



Service Bulletin

INFORMATION

Subject: 2017 Cadillac XT5 New Model Features

Attention: United States, Canada and Mexico. This Bulletin also applies to Export vehicles. Export Countries Include: Austria, Bahrain, Belgium, Czech Republic, Denmark, France, Germany, Iraq, Israel, Italy, Jordan, Kuwait, Lebanon, Luxembourg, Netherlands, Norway, Oman, Palestine, Portugal, Qatar, Russia, Saudi Arabia, Spain, Sweden, Switzerland, UAE and Yemen.

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		From:	To:	From:	To:		
Cadillac	XT5	2017	2017	All	All	Gasoline, 6 Cylinder, V6, 3.6L, DI, DOHC, VVT — RPO LGX	Aisin AF50-8 Automatic Transaxle with Electronic Precision Shift — RPO MRC

Overview



Bulletin Purpose

This is a special bulletin to introduce the 2017 Cadillac Crossover Touring 5 (XT5). The purpose of this bulletin is to help the Service Department Personnel become familiar with some of the vehicle's new features and to describe some of the action they will need to take to service this vehicle.

Trim Levels

The XT5 will be available in four trim levels, including:

- XT5 (base), available only in FWD.
- Luxury, available in FWD or AWD.
- Premium Luxury, available in FWD or AWD. (In Canada, Premium Luxury is available in AWD only)
- Platinum, available exclusively in AWD.

Overview

The 2017 Cadillac XT5 is a midsize, 5-passenger luxury crossover and the cornerstone of a new series of crossovers in the brand's ongoing expansion. All Cadillac crossovers will wear the **XT** designation. The XT5 is completely new, residing on a unique chassis and structure. The vehicle is bold, distinctive and sophisticated with superb driving dynamics in a lightweight, efficient package that enables more space. The XT5 has a great stance, with wheels further to the corners and overhangs reduced. Interior surfaces inside the XT5 are wider and more horizontal in orientation, emphasizing efficient use of space. Like all Cadillac models, the interior is assembled with cut-and-sewn wrapped panels, rather than molded surfaces typical of mainstream vehicles.

The XT5 is 278 pounds (126 kg) lighter than the current SRX which it replaces and achieving this with no compromise to body rigidity and crash performance. The new architecture delivers a wheelbase two-inches (5 cm) longer than the SRX, and a track one-inch (2.5 cm) wider, enabling more useable interior space. Rear seat legroom is increased 3.2 inches (8.1 cm) in the XT5, compared to the SRX. The rear seat also reclines and slides fore and aft, as well.

The XT5 will be powered by the V6 3.6-liter engine. This engine has been completely redesigned and features Active Fuel Management (AFM) which is cylinder deactivation technology and it allows the engine to seamlessly and automatically switch to a fuel-saving 4-cylinder mode under low or moderate loads. With an estimated peak output of 310 horsepower (231 kW) and 270 lb-ft of torque (366 Nm), the new V6 uses variable valve timing for strong response and smooth power delivery. The vehicle's Stop/Start technology automatically stops and starts the engine when the vehicle is at rest in traffic stops, saving fuel and reducing emissions while enhancing the quietness expected of a luxury vehicle.

A new 8-speed automatic transmission is standard for the XT5, which also debuts Electronic Precision Shift – the first electronically controlled transmission shifter for a Cadillac. Electronic Precision Shift reduces noise and vibration, and it allows for greater use of the cabin space with a storage space beneath the center console.

The new suspension features lightweight components with a MacPherson Strut design in the front and a five-link independent design at the rear.

Standard wheels are 18-inches with 20-inch wheels optional. All versions equipped with 20-inch wheels have a Continuous Damping Control system to manage ride control in real time. Additional ride bushings on the rear cradle are exclusive to the XT5 Platinum model and are specifically tuned to provide added ride comfort for rear seat passengers.

The Cadillac CUE system for connectivity and control is upgraded for the XT5. A faster and more powerful processor provides the best-ever response and accuracy.

Cadillac's signature LED light pipes are standard inside and out, while full LED headlamps are optional.

XT5 features Cadillac's Driver Awareness and Driver Assist packages to aid vision and collision avoidance. These include automatic front and rear braking for low-speed conditions, Lane Keep Assist, Rear Cross Traffic Alert, Side Blind Zone Alert, full-speed range Adaptive Cruise Control and Automatic Parking Assist.

The rear liftgate of the XT5 includes hands-free operation, allowing it to open or close via gesture control beneath the rear bumper.

Vehicle Highlights

Some additional vehicle highlights are:

- An optional new advanced Active Twin Clutch all-wheel drive (AWD) system continuously and automatically delivers excellent traction across a variety of conditions. While engineered specifically for strong performance in wet, snowy or icy conditions, it also provides enhanced stability in dry weather conditions.
- Available sunroof.
- Bose® Premium 8-speaker audio system on base (upgraded to Bose® Studio Surround™ Sound 14-speaker system with amplifier, standard on Premium Luxury and Platinum, available on Luxury).
- An optional color reconfigurable Head-Up Display (HUD) (standard on Platinum).
- OnStar® with 4G LTE and built-in Wi-Fi hotspot.
- A Real Time Damping System is standard on Premium Luxury and Platinum trim levels.
- Cadillac's patented new industry-leading Rear Camera Mirror with streaming video debuts on the XT5 (standard on Platinum).
- A Surround Vision system enables a "bird's eye" view of the perimeter around the car to assist in parking (standard on Platinum).
- Front intermittent wipers (upgraded to intermittent with RainSense on Luxury, Premium Luxury, and Platinum).

- Electric park brake.
- Power tilt and telescoping steering column.



- Wireless charger for mobile devices, with the slot integrated into the center console.

Brakes

This vehicle is equipped with a TRW EBC460 antilock brake system (ABS). The 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.

- **Antilock Brake System:** 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.
- **Hydraulic Brake Assist:** The hydraulic brake assist function is designed to support the driver in emergency braking situations. The EBCM receives inputs from the brake pressure sensor. When the EBCM senses an emergency braking situation, the EBCM will actively increase the brake pressure to a specific maximum.
- **Intelligent Brake Assist:** The intelligent brake assist 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.
- **Optimized Hydraulic Brake System:** With some engines the EBCM monitors the vacuum in the brake booster with a vacuum sensor and controls a brake booster vacuum pump depending on vacuum sensor input. It also has a hydraulic brake boost feature which supplements the brake system to maintain consistent brake performance under conditions of low brake booster vacuum. Low brake booster vacuum conditions can include initial start up after the vehicle has been parked for several hours, very frequent brake stops, or high altitude driving. The hydraulic brake boost system activates only during a brake apply under low vacuum conditions. In this case the EBCM will actively increase and control the hydraulic brake pressure by turning the pump motor **ON** and the appropriate solenoid valves **ON** and **OFF**. When hydraulic brake boost is active, a series of rapid pulsations is felt in the brake pedal.
- **Electronic Stability Control:** Electronic stability control provides added stability during aggressive maneuvers. Yaw rate is the rate of rotation about the vehicle's vertical axis. The stability control 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 over steer or under steer. 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 brake pressure which is applied varies, depending on the correction required.
- **Traction Control:** When drive wheel slip is noted, the EBCM will enter traction control mode. First, the EBCM requests the engine control module (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.
- **Dynamic Rear Proportioning:** The 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**.
- **Hill Hold Start Assist:** The hill hold start assist allows the driver to launch the vehicle without a roll back while moving the foot from the brake pedal to the accelerator pedal. The EBCM calculates the brake pressure, which is needed to hold the vehicle on an incline and locks that pressure for a certain

time by commanding the appropriate solenoid valves **ON** and **OFF** when the brake pedal is released. Hill hold start assist is activated when the EBCM determines that the driver wishes to move the vehicle up-hill, either backwards or forwards.

- **Cornering Brake Control:** Cornering brake control is a slip control function that is intended to improve the vehicle's lateral/yaw stability during combined braking and cornering situations. The EBCM will reduce the brake pressure to the inside wheels by commanding the appropriate solenoid valves **ON** and **OFF**.
- **Trailer Brake Control System:** A trailer brake control system is used to control the amount of trailer braking power that is made available to trailers with brakes that require a controlled output electrical signal for actuation. The trailer brake control system determines the trailer brake type (Electric Brake or Electric Over Hydraulic Brake) automatically.
- **Trailer Sway Control:** The trailer sway control will detect any vehicle yaw instability, caused by an attached trailer. When instability is detected, the EBCM attempts to correct the vehicle's yaw motion by applying brake pressure to one or more of the wheels. The engine torque may be reduced also, if it is necessary to slow down the vehicle.

Engine



Shown is a typical view of the 3.6L V6 Engine — RPO LGX

Overview

The 3.6L V-6 engine ushers in new benchmarks for efficiency, refinement and durability. The clean-sheet engine redesign represents the fourth generation of GM's acclaimed DOHC V-6 engine family and incorporates new features, including Active Fuel Management (AFM) also known as cylinder deactivation and Stop/Start technology to enhance fuel economy. The 3.6L also advances performance and fuel economy, optimizing technologies introduced on previous generations, including direct injection (DI) and continuously variable valve timing (VVT).

Engine Component Description and Operation

- **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 either **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 no oil is directed to the dual feed hydraulic lash adjuster. The switching roller finger followers operate as normal rocker arms. AFM is inactive at this time.
- **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. The 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 System:** The engine incorporates a camshaft position actuator for each intake and exhaust camshaft. 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 driveability. 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.

The camshaft position actuator is a hydraulic vane-type actuator that changes the camshaft lobe timing relative to the camshaft drive sprocket. Engine oil is directed by a camshaft position actuator oil control valve to the appropriate passages in the camshaft position actuator. Oil acting on the vane in the camshaft position actuator rotates the camshaft relative to the sprocket. At idle, both camshafts are at the default or "home" position. At this position, the exhaust camshaft is fully advanced and the intake is fully retarded to minimize valve overlap for smooth idle. In addition, this engine has intermediate park technology, which incorporates an intermediate-lock intake variable valve timing cam phaser, allowing the cams to be parked at the most favorable position for cold starting. Under other engine operating conditions, the camshaft position actuator is controlled by the engine control module (ECM) to deliver optimal intake and exhaust valve timing for performance, driveability and fuel economy. The camshaft position actuator incorporates an integral trigger wheel, which is sensed by the camshaft position sensor mounted in the front cover, to accurately determine the position of each camshaft. The exhaust camshaft position actuator has a different internal configuration than the intake camshaft position actuator since the exhaust camshaft position actuator phases in the opposite direction relative to the inlet camshaft position actuator.

The camshaft position actuator oil control valve (OCV) directs oil from the oil feed in the head to the appropriate camshaft position actuator oil passages. There is one OCV for each camshaft position actuator. The OCV is sealed and mounted to the front cover. The ported end of the OCV is inserted into the cylinder head with a sliding fit. A filter screen protects each OCV oil port from any contamination in the oil supply.

- **Crankshaft:** The crankshaft is a hardened, forged steel design 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. This crankshaft is internally balanced.
- **Cylinder Heads:** 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 allows for the Active Fuel Management (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). In the LGX engine, 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 also 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 also mounted through the spark plug tube. The LGX engine uses specific spark plugs and a different spark plug gap from other HFV6 engines. The engine coolant temperature (ECT) sensor is mounted in the thermostat housing near the flywheel end of the engine. With direct injection, 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 LGX 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.
- **Engine 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.
- **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 the engines smoother and quieter operation. The oiling system components differ depending on the engine being in a transverse or longitudinal orientation. The LGX 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 noise and mass concerns. 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 LGX oil pans contain oil level switches as do nearly all HFV6 applications. 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 throughout 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, replace the entire tandem pump assembly.

Engine Specifications

- **Displacement:** 3.6 L (220 cubic inches)
- **Bore x Stroke :** 95 mm (3.74 inches) x 85.6 mm (3.37 inches)
- **Compression Ratio:** 10.2:1
- **Horsepower:** 310 horsepower (231 kW) (Estimated)
- **Torque:** 270 lb ft (366 Nm) (Estimated)
- **Valves:** 2 intake and 2 exhaust valves per cylinder
- **Recommended Fuel:** Use regular unleaded gasoline meeting ASTM specification D4814 with a posted octane rating of 87 or higher.

Engine Oil — dexos®



Ask for and use engine oils that meet the dexos® specification. Engine oils that have been approved by GM as meeting the dexos® specification are marked with either of the dexos1® approved logos that are shown. For additional information, visit this General Motors website: <http://www.gmdexos.com>

Viscosity Grade

Use ACDelco dexos1® synthetic blend SAE 5W-30 viscosity grade engine oil. In an area of extreme cold, where the temperature falls below -20°F (-29°C) use SAE 0W-30 engine oil. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures.

Engine Oil Life System

The vehicle features GM's engine oil life system, which better protects engines by recommending oil changes based on a computer software algorithm using actual engine operating conditions and can save the vehicle owner money by avoiding unnecessary oil changes.

Engine Auto Stop/Start



A fuel-saving Auto Stop/Start system has been integrated with the 3.6L engine. While driving, when the brake pedal is applied and the vehicle is at a complete stop, the engine automatic Stop/Start system may turn the engine **OFF**, depending on operating conditions. When the engine is **OFF**, the tachometer will read **AUTO STOP (1)**. Upon releasing the brake pedal or applying the accelerator pedal, the engine will restart. After parking the vehicle and turning the engine **OFF**, the tachometer will read **OFF (2)**.

The engine may remain running or restart if:

- A minimum vehicle speed is not reached.
- The engine or transmission is not at the required operating temperature.
- The outside (ambient) temperature is not in the required operating range.
- The shift lever is in any gear other than **D** (Drive).
- The battery charge is low.
- The current settings for the climate control (HVAC) or defog system have not been reached.
- The **AUTO STOP** time is greater than 2 minutes.

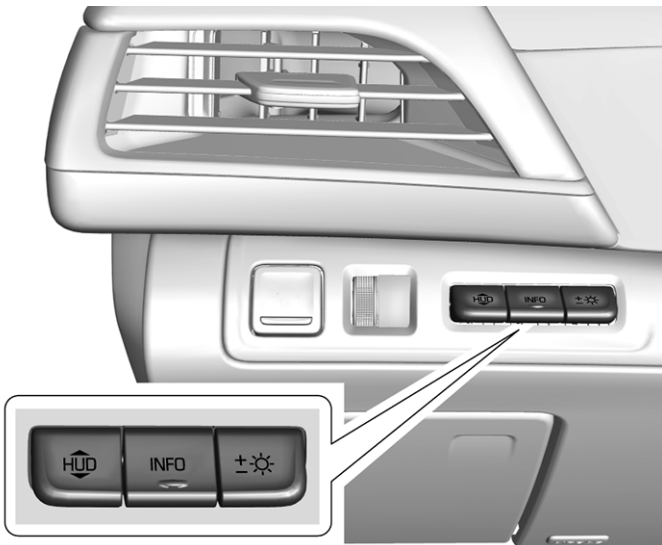
Head-Up Display (HUD)

If equipped with HUD, some information concerning the operation of the vehicle is projected onto the windshield. The image is projected through the HUD lens on top of the instrument panel. The information appears as an image focused out toward the front of the vehicle.

The HUD may display some of the following vehicle information and vehicle messages or alerts:

- Audio
- Collision Alert
- Cruise Control
- Lane Keep Assist
- Low Fuel
- Navigation
- Phone
- Speed
- Tachometer
- Temporary information, such as audio changes and navigation maneuvers, may also be displayed.

HUD Control



The HUD control is to the left of the steering wheel. To adjust the HUD image:

1. Adjust the driver seat.
2. Start the engine.
3. Press the **HUD** button down or lift it up to center the HUD image. The HUD image can only be adjusted up and down, not side to side.

To select the information display view, press the **INFO** button to select from four displays, Speed View; Audio/Phone View; Navigation View; and Performance View. Each press will change the display view.

To adjust the brightness of the image, lift the **brightness** button up and hold to brighten the display. Press the button down and hold to dim the display. Hold the button down to turn the display **OFF**. The HUD image will automatically dim and brighten to compensate for outside lighting.

OnStar® with 4G LTE and Wi-Fi

With OnStar® 4G LTE and Wi-Fi, up to seven devices such as smartphones, tablets and laptops can be connected to high-speed Internet through the vehicle's built-in Wi-Fi hotspot.

To retrieve the SSID and password for the hotspot, press the OnStar® Voice Command button on the overhead console or rearview mirror, wait for the prompt, and then say "Wi-Fi Settings." The information will be displayed on the screen.

The powerful OnStar® connection also enables improved access to existing OnStar® safety and security services, including the ability to transmit voice and data simultaneously. That means OnStar® advisors can run a diagnostic check without ever leaving the call, making customer interactions quicker and more seamless. It's the most comprehensive in-vehicle safety and connectivity system available.

For assistance, press the blue OnStar® button or call 1-888-4-ONSTAR (1-888-466-7827).

Radio — Cadillac User Experience

The Cadillac User Experience (CUE) system for connectivity and control is upgraded for the XT5. A faster and more powerful processor provides best-ever response and accuracy. The XT5 comes with an 8-inch (203 mm) diagonal color-touch radio. CUE offers a variety of entertainment, communication and vehicle system options. You can use simple gestures on the touch screen just as you would on a tablet, such as tap, drag, pinch and spread, to interact with the system. Touch an application icon on the touch screen to access an item. Link a smartphone, cell phone, USB flash drive or portable audio player/iPod® to the infotainment display using a Bluetooth or USB connection. For assistance, call 1-855-4-CUE-NOW (1-855-428-3669) or visit www.cadillac.com/cue. (in Canada, visit www.gm.ca/gm/english/vehicles/cadillac/infotainment/cue-features (English) or <http://www.gm.ca/gm/french/vehicles/cadillac/infotainment/cue-features> (French))

CUE Controls



1. **Applications:** Touch the screen icon to access an Application.
2. **Power/Mute:** Press and hold to turn CUE On/Off. Press to mute audio.
3. **VOLUME:** Touch the arrows or press momentarily and then swipe your finger to adjust the Volume.
4. **Home Screen:** Touch to reach the Home screen.
5. **Interaction Selector:** Touch to display the Favorite screen buttons.
6. **Additional Pages:** Touch to view additional pages of Applications.

Cadillac CUE Features

CUE in the XT5 offers:

1. **Text Message Alerts:** Text message alerts play a text message over the audio system and allow a response with a preset message. The text messaging feature must be set up when the cell phone is paired. Messages can be viewed on the touch screen only when the vehicle is not moving.
2. **Voice Recognition:** Control the music source and navigation destination, and make phone calls hands-free (after pairing your Bluetooth® enabled phone), using the natural voice recognition system.
3. **Voice Pass-Thru:** Voice pass-thru/Siri® Eyes Free allows access to the voice recognition commands on a cell phone; i.e. Siri® or Voice Command.
4. **Gesture Recognition:** Tap, drag, pinch and spread, to interact with the system.
5. **App Tray Customization:** Select and prioritize Favorite Apps.
6. **Customizable Favorites:** Display the Favorite screen buttons.
7. **Center Stack Integration:** CUE is seamlessly integrated into the center stack.
8. **Navigation:** Map coverage available in the United States and Canada.

Safety — Airbag System

Airbag Readiness Light

This light illuminates and stays **ON** if there is an electrical problem with the airbag system. The system check includes the airbag sensors, passenger sensing system, the pretensioners, the airbag modules, the wiring, and the crash sensing and diagnostic module (SDM). The airbag readiness light turns **ON** for several seconds when the vehicle is started. If the light does not turn **ON** and then **OFF**, have it repaired immediately.

Airbag Locations

All vehicle airbags have the word AIRBAG on the trim or on a label near the deployment opening. The airbags are located in the following positions:

- A frontal airbag for the driver.
- A frontal airbag for the front outboard passenger.
- A knee airbag for the driver.
- Seat-mounted side impact airbag for the driver.
- 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.

Safety — Driving/Parking Assistance Systems

If equipped, the Rear Vision Camera (RVC), Rear Parking Assist (RPA), Front Parking Assist (FPA), Surround Vision, Front Vision Camera, Rear Automatic Braking (RAB) and Backing Warning System, Rear Cross Traffic Alert (RCTA), and Automatic Parking Assist (APA) may help the driver park or avoid objects.

- **Adaptive Cruise Control:** If equipped, this feature helps to maintain a safe following distance with the vehicle ahead.
- **Automatic Parking Assist:** If equipped, the Automatic Parking Assist (APA) system helps to search for and maneuver the vehicle into parallel or perpendicular parking spots using automatic steering, DIC displays, and beeps while the driver follows text commands, selects the gear and brakes/accelerates.
- **Backing Warning and Rear Automatic Braking:** Vehicles with Adaptive Cruise Control (ACC) have the Backing Warning System 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 5 mph (8 km/h). 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. 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.
- **Forward Collision Alert:** 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 197 ft (60 m) and operates at speeds above 25 mph (40 km/h). If the vehicle has Adaptive Cruise Control (ACC), it can detect vehicles to distances of approximately 360 ft (110 m) and operates at all speeds.
- **Front Automatic Braking:** If the vehicle has Forward Collision Alert (FCA), it also has Front Automatic Braking (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.
- **Front Vision Camera:** If equipped, a view of the area in front of the vehicle displays in the center stack. The view displays after shifting from **R** (Reverse) to a forward gear, or by pressing CAMERA in the center stack, and when the vehicle is moving forward slower than 5 mph (8 km/h). If equipped, the front view camera also displays when the Front Parking Assist system detects an object within 12 in (30 cm).
- **Intelligent Brake Assist:** Intelligent Brake Assist (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.
- **Lane Change Alert with Side Blind Zone Alert:** Lane Change Alert (LCA) 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 blind spot during a lane change maneuver.
- **Lane Keep Assist with Lane Departure Warning:** Lane Keep Assist (LKA) provides gentle steering wheel turns and Lane Departure Warning (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.

- **Parking Assist:** With RPA, and if equipped with FPA, as the vehicle moves at speeds of less than 5 mph (8 km/h) the sensors on the bumpers may detect objects up to 8 ft (2.5 m) behind and 4 ft (1.2 m) in front of the vehicle within a zone 25 cm (10 in) high off the ground and below bumper level.
- **Rear Cross Traffic Alert:** If equipped, 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 65 ft (20 m) 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.
- **Rear Vision Camera:** When the vehicle is shifted into **R** (Reverse), the Rear Vision Camera (RVC) displays an image of the area behind the vehicle in the center stack display. A warning triangle may display on the RVC screen to show that it has detected an object. This triangle changes from amber to red and increases in size the closer the object becomes. The previous screen displays when the vehicle is shifted out of **R** after a short delay.
- **Safety Alert Seat:** The Safety Alert Seat provides the driver the option of getting haptic seat-bottom vibration crash avoidance alerts or beeping. To change from one to the other, see Collision/Detection Systems under Vehicle Personalization in the Owner Manual.

Safety — Rear Camera Mirror with Streaming Video

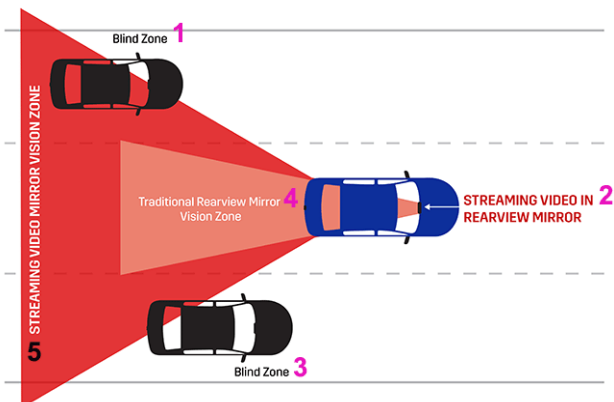


Cadillac's patented new industry-leading **Rear Camera Mirror** system debuts on the XT5. The system enhances the driver's rear vision by an estimated 300 percent, using a video display applied over the conventional inside rearview mirror. A high-dynamic range camera records wider images behind the car, streams the image to video processing software which **removes** obstacles such as the roof, rear pillars and rear seat passengers, projecting an unobstructed view to a Liquid Crystal Display.

Thanks to a high dynamic range, the camera's video feed reduces glare and allows a crisper image in low-light situations, versus a traditional glass electrochromatic, or auto-dimming, rearview mirror. The in-mirror display is an industry-leading 1280 by 240-pixel TFT-LCD display with 171-pixels per inch, combined with a HD camera designed specifically to enhance rear view lane width and maximize low-light situations. A water-shedding hydrophobic coating is applied to the camera to keep it clean to maintain visibility regardless of the driving conditions.

Drivers can disable the mirror's video streaming function by flipping the toggle on the underside of the mirror. This will revert it to a traditional electrochromatic rearview mirror.

Streaming Video Mirror Vision Zone



1. Blind Zone.

2. Streaming Video in Rearview Mirror.
3. Blind Zone.
4. Traditional Rearview Mirror Vision Zone.
5. Streaming Video Mirror Vision Zone

Rear Camera Mirror — Camera Location



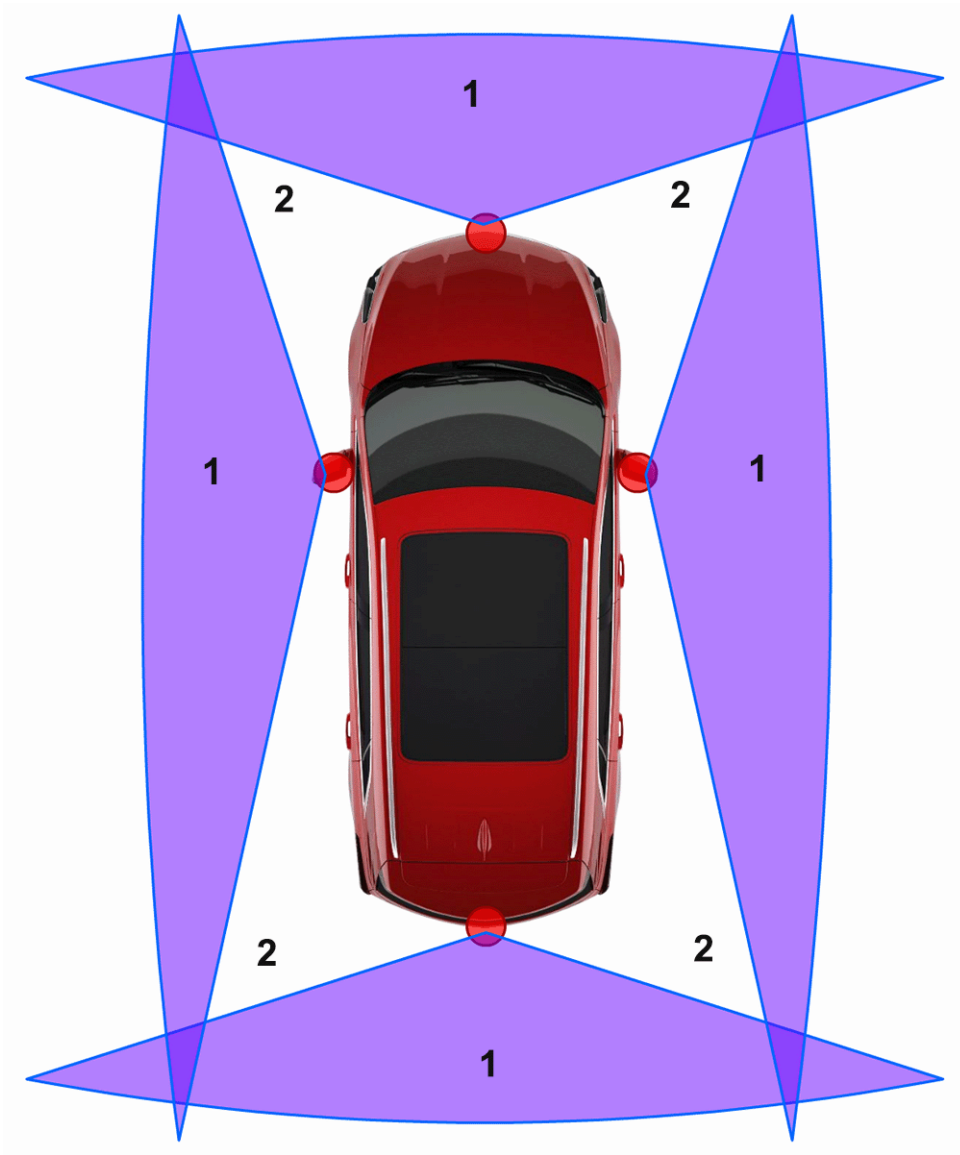
The camera that provides the Rear Camera Mirror image is above the license plate, next to the Rear Vision Camera (RVC).

Safety — 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 displays an image of the area surrounding the vehicle, along with the front or rear camera views in the center stack. The front camera is in the grille or near the front emblem, the side cameras are on the bottom of the outside rearview mirrors, and the rear camera is above the license plate.



1 = Areas displayed by the Surround Vision cameras.

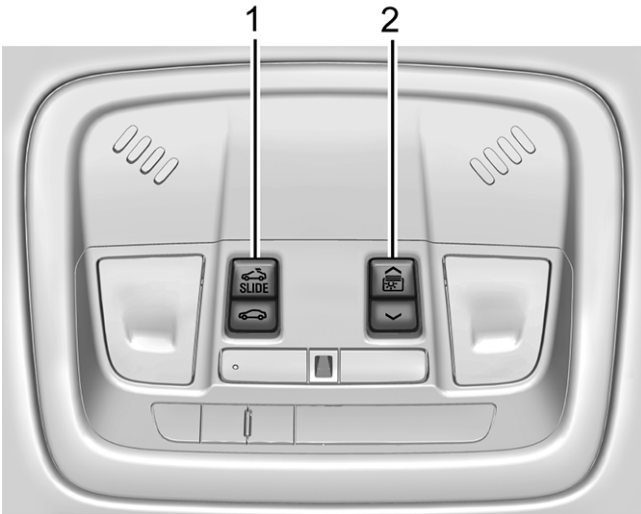
2 = Areas not displayed by the Surround Vision cameras.

Sunroof



If equipped, the ignition must be in **ON/RUN** or **ACC/ACCESSORY**, or in **Retained Accessory Power (RAP)** to operate the sunroof. The sunroof cannot be opened or closed if the vehicle has an electrical failure.

Sunroof Switch



To operate the sunroof:

Open/Close: Press and hold the front or rear of (1) to open or close the sunroof. Release at the desired position to stop movement.

Sunshade Switch

To operate the sunshade:

Open/Close: Press and hold the front or rear of (2) to open or close the sunshade to the desired position.

Suspension — Continuous Damping Control (CDC) — Electric Power Steering

Suspension

Front Suspension: The new suspension features lightweight components with a MacPherson Strut design in the front.

Rear Suspension: Five-link independent design at the rear.

Continuous Damping Control (CDC)

Standard on vehicles equipped with 20-inch wheels is an electronic suspension control system that uses a Continuous Damping Control (CDC) system to manage ride control in real time. The suspension control module monitors vehicle speed, steering wheel position, engine torque, brake pressure, the suspension position sensors and the multi-axis sensor to determine the proper damping forces. The module uses these inputs to separately control each of the shock absorbers. Changes of the damping forces can be accomplished within milliseconds. Suspension characteristics can be changed at any time by activating the Sport Mode or Tour Mode.

The system uses the following major components:

- Electronic suspension control module.
- Two front suspension position sensors.
- One rear suspension position sensor.
- Shock absorber electrical actuators integrated within each shock absorber and strut.

CDC Shock Absorbers

The CDC shock absorbers have integrated actuators that are PWM controlled to control the amount of damping provided. The suspension control module varies the amount of current with a higher current providing a higher rate of damping and stiffening the suspension. Less current reduces the rate of damping. The shock absorber uses a proportioning valve to control the amount of damping. Opening the valve allows more oil flow and softens the damping and closing the valve restricts the oil flow and firms the damping.

Electric Power Steering

The belt driven electric power steering system reduces the amount of effort needed to steer the vehicle by utilizing the power steering control module to control the power steering motor to maneuver the steering rack.

The belt driven electronic power steering system consists of the following components:

- A belt drive and a ball nut mechanism.
- A power pack; containing the power steering control module, its sensors, the power steering motor.
- A torque sensor.

- The steering gear (rack and pinion).

Traction Control and StabiliTrak®

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. 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.

TCS activates if it senses that any of the drive wheels are spinning or beginning to lose traction. On an All-Wheel-Drive (AWD) vehicle in AWD or Sport Mode, the system will operate if it senses that any of the 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.

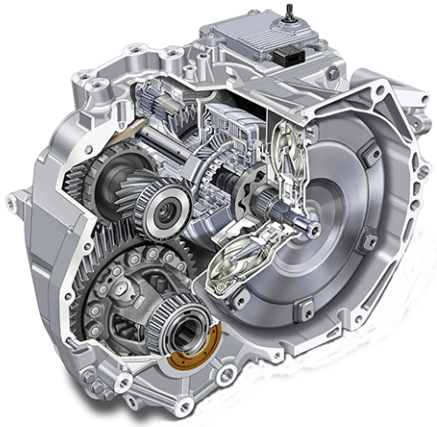
Indicator Light Operation

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 cruise control is being used and traction control or StabiliTrak begins to limit wheel spin, the cruise control will disengage. Cruise control may be turned back **ON** when road conditions allow.

Transmission — Aisin AF50-8 Automatic Transaxle with Electronic Precision Shift — RPO MRC



Aisin AF50-8 Automatic Transaxle

The AF50-8 is a compact, lightweight, next-generation electronically controlled 8-speed automatic transaxle that employs a Ravigneaux-type planetary gear. It employs a high-precision clutch hydraulic control system for smooth, highly responsive gear shift feel. A non-contact type shift position sensor has been adopted in the TCM. The sensor detects shift position by using the Hall Effect, which outputs specified voltage according to the shift position (P, R, N, D). The magnet position in the sensor changes when moving the shift lever, enabling the Hall IC to convert magnetic field strength into an electrical signal according to the shift position. Compared to the conventional contact type switch, the non-contact type sensor does not have contact points and is very compact. This makes it possible to integrate it with the TCM, improving reliability and durability.

Electronic Precision Shift — Transmission Shift Lever



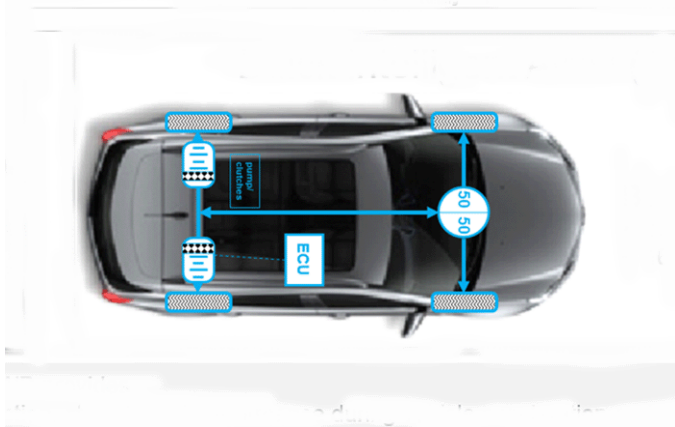
The XT5 is Cadillac's first application of Electronic Precision Shift which is **shift by wire**. The system has no physical link, cable or linkage between the shifter and transmission. The chassis control module (CCM) monitors the position of the shift lever and communicates the information to the transmission range control module. The transmission range control module then **turns** the gear selector shaft using a motor connected to the range selector shaft.

The automatic transmission shift pattern is displayed on top of the shift lever. The lever contains sensors that indicate the desired transmission range. The selected gear position illuminates in red on the shift lever. The shift lever always starts in a center position, represented by a dot on the shift pattern. After shifting, it returns to the center position.

Transmission Fluid Level and Condition Check

The transmission uses AW-1 premium transmission fluid which does not need to be replaced during the life of the transmission under normal use conditions. When performing fluid checks, always refer to SI for the Transmission Fluid Level and Condition Check procedure.

Twin Clutch All-Wheel Drive (AWD)



Notice: When using a compact spare tire on an AWD vehicle, the system automatically detects the compact spare and reduces AWD performance to protect the system. An AWD message may be displayed. 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.

The optional AWD system utilizes a twin clutch design that continuously and automatically delivers outstanding traction in various driving conditions. The twin clutch design allows the XT5's AWD system to transfer up to 100 percent of available torque to either the front or rear axles. In addition, the system's electronically controlled rear differential can direct up to 100 percent of available torque to either wheel laterally. The ability to move power across the rear axle was designed for split-coefficient surfaces, such as when there is more water, ice or snow on one side of the road surface than the other.

Furthermore, this AWD system is driver-controlled and includes a new disconnect feature that disables the rear drive unit, thereby leaving the car in front wheel drive (FWD) mode, for improved fuel efficiency and reduced emissions. The AWD mode will stay selected until the MODE is changed to FWD.

Towing the Vehicle — Recreational Vehicle Towing

Towing the Vehicle

Use only a **flatbed tow truck** for towing a disabled vehicle. **DO NOT** use a sling type lift or damage will occur. Use ramps to help reduce approach angles if necessary. A towed vehicle should have its **drive wheels off the ground**.

Recreational Vehicle Towing — Dinghy Towing and Dolly Towing

Recreational vehicle towing means towing the vehicle behind another vehicle, such as behind a motor home.

Dinghy Towing

The vehicle is neither designed nor intended to be dinghy towed. **DO NOT dinghy tow the vehicle.**

Dolly Towing (All-Wheel-Drive Vehicles)

All-wheel-drive vehicles **should not be towed with two wheels on the ground.** To properly tow an AWD vehicle, it should be placed on a platform trailer with **all four wheels off of the ground.**

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).
3. Set the parking brake.

Notice: Follow the dolly manufacturer's instructions for preparing the vehicle and dolly for towing.

4. Secure the vehicle to the dolly.
5. Release the parking brake.

Special Tools

The following new tools were released for the 2017 XT5:

Special Tools — Tool Number and Description

Tool Number	Description
DT-51329-A	Driveshaft Remover
DT-51834	Seal Installer, RH Input & Pinion Cassette
DT-51835	Seal Installer, LH Input & IDS Cassette
EN-42385-70	Head Bolt Thread Repair Torque Plate
EN-44226-5	Crankshaft Protector Button
EN-46335-A	Valve Spring Compressor (On-vehicle)
EN-49941	Piston Pin Retainer Remover
EN-51333	Timing Chain Retainer Set
EN-51766	Rear Seal Installation Pilot

Training Courses

The majority of the systems found on this vehicle are taught in GM's core curriculum from a conceptual theory and operation perspective. The North American technical training core curriculum structure is system based.

To access **all** of the available training courses in the United States, visit the following website: www.centerlearning.com

In Canada, Go to **GM GlobalConnect and select Centre of Learning**

Training Course Name or System — Course Number and Description

Course Name or System	Course Number and Description
-----------------------	-------------------------------

<p align="center">New Model Feature</p> <p align="center">2017 Cadillac XT5 New Model Feature</p>	<p align="center">#10317.92W — 2017 Cadillac XT5 New Model Launch (United States and Canada)</p> <p align="center">#10317.91H — 2017 Cadillac XT5 New Model Launch</p> <p align="center">#10317.91W — 2017 Cadillac XT5 New Model Launch</p>
<p align="center">Engine</p> <p align="center">Gasoline, 6 Cylinder, V6, 3.6L, DI, DOHC, VVT — RPO LGX</p>	<p align="center">#16440.20D — Engines: New and Updates for RPOs LF4, LGX, LGW, L3A, LV7, LE2 and LWN (United States Only)</p>
<p align="center">Transmission</p> <p align="center">Aisin AF50-8 Automatic Transaxle — RPO MRC</p>	<p align="center">#17440.16D (VCT) — Transmissions: New and Updates for Aisin AF50-8, 8L45/8L90 Automatic Transmissions (United States Only)</p>
<p>Safety Systems Forward Collision Alert / Lane Departure Warning and Rear Vision Camera</p>	<p align="center">#22048.42W1-W3 GM Safety Systems 1-3 (United States and Canada)</p>

Version Information

Version	1
Modified	—

Trademark Footnotes

Apple® is a Registered Trademark of Apple Inc.

Bose® is a Registered Trademark of the Bose Corporation

The Bluetooth® Word Mark and Logos are Registered Trademarks Owned by Bluetooth SIG, Inc.

dexos® is a Registered Trademark of General Motors LLC

dexos1® Icons are Registered Logos of General Motors LLC

Google® is a Registered Trademark of Google Inc.

iPhone® is a Registered Trademark of Apple Inc.

OnStar® is a Registered Trademark of OnStar LLC

Siri® Eyes Free Voice Recognition Software is a Registered Trademark of Apple Inc.

Siri® is a Registered Trademark of Apple Inc.

StabiliTrak® is a Registered Trademark of General Motors LLC

Studio Surround™ is a Trademark of the Bose® Corporation

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.



WE SUPPORT VOLUNTARY TECHNICIAN CERTIFICATION