Service Bulletin

File in Section: -
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INFORMATION

Subject: 2019 Chevrolet Blazer New Model Features

Brand:	Model:	Model Year:		VIN:		Engines:	Transmissions:
		From:	To:	From:	To:		
Chevrolet	Blazer	2019		—		Gasoline, 2.5L, 4 Cylinder, L4, SIDI, DOHC, DCVCP, VVT, Aluminum — RPO LCV Gasoline, 3.6L, V6, DI, AFM, DOHC, VVT, Aluminum, GEN 2 — RPO LGX	9T50, 9-Speed, Automatic, GEN 1 — RPO M3D 9T65, 9-Speed, Automatic, GEN 1 — RPO M3V

Involved Countries	**United States, Canada, Mexico, Caribbean, Central America, South America, Israel and Middle East**

Overview

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2019 Blazer

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2019 Blazer

Bulletin Purpose

This purpose of this bulletin is to introduce the 2019 Chevrolet Blazer midsize SUV. The bulletin will help the Service Department Personnel become familiar with some of the vehicle's features. Blazer has two-row five-passenger seating with up to 64.2 cubic feet (1,818 L) of maximum cargo space with the second-row seats folded flat.

Blazer Trim Levels

The Trim Levels are:

L

L is the entry-level trim for the all-new Blazer. It will be equipped with a 2.5L L4 engine — RPO LCV and the 9T50 9-speed automatic transmission — RPO M3D. Other features of this trim level include FWD and cloth seats.

L is the Blazer 2.5 in Canada.

Blazer

The mid-level trim will be known as Blazer, but it will actually come in three different variations.

– The 1LT will be equipped with a 2.5L L4 engine — RPO LCV and the 9T50 9-speed automatic transmission — RPO M3D, FWD, and cloth seats.

  1LT is not available in Canada.

– The 2LT will be equipped with a 3.6L V6 engine — RPO LGX and the 9T65 9-speed automatic transmission — RPO M3V with a choice of FWD or AWD and cloth seats.

  2LT is the Blazer 3.6 in Canada.

– The 3LT will be equipped with a 3.6L V6 engine — RPO LGX and the 9T65 9-speed automatic transmission — RPO M3V with a choice of FWD or AWD, and leather seats.

  3LT is the Blazer 3.6 True North in Canada (AWD only).

Blazer RS

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The blacked-out, sport-inspired RS trim will be equipped with a 3.6L V6 engine — RPO LGX and the 9T65 9-speed automatic transmission — RPO M3V with a choice of FWD or AWD and leather seats.

Blazer RS in Canada (AWD only).

Blazer Premier

The top-of-the-line Premier trim will include an array of additional luxurious features and will be equipped with a 3.6L V6 engine — RPO LGX and the 9T65 9-speed automatic transmission — RPO M3V with a choice of FWD or AWD and leather seats.

Blazer Premier in Canada (AWD only).

Audio System

Blazer will offer two audio systems. A 6-speaker audio system — RPO UQF comes standard on L, Mainstream and RS models, while a Bose® Premium 8-speaker audio system — RPO UQA comes standard on Premier models. Bose Premium audio is also available on Leather and RS models.

6-Speaker System

The 6-speaker system includes:

– 4 door speakers
– 2 tweeters in the IP
– Internal amplifier (RS models only)
– 4 Active Noise Cancellation microphones

Bose® Premium 8-Speaker System

The Bose® Premium 8-speaker system includes:

– 4 door speakers
– 2 tweeters and 1 midrange in the IP
– Amplifier below center console
– Subwoofer below front passenger seat
– 4 Active Noise Cancellation microphones

Active Noise Cancellation Operation

Active Noise Cancellation (ANC) technology employs the same technique used in many of today's most popular headphones to quiet ambient noise. It preserves the peace and quiet of the cabin by reducing unwanted noises at all engine speeds. It also benefits fuel economy since the engine can run at a lower, more fuel-efficient rpm without customers hearing the associated low-frequency noise inside the vehicle. Four microphones strategically placed in the headliner on the driver and passenger side of the front and second rows, monitor the cabin for unwanted low-frequency engine produced noises occurring between 40 Hz and 180 Hz. A computer then produces indistinguishable sound waves and projects them back into the cabin through the audio system's speakers and subwoofer (located below the front passenger seat if equipped). The sound waves counteract the unwanted noise, reducing or cancelling it out altogether. Active Noise Cancellation is standard on all Trim Levels.

Brakes

Brake System Overview

The Blazer is equipped with a TRW EBC460 brake system. The K17 electronic brake control module (EBCM) and the brake pressure modulator are serviced separately. The brake pressure modulator uses a four circuit configuration to control hydraulic pressure to each wheel independently.

Brake Fluid

Use DOT 3 Motor Vehicle Brake Fluid.

Brake System Components

The following components are involved in the operation of the brake system:

- **Electronic Brake Control Module:** The EBCM controls system functions and detects failures. It supplies voltage to the solenoid valves and pump motor.
- **Brake Pressure Modulator:** The brake pressure modulator contains the following components:
  – Brake pressure sensor
  – Hydraulic pump with pump motor
  – Four isolation valves
  – Four dump valves
  – Two traction/stability control supply valves
  – Two traction/stability control isolation valves
  – High pressure accumulator
  – Low pressure accumulator
- **Body Control Module:** The BCM monitors the brake pedal position sensor signal when the brake pedal is applied and sends a high speed serial data message to the EBCM indicating the brake pedal position.
- **Brake Pressure Sensor:** The brake pressure sensor is used to sense the movement of the brake pedal during application. The sensor provides an analog voltage signal that will

increase as the brake pedal is applied. The EBCM monitors the brake pressure sensor which is integral to the brake pressure modulator.

- **Instrument Cluster:** The IC displays the vehicle speed based on the information from the ECM. The ECM sends the vehicle speed information via a high speed serial data to the BCM. The BCM then sends the vehicle speed information via a low speed serial data to the IC in order to display the vehicle speed.
- **Multi-axis Acceleration Sensor:** The yaw rate, lateral acceleration and longitudinal acceleration sensors are combined into one multi-axis acceleration sensor, internal to the inflatable restraint sensing and diagnostic module (SDM). The EBCM receives serial data message inputs from the sensor and activates Electronic Stability Control (ESC) and Hill Hold Start Assist as needed depending on multi-axis acceleration sensor input.
- **Multifunction Switch:** The Traction Control (TC) switch is a multifunction momentary switch. The BCM monitors the signal circuit from the TC switch and sends a high speed serial data message to the EBCM indicating the switch position. TC and ESC are manually disabled or enabled by pressing the traction control switch.
- **Steering Wheel Angle Sensor:** The EBCM receives serial data message inputs from the steering wheel angle sensor. The sensor signal is used to calculate the intended driving direction. The steering wheel angle sensor is an internal part of the power steering gear.
- **Transmission Control Module:** The EBCM receives high speed serial data message inputs from the Transmission Control Module (TCM) indicating the gear position of the transmission for Hill Start Assist (HSA) or Hill Hold functions.
- **Active Wheel Speed Sensors:** The EBCM supplies ignition voltage to each Wheel Speed Sensor (WSS). As the wheel spins, the WSS produces an alternating current square wave signal. The EBCM uses the frequency of the square wave signal to calculate the wheel speed. The EBCM sends the wheel speed information via high speed serial data to the ECM.

ABS

When wheel slip is detected during a brake application, an ABS event occurs. During ABS braking, hydraulic pressure in the individual wheel circuits is controlled to prevent any wheel from slipping. A separate hydraulic line and specific solenoid valves are provided for each wheel. The ABS can decrease, hold, or increase hydraulic pressure to each wheel. The ABS does not, however, increase hydraulic pressure above the amount which is transmitted by the master cylinder during braking.

Initialization Sequence

The initialization sequence cycles each solenoid valve and the pump motor, as well as the necessary relays, for approximately forty milliseconds to verify proper component operation. One of the tests performed is the adaptive pressure calibration that occurs when the engine is running and the brake pedal is not applied. The adaptive pressure calibration will cycle each of the six isolation valves to verify valve operation. The initialization sequence may be heard and felt while it is taking place, and is considered part of normal system operation. The active test is initiated by the EBCM at the start of the ignition cycle and when the speed of the fastest wheel exceeds 10 mph (16 km/h). If a fault is detected the EBCM will set a DTC.

Power-Up-Self Test

The EBCM performs the first phase of the power-up-self test when the ignition is first turned ON. This phase consists of internal testing of the Brake System Control Module and electrical tests of system sensors and circuits. Certain failures cannot be detected unless active diagnostic tests are performed on the components. Shorted solenoid coil or motor windings for example, cannot be detected until the components are commanded ON by the EBCM.

Pressure Decrease

If a pressure hold does not correct the wheel slip condition, a pressure decrease occurs. The EBCM decreases the pressure to individual wheels during deceleration when wheel slip occurs. The isolation valve is closed and the dump valve is opened. The excess fluid is stored in the accumulator until the pump can return the fluid to the master cylinder or fluid reservoir.

Pressure Hold

The EBCM closes the isolation valve and keeps the dump valve closed in order to isolate the slipping wheel when wheel slip occurs. This holds the pressure steady on the brake so that the hydraulic pressure does not increase or decrease.

Pressure Increase

After the wheel slip is corrected, a pressure increase occurs. The EBCM increases the pressure to individual wheels during deceleration in order to reduce the speed of the wheel. The isolation valve is opened and the dump valve is closed. The increased pressure is delivered from the master cylinder.

Dynamic Rear Proportioning

Dynamic rear proportioning is a control system that replaces the mechanical proportioning valve. Under certain driving conditions the EBCM will reduce the rear wheel brake pressure by commanding the appropriate solenoid valves ON and OFF.

Intelligent Brake Assist

The Intelligent Brake Assist (IBA) function is designed to provide limited braking to help prevent front and rear low speed collisions. The EBCM receives inputs from the brake pedal position sensor, wheel speed sensors, short range radar and ultrasonic sensors to detect a collision. When the EBCM senses a possible collision, it will actively increase the hydraulic brake pressure to apply the brakes. IBA will automatically disengage only when the brake pedal is released.

StabiliTrak® Electronic Stability Control

StabiliTrak® Electronic Stability Control provides added stability during aggressive maneuvers. Yaw rate is the rate of rotation about the vehicle's vertical axis. The ESC is activated when the EBCM determines that the desired yaw rate does not match the actual yaw rate as measured by the yaw rate sensor. The difference between the desired yaw rate and the actual yaw rate is the yaw rate error, which is a measurement of oversteer or understeer. When a yaw rate error is detected, the EBCM attempts to correct the vehicle's yaw motion by applying brake pressure to one or more of the wheels. The amount of applied brake pressure varies, depending on the correction required. The engine torque may be reduced also, if it is necessary to slow the vehicle while maintaining stability. Stability control activations generally occur in turns during aggressive driving. When braking during stability control activation, the brake pedal may pulsate.

Electronic Stability Control can be manually disabled or enabled by pressing and holding the TCS switch for five seconds.

Traction Control System

When drive wheel slip occurs, the EBCM will enter TCS mode. The EBCM requests the ECM to reduce the amount of torque to the drive wheels via a serial data message. The ECM reduces torque to the drive wheels and reports the amount of delivered torque. If the engine torque reduction does not reduce drive wheel slip, the EBCM will actively apply the brakes on the slipping drive wheel. During traction control braking, hydraulic pressure in each drive wheel circuit is controlled to prevent the drive wheels from slipping. The EBCM commands the pump motor and appropriate solenoid valves ON and OFF to apply brake pressure to the slipping wheel.

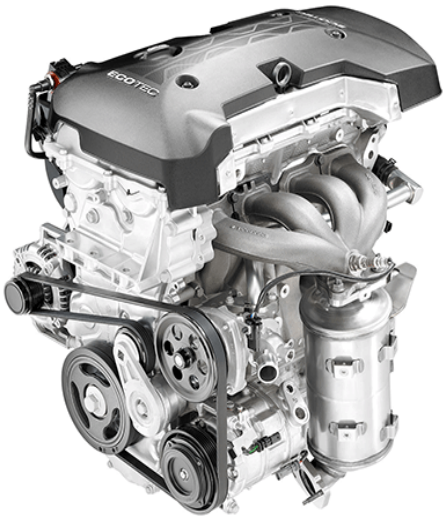
Traction Control can be manually disabled or enabled by pressing the TCS switch.

Trailer Sway Control (TSC)

Vehicles with StabiliTrak® have a Trailer Sway Control (TSC) feature. Trailer sway is unintended side-to-side motion of a trailer while towing. If the vehicle is towing a trailer and the TSC detects that sway is increasing, the vehicle brakes are selectively applied at each wheel, to help reduce excessive trailer sway.

Engine 2.5L — RPO LCV

Overview



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Gasoline, 2.5L, 4 Cylinder, L4, SIDI, DOHC, DCVCP, VVT, Aluminum — RPO LCV (Typical View)

The 2.5L engine features a combustion system with improved knock resistance and higher flowing intake and exhaust ports in the cylinder head, delivering impressive horsepower, torque and fuel efficiency. It is tuned to deliver more torque at lower RPM, providing a stronger feel at launch and during on-demand maneuvers.

Engine Features and Specifications

- **Air Filter Life:** This DIC message shows an estimate of the engine air filter’s remaining useful life and the state of the system. Engine Air Filter Life 95% means 95% of the current air filter life remains.
- **Balance Shaft Assembly:** The dual balance shaft assembly is mounted to the lower crankcase located within the oil pan. The balance shafts are driven by a single inverted tooth chain that also drives the oil pump. The chain is tensioned by a hydraulic tensioner that is supplied pressure by the engine oil pump. This design promotes the maximum effectiveness of the balance shaft system and reduces noise and vibration.
- **Bore/Stroke:** 3.46 inches (88 mm) / 3.97 inches (101 mm).
- **Camshaft:** Two camshafts are used, one for all intake valves and high pressure fuel pump, the other for all exhaust valves and mechanical vacuum pump. The camshafts are cast iron.
- **Camshaft Cover:** The camshaft cover has an integrated steel crankcase ventilation baffling. The camshaft cover has mounting locations for the ignition system.

- **Camshaft Drive:** A roller chain is used for the camshaft drive. There is a tensioner and active guide used on the slack side of the chain to control chain motion and noise. The chain drive promotes long valve train life and low maintenance.
- **Camshaft Position Sensor:** The engine uses a camshaft position sensor for each camshaft. The camshaft position sensor signals are a digital ON/OFF pulse and output 4 times per revolution of the camshaft. The camshaft position sensor does not directly affect the operation of the ignition system. The camshaft position sensor information is used by the ECM to determine the position of the camshaft relative to the crankshaft position. By monitoring the camshaft position and crankshaft position signals the ECM can accurately time the operation of the fuel injectors.
- **Compression Ratio:** 11.3:1
- **Connecting Rod and Piston:** The connecting rods are powdered metal. The connecting rod incorporates the floating piston pin. The pistons are cast aluminum. The piston rings are of a low tension type to reduce friction. The top compression ring is ductile steel with a molybdenum facing and phosphate coated sides. The second compression ring is gray iron. The oil ring is a 3-piece spring construction with chromium plating.
- **Cooling System:** The thermostat is positioned between the engine and the radiator. Its purpose is to control the flow of coolant to the radiator. The thermostat will not allow coolant flow through the radiator when the coolant is cold. Once the engine reaches its operating temperature, approximately 203°F (95°C), the thermostat opens. The thermostat is also controlled by the ECM. The thermostat receives a signal from the ECM that activates a heater element within the thermostat. This forces the thermostat to an open position when desired for maximum operational efficiencies.
- **Crankshaft:** The crankshaft is cast nodular iron with 8 counterweights. The number 8 counterweight is also the ignition system reluctor wheel. The main bearing journals are cross-drilled, and the upper bearings are grooved. The crankshaft has a slip fit balance shaft drive sprocket. Number 2 main bearing is the thrust bearing. The crankshaft balancer is used to control torsional vibration.
- **Crankshaft Position Sensor:** The crankshaft position sensor works in conjunction with a reluctor wheel that is part of the flywheel (rear mounted crankshaft position sensor). The ECM monitors the voltage frequency on the crankshaft position sensor signal circuit. As each reluctor wheel tooth rotates past the sensor, the sensor creates a digital ON/OFF pulse. The ECM uses this to properly synchronize the ignition system, the fuel injectors, and the knock control.
- **Cylinder Block:** The cylinder block is constructed of aluminum alloy by precision sand-casting with cast-in-place iron cylinder liners. The block has 5 crankshaft bearings with the thrust bearing located on the second bearing from the front of the engine. The cylinder block incorporates a bedplate design that forms an upper and lower crankcase. This design promotes cylinder block rigidity and reduced noise and vibration.
- **Cylinder Head:** The aluminum cylinder head is cast using advanced semipermanent mold technology which provides excellent strength, optimal port flow, and reduces machining. The cylinder head is designed specifically for direct injection into each combustion chamber and includes a premium valve seat, valve guide, and valve materials.
- **Direct Injection:** Direct Injection (DI) is used to optimize efficiency and performance. Using DI, a higher compression ratio of 11.3:1 is possible because of a cooling effect that is produced as the injected fuel vaporizes in the combustion chamber, reducing the charge temperature and improving resistance to spark knock.
- **Engine Block Cooling Baffle:** The engine block cooling baffle is essential to proper engine coolant flow. The baffle's presence in the engine block is strategic and acts to direct the engine coolant flow around the bores for uniform cooling.
- **Exhaust Manifold:** High-silicon molybdenum, cast nodular iron.
- **Firing Order:** 1 - 3 - 4 - 2
- **Fuel:** Use regular unleaded gasoline meeting ASTM specification D4814 with a posted octane rating of 87 or higher. Do not use gasoline with a posted octane rating of less than 87, as this may cause engine knock and will lower fuel economy. ***DO NOT use any fuel labeled E85, FlexFuel or gasoline with ethanol levels greater than 15% by volume.***
- **Fuel System:** An electric turbine style fuel pump attaches to the fuel tank fuel pump module inside the fuel tank. The fuel pump supplies fuel through the fuel feed pipe to the high pressure fuel pump. The high pressure fuel pump supplies fuel to a variable-pressure fuel rail. Fuel enters the combustion chamber through precision multi-hole fuel injectors. The high pressure fuel pump, fuel rail pressure, fuel injection timing, and injection duration are controlled by the ECM.
- **Horsepower/Torque:** 193 horsepower (144 kW) @ 6300 RPM and 188 pound-feet (255 Nm) of torque @ 4400 RPM (GM Estimates).
- **Ignition System:** The ignition coils are mounted near each cylinder with short integrated boots or high tension wires connecting the coils to the spark plugs. The driver modules within each ignition coil are commanded ON/OFF by the ECM. The ECM uses engine speed, the mass air flow (MAF) sensor signal, and position information from the crankshaft position and the camshaft position sensors to control the sequence, dwell, and timing of the spark.
- **Intake Manifold:** There is an Integrated Noise and Vibration (N&V) cover on the intake manifold.
- **Maximum Engine Speed:** 6850 RPM.

- **Oil Life:** The software used to predict remaining air filter life, is coordinated with the vehicle's oil life system. If the REMAINING OIL LIFE 99% message is displayed, that means 99% of the current oil life remains.
- **Oil Pan:** The unique two-piece oil pan is made from die cast aluminum and stamped steel. The oil pan includes an attachment to the transmission to provide additional structural support.
- **Oil Spray Piston Cooling:** Each piston has its own directed jet, coating its underside and the cylinder wall with an additional layer of lubricant. Extra lubrication cools the pistons and reduces friction and operational noise and increases engine durability.
- **Spark Plugs:** Extended-life spark plugs.
- **Two-Stage, Variable-Displacement Oil Pump:** The oil pump assembly is located within the oil pan. The oil pump assembly is fastened directly to the rear of the balancer shaft assembly and is driven by the rotation of the balance shaft spline. The variable-flow oiling system helps maximize fuel efficiency. The flow volume of the oil pump is designed to support the engine's oiling requirements, including piston cooling and camshaft phasing.
- **Valves:** There are two intake and two exhaust valves per cylinder. The head of the valve is made of a durable alloy. The valve shaft resists wear. Valve stem oil seals control oil consumption.
- **Variable Valve Timing:** VVT enhances fuel economy and will maximize engine performance for given demands and conditions.

Engine 3.6L V6 — RPO LGX

Overview

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Gasoline, 3.6L, V6, DI, AFM, DOHC, VVT, Aluminum, GEN 2 — RPO LGX

The 3.6 Liter V6 — RPO LGX has Variable Valve Timing (VVT), Direct Injection (DI) and Active Fuel Management (AFM). The DI system positions the high pressure fuel injectors in the cylinder heads. The engine incorporates 2 intake and 2 exhaust valves per cylinder, and uses a Dual Overhead Camshaft design (DOHC) with individual intake and exhaust camshafts. A camshaft position actuator is mounted on each camshaft. The cylinders are arranged in 2 banks of 3 with a 60 degree angle. The right bank of cylinders are number 1-3-5 and the left bank of cylinders are 2-4-6, viewed from the flywheel end of the engine.

Engine Features and Specifications

- **Air Filter Life:** This DIC message shows an estimate of the engine air filter's remaining useful life and the state of the system. Engine Air Filter Life 95% means 95% of the current air filter life remains.
- **Bore/Stroke:** 3.74 inches (95.0 mm) / 3.37 inches (85.8 mm).
- **Camshaft Drive System:** The camshaft drive system consists of two timing drive chains driven by the crankshaft which drives the respective cylinder head's intake and exhaust camshaft position actuators. Cushioned actuator chain sprockets have been added contributing to quieter engine operation. The timing drive chains use moveable timing drive chain guides and a hydraulic-actuated tensioner. The tensioner minimizes timing drive chain noise and provides accurate valve action by keeping slack out of the timing drive chains and continuously adjusting for timing drive chain wear. The tensioner incorporates a plunger that adjusts out with wear allowing only a minimal amount of backlash. All tensioners are sealed to the head or block using a rubber coated steel gasket. The gasket traps an adequate oil reserve to ensure quiet start-up.
- **Camshaft Position Actuator:** The engine incorporates a camshaft position actuator for each intake and exhaust camshaft. The camshaft position actuator is a hydraulic vane-type actuator that changes the camshaft lobe timing relative to the camshaft drive sprocket. Camshaft phasing changes valve timing as engine operating conditions vary. Dual camshaft phasing allows the further optimization of performance, fuel economy and emissions without compromising overall engine response and drivability. Variable valve timing also contributes to a reduction in exhaust emissions. It optimizes exhaust and inlet valve overlap and eliminates the need for an exhaust gas recirculation (EGR) system.
- **Compression Ratio:** 11.5:1
- **Cooling System:** The engine has a targeted cooling system which sends coolant simultaneously to each water jacket in the heads and block. This new, parallel-flow design maximizes heat extraction in the area of the upper deck, intake and exhaust valve bridges in the heads and integrated exhaust manifold with a minimal amount of coolant. The result is more

even and consistent cooling, which enhances performance, and faster engine warm up, which improves cold-start efficiency and reduces emissions.

- **Connecting Rods and Pistons:** The connecting rods are sinter-forged with a high copper content and have press-in-place piston pin bushings. The connecting rods and rod cap are aligned by dowel pins retained in the cap. The cast aluminum pistons incorporate a polymer-coated skirt to reduce friction. The pistons are unique to the LGX both for compression ratio and combustion efficiency. The piston uses two low tension compression rings and one multi-piece oil control ring.
- **Crankshaft:** The crankshaft is hardened, forged steel with 4 main bearings. Crankshaft thrust is controlled by the upper portion of the number 3 main bearing. The crankshaft position reluctor wheel is pressed onto the rear of the crankshaft in front of the rear main journal. A micro encapsulated adhesive is used on the reluctor wheel to aid retention. The crankshaft is internally balanced.
- **Cylinder Block:** The cylinder block is constructed of aluminum alloy by precision sand-casting with cast-in-place iron cylinder liners. Each nodular main bearing cap incorporates 6 bolts bolting the cap into the engine block. Along with 2 outer and 2 inner bolts, 2 side bolts are used in the deep skirt block. To prevent aeration, oil return from the valve train and cylinder heads is channeled away from the rotating and reciprocating components through oil drain back passages incorporated into the cylinder heads and engine block. Pressure-actuated piston oil cooling jets are mounted between opposing cylinders. Twin knock sensors are located in the valley of the block between the cylinder heads. The knock sensors have an acoustic foam noise barrier that surrounds them in the valley.
- **Cylinder Head:** The cylinder heads are a two piece design consisting of a head and a camshaft carrier which are cast aluminum with powdered metal valve seat inserts and valve guides. The two piece design accommodates the AFM system. The cylinder heads also feature integrated exhaust manifolds; the exhaust manifolds are incorporated into the head casting. Two intake valves and two exhaust valves are actuated by roller finger followers pivoting on a stationary hydraulic lash adjuster (SHLA). The valves and seats are constructed with specialized materials and coatings, and the exhaust valves are sodium filled for robustness. The cylinder heads also feature a “high-tumble” port design, and are sealed with LGX specific head gaskets. The head gaskets are specific to the LH and RH sides.

  Separate exhaust and intake camshafts are supported by bearings machined into the camshaft carrier. The front camshaft bearing cap is used as a thrust control surface for each camshaft. Each spark plug is shielded by a tube that is pressed into the cylinder head. Each spark plug ignition coil is mounted through the spark plug tube. The LGX engine uses specific spark plugs and a different spark plug gap from other V6 engines. The engine coolant temperature (ECT) sensor is mounted in the thermostat housing near the flywheel end of the engine. With DI, the high pressure injectors are located in machined bores below the intake ports. A stainless steel, high pressure fuel rail is attached to the intake side of the head. The engine has unique higher-flow injectors and fuel pump. The cylinder head has a larger bore for the new larger diameter fuel pump follower that operates the higher-flow pump. The fuel injectors are retained to the fuel rail in a new “twist-lock” retention scheme that does not require special tools for service.
- **Direct Injection:** DI is used to optimize efficiency and performance. With DI, a higher compression ratio of 11.5:1 is possible because of a cooling effect that is produced as the injected fuel vaporizes in the combustion chamber, reducing the charge temperature and improving resistance to spark knock.
- **Electronic Ignition System:** The electronic ignition system produces and controls the high energy secondary spark. This spark ignites the compressed air/fuel mixture at precisely the correct time, providing optimal performance, fuel economy, and control of exhaust emissions. The ECM primarily collects information from the crankshaft position and camshaft position sensors to control the sequence, dwell, and timing of the spark.
- **Firing Order:** The engine firing order is 1-2-3-4-5-6
- **Horsepower/Torque:** 305 hp (227 kW) and 269 lb-ft of torque (365 Nm).
- **Oil Life:** The software used to predict remaining air filter life, is coordinated with the vehicle’s oil life system. If the REMAINING OIL LIFE 99% message is displayed, that means 99% of the current oil life remains.
- **Oil Spray Piston Cooling:** Each piston has its own directed jet, coating its underside and the cylinder wall with an additional layer of lubricant. Extra lubrication cools the pistons and reduces friction and operational noise and increases engine durability.
- **Oiling System:** The LGX engine contains a dual-pressure control and variable-displacement vane pump that enhances efficiency by optimizing oil pressure as a function of engine speed. The oil pump is located beneath the cylinder block inside the oil pan, contributing to smoother and quieter engine operation. The oiling system components differ depending on the engine being in a transverse or longitudinal orientation. The engine has unique oil pans depending on orientation, with the pans being separated into an upper (traditional aluminum) and lower (stamped steel) pan. This configuration helps with reducing noise and mass. It also affords some serviceability improvements through not needing to remove the entire upper pan for some service procedures; the procedures can be performed through removing the lower

pan. The oil pans contain oil level switches. The oil level switch is normally open and closes at oil levels above minimum requirements.

- **Right and Left Bank Designation:** Right hand (RH) and left hand (LH) designation through the engine mechanical section are viewed from the rear, flywheel side, of the engine or from inside the vehicle. These banks are also referred to as Bank 1 (RH) and Bank 2 (LH).
- **Vacuum Pump:** The engine utilizes a mechanical vacuum pump to provide a vacuum source for the braking system. The vacuum pump is integrated into the oil pump assembly located in the oil pan. Both vacuum pump and oil pump are part of a common assembly, referred to as a tandem pump. Neither pump is serviceable individually. If either the oil pump or vacuum pump are defective, the tandem pump assembly must be replaced.
- **Variable Valve Timing:** VVT helps maximize performance by enabling different valve timing depending on rpm and operating conditions.

Active Fuel Management System

Active Fuel Management System

The Active Fuel Management System (AFM) consists of the camshafts, valves, the switching roller finger followers (SRFF), also known as the valve switching rocker arm, the dual feed hydraulic lash adjusters and the oil control valve (OCV) which is also known as the valve rocker arm oil control valve. Depending on engine RPM, the ECM sends a signal to the OCV commanding it ON or OFF.

With the AFM system ON, the OCV directs oil to the dual feed hydraulic lash adjuster unlatching the switching roller finger followers creating zero lift and not allowing the valves to open on cylinders two and five. AFM is active at this time. With the AFM system OFF, the OCV is not active and oil is not directed to the dual feed hydraulic lash adjuster. The switching roller finger followers operate as a normal rocker arm and all valves open 11.5 mm of lift at 90° BTDC. AFM is inactive at this time.

Fuel System

Overview

The fuel system is an electronic returnless on-demand design. A returnless fuel system reduces the internal temperature of the fuel tank by not returning hot fuel from the engine to the fuel tank. An electric turbine style fuel pump attaches to the primary fuel tank fuel pump module inside the fuel tank. The fuel pump supplies fuel through the fuel feed pipe to the high pressure fuel pump. The high pressure fuel pump supplies fuel to a variable-pressure fuel rail. Fuel enters the combustion chamber through precision multi-hole fuel injectors. The high pressure fuel pump, fuel rail pressure, fuel injection timing, and injection duration are controlled by the ECM.

The primary fuel tank fuel pump module also contains a primary jet pump. Fuel pump flow loss, caused by vapor expulsion in the pump inlet chamber, is diverted to the primary jet pump through a restrictive orifice located on the pump cover. The primary jet pump fills the reservoir of the primary fuel tank fuel pump module. The fuel tank fuel pump module has a secondary jet pump that creates a venturi action which causes the fuel to be drawn from the secondary side of the fuel tank, through the fuel transfer pipe, to the primary side of the fuel tank.

Fuel Level Sensor

The fuel level sensor consists of a float, a wire float arm, and a ceramic resistor card. The position of the float arm indicates the fuel level. The fuel level sensor contains a variable resistor which changes resistance in correspondence with the position of the float arm. The ECM sends the fuel level information via the serial data circuit to the instrument panel cluster (IPC) in order to control the fuel gauge. The control module monitors the signal circuits of the primary fuel level sensor and the secondary fuel level sensor in order to determine the fuel level.

Fuel Pump

The fuel pump is mounted in the fuel tank fuel pump module reservoir. The fuel pump is an electric pump. Fuel is pumped to the high pressure fuel pump at a pressure that is based on feedback from the fuel pressure sensor. The fuel pump delivers a constant flow of fuel even during low fuel conditions and aggressive vehicle maneuvers. The fuel pump flex pipe acts to dampen the fuel pulses and noise generated by the fuel pump.

Fuel Pump Power Control Module

The fuel pump power control module is a serviceable GMLAN module. The fuel pump power control module receives the desired fuel pressure message from the ECM and controls the fuel pump located within the fuel tank to achieve the desired fuel pressure. The fuel pump power control module sends a 25 kHz PWM signal to the fuel pump, and pump speed is changed by varying the duty cycle of this signal. Maximum current supplied to the fuel pump is 15 A. A liquid fuel pressure sensor provides fuel pressure feedback to the ECM.

Fuel Pressure Sensor

The fuel pressure sensor is a serviceable 5V, 3-pin device. It is located on the fuel feed line forward of the fuel tank, and receives power and ground from the ECM through a vehicle wiring harness. The sensor provides a fuel pressure signal to the ECM, which is used to provide Closed Loop fuel pressure control.

Pressure Relief Regulator Valve

The pressure relief regulator valve replaces the typical fuel pressure regulator used on a mechanical returnless fuel system. The pressure relief regulator valve is closed during normal vehicle operation. The pressure relief regulator valve is used to vent pressure during hot soaks and also functions as a fuel pressure regulator in the event of the fuel pump power control module defaulting to 100 percent pulse width modulation (PWM) of the fuel pump. Due to variation in the fuel system pressures, the opening pressure for the pressure relief regulator valve is set higher than the pressure that is used on a mechanical returnless fuel system pressure regulator.

Secondary Fuel Tank Fuel Pump Module

The secondary fuel tank fuel pump module is located inside of the left side of the fuel tank. The secondary fuel tank fuel pump module consists of the following major components, the fuel level sensor and the fuel pick-up.

Engine Oil — dexos1®

Engine Oil — dexos1® GEN2 (2.5L, 3.6L)

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Ask for and use engine oils that meet the dexos® specification. Use full synthetic engine oils that meet the dexos1® GEN 2 specification. Engine oils that have been approved by GM as meeting the dexos1® GEN 2 specification are marked with the dexos1® APPROVED - GEN 2 logo. For additional information, visit this General Motors website: http://www.gmdexos.com

- Use dexos1® APPROVED - GEN 2 full synthetic SAE 0W-20 viscosity grade engine oil for the 2.5L L4 engine.
- Use dexos1® APPROVED - GEN 2 full synthetic SAE 5W-30 viscosity grade engine oil for the 3.6L V6 engine. In an area of extreme cold, where the temperature is colder than −20°F (−29°C), use SAE 0W-30 engine oil. An oil of this viscosity grade will provide easier cold starting at extremely low temperatures.

Safety — Driving Assistance Technologies

Overview

These technologies provide the driver the ability to better monitor the vehicle's surroundings and the driving environment and can help the driver be better prepared and respond in the event of the unexpected. The array of advanced driving assistance technologies available includes proven, highly designed features that use a combination of camera, short and long range radars, and ultrasonic sensors designed to help drivers avoid crashes or reduce their severity if one occurs. When fully equipped with all of the available safety features, there are a total of 3 radars, 6 cameras and 8 ultrasonic sensors.

Depending on the Trim Level the following systems may be provided:

- **Adaptive Cruise Control:** Adaptive Cruise Control (ACC) enhances regular cruise control to allow the vehicle to automatically follow a detected vehicle ahead at the driver-selected following gap while the driver steers, reducing the need for the driver to frequently brake and accelerate. The feature automatically accelerates and brakes the vehicle up to moderate levels to maintain a driver selected following gap (distance), even under stop and go traffic conditions. It uses existing Forward Collision Alert (FCA) sensors.
- **Digital Rear Vision Camera:** When in Reverse, Rear Vision Camera provides the driver a view of the scene directly behind the vehicle on the center stack display to help them park and avoid crashing into nearby objects during low-speed maneuvering. It shows detection displays for Active Tow and the Rear Park Assist (RPA) and Rear Cross Traffic Alert (RCTA) systems if equipped.
- **Following Distance Indicator:** This feature provides the following (or headway) time to a detected vehicle that the driver is following to let the driver know if they are following the vehicle too closely or violating vehicle following distance laws. This feature uses existing Forward Collision Alert sensors on the vehicle. The driver is responsible for understanding local following-distance laws.
- **Forward Automatic Braking:** If the system detects that a front-end collision situation is imminent while following a detected vehicle, and the driver has not already applied the brakes, the system automatically applies the brakes to help reduce the collision's severity. The system may even help avoid the collision at very low speeds. This feature is offered with Intelligent Brake Assist, which may activate when the brake pedal is applied quickly by providing a boost to driver-initiated braking when a Forward Automatic Braking situation is detected. Automatic braking is up to "hard" when the vehicle is moving 2 mph to 25 mph (3.2 to 40 km/h). When the vehicle is moving more than 25 mph (40 km/h), braking is up to "moderately hard" for at least 0.5 second, followed by a level of deceleration that can be up to "hard," depending on the specific situation and how much deceleration is needed.
- **Forward Collision Alert:** If Forward Collision Alert (FCA) detects that a front-end collision situation is imminent while following a detected vehicle, the system alerts the driver to a potential crash. It also alerts the driver if he/she is following a detected vehicle much too closely. The feature works in Forward gear and, depending on the vehicle's selected equipment uses radar and

camera, or just camera. The radar is located in the front grille and the camera is mounted behind the windshield in front of the inside rearview mirror.

- **Front Pedestrian Braking:** If the system detects that a pedestrian is directly ahead and a collision is imminent, and the driver has not already applied the brakes, the system alerts the driver and, if necessary, automatically applies the brakes to help reduce the collision's severity or avoid the collision. This feature is offered with Intelligent Brake Assist, which can provide a boost to driver-initiated braking when a Front Pedestrian Braking situation is detected. It can detect pedestrians up to 131 ft (40 m) during the daytime, and has very limited nighttime performance. It uses a forward-looking camera mounted behind the windshield in front of the inside rearview mirror.
- **Lane Change Alert with Side Blind Zone Alert:** This system provides side-mirror alerts to help the driver avoid crashing into a moving vehicle detected in their side blind spot (or zone) or a vehicle that is rapidly approaching their side blind spot during a lane-change maneuver. The system uses one left-side and one right-side radar to monitor moving vehicles up to 230 ft (70 m) back from the side mirror one lane over from both sides of the vehicle. Hidden radars are located in the rear corners of the vehicle.
- **Lane Keep Assist with Lane Departure Warning:** Lane Keep Assist (LKA) with Lane Departure Warning (LDW) provides gentle steering wheel turns (and LDW alerts if necessary) to help drivers avoid crashes due to unintentionally drifting out of their lane when they are not actively steering and their turn signal is not activated. It uses a forward-looking camera mounted behind the windshield in front of the inside rearview mirror.

Note: The Blazer is equipped with the Gen 2 Rear Camera Mirror. It differs from the mirror on the MY2018 Traverse and Equinox because the driver is able to adjust brightness, zoom and vertical tilt using menu buttons on the right underside of the inside rearview mirror packaging.

- **Rear Camera Mirror:** Compared to a traditional inside rearview mirror, the Rear Camera Mirror (RCM) display provides a wider, less-obstructed field of view to assist when driving, changing lanes and checking for vehicles and traffic conditions. The system may provide increased rear visibility during the nighttime. The view provided by this feature is unobstructed by the vehicle's pillars, decklid, roof, head restraints and rear-seat occupants. It uses a rear-looking camera located in the rear of the vehicle packaged into the spoiler.
- **Rear Cross Traffic Alert:** When in Reverse, Rear Cross Traffic Alert provides alerts to help the driver avoid crashing into approaching detected left or right cross traffic (e.g., out of a crowded parking space or driveway with side obstructions). RCTA uses one left-side and one right-side short-range radar to monitor cross traffic while backing up to 65 ft (20 m) to the left and right. The radars are hidden in the rear corners of the vehicle.
- **Safety Alert Seat:** The GM-patented Safety Alert Seat provides the driver the option of getting haptic seat-bottom vibration pulses instead of audible crash avoidance alerts. Small motors generate vibration pulse alerts on the left, right or both sides of the driver seat bottom to indicate the direction of the potential crash threat (visual alerts also occur). The feature is simple and intuitive. It cuts through the visual and auditory "clutter" in the vehicle.
- **Surround Vision:** Surround Vision provides the driver with an overhead bird's-eye view of the scene around the vehicle on the center stack display. It helps the driver park and avoid crashes with nearby objects during low-speed maneuvering. This feature uses four cameras, the Rear Vision Camera (RVC), a forward-looking camera in the front grille/emblem area and two side-looking cameras mounted on each side mirror.
- **Teen Driver:** If equipped, this allows multiple keys to be registered for beginner drivers to encourage safe driving habits. When the vehicle is started with a Teen Driver key, it will automatically activate certain safety systems, allow setting of some features, and limit the use of others. The Report Card will record vehicle data about driving behavior that can be viewed later. When the vehicle is started with a registered key, the DIC displays a message that Teen Driver is active.

Steering Wheel Vibrations

A solution was developed to improve the feeling of the steering wheel which is often prone to vibrations from the road and engine while the driver is gripping it. On rough driving surfaces or at idle (e.g., in a driveway or at a stoplight), vibrations from the powertrain and road can make their way up the steering column. To help mitigate them, Blazer is equipped with a tuned vibration absorber integrated into the steering wheel. This is accomplished efficiently, without adding extra mass to the system. The tuned vibration absorber helps provide a more comfortable feel for the steering wheel and a feeling of structural solidity for the entire vehicle.

Storage

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The cargo section will offer a rail-based system that allows the space to be configured and blocked off as needed to secure items. It is a built-in way of creating storage dividers to keep grocery bags and a variety of other items from rolling around.

Supplemental Inflatable Restraints

Airbags

Airbags are designed to supplement the protection provided by seat belts. Even though today's airbags are also designed to help reduce the risk of injury from the force of an inflating airbag, all airbags must inflate very quickly to do their job. All vehicle airbags have the word AIRBAG on the trim or on a label near the deployment opening. Blazer is equipped with an innovative 360-degree sensor system designed to measure the severity of a crash and adjust air bag inflation accordingly for proper deployment.

The vehicle has the following airbags:

- A dual-stage frontal airbag for the driver
- A dual-stage frontal airbag for the front outboard passenger
- A knee airbag for the driver
- 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 the passenger seated directly behind the driver
- A roof-rail airbag for the front outboard passenger and the passenger seated directly behind the front outboard passenger

Seat Belt Pretensioners

This vehicle has seat belt pretensioners for the front outboard occupants. Although the seat belt pretensioners cannot be seen, they are part of the seat belt assembly. They can help tighten the seat 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. Seat belt pretensioners can also help tighten the seat belts in a side crash or a rollover event. Pretensioners only work once. If the pretensioners activate in a crash, the pretensioners and probably other parts of the vehicle's seat belt system will need to be replaced.

Stop/Start System

The Stop/Start System is used to improve fuel efficiency in Stop/Start driving. The vehicle automatically shuts down the engine in appropriate conditions at a traffic light, for example, resulting in zero tail pipe emissions and saving fuel which otherwise is used idling the engine when the vehicle is stationary. As soon as the driver prepares to move away, by releasing the brake pedal and/or depressing the accelerator pedal, the engine will start. It only takes the system around 0.3 s to start the engine. To support the increased number of engine starts, the starter motor is upgraded with a high performance electric motor and a stronger pinion engagement mechanism with reduced noise levels.

Along with the upgraded starter motor, advanced battery technology is required to ensure the vehicle battery can handle the frequent charge and discharge cycles common with stop/start operation. There is a battery sensor module connected to the battery which continually monitors the battery charge and healthy state. The ECM uses this information from the battery sensor module to determine if the battery charge and health is sufficient for a Stop/Start event.

There are sophisticated controls in place to help ensure the Stop/Start System does not compromise the needs of either the driver or vehicle. For the engine to shutdown, the vehicle must be moving slower than 3 mph (5 km/h), the range selector lever in **D**, and the brake pedal depressed. When the engine has been shut down by the Stop/Start System, a control indicator will be illuminated in the DIC. When the engine is restarted, the control indicator in the DIC turns OFF.

The Stop/Start System is automatically activated each time the ignition switch is turned ON.

Absorbed Glass Mat 12V Battery

Blazer is equipped with an Absorbed Glass Mat (AGM) 12V battery. In this type of battery the sulfuric acid is absorbed by a very fine fiberglass mat, making the battery spill-proof. The AGM has very low internal resistance, is capable of delivering high currents on demand and offers a relatively long service life, even when deep cycled. AGM is maintenance free, provides good electrical reliability and is lighter than the flooded lead acid type.

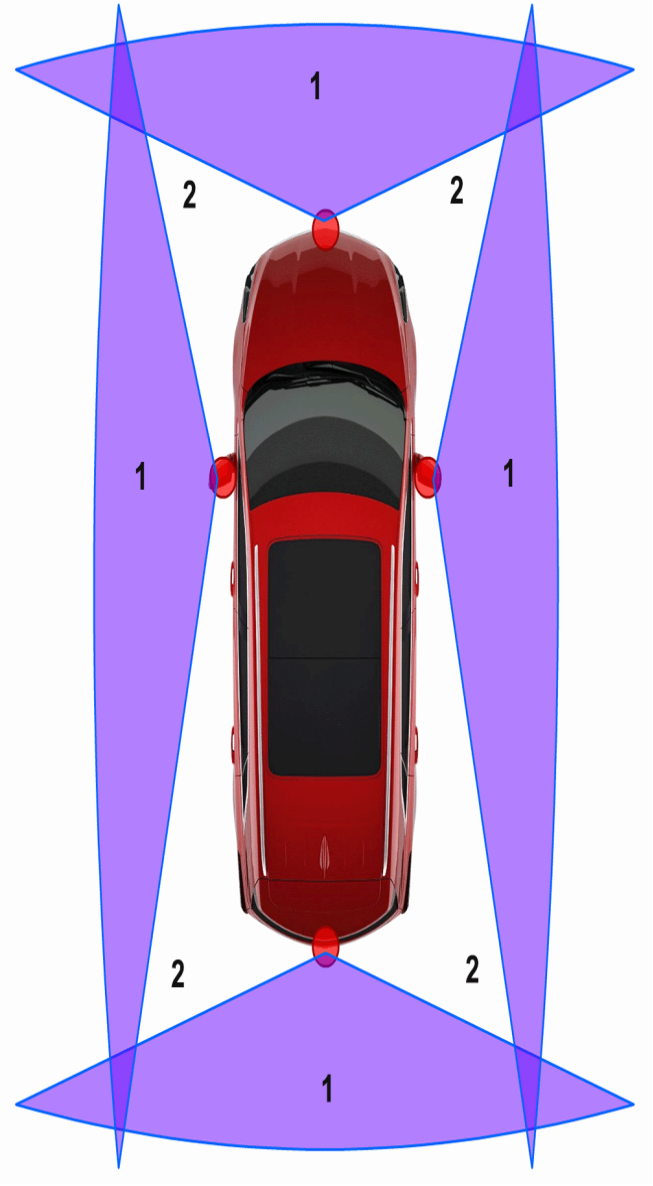
Installation of a standard 12V battery will result in reduced 12V battery life. When using a 12V battery charger on the 12V AGM battery, some chargers have an AGM battery setting on the charger. If available, use the AGM setting on the charger, to limit charge voltage to 14.8V.

Surround Vision

Surround Vision

Notice: **The Surround Vision cameras have blind spots and will not display all objects near the corners of the vehicle. Folding side mirrors that are out of position will not display the surround view correctly.**

Surround Vision provides the driver with an overhead bird's-eye view of the scene around the vehicle on the center stack display. It helps the driver park and avoid crashes with nearby objects during low-speed maneuvering. This feature uses four cameras, the Rear Vision Camera (RVC), a forward-looking camera in the front grille/emblem area and two side-looking cameras mounted on each side mirror.



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1 = Areas displayed by the Surround Vision cameras.

2 = Areas **not** displayed by the Surround Vision cameras.

Suspension

Front Suspension

The MacPherson Strut front suspension absorbs the impact of the tires travelling over irregular road surfaces and dissipates this energy throughout the suspension system. This process isolates the vehicle occupants from the road surface. The rate at which the suspension dissipates the energy and the amount of energy that is absorbed is how the suspension defines the vehicles ride characteristics. Ride characteristics are designed into the suspension system and are not adjustable.

The steering knuckle is suspended between a lower control arm and a strut assembly. The lower control arm attaches from the steering knuckle at the outermost point of the control arm. The attachment is through a ball and socket type joint. The innermost end of the control arm attached at 2 points to the vehicle frame through semi-rigid bushings. The upper portion of the steering knuckle is attached to a strut assembly. The strut assembly then connects to the vehicle body by way of an upper bearing. The steering knuckle is allowed to travel up and down independent of the vehicle body structure and frame.

This up and down motion of the steering knuckle as the vehicle travels over bumps is absorbed predominantly by the coil spring. This spring is retained under tension over the strut assembly. A strut is used in conjunction with this system in order to dampen out the oscillations of the coil spring. A strut is a basic hydraulic cylinder. The strut is filled with oil and has a moveable shaft that connects to a piston inside the strut. Valves inside the shock absorber offer resistance to oil flow and consequently inhibit rapid movement of the piston and shaft. Each end of the shock absorber is connected in such a fashion to utilize this recoil action of a spring alone. Each end of the strut is designed as the connection point of the suspension system to the vehicle and acts as the coil spring seat. This allows the strut to utilize the dampening action to reduce the recoil of a spring alone. The lower control arm is allowed to pivot at the vehicle frame in a vertical fashion. The ball joint allows the steering knuckle to maintain the perpendicular relationship to the road surface.

The front suspension stabilizer bar connects between the left and right lower control arm assemblies through the stabilizer link and stabilizer shaft insulators. The bar controls the amount of independent movement of the suspension when the vehicle turns. Limiting the independent movement defines the vehicles handling characteristics on turns.

Key Features

- Aluminum steering knuckles.
- Steel front lower control arms, with optimized material gauge and extensive use of high-strength steel.
- Hydraulic control arm ride bushing for improved isolation.
- 4-point isolated steel front engine/suspension cradle, with optimized material gauge and extensive use of high-strength steel.

- Direct-acting hollow stabilizer bar.
- Preloaded linear valve (PLV) technology in the front struts for increased driving comfort and excellent damping of vibrations in the vehicle body.

Rear Suspension

The rear suspension system on this vehicle is the 5 link independent type. Rear suspension adjustment is achieved through adjustable toe links and lower control arms. The rear coil springs are retained between the body and the lower control arm. Rubber insulators isolate the coil spring at both top and bottom. The rear suspension consists of 2 shock absorbers attached to the lower control arms and the reinforced body areas.

The rear suspension system performs the following functions:

- Maintains the relationship of the rear axle to the body.
- Controls the torque reaction on acceleration and braking.
- Provide optimal ride and handling.
- Damping of vibrations.

Key Features

- Aluminum knuckles.
- Mass-optimized suspension links.
- High-performance cross-axis ball joints that replace suspension bushings in critical areas, enabling improved handling and better ride quality.
- 4-point isolated steel suspension cradle, with optimized material gauge and extensive use of high-strength steel.
- Hollow stabilizer bar.
- Preloaded linear valve (PLV) technology in the rear shocks for increased driving comfort and excellent damping of vibrations in the vehicle body.
- 36 mm piston rear dampers for increased tuning range and control.

Fluid-Filled Rear Cross Member Mount

Ride bushings on the rear cross member are specifically tuned to provide added ride comfort for rear-seat passengers. When the vehicle hits a bump, the suspension pushes the rear cross member rearward, flexing the rubber element. It then releases and the hydraulics damp the motion by quickly moving fluid between the front and rear chambers resulting in a smooth ride without vehicle shake on impact.

Unique Suspension for Models Equipped with 21 Inch Wheels and Tires

On RS and Premier models equipped with 21 inch wheels and tires, the suspension also features an auxiliary spring aid that's internal to each of the springs and a load management striker cap (LMSC) on the rear dampers to help give the vehicle better ride performance. The 21 inch tire has a very short sidewall height due to it being a low profile '45 Series' tire. When the vehicle is driven over a pothole, for example, the tire doesn't absorb as much of the impact energy as a taller sidewall tire would. That energy instead gets transferred into the chassis. The LMSC absorbs some of the energy. The auxiliary spring aid absorbs energy as well and provides another load path to the chassis.

Steering

All models are equipped with an electric variable power-assist steering (EPS) system that helps save fuel by drawing energy only when the steering effort is applied.

Key Features

- Excellent response and on-center characteristics.
- Variable-effort steering, which increases the level of power assist during low-speed maneuvers such as parking and decreases the level of power assist at higher speeds.
- No need for a power steering pump resulting in no power steering fluid leaks or a need to check the power steering fluid level.
- Noise reduction because there isn't a pump or fluid flowing through hoses and valves.
- Active Return Assist which helps the driver return the steering wheel after a turn.
- Lead-Pull Compensation which automatically adjusts the steering angle to account for factors like crowned roads or high crosswinds.

Tires and Wheels

Tires

Tires are a major contributor to vehicle performance. Not only are they the vehicle's only point of contact with the road, but they also influence drive control, how quickly the vehicle can stop, turn accuracy and how quiet and smooth the ride is.

Chevrolet worked closely with its tire suppliers to ensure the balance of all of these attributes in a safe and efficient manner, while meeting expectations for quality and performance.

The tire lineup includes:

- 18 inch all-season tire from Continental — RPO QMX
- 20 inch all-season tire from Michelin — RPO QNU
- 20 inch summer tire from Continental — RPO QJO (export only)
- 21 inch all-season tire from Continental — RPO ROV

Wheels

Models will be equipped with standard 8 inch wide wheels. They were chosen for their added steering response. The wheel width increases to 8.5 inches with the 21 inch tire, an option exclusive to RS and Premier models.

Compact Spare Tire Detection

Compact Spare Tire Detection is an important vehicle safety benefit. In the event of a flat tire requiring the use of the compact spare tire (standard on 3.6L V6 models), the EBCM automatically detects the spare tire, the specific wheel location and adjusts ABS/TCS/ESC controls to account for the smaller diameter spare tire.

Tire Pressure Monitoring System

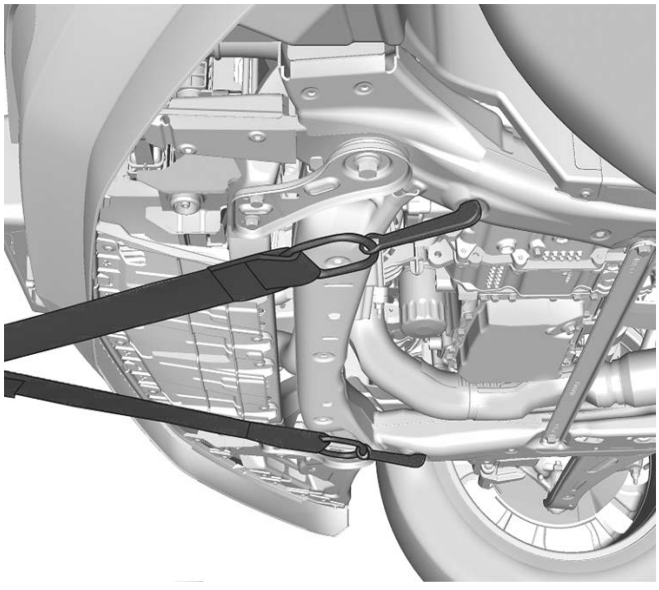
The Tire Pressure Monitoring System (TPMS) uses the Body Control Module (BCM), the driver information center, instrument cluster, the Remote Control Door Lock Receiver, and a radio frequency transmitting pressure sensor in each tire assembly. Each sensor has an internal power supply. If the pressure in one or more of the tires is 25 percent or more below the recommended cold inflation pressure for tires, a warning indication will alert the driver.

Tire Fill Alert

The Tire Fill Alert (TFA) feature provides visual and audible alerts (light flashes and horn chirps) to the driver to assist in inflating an underinflated tire to the recommended tire pressure without the need to check a gauge or the instrument panel. TFA only functions once the tire pressure is low enough to trigger the telltale on the dashboard. When the driver starts filling the underinflated tire, the corner lamp nearest to that tire will begin to flash. When the recommended pressure is reached, the horn sounds once and the turn signal lamps will stop flashing and briefly turn solid. If the tire is overinflated by more than 5 psi (35 kPa), the horn will sound multiple times and the turn signal lamp will continue to flash for several seconds after filling stops. To release and correct the pressure, while the turn signal lamp is still flashing, briefly press the center of the valve stem to release some of the excess air. When the recommended pressure is reached, the horn sounds once.

Towing the Vehicle

Front Attachment Points Used to Pull Vehicle Onto Flatbed Car Carrier



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GM recommends a flatbed tow truck to transport a disabled vehicle. Use ramps to help reduce approach angles, if necessary. A towed vehicle should have its drive wheels off the ground. The vehicle is equipped with specific front attachment points to be used by the towing provider to ***pull the vehicle onto a flatbed car carrier from a flat road surface.*** Contact Roadside Assistance or a professional towing service if the disabled vehicle must be towed.

Trailering

The estimated maximum trailering capability of the Blazer when equipped with the 3.6L V6 engine and AWD with Heavy Duty Towing — RPO V92 is 4,500 pounds (2,041 kg). The weight of passengers, cargo, options and accessories may reduce the amount the vehicle can tow.

- **Hitch Guidance:** Available on models with the 3.6L engine, it aids in aligning the Blazer's hitch to a trailer by showing the center line on the rear-vision camera.
- **Hitch View:** This available feature complements Hitch Guidance by showing a top-down view, making it easier to hitch a trailer without a second person to assist.

Maximum Trailer Weight Rating

The maximum trailer weight rating is calculated assuming the tow vehicle has a driver, a front seat passenger, and all required trailering equipment. This value represents the heaviest trailer the vehicle can tow, but it may be necessary to reduce the trailer weight to stay within the GCW, GVWR, maximum trailer tongue load, or GAWR-RR for the vehicle. Review the vehicle-specific Certification Label that is attached to the vehicle's center pillar (B-pillar).

Use the tow rating chart to determine how much the trailer can weigh, based on the vehicle model, powertrain, and trailering options.

Tow Rating Chart

Vehicle	Maximum Trailer Weight	*GCWR
2.5L L4 Engine FWD	680 kg (1,500 lb)	2 625 kg (5, 787 lb)
3.6L V6 Engine FWD	680 kg (1,500 lb)	2 625 kg (5, 787 lb)
3.6L V6 Engine AWD w/V92 Option (Heavy Duty Towing)	2 041 kg (4,500 lb)	4 155 kg (9, 250 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.		

Transmission 9T50 and 9T65 9-Speed — RPO M3D and M3V

Application and Fluid

The 2.5L engine will be equipped with the 9T50 9-speed automatic transmission.

The 3.6L engine will be equipped with the 9T65 9-speed automatic transmission.

Both transmissions use DEXRON®-VI Automatic Transmission Fluid — GM Part No. 88865601, in Canada 19367328.

Overview

The Hydra-matic 9T50 and 9T65 are fully automatic, 9-speed, transverse mounted, electronic-controlled transmissions. They consist primarily of a 4-element torque converter, a compound planetary gear set, friction and mechanical clutch assemblies, and a hydraulic pressurization and control system.

The 4-element torque converter contains a pump, a turbine, a pressure plate splined to the turbine, and a stator assembly. The torque converter acts as a fluid coupling to smoothly transmit power from the engine to the transmission. It also hydraulically provides additional torque multiplication when required. The pressure plate, when applied, provides a mechanical direct drive coupling of the engine to the transmission.

The planetary gear sets provide the 9 forward gear ratios and reverse. Changing gear ratios is fully automatic and is accomplished through the use of a transmission control module (TCM). The TCM receives and monitors various electronic sensor inputs and uses this information to shift the transmission at the optimum time.

The TCM commands shift solenoids and variable bleed pressure control solenoids to control shift timing and feel. The TCM also controls the apply and release of the torque converter clutch which allows the engine to deliver the maximum fuel efficiency without sacrificing vehicle performance. All the solenoids, are packaged into a self-contained control valve solenoid body assembly.

The hydraulic system primarily consists of a chain driven pump, a control valve body assembly and case. The pump maintains the working pressures needed to stroke the clutch pistons that apply or release the friction components. These friction components, when applied or released, support the automatic shifting qualities of the transmission.

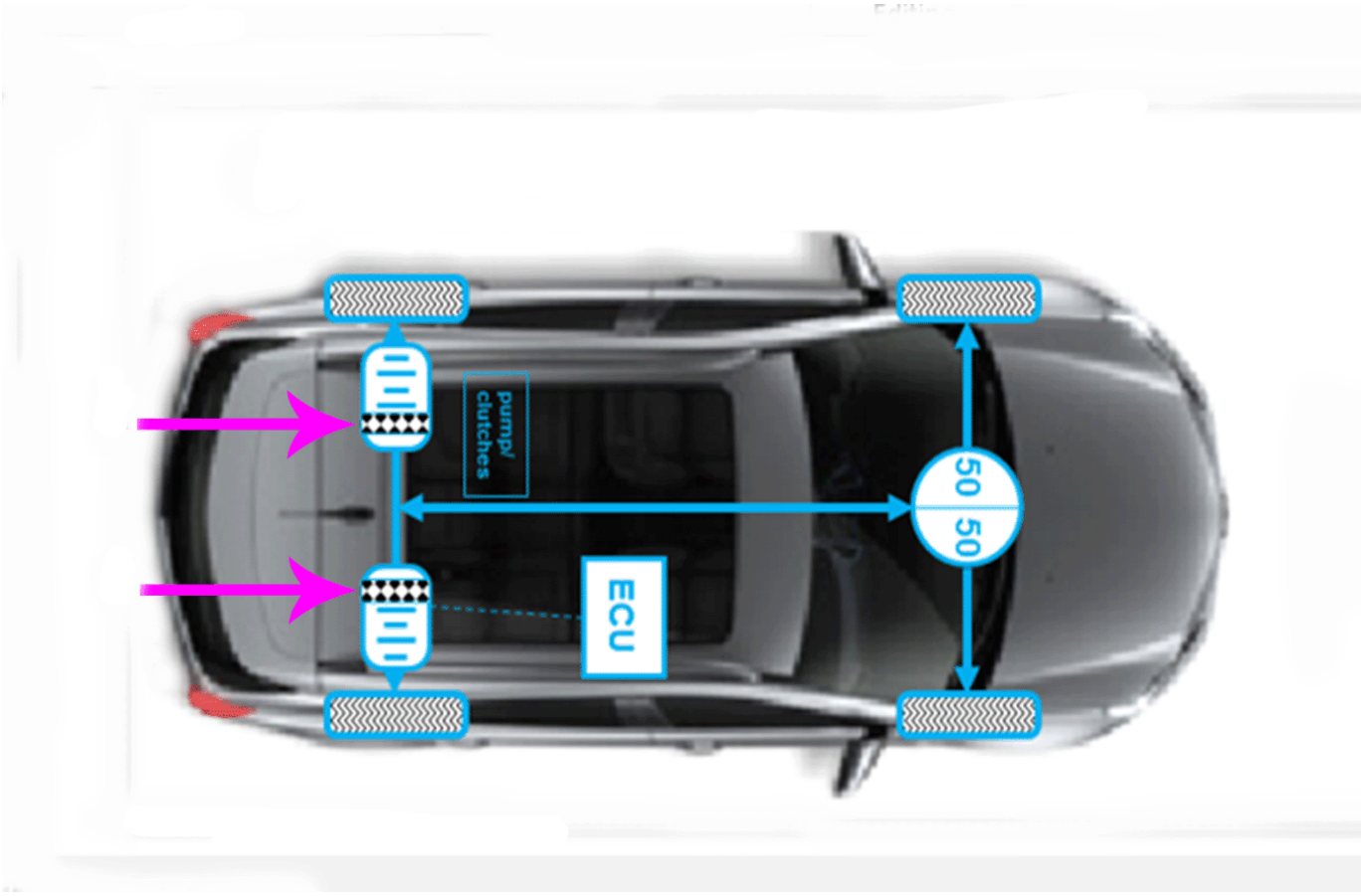
The friction components used in this transmission consist of 7 multiple disc clutches. The multiple disc clutches combine with one away clutch to deliver 10 different gear ratios, 9 forward and one reverse, through the gear sets. The gear sets then transfer torque through the transfer drive gear, transfer driven gear and differential assembly.

9T65 Capabilities

The 9T65 has the highest torque capability rating, gross vehicle weight rating (GVWR) and gross combination weight rating (GCWR).

Advanced AWD System with Active Twin Clutch — RPO G99

Overview



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The Advanced AWD system with Active Twin Clutch delivers greater handling, stability and driver confidence by preemptively and ***electronically*** splitting the torque as needed between the rear wheels using twin clutches to provide additional traction, stability and control versus a 50/50 split in a single clutch system. Due to the twin-clutch design, it is capable of transferring up to 100 percent of available torque to the front or rear axles. Also, across the rear axle, the electronically controlled rear differential can direct up to 100 percent of available torque to either wheel.

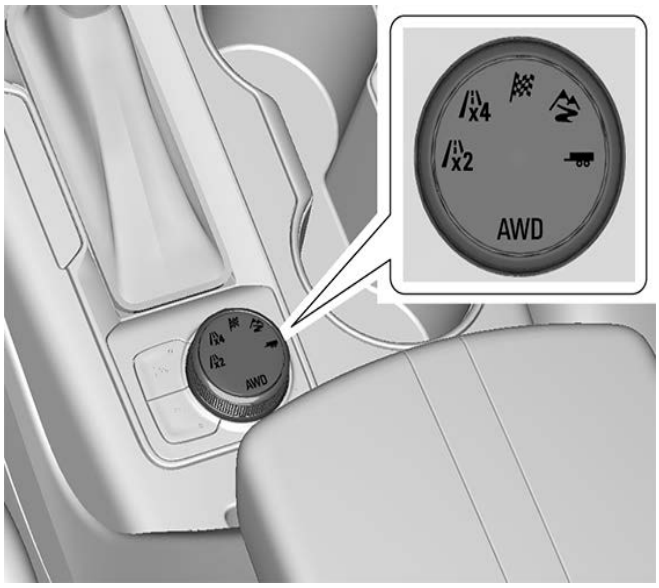
Active Twin Clutch provides the following benefits:

- Enhanced traction, stability and performance during vehicle acceleration and cornering during dry normal conditions.
- Optimal handling and improved traction in wet/ snowy/icy conditions.
- Improved vehicle response when road traction is not uniform, such as when the right side of the vehicle is on ice and the left side is on dry pavement.
- Active Twin Clutch with active torque bias has increased capability to add stability across all driving conditions.
- A fuel economy benefit is realized by not pushing torque when it is not needed.

Switchable AWD

On AWD models, an innovative Switchable AWD feature lets the driver switch between drivelines, for optimized fuel economy in certain scenarios or improved traction in others. When the vehicle is in motion and the driver uses Driver Mode Control to change from 4x4 to Normal mode, Switchable AWD efficiently disconnects virtually all of the AWD components from the drivetrain, stopping the Power Transfer Unit (PTU) gears and prop shaft from spinning to help save fuel and reduce emissions. Conversely, if a driver is operating in Normal mode and switches to 4x4 mode, Switchable AWD will engage the PTU gears and prop shaft without the driver having to stop the vehicle.

Driver Mode Control



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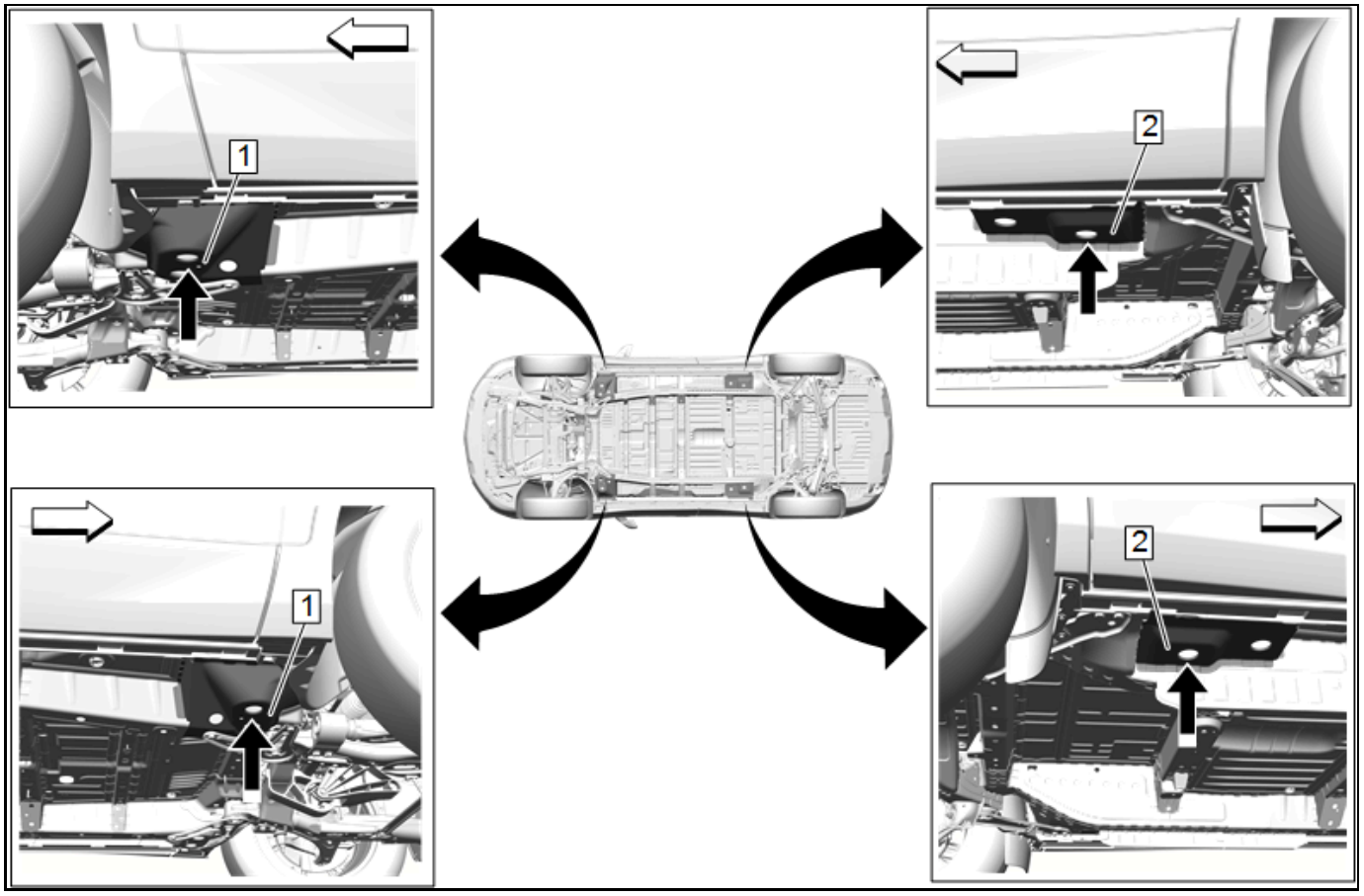
Driver Mode Control is standard on all models. With the simple turn of a console-mounted rotary dial, customers select the mode in which they want the vehicle to operate. The system offers Normal, Snow, Sport and Tow/Haul (if equipped) modes on FWD models and Normal, 4x4, Off-Road, Sport and Tow/Haul (if equipped) modes on AWD models. Based on the mode chosen, Traction Select adjusts the vehicle's throttle response, shift mapping and stability control to maximize performance in varying road or surface conditions. When Normal or 4x4 (AWD models only) is selected, the vehicle will remain in that mode until a different one is selected, even through ignition cycles. When Sport, Off-Road (AWD models only) or Tow/Haul (if equipped) is selected, the vehicle will default back to Normal on the next ignition cycle. An indicator light on the rotary dial indicates what mode the customer is operating in at any given time.

Vehicle — Lifting and Jacking



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Vehicle Lifting – Frame Contact Lift

- **Front Lift Pads:** When lifting the vehicle with a frame-contact lift, place the front lift pads on the front lower brackets, inboard of the rocker pinch weld flange and outboard of the front frame rail, at the torque box location (1), as shown.
- **Rear Lift pads:** When lifting the vehicle with a frame-contact lift, place the rear lift pads on the rear frame rail, at the torque box location (2), as shown.

Training Courses

Training Courses — Description, Course Number and Name

Description	Course Number and Name
2019 Chevrolet Blazer New Model Launch	#10319.11W: Chevrolet Blazer New Model Launch (United States and Canada)
Engines	#16440.17D-V: Engines New and Updates for RPOs LCV,LTG, LL0 (United States) #16440.20D-V: Engines New and Updates — RPO LF4 LGX LGW L3A LV7 LE2 LWN LWC (United States)
Transmissions	#17440.17D: Transmissions New and Updates for 9T50, 10R90 and ETR Select — RPO M3H (United States) #17041.77W: 9-Speed Automatic Transmission Overview — RPO M3V (United States)

Version Information

Version	1
Modified	Released December 12, 2018

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