oklahoma
Estimated miles driven per year	15,606/yr	---
Last reported odometer reading	52,991	57,443

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss No total loss reported to CARFAX.	No Issues Reported	No Issues Reported
Structural Damage No structural damage reported to CARFAX.	No Issues Reported	No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage No accidents or damage reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2015
Type: Personal
Where: Oklahoma
Est. miles/year: 15,000/yr
Est. length: 12/2015 -
owned: 4/7/19
(5 yrs, 1 mo)

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
11/24/2014	6	Bob Moore Cadillac Oklahoma City, OK 888-699-4195 bobmoorecadillacokc.com **4.8** ★★★★½ 83 Verified Reviews	Pre-delivery inspection completed Nitrogen fill tires
12/08/2014		Dealer Inventory	Vehicle offered for sale
04/30/2015		Lake Country Chevrolet Cadillac Muskogee, OK 918-683-0311 lakecountrychevrolet.com **3.5** ★★★½☆ 6 Verified Reviews	Vehicle offered for sale
05/27/2015	173	Lake Country Chevrolet Cadillac Muskogee, OK 918-683-0311 lakecountrychevrolet.com **3.5** ★★★½☆ 6 Verified Reviews	Vehicle serviced
08/04/2015	291	Lake Country Chevrolet Cadillac Muskogee, OK 918-683-0311 lakecountrychevrolet.com **3.5** ★★★½☆ 6 Verified Reviews	Accessories installed
11/05/2015		Dealer Inventory	Vehicle offered for sale
11/20/2015		Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com **4.8** ★★★★½	Vehicle serviced

		16 Verified Reviews	
12/01/2015	4,294	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com 4.8 16 Verified Reviews	Vehicle sold
12/03/2015		Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com 4.8 16 Verified Reviews	Vehicle offered for sale
12/04/2015		Oklahoma Motor Vehicle Dept. Muskogee, OK Title #810001204565	Vehicle purchase reported Title issued or updated Registration issued or renewed Title or registration issued First owner reported Loan or lien reported
01/05/2016	5,000	Oklahoma Motor Vehicle Dept. Muskogee, OK	Odometer reading reported Titled or registered as personal vehicle
01/05/2016		Oklahoma Motor Vehicle Dept. Muskogee, OK Title #810001377287	Registration issued or renewed Title or registration issued Loan or lien reported
01/26/2016	6,782	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com 4.8 16 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
05/20/2016	11,501	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com 4.8 16 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
06/01/2016	11,861	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com 4.8 16 Verified Reviews	Maintenance inspection completed Drivability/performance checked
09/06/2016	16,345	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com 4.8 16 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
11/17/2016	17,345	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com 4.8 16 Verified Reviews	Outside door handle replaced
12/15/2016		Oklahoma Motor Vehicle Dept.	Registration issued or renewed Loan or lien reported

		Muskogee, OK Title #810001377287	
12/20/2016	21,244	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com **4.8** 16 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated Outside mirror replaced/repaired
04/20/2017	26,290	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com **4.8** 16 Verified Reviews	Maintenance inspection completed Alignment checked Air filter replaced Oil and filter changed Cabin air filter checked Tires rotated
08/23/2017	31,047	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com **4.8** 16 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated Vehicle washed/detailed
12/05/2017		Oklahoma Motor Vehicle Dept. Fort Gibson, OK Title #810001377287	Registration issued or renewed Loan or lien reported Registration updated when owner moved the vehicle to a new location
12/07/2017	34,679	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com **4.8** 16 Verified Reviews	Maintenance inspection completed Interior cleaned Anti-theft/keyless remote battery replaced
01/18/2018	36,080	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com **4.8** 16 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
04/18/2018	38,948	Oklahoma Motor Vehicle Dept. Fort Gibson, OK Title #810005078968	Title or registration issued
05/30/2018	40,121	Auffenberg Chevrolet Cadillac Muskogee, OK 918-683-0311 auffenbergchevy.com **4.8** 16 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
08/13/2018	42,126	Corley Chevrolet Cadillac Muskogee, OK 918-683-0311 corleychevy.net **4.6** 13 Verified Reviews	Maintenance inspection completed Battery replaced Battery/charging system checked Outside door handle replaced
08/29/2018	43,477	Corley Chevrolet Cadillac Muskogee, OK 918-683-0311 corleychevy.net **4.6**	Radio/sound system repaired Stabilizer bar links replaced Sway bar link(s) replaced

		13 Verified Reviews	
09/21/2018	44,530	Corley Chevrolet Cadillac Muskogee, OK 918-683-0311 corleychevy.net **4.6** 13 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated Interior trim checked Transmission checked
12/10/2018		Oklahoma Motor Vehicle Dept. Fort Gibson, OK Title #810005078968	Registration issued or renewed
02/09/2019	49,784	Corley Chevrolet Cadillac Muskogee, OK 918-683-0311 corleychevy.net **4.6** 13 Verified Reviews	Maintenance inspection completed Oil and filter changed Tires rotated
04/25/2019		Kevin Grover Buick GMC, Inc. Wagoner, OK 918-485-2188 grovergm.com **5.0** 10 Verified Reviews	Vehicle offered for sale
04/26/2019	52,975	Oklahoma Motor Vehicle Dept. Wagoner, OK Title #810006586506	Dealer took title of this vehicle while it was in inventory Title or registration issued
04/29/2019	52,980	Kevin Grover Buick GMC, Inc. Wagoner, OK 918-485-2188 grovergm.com **5.0** 10 Verified Reviews	Pre-delivery inspection completed Maintenance inspection completed Tire(s) balanced Tires rotated Cabin air filter replaced/cleaned Air filter replaced Oil and filter changed
04/29/2019		Oklahoma Motor Vehicle Dept. Wagoner, OK Title #810006586506	Title or registration issued
05/07/2019		Dealer Inventory	Vehicle offered for sale
05/10/2019	52,985	Kevin Grover Buick GMC, Inc. Wagoner, OK 918-485-2188 grovergm.com **5.0** 10 Verified Reviews	Brake booster replaced/repaired Computer reprogrammed
05/14/2019	52,991	Kevin Grover Buick GMC, Inc. Wagoner, OK 918-485-2188 grovergm.com **5.0** 10 Verified Reviews	Vehicle sold
05/15/2019		Oklahoma Motor Vehicle Dept. Wagoner, OK Title #810006586506	Title or registration issued Loan or lien reported

Owner 2

Date:	Mileage:	Source:	Comments:
05/24/2019		Oklahoma Motor Vehicle Dept.	Title or registration issued New owner reported Loan or lien reported

Owasso, OK
Title #810006941118

Avoid financial headaches. Make sure the loan has been paid off if you're buying from a private seller.

08/07/2019	57,443	Robertson Tire Broken Arrow, OK 918-940-3999 robertson-tire.com/ 4.6 18 Verified Reviews	Oil and filter changed Tires rotated Wiper(s) replaced

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Title Issued
A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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8/9/19 9:04:39 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2015 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNDE31FS[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: FRONT WHEEL DRIVE

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	2
Last owned in the following state/province:	Oklahoma
Annual average mileage:	15,623

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported
Other Accidents / Damage	☑ No Issues Reported

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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8/9/19 9:04:39 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2015 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNDE31FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
FRONT WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
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Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **2** Previous owners
- **22** Service history records
- Personal vehicle
- **57,443** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 57,443 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Are the brakes and other safety equipment in good working order?

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2015 CADILLAC SRX PREMIUM COLLECTION (3GYFNDE31FS[redacted].

VIN:	3GYFNDE31FS558795
Estimated start date of warranty:	12/04/2015
Last CARFAX reading reported on 08/07/2019:	57,443 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	28 months or 12,557 miles
Emissions	96 months or 80,000 miles	52 months or 22,557 miles
Corrosion	72 months or unlimited mileage	28 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2015 CADILLAC SRX PREMIUM COLLECTION

VIN: 3GYFNDE31FS[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: FRONT WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

US $39.99

An independent company established in 1986

Vehicle Information:
2015 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNGE37FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
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Detroit, MI 48243
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- Accident reported: moderate damage
- CARFAX 1-Owner vehicle
- Personal vehicle
- Last owned in Ontario
- **4** Detailed records available
- **24,415** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:05:31 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1
Year purchased	2015
Type of owner	Personal
Estimated length of ownership	4 years
Owned in the following states/provinces	Ontario
Estimated miles driven per year	20,968/yr
Last reported odometer reading	24,415

CARFAX 1 OWNER

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem

BUYBACK GUARANTEE

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1
Total Loss No total loss reported to CARFAX.	✓ No Issues Reported
Structural Damage No structural damage reported to CARFAX.	✓ No Issues Reported

Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated
Accident / Damage Accident reported on 10/04/2016.	⚠ Accident Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have 0 months or 25,585 miles remaining.	✓ Warranty Active

CARFAX Detailed History

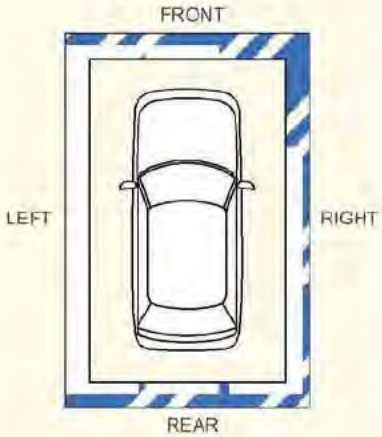
Glossary

Owner 1
Purchased: 2015
Type: Personal
Where: Ontario
Est. miles/year: 20,968/yr
Est. length owned: 7/16/15 - present (4 years)

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
07/16/2015		Ontario Ministry of Transportation	Registration issued or renewed First owner reported Passed safety inspection Vehicle color noted as Gray
09/13/2016	24,415	Ontario Ministry of Transportation	Registration issued or renewed Registered as personal vehicle Odometer reported as 39,292 kilometers
10/04/2016		Ontario Damage Report	Accident reported Involving right front impact Moderate damage reported

Damage Severity Scale ⓘ

Damage Location



Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

Accident Indicator
CARFAX receives information about accidents in all 50 states, the District of Columbia and Canada.

Not every accident is reported to CARFAX. As details about the accident become available, those additional details are added to the CARFAX Vehicle History Report. CARFAX recommends that you have this vehicle inspected by a qualified mechanic.

- According to the National Safety Council, Injury Facts, 2015 edition, 8% of the 254 million registered vehicles in the U.S. were involved in an accident in 2013. Over 74% of these were considered minor or moderate.
- This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:05:31 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

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8/9/19 9:05:31 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2015 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNGE37FS[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE

CARFAX 1 OWNER

Original Manufacturer's Warranty:
Basic Warranty Active
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
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Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners: CARFAX 1-OWNER

Last owned in the following state/province:	Ontario

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported

Accident reported on this vehicle. Please see the full CARFAX Vehicle History Report for more details.

Ask your dealer for the full CARFAX® Vehicle History Report™

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8/9/19 9:05:31 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2015 CADILLAC SRX PREMIUM COLLECTION
VIN: 3GYFNGE37FS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | **Safety Options**

This CARFAX Report Provided by:
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Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- Accident reported: moderate damage
- CARFAX 1-Owner vehicle
- Personal vehicle
- Last owned in Ontario
- **4** Detailed records available
- **24,415** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 24,415 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Accident / Damage reported: You may want to have the dealer, a mechanic, or body shop inspect the repair.

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2015 CADILLAC SRX PREMIUM COLLECTION (3GYFNGE37FS634070).

VIN:	3GYFNGE37FS[redacted]
Estimated start date of warranty:	07/16/2015
Last CARFAX reading reported on 09/13/2016:	24,415 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage:	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	24 months or 45,585 miles
Emissions	96 months or 80,000 miles	48 months or 55,585 miles
Corrosion	72 months or unlimited mileage	24 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2015 CADILLAC SRX PREMIUM COLLECTION

VIN: 3GYFNGE37FS[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Detroit, MI

CARFAX® Vehicle History Report™

An independent company established in 1986

US $39.99

Vehicle Information:
2016 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE31GS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V
GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **2** Previous owners
- **16** Service history records
- Types of owners: Personal lease, Personal
- **50,050** Last reported odometer reading

This CARFAX Vehicle History Report is based only on information supplied to CARFAX and available as of 8/9/19 at 9:02:46 AM (CDT). Other information about this vehicle, including problems, may not have been reported to CARFAX. Use this report as one important tool, along with a vehicle inspection and test drive, to make a better decision about your next used car.

CARFAX Ownership History

The number of owners is estimated

	Owner 1	Owner 2
Year purchased	2016	2018
Type of owner	Personal lease	Personal
Estimated length of ownership	1 yr. 11 mo.	1 yr. 5 mo.
Owned in the following states/provinces	New Jersey, New York	New York
Estimated miles driven per year	15,239/yr	---
Last reported odometer reading	30,045	50,050

CARFAX Title History

CARFAX guarantees the information in this section

	Owner 1	Owner 2
Salvage | Junk | Rebuilt | Fire | Flood | Hail | Lemon	Guaranteed No Problem	Guaranteed No Problem
Not Actual Mileage | Exceeds Mechanical Limits	Guaranteed No Problem	Guaranteed No Problem

GUARANTEED - None of these major title problems were reported by a state Department of Motor Vehicles (DMV). If you find that any of these title problems were reported by a DMV and not included in this report, CARFAX will buy this vehicle back. **Register** | **View Terms** | **View Certificate**

CARFAX Additional History

Not all accidents / issues are reported to CARFAX

	Owner 1	Owner 2
Total Loss No total loss reported to CARFAX.	No Issues Reported	No Issues Reported
Structural Damage	No Issues Reported	No Issues Reported

No structural damage reported to CARFAX.	✓	✓
Airbag Deployment No airbag deployment reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Odometer Check No indication of an odometer rollback.	✓ No Issues Indicated	✓ No Issues Indicated
Accident / Damage No accidents or damage reported to CARFAX.	✓ No Issues Reported	✓ No Issues Reported
Manufacturer Recall No open recalls reported to CARFAX. Check for open recalls on GM vehicles at recalls.gm.com.	✓ No Recalls Reported	✓ No Recalls Reported
Basic Warranty Original warranty estimated to have expired.	**Warranty Expired**	**Warranty Expired**

CARFAX Detailed History

Glossary

Owner 1
Purchased: 2016
Type: Personal lease
Where: New Jersey, New York
Est. miles/year: 15,210/yr
Est. length owned: 2/3/16 - 1/22/18 (1 yr, 11 mo.)

CADILLAC CERTIFIED PRE-OWNED

Date:	Mileage:	Source:	Comments:
Original Equipment		OnStar	Vehicle equipped with OnStar Get 3 free months of premium OnStar with Automatic Crash Response, Roadside Assistance and Remote Door Unlock by pressing the blue OnStar button Learn more
09/15/2015	20	McGuire Cadillac Woodbridge, NJ 732-326-0300 mcguirecadillac.com **4.5** ★★★★½ 86 Verified Reviews	Pre-delivery inspection completed Fluids checked
09/15/2015		McGuire Cadillac Woodbridge, NJ 732-326-0300 mcguirecadillac.com **4.5** ★★★★½ 86 Verified Reviews	Vehicle offered for sale
09/29/2015		McGuire Cadillac Woodbridge, NJ 732-326-0300 mcguirecadillac.com **4.5** ★★★★½ 86 Verified Reviews	Floor mats installed
09/29/2015		McGuire Chevrolet Cadillac Newton, NJ 973-383-1300 mcguirechevy.com **4.6** ★★★★½ 28 Verified Reviews	Vehicle offered for sale
10/01/2015	65	McGuire Chevrolet Cadillac Newton, NJ 973-383-1300 mcguirechevy.com **4.6** ★★★★½ 28 Verified Reviews	Electrical system checked
10/08/2015		McGuire Cadillac Woodbridge, NJ 732-326-0300 mcguirecadillac.com ★★★★★	Pre-delivery inspection completed Fluids checked

		4.5 86 Verified Reviews	
10/22/2015		McGuire Cadillac Woodbridge, NJ 732-326-0300 mcguirecadillac.com 4.5 86 Verified Reviews	Floor mats installed
01/30/2016	4,275	McGuire Chevrolet Cadillac Newton, NJ 973-383-1300 mcguirechevy.com 4.6 28 Verified Reviews	Vehicle sold
02/03/2016		New Jersey Motor Vehicle Dept. Sparta, NJ Title #GD20160341128	Title issued or updated Registration issued or renewed First owner reported Titled or registered as personal lease vehicle Loan or lien reported Vehicle color noted as Silver
02/11/2016	4,876	McGuire Chevrolet Cadillac Newton, NJ 973-383-1300 mcguirechevy.com 4.6 28 Verified Reviews	Maintenance inspection completed Electrical system checked
10/17/2016	12,086	McGuire Chevrolet Cadillac Newton, NJ 973-383-1300 mcguirechevy.com 4.6 28 Verified Reviews	Maintenance inspection completed Fluids checked Tires rotated Oil and filter changed
03/06/2017	18,091	McGuire Chevrolet Cadillac Newton, NJ 973-383-1300 mcguirechevy.com 4.6 28 Verified Reviews	Maintenance inspection completed Fluids checked Tire pressure sensor reprogrammed Electrical system checked Wipers/washers checked Tires rotated Oil and filter changed
04/27/2017	19,619	McGuire Chevrolet Cadillac Newton, NJ 973-383-1300 mcguirechevy.com 4.6 28 Verified Reviews	Maintenance inspection completed
08/14/2017	23,450	McGuire Chevrolet Cadillac Newton, NJ 973-383-1300 mcguirechevy.com 4.6 28 Verified Reviews	Maintenance inspection completed Tire pressure sensor reprogrammed Fluids checked Tires rotated Oil and filter changed
12/29/2017	29,452	McGuire Chevrolet Cadillac Newton, NJ 973-383-1300 mcguirechevy.com 4.6 28 Verified Reviews	Maintenance inspection completed Steering/suspension checked
01/22/2018	30,020	Hudson Cadillac Buick GMC	Vehicle offered for sale

		Poughkeepsie, NY 845-298-4700 hudsongm.com **4.8** ★★★★½ 45 Verified Reviews	
01/25/2018		Cadillac Certified Dealer Poughkeepsie, NY	Offered for sale as a Cadillac Certified Pre-Owned Vehicle Silver exterior
01/31/2018	30,043	Cadillac Certified Dealer Poughkeepsie, NY	Sold as a Cadillac Certified Pre-Owned Vehicle
01/31/2018	30,045	Hudson Cadillac Buick GMC Poughkeepsie, NY 845-298-4700 hudsongm.com **4.8** ★★★★½ 45 Verified Reviews	Maintenance inspection completed Alignment performed Air filter replaced Oil and filter changed Tires rotated Safety inspection performed Wiper(s) replaced Emissions inspection performed
01/31/2018		New York Inspection Station	Dealer had vehicle inspected to prepare it for sale Passed safety inspection Passed emissions inspection View what was inspected
02/01/2018		New York Motor Vehicle Dept. Cold Spring, NY	Registration issued or renewed Passed safety inspection

Owner 2

Purchased: [redacted]
Type: [redacted]
Where: [redacted]
Est. length of ownership: [redacted]

Date:	Mileage:	Source:	Comments:
02/13/2018		New York Motor Vehicle Dept. Cold Spring, NY	Title issued or updated New owner reported
11/24/2018	44,152	Hudson Cadillac Buick GMC Poughkeepsie, NY 845-298-4700 hudsongm.com **4.8** ★★★★½ 45 Verified Reviews	Headlights adjusted Oil and filter changed Tires rotated Tire condition and pressure checked
01/28/2019	45,993	Oil Change Plus - Fishkill Fishkill, NY 845-896-3500 foamandwash.com/index.html **4.7** ★★★★½ 45 Verified Reviews	Emissions inspection performed
01/28/2019		New York Inspection Station	Passed safety inspection Passed emissions inspection View what was inspected
04/11/2019	49,340	Inspection Co.	Inspection performed
04/13/2019	49,509	Hudson Cadillac Buick GMC Poughkeepsie, NY 845-298-4700 hudsongm.com **4.8** ★★★★½ 45 Verified Reviews	Oil and filter changed Tires rotated Alignment checked Four tires balanced Four tires mounted
04/22/2019	50,050	Hudson Cadillac Buick GMC Poughkeepsie, NY 845-298-4700 hudsongm.com	Tire(s) balanced Four tires balanced Alignment performed

4.8
45 Verified Reviews

Have Questions? Consumers, please visit our Help Center at www.carfax.com. Dealers or Subscribers, please visit our Help Center at www.carfaxonline.com.

CARFAX Glossary

View Full Glossary

First Owner
When the first owner(s) obtains a title from a Department of Motor Vehicles as proof of ownership.

New Owner Reported
When a vehicle is sold to a new owner, the Title must be transferred to the new owner(s) at a Department of Motor Vehicles.

Ownership History
CARFAX defines an owner as an individual or business that possesses and uses a vehicle. Not all title transactions represent changes in ownership. To provide estimated number of owners, CARFAX proprietary technology analyzes all the events in a vehicle history. Estimated ownership is available for vehicles manufactured after 1991 and titled solely in the US including Puerto Rico. Dealers sometimes opt to take ownership of a vehicle and are required to in the following states: Maine, Massachusetts, New Jersey, Ohio, Oklahoma, Pennsylvania and South Dakota. Please consider this as you review a vehicle's estimated ownership history.

Title Issued
A state issues a title to provide a vehicle owner with proof of ownership. Each title has a unique number. Each title or registration record on a CARFAX report does not necessarily indicate a change in ownership. In Canada, a registration and bill of sale are used as proof of ownership.

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8/9/19 9:02:46 AM (CDT)

CARFAX

VEHICLE HIGHLIGHTS

2016 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE31GS[redacted]
Body Style: 4 DOOR WAGON/SPORT UTILITY
Engine Size: 3.6L V6 F DOHC 24V
Drivetrain: ALL WHEEL DRIVE
Certified on 01/31/2018

Original Manufacturer's Warranty:
Basic Warranty Expired
Please confirm remaining factory warranty and extended warranty options with your dealer!
The original manufacturer's warranty includes:
48 months or 50,000 miles

Courtesy of
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Information excerpted from the CARFAX Vehicle History Report and/or Safety & Reliability Ratings; see full reports for additional information, glossary of terms, source attributions,disclaimers & limitations. Go to carfax.com for complete Buyback Guarantee terms and conditions.

OWNERSHIP HISTORY:

Number of Owners:	2
Last owned in the following state/province:	New York
Annual average mileage:	15,560

STATE DMV-REPORTED TITLE PROBLEMS:

None of these major title problems were reported by a state Department of Motor Vehicles:

Salvage, Junk, Rebuilt, Fire, Flood, Hail, Lemon	Guaranteed No Problem
Not Actual Mileage, Exceeds Mechanical Limits	Guaranteed No Problem

ACCIDENTS AND OTHER ISSUES:

No issues reported to CARFAX on the following:

Total Loss	☑ No Issues Reported
Structural Damage	☑ No Issues Reported
Airbag Deployment	☑ No Issues Reported
Odometer Rollback	☑ No Issues Reported
Other Accidents / Damage	☑ No Issues Reported

Ask your dealer for the full CARFAX® Vehicle History Report™

SHOW ME THE CARFAX

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Covered by United States Patent Nos. 7,113,853; 7,778,841; 7,596,512; 8,600,823; 8,595,079; 8,606,648; 7,505,838.
8/9/19 9:02:46 AM (CDT)

CARFAX® SmartBuyer Checklist

Vehicle Information:
2016 CADILLAC SRX LUXURY COLLECTION
VIN: 3GYFNEE31GS[redacted]
4 DOOR WAGON/SPORT UTILITY
3.6L V6 F DOHC 24V GASOLINE
ALL WHEEL DRIVE
Standard Equipment | Safety Options

This CARFAX Report Provided by:
ESIS GM
300 Renaissance Ctr
Detroit, MI 48243
(586) 212-2141

Notes & Observations:
Enter your notes or additional questions here. Salesperson: Appointment Time: Price: Color:

CARFAX Vehicle History Report Summary:

- No accidents reported to CARFAX
- No damage reported to CARFAX
- **2** Previous owners
- **16** Service history records
- Types of owners: Personal lease, Personal
- **50,050** Last reported odometer reading

PRINT AND TAKE THIS CHECKLIST WITH YOU
This checklist utilizes information from your CARFAX report to help you make an informed used car purchase.

General Questions

Is the car still under manufacturer warranty or is a warranty available at the time of purchase?

Test Drive and Visual Inspection

Turn on the ignition without starting the car. Do all the warning lights and gauges work?

Ensure the airbag light appears momentarily and goes out upon starting the vehicle.

Is the odometer consistent with the last reading of 50,050 on the CARFAX report summary above?

Do the tires appear to be in good shape and without uneven wear?

Test all internal controls. Do all lights, turn signals, windows and the heater and air conditioner work?

Mechanical Questions

Are the brakes and other safety equipment in good working order?

Does the vehicle appear to have been well maintained?

When should you schedule the next regular service?

CARFAX® Warranty Check™

CARFAX has estimated the remaining original manufacturer warranty coverage based on information reported to us on this 2016 CADILLAC SRX LUXURY COLLECTION (3GYFNEE31GS[redacted].

VIN:	3GYFNEE31GS[redacted]
Estimated start date of warranty:	02/03/2016
Last CARFAX reading reported on 04/22/2019:	50,050 miles
Today's Date:	August 9, 2019

Enter the current mileage and click 'Recalculate Warranty' to update the remaining warranty coverage.

Enter current mileage: [ ] Recalculate Warranty

Type of Coverage	Original Warranty:	Estimated Remaining Coverage:
Basic	48 months or 50,000 miles	Coverage expired
Drivetrain	72 months or 70,000 miles	30 months or 19,950 miles
Emissions	96 months or 80,000 miles	54 months or 29,950 miles
Corrosion	72 months or unlimited mileage	30 months or unlimited mileage
Transferable	No cost, unlimited owners covered	Same
Roadside Assistance	No data reported to CARFAX	
Safety belt & inflatable restraint	No data reported to CARFAX	
Specific Components	No data reported to CARFAX	
Notes:	Emissions: Manufacturer covers emissions components under basic warranty. Emissions coverage may vary by state. Refer to owners manual for specific details. Transferable: No cost, unlimited owners covered. Specific Components: See notes below. Maintenance: Alignment and wheel balancing are considered maintenance after 7,500 miles. Cadillac Premium Maintenance Care no charge maintenance:. 4/50,000: 2017 XT5 and 2013 and newer models. 3/36,000: 2017-18 model year vehicles (excluding the 2017 XT5). 2019 model year vehicles receive one maintenance visit during the first year of ownership. Notes: Includes surface corrosion, batteries, adjustments, alternate transportation, roadside assistance, tires prorated. Includes courtesy transportation, roadside assistance, transferable, no deductible.	

- CARFAX Warranty Check provides an **estimate** of this vehicle's remaining warranty coverage. It does not take into account some vehicle history events such as some title brands that may void the original manufacturer warranty or ownership transfers that may decrease warranty coverage. This warranty information is only valid for vehicles manufactured for the United States. Complete warranty coverage information is available for this vehicle at the CADILLAC web site.

CARFAX BUYBACK GUARANTEE

Guarantee Coverage: 08/09/2019 - 08/09/2020

CARFAX Vehicle Description: 2016 CADILLAC SRX LUXURY COLLECTION

VIN: 3GYFNEE31GS[redacted]	**Body Style:** 4 DOOR WAGON/SPORT UTILITY
Driveline: ALL WHEEL DRIVE	**Engine:** 3.6L V6 F DOHC 24V

CARFAX will buy this vehicle back if

you find that any of these severe problems were reported by a Department of Motor Vehicles and were not included in this report.

SEVERE DAMAGE
Salvage/Junk
Rebuilt/Reconstructed
Dismantled
Fire/Flood/Hail

ODOMETER PROBLEMS
Exceeds Mechanical Limits
Not Actual Mileage

LEMON HISTORY
Manufacturer Buyback

Terms and Conditions Apply
View Terms and Conditions for CARFAX Buyback Guarantee coverage

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Document Provided in Native Format

File Name: 226310 2010-16 SRX GMT166 2-GLCS GART AA WARRANTY.XLSX

Document Provided in Native Format

File Name: 226310 2010-16 SRX GMT166 4-GLCS GART AA WARRANTY.XLSX

Document Provided in Native Format

File Name: 226310 2010-16 SRX GMT166 3-BULLETIN LCS GART AA WARRANTY.XLSX

Document Provided in Native Format

File Name: 226310 2010-16 SRX GMT166 3-BULLETIN LCS GART AA WARRANTY (2).XLSX

Document Provided in Native Format

File Name: 226310 2010-16 SRX GMT166 4-GLCS GART AA WARRANTY (2).XLSX

Bulletin No.: 14457C
Date: March 2015

Recall Bulletin

PRODUCT SAFETY RECALL

SUBJECT: **Rear Toe Link Adjuster Lock Nut Torque**

MODELS: **2010-2015 Cadillac SRX**
2011-2012 Saab 9-4X

This bulletin has been revised to add a note in the Service Procedure section (see Step 4). Please discard all copies of bulletin 14457B.

Owners of Saab 9-4X vehicles delivered in the U.S. or Canada will receive a separate notification and be addressed by Saab Authorized Service Centers. This bulletin applies to Saab vehicles delivered outside of the U.S. and Canada that are subject to this recall.

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

All involved vehicles that are in dealer inventory must be held and not delivered to customers, dealer traded, or used for demonstration purposes until the repair contained in this bulletin has been performed on the vehicle.

CONDITION

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2010-2015 model year Cadillac SRX vehicles and 2011-2012 Saab 9-4X vehicles. On some of these vehicles, the jam nut in the rear suspension toe adjuster link may not be torqued to the proper specification. A loose toe adjuster link can cause the vehicle to sway or wander at highway speed, activate the vehicle's electronic stability control system, and cause excessive wear to the threads in the link. Additionally, the rear suspension may make loud metallic noises, particularly when the vehicle is travelling over bumps or potholes. If the threads in the link become worn, the link may separate. If separation occurs while the vehicle is being driven, it would create sudden vehicle instability, increasing the risk of a crash.

CORRECTION

On vehicles in dealer inventory, dealers must inspect the left and right rear toe link adjuster lock nuts for proper torque and tighten the nuts if necessary. On customer vehicles, dealers must inspect the left and right rear toe link and replace the parts if there is evidence of damage or a loose link. If the rear toe links pass the inspection, then the dealer should torque the adjuster jam nuts to specification.

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VEHICLES INVOLVED

All involved vehicles are identified by Vehicle Identification Number on the Investigate Vehicle History screen in GM Global Warranty Management system. Dealership service personnel should always check this site to confirm vehicle involvement prior to beginning any required inspections and/or repairs. It is important to routinely use this tool to verify eligibility because not all similar vehicles may be involved regardless of description or option content.

For dealers with involved vehicles, a listing with involved vehicles containing the complete vehicle identification number, customer name, and address information has been prepared and will be provided to US and Canadian dealers through the GM GlobalConnect Recall Reports or sent directly to export dealers. Dealers will not have a report available if they have no involved vehicles currently assigned.

The listing may contain customer names and addresses obtained from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any purpose other than follow-up necessary to complete this recall is a violation of law in several states/provinces/countries. Accordingly, you are urged to limit the use of this report to the follow-up necessary to complete this recall.

PART INFORMATION

Parts Pre-Ship Information – For US and Canada

Important: An initial supply of Rear Suspension Adjustment Links required to complete this recall will be pre-shipped to involved dealers of record. This pre-shipment is scheduled to begin the weeks of October 6, 13 and 20, 2014. Pre-shipped parts will be charged to dealer's open parts account.

Beginning the week of October 27, 2014, additional parts, if required, are to be obtained from GMCC&A. Please refer to your "involved vehicles listing" before ordering parts. Normal orders should be placed on a DRO = Daily Replenishment Order. In an emergency situation, parts should be ordered on a CSO = Customer Special Order.

Important: It is estimated that only 20% of involved vehicles will require link replacement. Please order parts accordingly.

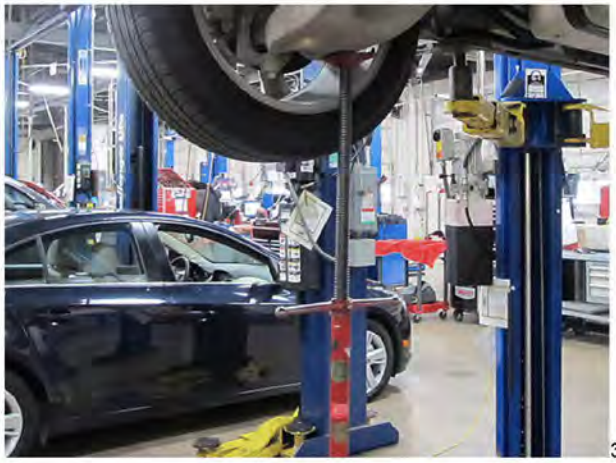
Part Number	Description	Quantity/Vehicle
20867273	LINK, REAR SUSPENSION ADJUSTMENT	1-2 (if required)

SERVICE PROCEDURE

Note: For new unsold vehicles, proceed directly to the tightening procedure (step 5). It is not necessary to inspect or replace the rear suspension adjustment link on new unsold vehicles. For all sold and delivered vehicles perform all 5 steps.

Use the following steps to inspect the left and right rear suspension adjustment links:

1. Lift the vehicle on a hoist. Refer to *Lifting and Jacking the Vehicle* in SI.


3980939

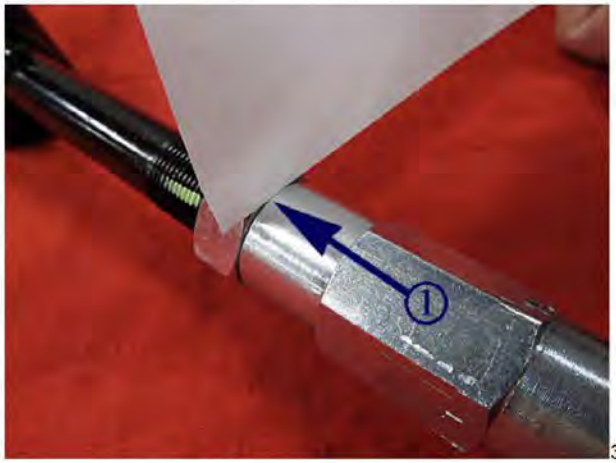
3980940

Note: Load the suspension so the wheels are in the same position they would be if the vehicle was on the ground.

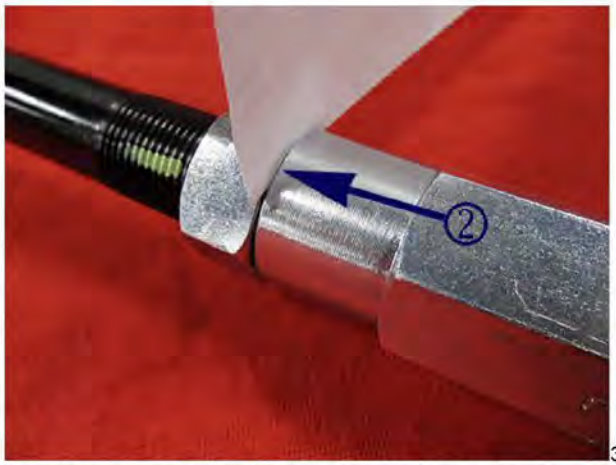
2. Place tall threaded jack stands under the left and right control arms at the shock absorber mount as shown. Using the threaded jack stands, raise the left and right control arms to the ride height level.
3. Inspect the left and right rear suspension links as follows:

3979306

- Grasp the adjustment collar and push up and pull down firmly, note any movement in the link assembly components (the ends are rubber mounted and will have some movement)



3980941



3980942

(1) Paper does NOT fit between jam nut and rear suspension adjustment link. (2) Paper fits between jam nut and rear suspension adjustment link.

- Inspect the toe link assembly for loosened jam nuts. Use a piece of paper to determine if there is a gap between the jam nut and the adjustment collar.

4. If the adjustment link fails any of the above tests, replace the adjustment link assembly. Refer to *Adjust Link Replacement* in SI.

Note: The following steps use a 26mm crows foot wrench attached to a torque wrench. The orientation of the crows foot to the torque wrench should be as close to inline as possible to obtain accurate readings.

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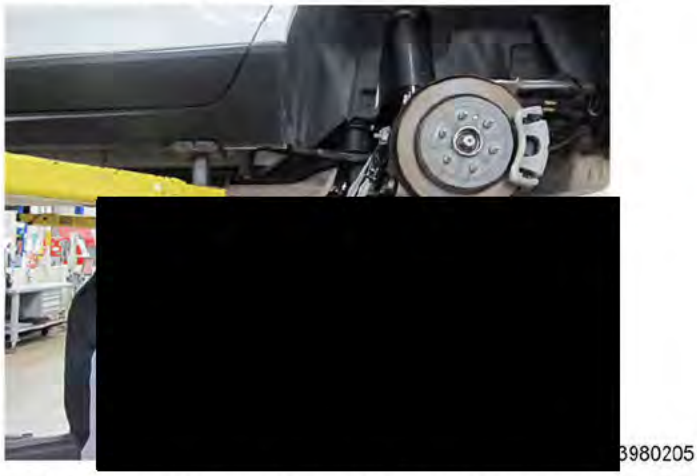
Note: Ensure the open end wrench is on the adjustment collar (2) while the jam nut (1) is checked with the torque wrench.

5. Use the following steps to verify the tightness of the adjustment link jam nuts (1) and adjustment collar (2).
   - Remove the two jack stands.


3980205

   - On the left hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the torque of the jam nuts using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be

checked by pushing torque wrench handle toward the rear of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

- On the right hand side of the vehicle, have one technician hold the adjustment collar with a 26mm open end wrench. Have a second technician verify the jam nut torque using a 26mm crow's foot attachment on a calibrated torque wrench. The torque will be checked by pulling torque wrench handle toward the front of vehicle on both the inner and outer jam nuts (the outer link has left handed threads) Tighten **150 Nm (110 lb ft)**.

CUSTOMER REIMBURSEMENT - For US

Customer requests for reimbursement of previously paid repairs for the recall condition are to be submitted to the dealer by November 30, 2015, unless otherwise specified by state law. If this is not convenient for the customer, they may mail the completed Customer Reimbursement Request Form and all required documents to the GM Customer Assistance Center.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

When a customer requests reimbursement, they must provide the following:

- A completed Customer Reimbursement Request Form. This form is mailed to the customer or can be obtained through GM GlobalConnect.
- The name and address of the person who paid for the repair.
- Paid receipt confirming the amount of the repair expense, a description of the repair, and the person or entity performing the repair.

IMPORTANT: GM requires dealers to approve or deny a reimbursement request within 30 days of receipt. If a reimbursement request is approved, the dealer should immediately issue a check to the customer and submit an appropriate warranty transaction for the incurred expense. If a reimbursement request is denied, the dealer MUST provide the customer with a clear and concise explanation, in writing, as to why the request was denied. The bottom portion of the Customer Reimbursement Request Form may be used for this purpose. If the denial was due to missing documents, the customer can resubmit the request when the missing documents are obtained, as long as it is still within the allowed reimbursement period.

Warranty transactions for customer reimbursement of previously paid repairs are to be submitted as required by GM Global Warranty Management. Additional information can also be found in Warranty Administration Bulletin 11-00-89-004.

CUSTOMER REIMBURSEMENT - For Canada and Export

Customer requests for reimbursement of previously paid repairs to correct the condition described in this bulletin are to be submitted to the dealer prior to or by November 30, 2015.

When a customer requests reimbursement, they must provide the following:

- Proof of ownership at time of repair.
- Original paid receipt confirming the amount of unreimbursed repair expense(s) (including Service Contract deductibles), a description of the repair, and the person or entity performing the repair.

All reasonable and customary costs to correct the condition described in this bulletin should be considered for reimbursement. Any questions or concerns should be reviewed with your GM representative prior to processing the request.

COURTESY TRANSPORTATION – For US and Canada

The General Motors Courtesy Transportation program is intended to minimize customer inconvenience when a vehicle requires a repair that is covered by the New Vehicle Limited Warranties. The availability of courtesy transportation to customers whose vehicles are within the warranty coverage period and involved in a product program is very important in maintaining customer satisfaction. Dealers are to ensure that these customers understand that shuttle service or some other form of courtesy transportation is available and will be provided at no charge. Dealers should refer to the General Motors Service Policies and Procedures Manual for Courtesy Transportation guidelines.

WARRANTY TRANSACTION INFORMATION

Submit a transaction using the table below. All transactions should be submitted as a ZFAT transaction type, unless noted otherwise.

Note: *To avoid having to "H" route the customer reimbursement transaction for approval, it must be submitted prior to the repair transaction.*

Labor Code	Description	Labor Time	Net Item
9100933	Inspect & Tighten Right & Left Rear Suspension Adjustment Links	0.3	N/A
9100934	Inspect & Install One Toe Rear Suspension Adjustment Link (incl. resetting rear toe) – Not for Use on Inventory Vehicles	1.5	N/A
9100935	Inspect & Install Both Toe Rear Suspension Adjustment Link (inc. resetting rear toe) – Not for Use on Inventory Vehicles	1.9	N/A
9100936	Customer Reimbursement Approved	0.2	*
9100937	Customer Reimbursement Denied - For US dealers only	0.1	N/A

Note: Customer reimbursement will not close this recall. The service procedure must also be performed on the vehicle.

* The amount identified in "Net Item" should represent the dollar amount reimbursed to the customer.

CUSTOMER NOTIFICATION – For US and Canada

General Motors will notify customers of this recall on their vehicle.

CUSTOMER NOTIFICATION – For Export

Letters will be sent to known owners of record located within areas covered by the US National Traffic and Motor Vehicle Safety Act.

DEALER RECALL RESPONSIBILITY – For US and Export (US States, Territories, and Possessions)

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

The US National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the US

National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

DEALER RECALL RESPONSIBILITY – All

All unsold new vehicles in dealers' possession and subject to this recall must be held and inspected/repaired per the service procedure of this recall bulletin before customers take possession of these vehicles.

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

Customers who have recently purchased vehicles sold from your vehicle inventory, and for which there is no customer information indicated on the dealer listing, are to be contacted by the dealer. Arrangements are to be made to make the required correction according to the instructions contained in this bulletin. Recall follow-up cards should not be used for this purpose, since the customer may not as yet have received the notification letter.

In summary, whenever a vehicle subject to this recall enters your vehicle inventory, or is in your dealership for service in the future, you must take the steps necessary to be sure the recall correction has been made before selling or releasing the vehicle.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trainedtechnicians have the tools, equipment, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your dealer for information on whether your vehicle may benefit from the information.

We Support Voluntary Technician Certification

IMPORTANT SAFETY RECALL

October 2014

Dear General Motors Customer:

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act.

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2010-2015 model year Cadillac SRX vehicles and 2011-2012 Saab 9-4X vehicles. As a result, GM is conducting a safety recall. We apologize for this inconvenience. However, we are concerned about your safety and continued satisfaction with our products.

IMPORTANT

- This notice applies to your 2010-2015 model year Cadillac SRX vehicles or 2011-2012 Saab 9-4X vehicle, **VIN** _____.
- Your vehicle is involved in GM recall 14457.
- Schedule an appointment with your dealer on or after November 10, 2014.
- This service will be performed for you at **no charge**.

Why is your vehicle being recalled?

The jam nut in the rear suspension toe adjuster link may not be torqued to the proper specification. A loose toe adjuster link can cause the vehicle to sway or wander at highway speed, activate the vehicle's electronic stability control system, and cause excessive wear to the threads in the link. Additionally, the rear suspension may make loud metallic noises, particularly when the vehicle is travelling over bumps or potholes. If the threads in the link become worn, the link may separate. If separation occurs while the vehicle is being driven, it would create sudden vehicle instability, increasing the risk of a crash.

What will we do?

PARTS ARE NOT CURRENTLY AVAILABLE, but when parts are available, your dealer will inspect the left and right rear toe link and replace the parts if there is evidence of damage or a loose link. If the rear toe links pass the inspection, then your dealer will torque the adjuster jam nuts to specification. This service will be performed for you at **no charge**. Because of service scheduling requirements, it is likely that your dealer will need your vehicle longer than the actual inspection time of approximately 20 minutes. If part replacement is required an additional 1 hour and 20 minutes to 1 hour and 40 minutes may be needed.

We are working as quickly as possible to correct this condition and expect to have sufficient parts to begin repairs by November 10, 2014.

What should you do?

You should contact your dealer to arrange a service appointment on or after November 10, 2014.

If you experience any sway or wandering while the vehicle is at speed, or hear any loud metallic or other unusual noises from the rear suspension, you should have the vehicle towed to a GM dealership for inspection and repair, and should not drive the vehicle until the recall repairs have been performed.

Did you already pay for this repair?

Even though you may have already had repairs for this condition, you will still need to take your vehicle to your dealer for additional repairs. If you have paid for repairs for the condition described in this letter, please complete the enclosed reimbursement form and present it to your dealer with all required documents. Working with your dealer will expedite your request, however, if this is not convenient, you may mail the completed reimbursement form and all required documents to Reimbursement Department, PO Box 33170, Detroit, MI 48232-5170. The completed form and required documents must be presented to your dealer or received by the Reimbursement Department by November 30, 2015, unless state law specifies a longer reimbursement period.

Do you have questions?

If you have questions or concerns that your dealer is unable to resolve, please contact the appropriate Customer Assistance Center at the number listed below.

Division	Number	Text Telephones (TTY)
Cadillac	1-800-458-8006	1-800-833-2622
Saab	1-855-880-0808	
Guam	65-6267-1752	
Puerto Rico – English	1-800-496-9992	
Puerto Rico – Español	1-800-496-9993	
Virgin Islands	1-800-496-9994	
GM Medium Duty Truck	1-800-862-4389	

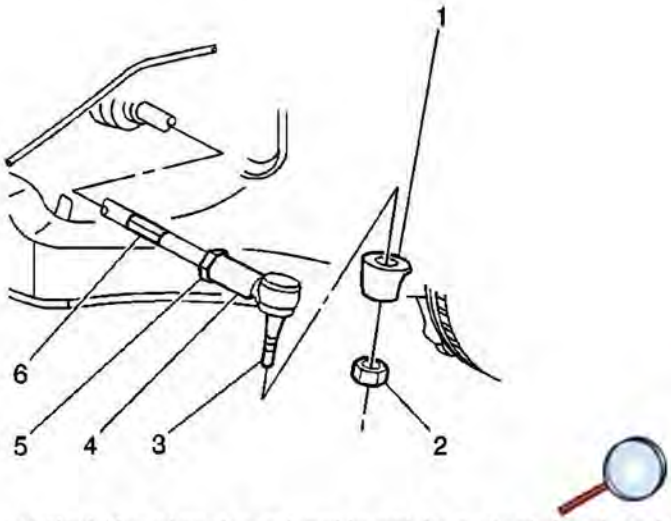
If after contacting your dealer and the Customer Assistance Center, you are still not satisfied we have done our best to remedy this condition without charge and within a reasonable time, you may wish to write the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590, or call the toll-free Vehicle Safety Hotline at 1.888.327.4236 (TTY 1.800.424.9153), or go to http://www.safercar.gov. The National Highway Traffic Safety Administration Campaign ID Number for this recall is 14V571.

Federal regulation requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Jeffrey M. Boyer
Vice President
Global Vehicle Safety

Enclosure
GM Recall #14457

Wheel Alignment - Steering Wheel Angle and/or Front Toe Adjustment



1. Ensure that the steering wheel is set in a straight ahead position.
2. Loosen the tie rod jam nut (5).
3. Adjust the toe to specification by turning the adjuster (6). Refer to Wheel Alignment Specifications.

   Caution: Refer to Fastener Caution.
4. Install the tie rod jam nut (5) and tighten to **70** Y **(52 lb ft)**.

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Wheel Alignment Measurement

Steering and vibration complaints are not always the result of improper alignment. One possible cause is wheel and tire imbalance. Another possibility is tire lead due to worn or improperly manufactured tires. Lead/pull is defined as follows: At a constant highway speed on a typical straight road, lead/pull is the amount of effort required at the steering wheel to maintain the vehicle straight path. Lead is the vehicle deviation from a straight path on a level road without pressure on the steering wheel.

Before performing any adjustment affecting wheel alignment, perform the following inspections and adjustments in order to ensure correct alignment readings:

- Inspect the tires for the proper inflation and adjust as necessary.
- Inspect the tires for irregular tire wear. Tire Diagnosis - Irregular or Premature Wear
- Inspect the runout of the wheels and the tires.
- Inspect the wheel bearings for backlash and excessive play.
- Inspect the ball joints and tie rod ends for looseness or wear.
- Inspect the control arms and stabilizer shaft for looseness or wear.
- Inspect the steering gear for looseness at the frame. Fastener Specifications
- Inspect the struts/shock absorbers for wear, leaks, and any noticeable noises. Suspension Strut and Shock Absorber Testing - On Vehicle
- Inspect the vehicle trim height. Trim Height Inspection
- Inspect the steering wheel for excessive drag or poor return due to stiff or rusted linkage or suspension components.

Give consideration to the condition of the equipment being used for the alignment. Follow the equipment manufacturer instructions.

Satisfactory vehicle operation may occur over a wide range of alignment settings. However, if the setting exceeds the service allowable specifications, correct the alignment to the service preferred specifications. Wheel Alignment Specifications

Perform the following steps in order to measure the front and rear alignment angles:

1. Install the alignment equipment according to the manufacturer instructions.
2. Jounce the front and the rear bumpers 3 times prior to checking the wheel alignment.
3. Measure the alignment angles and record the readings.
4. Adjust alignment angles to vehicle specification, if necessary. Wheel Alignment Specifications

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Wheel Alignment Specifications

Alignment Condition: Full tank of fuel, no passengers and placed on flat level surface.

Wheel Alignment Specifications

RPO Restriction	Wheels	Caster ± 0.8°		Cross Caster ± 0.8°	Camber ± 0.8°		Cross Camber ± 0.8°	Total Toe ± 0.2°	Steering Wheel Angle ± 3.5°	Thrust Angle ± 0.3°
		Left	Right	(Left – Right)	Left	Right	(Left – Right)	(Left + Right)		(Left – Right)/2
All RPOs	Front	4.5°	4.5°	0.0°	−0.6°	−0.6°	0.0°	0.2°	0.0°	—
	Rear	—	—	—	−1.0°	−1.0°	—	0.2°	—	0.0°

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File Name: 226310 2010-16 SRX GMT166 2-GLCS GART AA WARRANTY.XLSX

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File Name: 226310 2010-16 SRX GMT166 3-BULLETIN LCS GART AA WARRANTY.XLSX

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File Name: 226310 2010-16 SRX GMT166 4-GLCS GART AA WARRANTY.XLSX

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File Name: 226310 2013-16 18VINS PROVIDED GART AA WARRANTY.XLSX