

## All-New 2018 Buick Enclave



The 2018 Enclave, Buick's all-new seven passenger midsize luxury SUV, features a longer wheelbase than the previous generation with a body structure built for safety, strength and mass efficiency. The standard 3.6L V6 engine with Stop/Start technology is paired with an efficient 9-speed automatic transmission. Plus, there are 17 radar, camera and ultrasonic sensors, when fully equipped, that provide a wealth of data for the numerous safety and collision avoidance features.

### New Model, New Technology

The 2018 Enclave is now available in a new Avenir model, which is Buick's new luxury sub-brand that offers unique styling cues and an extensive list of premium features.

The new styling of the Enclave showcases a lower roofline and sharper windshield angle than the model it replaces. It includes Buick's traditional QuietTuning sound-blocking features, yet with a new active noise cancellation system.

Also offering additional comfort for passengers is the new available air ionizer that eliminates odors and provides enhanced air quality. The air ionizer works by producing negatively charged particles that attract air-borne contaminants

continued on page 2

### CONTENTS

All-New 2018 Buick Enclave . . . . .	1
Intake Rocker Arm Oil Control Valve Components . . . . .	4
Forward Collision System Reduced Message . . . . .	4
Battery Vent Plug Installation . . . . .	5
UPDATE: Loose Charge Air Cooler Ductwork . . . . .	5



Customer Care and Aftersales

# All-New 2018 Buick Enclave — continued from page 1

and break down their structure, cleaning the cabin air. The ionizer doesn't require any maintenance, but the traditional cabin filter should be serviced regularly. To turn the ionizer on or off, go to Settings > Vehicle > Climate and Air Quality.

## High Feature V6

The High Feature 3.6L V6 engine (RPO LFY) uses variable valve timing (VVT) and direct injection (DI) to produce 310 horsepower and 266 lb.-ft. of torque. It uses dexos1 SAE 5W-30 viscosity grade engine oil.

The fuel efficient Stop/Start technology on the engine is similar to the Stop/Start system found on other GM vehicles. An advanced algorithm determines when driving conditions are optimal to turn off the engine. The system monitors vehicle speed, climate control system operation and other conditions. The advanced system recognizes certain driving maneuvers, such as backing into a garage or parking lot situations, to better determine whether or not the vehicle needs to operate the stop/start function. Unique Stop/Start system components include a tandem-solenoid starter, DC-DC module that maintains voltage during a stop/start event, an electronically-controlled accumulator that retains transmission fluid pressure, and an engine mount system that dampens vibrations.



3.6L V6 engine

## 9-Speed Transmission

The 9T65 (RPO M3W) 9-speed, transverse-mounted, electronically-controlled automatic transmission consists 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 Transmission Control Module (TCM) is a standalone unit mounted on a bracket near the transmission. Use DEXRON®-VI Transmission Fluid in the 9T65.



9T65 9-speed automatic transmission

Selecting a gear is done with the shift-by-wire Electronic Precision Shift (EPS) gear selector, which eliminates the mechanical connection to the transmission. The automatic transmission shift pattern — Park, Reverse, Neutral, Drive, and Manual positions — is displayed on top of the shift lever. The shift lever position is determined by two internal sensors that each transmit an X and Y coordinate signal. All four signal circuits are inputs to the Chassis Control Module.

The selected gear position illuminates in red on the shift lever.

The shift lever includes a Shift Interlock Button on the side of the lever that must be pressed to shift out of Park or into Reverse as well as a Park Button on top of the lever that must be pressed to shift the transmission into Park.



Electronic Precision Shift

## Switchable All-Wheel Drive

Available intelligent All-Wheel Drive (AWD) with an active twin-clutch rear differential — independently controlling torque to each rear wheel — and Buick's first switchable AWD system improve control and efficiency. Switchable AWD allows the driver to switch between front-wheel drive and AWD when road conditions change. In front-wheel drive, the system disconnects virtually all of the AWD components from the drivetrain to save fuel and reduce emissions.

In addition, the Enclave comes standard with the driver-controllable Traction Select system, which offers choices for different driving conditions, and changes the throttle response and other calibrations for the selected driving mode.



AWD and Sport buttons

The Driver Mode Control also provides additional driver control with Sport and Tow/Haul modes. The system simultaneously changes the software calibration of various sub-systems, including the suspension, steering, and powertrain settings. On vehicles with Sport and Tow/Haul modes, there is only one selectable button (Tow/Haul), which engages both the Sport features as well as the Tow/Haul features when enabled.

continued on page 3



# All-New 2018 Buick Enclave — continued from page 2

## Infotainment System

The infotainment system on the Enclave includes an 8-inch (203 mm) diagonal color touchscreen. The standard system (RPO IO5) features gesture control (use simple gestures such as tap, drag and swipe to navigate through menus and screens), in-vehicle apps via Shop, Apple CarPlay™ and Android Auto™ compatibility, and natural language voice recognition. The available system (RPO IO6) with embedded navigation offers easy-to-understand turn-by-turn directions. Navigation features can be accessed using the touchscreen, voice command or within the instrument cluster using the steering wheel-mounted buttons.



Shop and Apple CarPlay/Android Auto capability are standard infotainment system features.

## SmartSlide Seating

The SmartSlide 2nd-row seat on the passenger side of the vehicle can be slid and angled forward using the handle on the side of the seatback, allowing passengers easy access to the 3rd-row seats on the curb side of the vehicle. The seat slides and tilts forward even when a forward-facing child restraint is installed using the LATCH system. Remove a rear-facing child restraint before moving the seat for 3rd-row entry or exit.

## Safety Features

The Driver Assistance Systems — an expanded range of radar- and camera-based active safety technologies — are designed to enhance driver awareness and aid in reducing potential collision situations.

Some of the available Driver Assistance features include:

- Adaptive Cruise Control
- Forward Automatic Braking
- Forward Collision Alert with Following Distance Indicator
- Front Pedestrian Braking
- Lane Keep Assist with Lane Departure Warning
- Lane Change Alert with Side Blind Zone Alert
- Rear Cross Traffic Alert
- Rear Parking Assist
- IntelliBeam high-beam headlamp control
- Safety Alert Seat
- Surround Vision camera system

## Power Liftgate

The available hands-free power programmable liftgate can be



Projected Buick Tri-Shield logo

opened and closed by simply using a kicking motion under the driver's side of the rear bumper, just left of center. It also features a Buick Tri-Shield logo that is projected onto the ground by an LED lamp under the rear bumper to indicate the hands-free sensor location. The key fob must be within 10 feet (3 m) of the back of the vehicle to activate the projected logo. The projected logo may not be visible in all conditions, such as on snow-covered ground or on a bright, sunny day.

## Spare Tire Access

To access the spare tire, the cargo management system below the rear cargo floor must be removed. Remove the four wing nuts and lift up on the handles on both sides to remove the cargo management system. The storage bin can be placed on the lowered third row seats while accessing the spare tire.



The spare tire is located below the cargo management system under the rear cargo floor.

## Special Tools

The following special service tools have been released for the 2018 Enclave:

DT-48022	Bushing Installer
DT-51834	Seal Installer, RH Input & Pinion Cassette
DT-51835	Seal Installer, LH Input & IDS Cassette
EN-51332	Fuel Line Release Tool

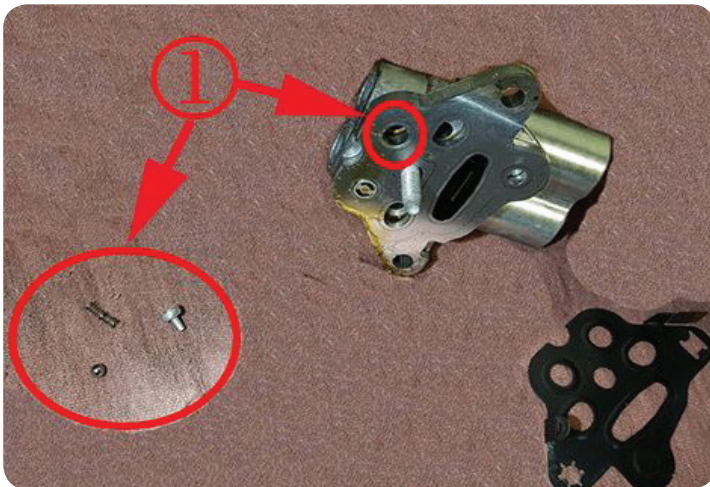
For additional information on the new 2018 Enclave, refer to Bulletin #17-NA-285.

🙏 Thanks to Sherman Dixon and Steve Bruder

# Intake Rocker Arm Oil Control Valve Components

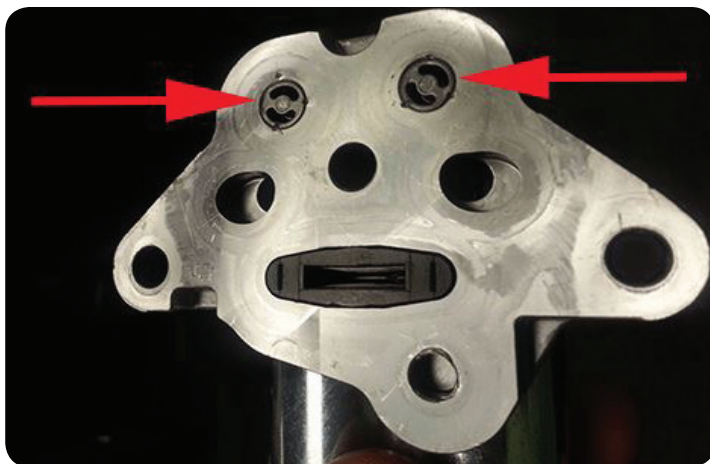
Some 2014-2015 Impala (VIN 1) and Malibu models equipped with the 2.5L engine (RPO LKW) may have several driveability conditions, such as a surge, rough idle, or misfire. The engine may misfire on cylinders 1 and 2 or cylinders 3 and 4. DTCs P0101 (MAF Sensor Performance), P0106 (MAP Sensor Performance), P0171 (Fuel Trim System Lean) or P0300 (Engine Misfire Detected) also may be set.

If these conditions are found, follow the appropriate diagnostic procedures in the Service Information. If the concern is not resolved, inspect the intake rocker arm oil control valve for missing components.



Valve with missing components

If any intake rocker arm oil control valve components are missing, replace the intake rocker arm oil control valve and the camshaft cover. The camshaft cover must be replaced because some components may have become lodged in the camshaft cover oil passages.



Valve with all components in place

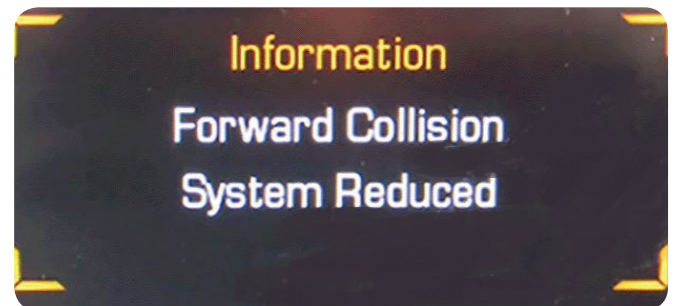
If the intake rocker arm oil control valve is not missing any components, only replace the intake rocker arm oil control valve.

🙏 Thanks to David Rutkowski

# Forward Collision System Reduced Message

A Forward Collision System Reduced message may appear on the Driver Information Center (DIC) when the vehicle is started on 2016-2018 CT6, Escalade, Malibu, Volt; 2017-2018 XT5, Bolt EV, Silverado, Suburban, Tahoe, Acadia, Sierra, Yukon; 2018 Enclave, Equinox, and Traverse models equipped with Low Speed Forward Automatic Braking (RPO UHY). On some 2016 models, the DIC message displayed may be Automatic Collision Prep Reduced.

When driving in a forward gear, if the Forward Automatic Braking System detects another vehicle ahead in the path that the vehicle traveling and in the same direction, it can provide a boost to braking or automatically brake the vehicle to help



Forward Collision System Reduced DIC message

avoid or lessen the severity of a collision. Depending on the situation, the vehicle may automatically brake moderately or hard. The system works when driving in a forward gear between 5 mph (8 km/h) and 50 mph (80 km/h) or, on vehicles with Adaptive Cruise Control, above 2 mph (4 km/h). It can detect vehicles up to approximately 197 ft. (60 m).

There are three possible settings for the Forward Automatic Braking System:

- Off
- Alert
- Alert and Brake

The Forward Collision System Reduced DIC message will be displayed when the Forward Automatic Braking System has been set to the "Alert" setting in the Vehicle Settings on the infotainment system.



The Forward Automatic Braking System has three settings.

The Alert setting disables most automatic braking functions, providing reduced operation. This is normal when the system has been set to "Alert."

If the system is set to "Alert and Brake," the DIC message will no longer be displayed when the vehicle is started.

🙏 Thanks to James Will



# Battery Vent Plug Installation

Absorbed Glass Mat (AGM) and flooded lead acid batteries can produce a number of potentially dangerous gases, which requires that the battery be properly vented on vehicle applications that have the battery installed inside the passenger compartment. The typical maintenance-free battery is completely sealed except for two small vent ports in the side. These vent ports allow the gas that is produced in the battery to escape.

On applications with a single vent tube, the opposing vent opening on the battery cover must be plugged using the vent plug.

Batteries that require venting include a removable vent plug, which can be inserted into the vent port that is opposite of the vent hose that leads to outside the vehicle. The twist-off plug is attached to the positive terminal cap. Instructions for using the vent plug are included on the battery positive post cover.

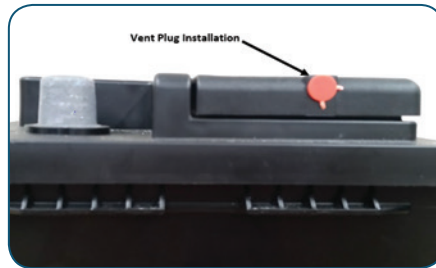
Press fit the vent plug into the battery to ensure proper seating into the vent port. Be sure to never plug both vent ports.

**TIP:** Some batteries may have vent hose configurations that vent both ports to outside the vehicle, such as the Saturn Ion. These applications do not require a plug.

☺ Thanks to John Munsell



Vent plug attached to the positive terminal cap.



Installed vent plug

## UPDATE: Loose Charge Air Cooler Ductwork

Loose connections of the charge air cooler ductwork on some 2017-2018 Silverado and Sierra models equipped with the 6.6L Duramax diesel engine (RPO L5P) may result in an illuminated Check Engine light. DTCs P0101, P0299, P0712, P11CC, P11DC, P2002, P2463, P2627, P2A00, P2459, P22B6, P200C, P200E, P0263, P0266, P0269, P0272, P0275, P0278, P0281 and/or P0284 also may be set.

If any of the DTCs are set, check for loose charge air cooler ductwork at the turbocharger outlet pipe, the charge air cooler inlet pipe, the charge air cooler outlet pipe, and the connection at the intake air flow valve (throttle body).

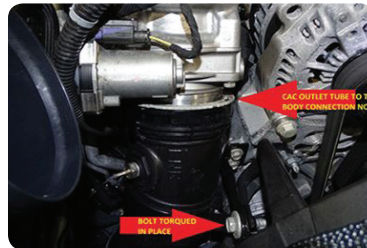
**TIP:** The loose ductwork is most likely to become disconnected during engine roll or brake torque. Test for leaks using the smoke test procedure in the Charge Air Cooler Diagnosis document (Service Information document ID. #4282009).

Also check for proper alignment of the charge air cooler pipe bracket and bolt hole. The bracket and bolt hole may require realignment after the charge air cooler outlet hose is properly connected to the throttle body.

If DTC P2463 (DPF Soot Accumulation) was not set and a charge air cooler leak or disconnection was found, after repairing charge air cooler connections, command the Diesel Particulate Filter (DPF) Regeneration Enable with the scan tool before returning the vehicle to the customer.

The DPF Regeneration Enable will put the vehicle in DPF regeneration mode when the customer gets the vehicle, which will delay any emissions diagnostic codes that can be fouled by high soot in the exhaust until the exhaust is cleaned by the vehicle being driven with an on-road DPF regeneration.

☺ Thanks to John Stempnik



Check the connection of the charge air cooler pipe at the intake air flow valve.

## TECHLINK

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