12 V Battery Usage

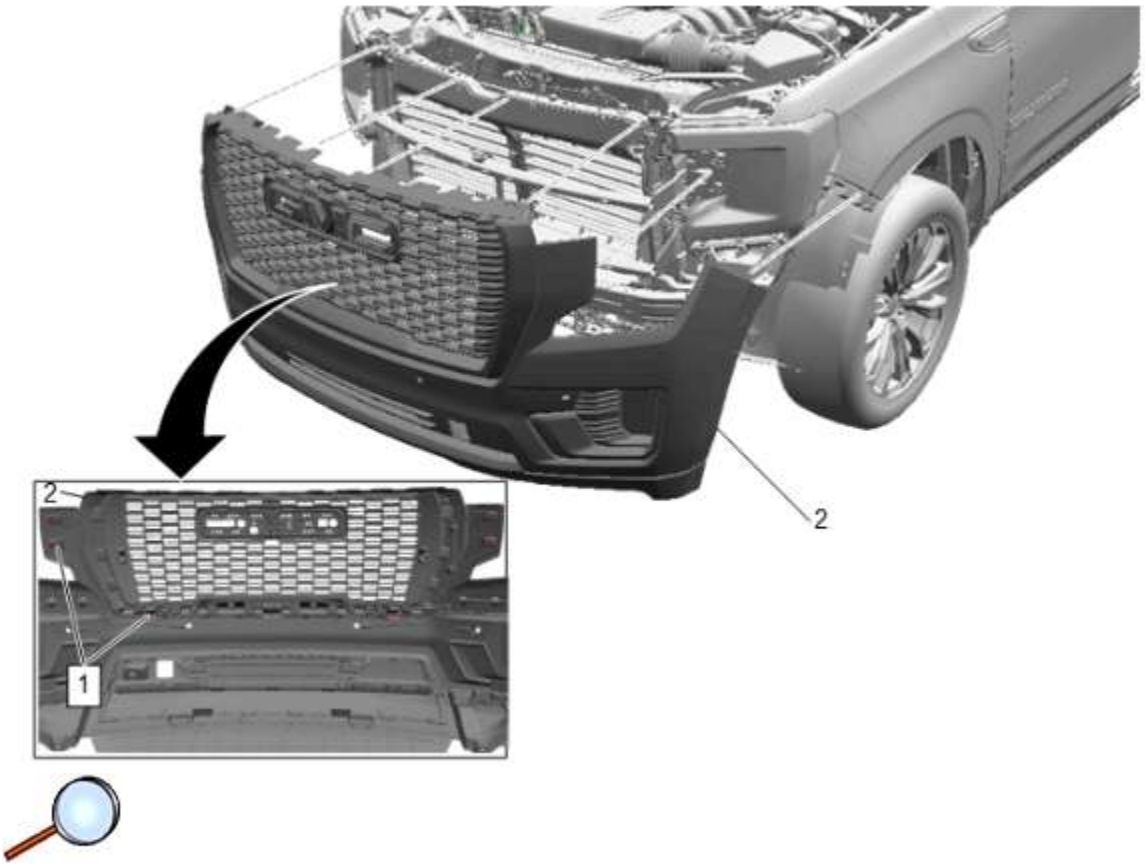
Note:

- This table is intended for North America ONLY and references the Battery the vehicle was built with.
- When charging and testing Batteries ALWAYS use the information on the Battery label. Failure to use the correct information from the actual Battery label may result in providing a false test result for a good or bad battery.
- Failure to enter the correct battery Specifications from the battery label during testing will be subject to a warranty claim debit.
- When Testing a vehicle with a two batteries, you must identify the correct specifications, both batteries may not have the same specifications with a primary and auxiliary battery.
- The Provided Specifications in this table are SAE CCA (North America) which is Utilized for the GR8 Testing Specifications. ALWAYS use SAE CCA Ratings when Testing. Other published information such as Online Order Reference Guides, Quick Reference Guides or EPC may publish the EN CCA (Except North America) the ratings are higher than the SAE CCA Rating,

Search:

12 V Battery Usage

Model Year	Make	Model	Engine RPO	Equipped with Start/Stop (RPO KL9)	Battery Tester/Battery Type Selection	Original Equipment SAE Cold Cranking Amps (SAE/CCA)	Original Equipment Amp Hours (AH)	Original Equipment Reserve Capacity (RC)
2022	BrightDrop	EV600	—	—	AGM	730	80	140
2022	Buick	Enclave	3.6L V6 LFY	Stop/Start	AGM	730	80	140
2022	Buick	Encore	1.4L L4 LE2	—	Flooded	525	60	105
2022	Buick	Encore GX	1.2L L3 LIH 1.3L L3 L3T	Stop/Start	AGM	760	70	140
2022	Buick	Envision	2.0L L4 LSY	Stop/Start	AGM	730	80	140
2022	Cadillac	CT4	2.0L L4 LSY 2.7L L4 L3B	Stop/Start	AGM	730	80	140
2022	Cadillac	CT4	3.6L V6 LF4	—	AGM	700	70	120
2022	Cadillac	CT5	2.0L L4	Stop/Start	AGM	730	80	140



4. Front Bumper Fascia (2) » Install — Front Bumper Fascia Removal and Installation

DTC B13E7

Diagnostic Instructions

- Perform the Diagnostic System Check - Vehicle prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions provides an overview of each diagnostic category.

DTC Descriptor

DTC B13E7 23 Horn Switch Signal

Diagnostic Fault Information

Circuit number	Circuit Function	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
3287	Signal	B13E7 23	1	—	—
6051	Ground	—	1	—	—
1. S33 Steering Wheel Horn Contact= Inoperative					

Circuit/System Description

The K9 Body Control Module provides the S33 Steering Wheel Horn Contact with approximately 7.5V to the signal circuit 3287. When the switch is pressed, the K9 Body Control Module will detect the voltage drop in the signal circuit 3287 and will command the KR3 Horn Relay to energize.

Conditions for Running the DTC

When the output is actively being requested by the body control module.

Conditions for Setting the DTC

Circuit 3287 is stuck low

Action Taken When the DTC Sets

The horn will continuously sound until it is disconnected or when it overheats and becomes inoperative.

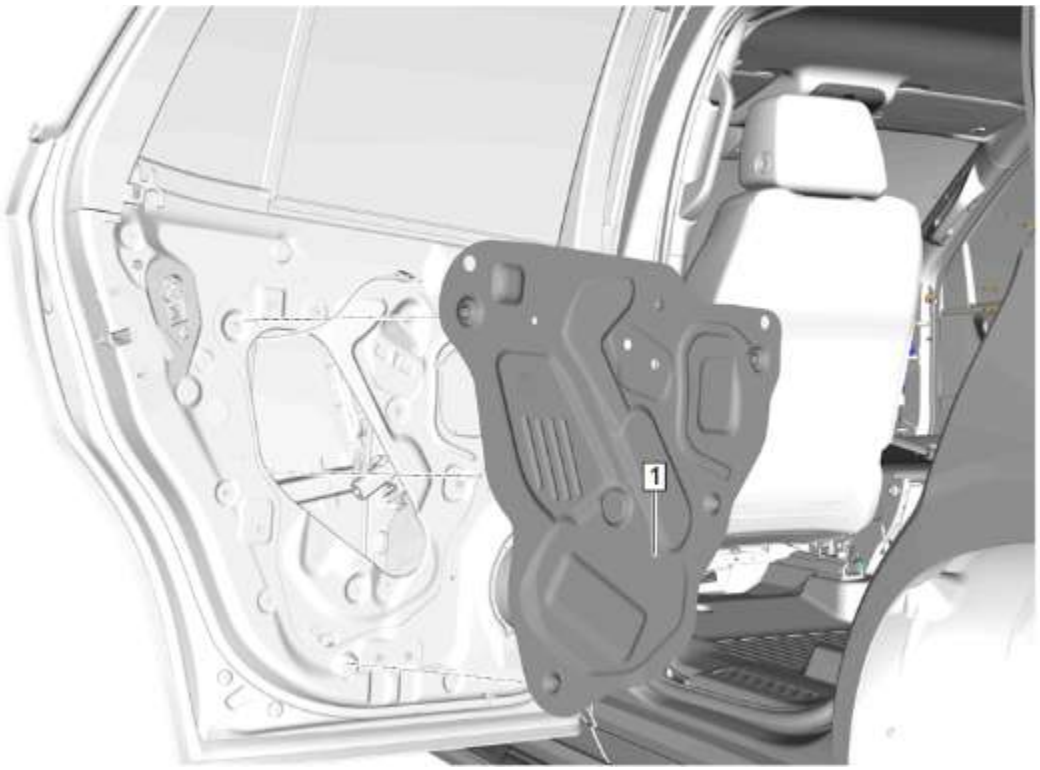
Conditions for Clearing the DTC

- The DTC clears when the fault is no longer detected.
- The current DTC will become history when the request for the output is removed.
- The history DTC will clear after 40 consecutive fault-free ignition cycles have occurred.

Reference Information

Schematic Reference

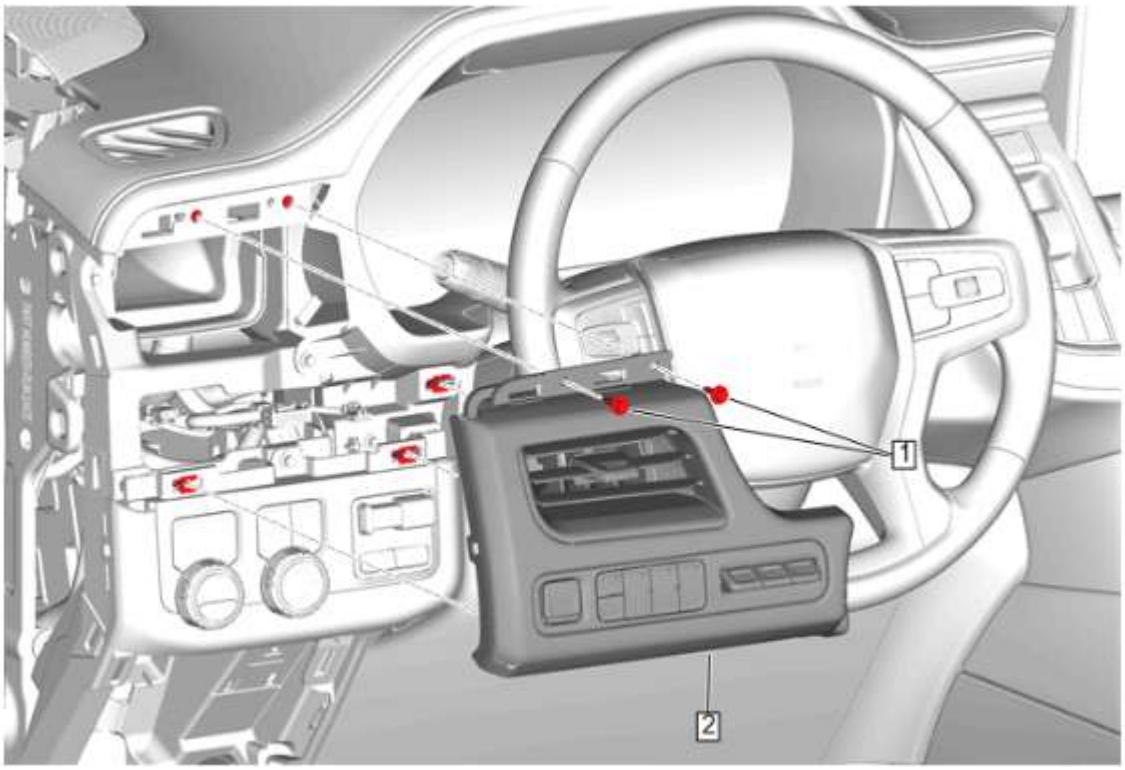
Horn Schematics



Note: When reinstalling water deflector ensure integral locators are installed properly and that water deflector is secured and leakproof.

3. Route the rear side door inside handle cable through hole in deflector (1).
4. Rear Side Door Water Deflector (1) » Install

4. Using a flat-bladed plastic trim tool, release the retaining clips.
5. Instrument Panel Trim Plate Applique (1) » Remove

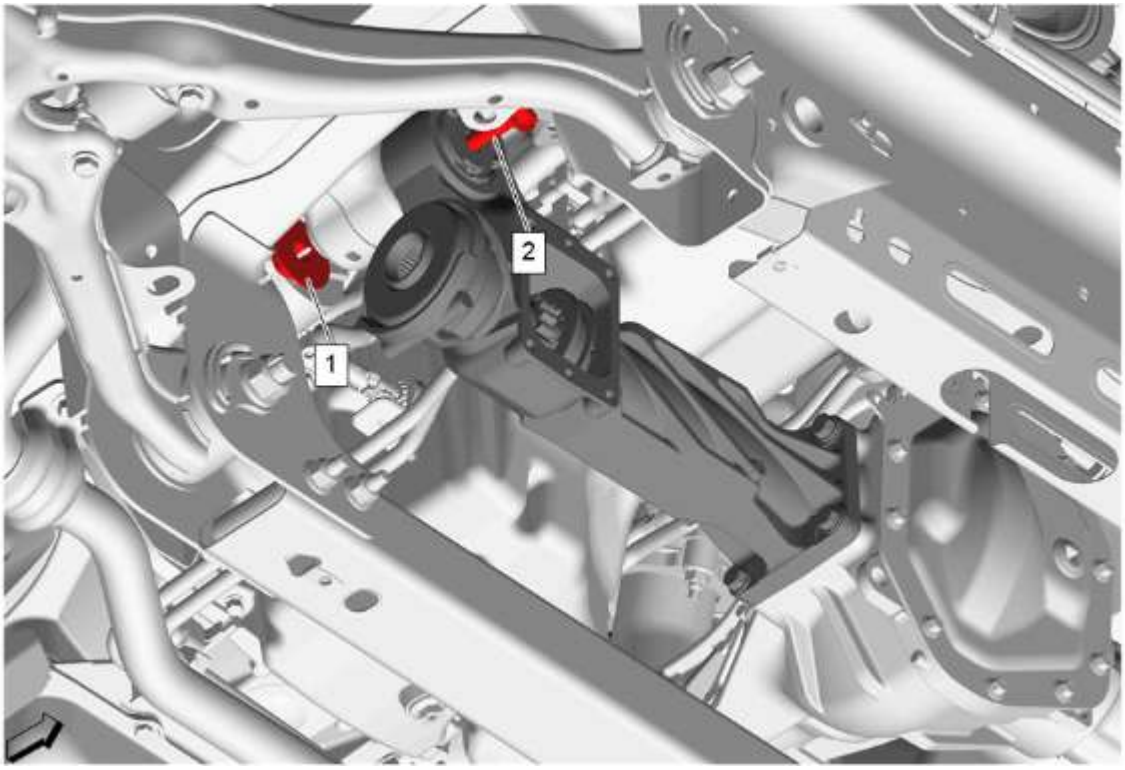


6. Instrument Panel Trim Pad Bolt (1) » Remove [2x]
7. Disconnect the electrical connectors.
8. Instrument Panel Trim Pad (2) » Remove

Parameter	System State	Expected Value	Description
			Run if a diagnosis has not been made. The scan tool will display Malfunction if there is an open in the circuit.
Intake Air Flow Valve Control Circuit Shorted Test Status	—	OK	This parameter displays the status of the Intake Air Flow Valve Control Circuit. The scan tool will display OK if the circuit is operating correctly or Not Run if a diagnosis has not been made. The scan tool will display Malfunction if there is a short in the circuit.
Intake Air Flow Valve Control Driver Overcurrent	—	No	This parameter displays the status of the Intake Air Flow Valve Control driver. The scan tool will display Yes when an overcurrent is detected.
Intake Air Flow Valve Control Driver Overtemperature	—	No	This parameter displays the status of the Intake Air Flow Valve Control driver. The scan tool will display Yes when overtemperature is detected.
Intake Air Flow Valve Control Driver Temperature Dependent Overcurrent	—	No	This parameter displays the status of the Intake Air Flow Valve Control driver. The scan tool will display Yes when Temperature Dependent Overcurrent is detected.
Intake Air Flow Valve Control Driver Undervoltage	—	No	This parameter displays the status of the Intake Air Flow Valve Control driver. The scan tool will display Yes when Undervoltage is detected.
Intake Air Flow Valve Learned Closed Position	—	%	This parameter displays the minimum position learned for Intake Air Flow Valve position

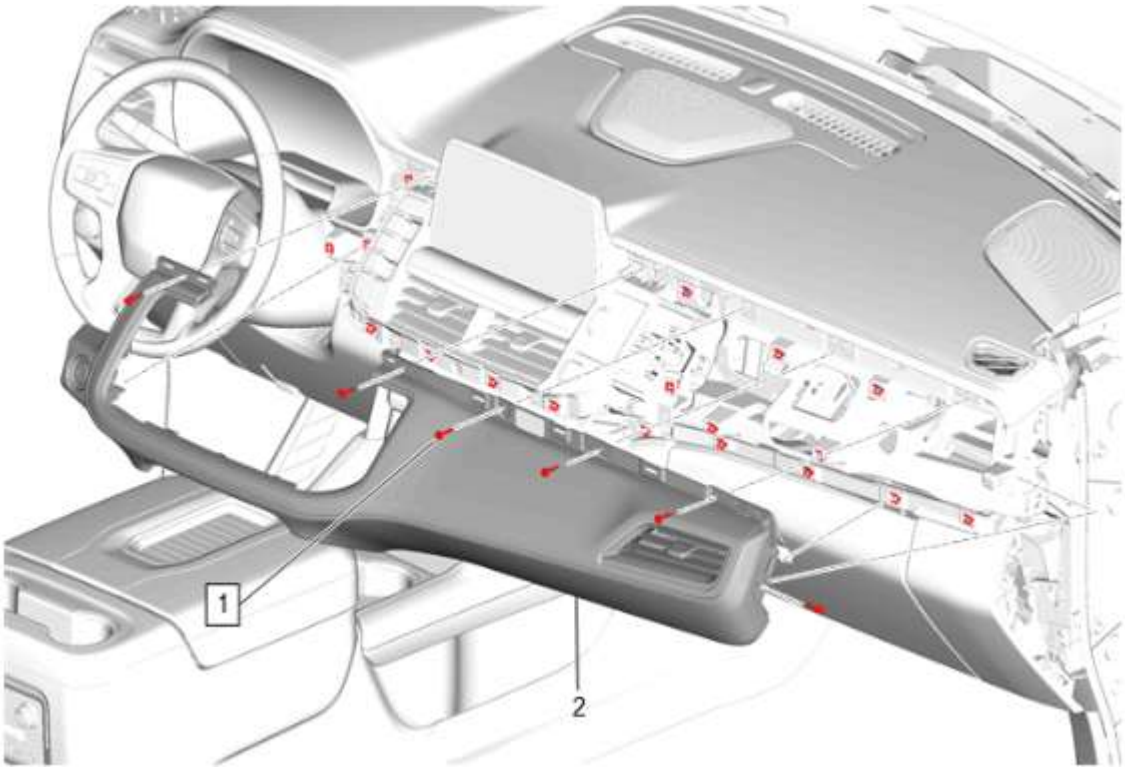
Note: Some components not shown for graphic clarity.

37. { With L84, L87 } Electrical Connector @ Heater Coolant Pump (2) » Disconnect
    37.1. Heater Water Auxiliary Pump Bolt (1) » Remove
    37.2. Remove the heater coolant pump and heater water auxiliary pump bracket (2) as assembly and position aside.



38. Front Differential Carrier Bracket Nut (1) » Remove
39. Front Differential Carrier Bolt (2) » Remove

5. Using a flat-bladed plastic trim tool, release the retaining clips.
6. Instrument Panel Center Trim Plate Applique (1) » Remove

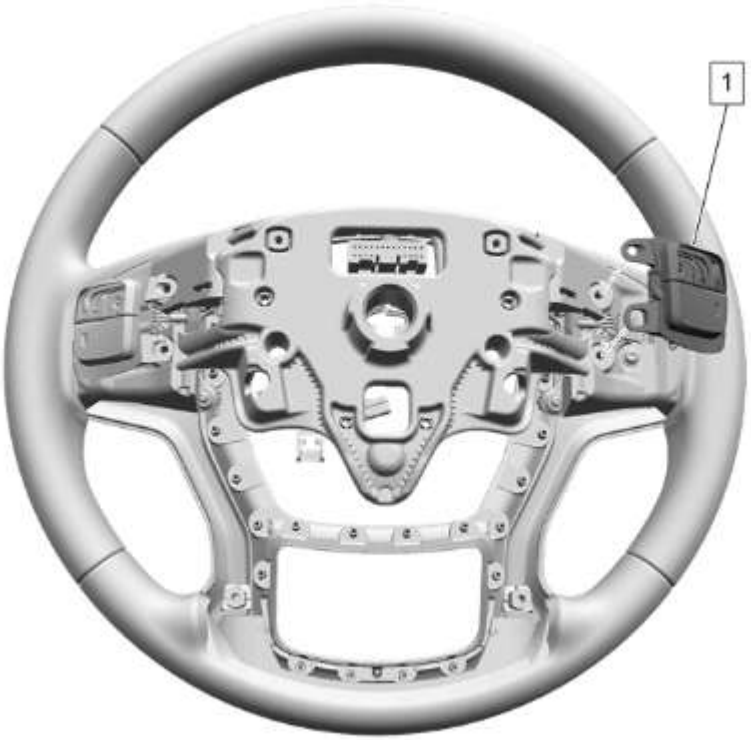


7. Instrument Panel Upper Trim Panel Bolt (1) » Remove [6x]
8. Using a flat-bladed plastic trim tool, release the retaining clips.
9. Disconnect the electrical connector.

Note: Use care not to bend or deform the thin area of the instrument panel trim pad.

10. Instrument Panel Trim Pad (2) » Remove

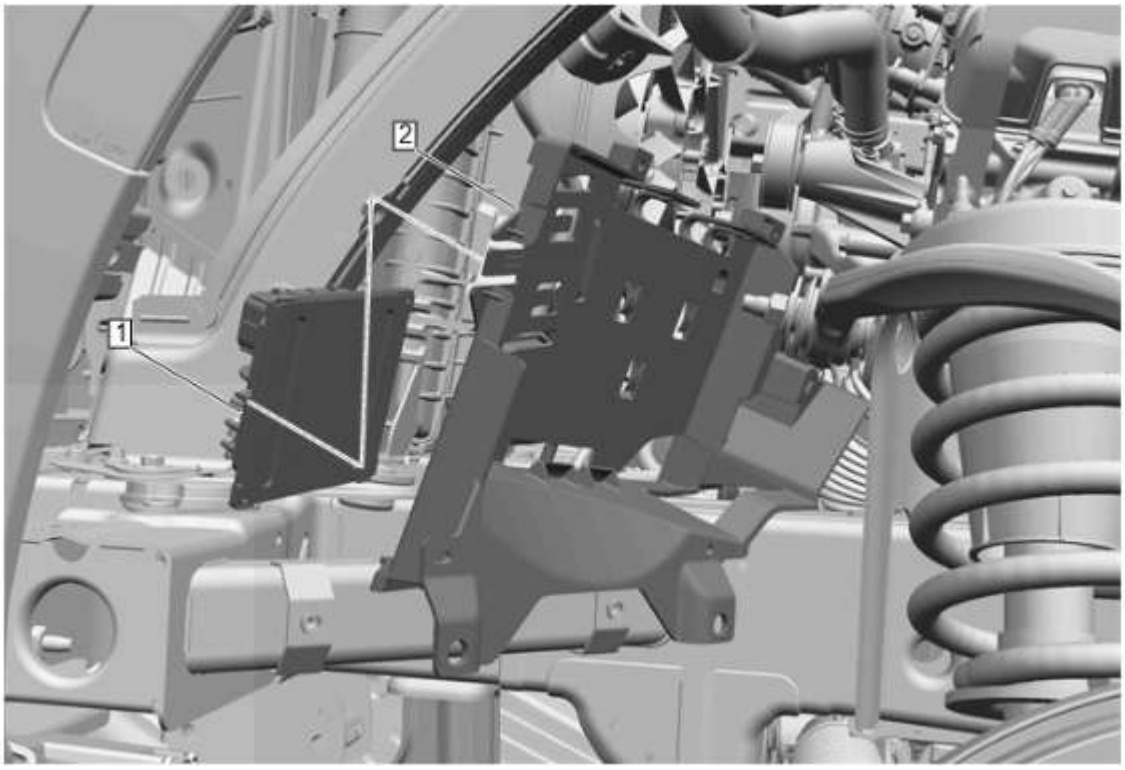
15. Disconnect the electrical connector.
16. Radio Volume Switch (1) » Remove



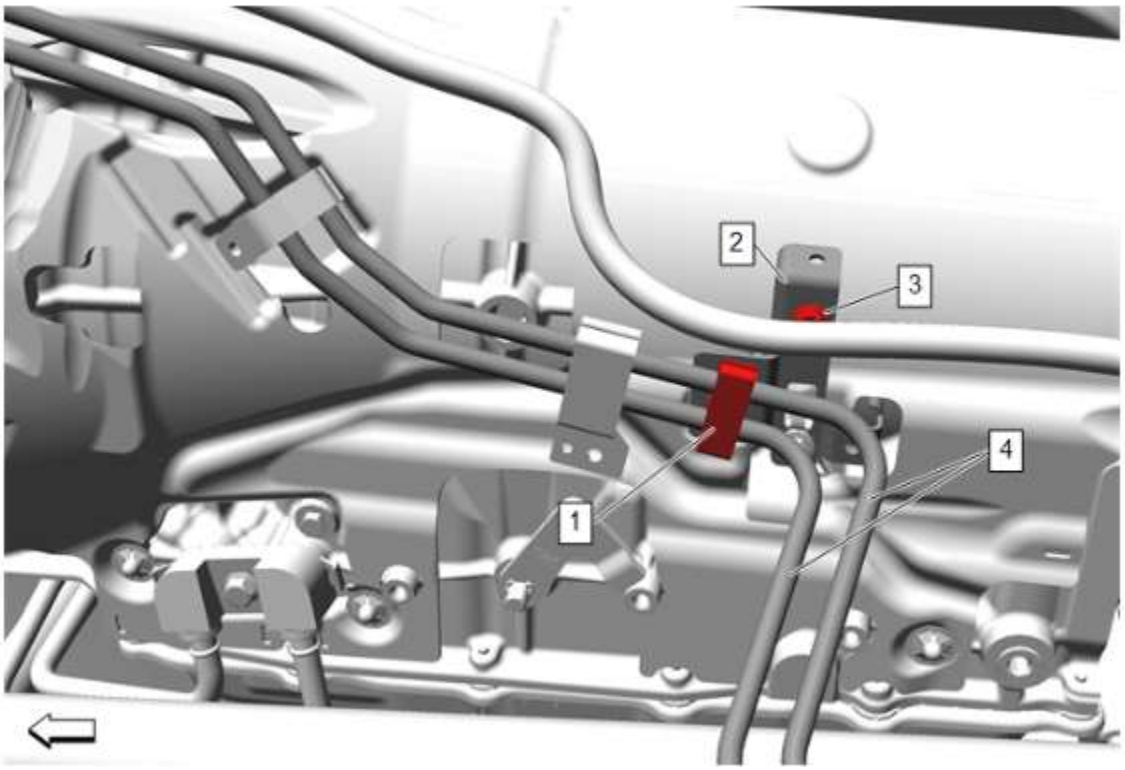
17. Disconnect the electrical connector.
18. Radio Favorites Switch (1) » Remove

17. Use a suitable tool to pry back the locking tab and remove the transmission control module (1) by sliding it out from the bracket (2).

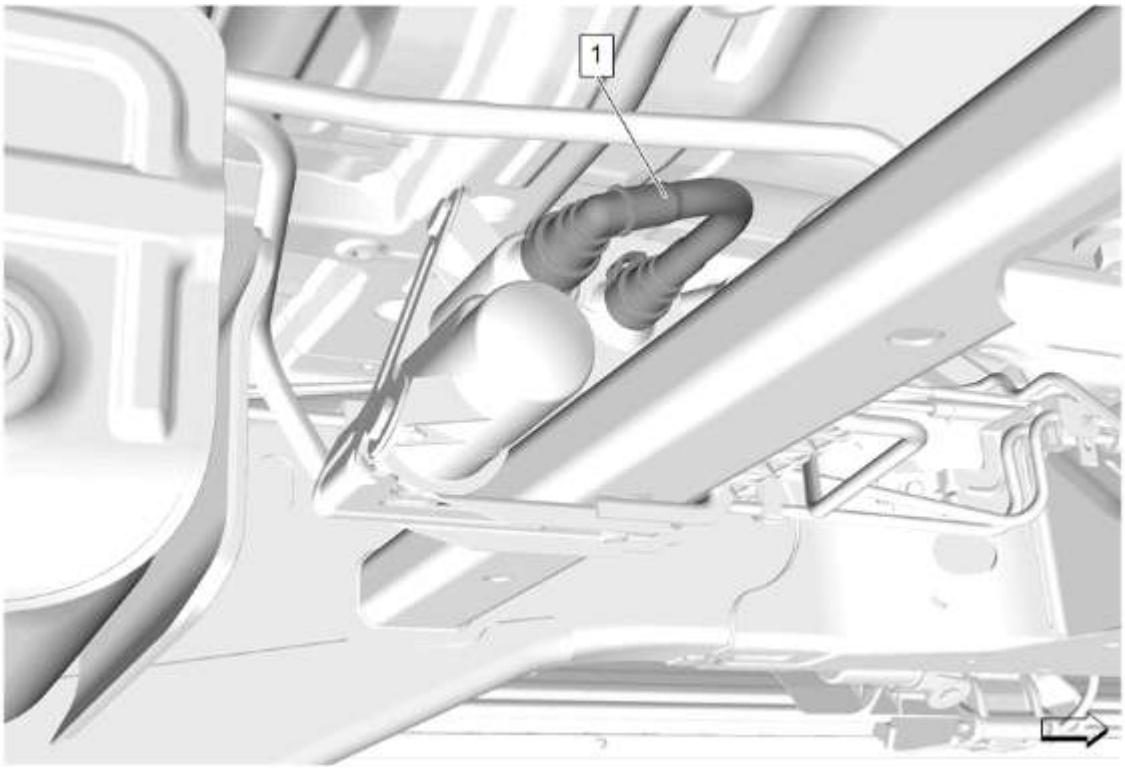
Installation Procedure

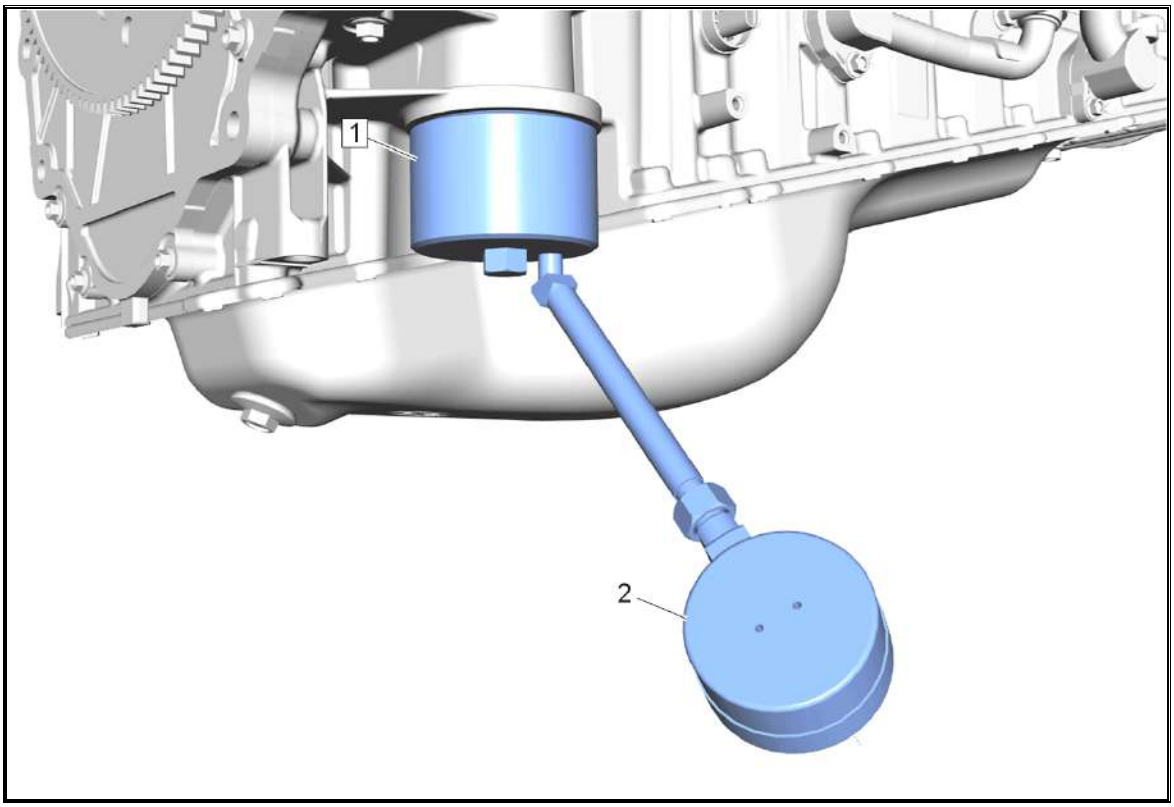


1. Transmission Control Module (1) » Install
2. Engine Control Module Bracket (2) » Install



31. Retainer (1) @ Fuel Feed and Return Front Hose Bracket (2) » Remove
32. Fuel Feed and Return Front Pipe (4) » Remove





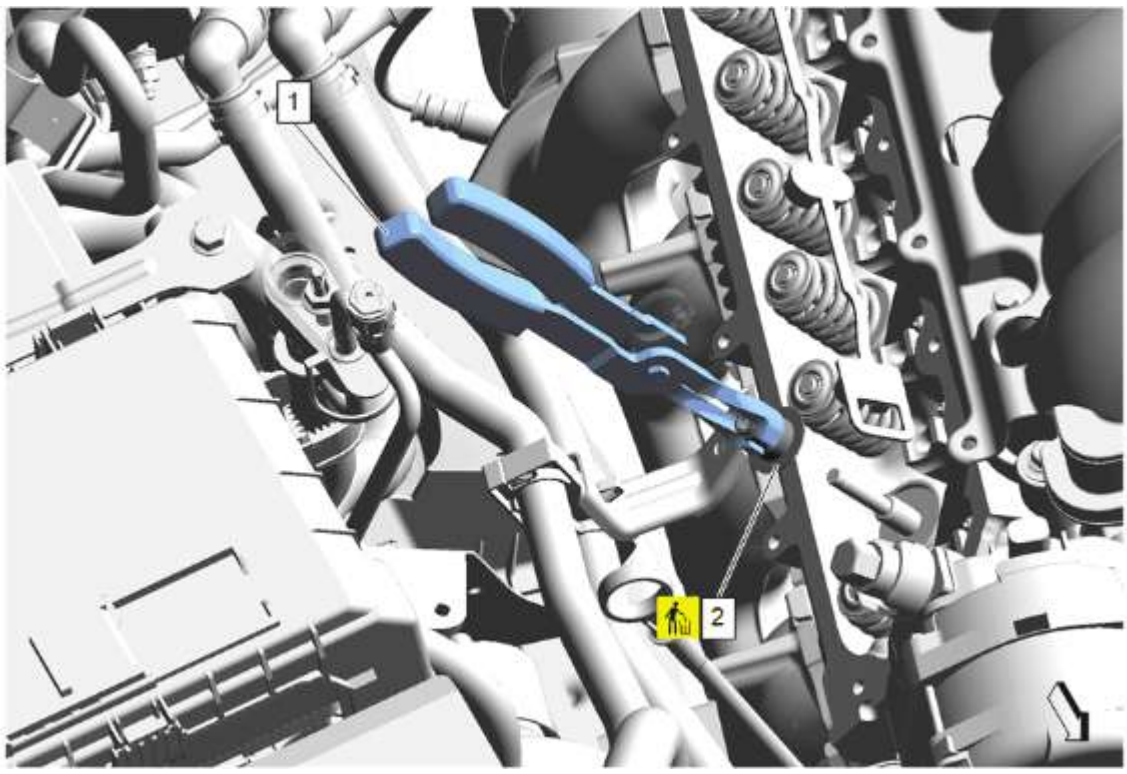
3. Install the *EN-52486* Oil Pressure Gauge Adapter (1).
4. Install the *J-21867* Pressure Gauge (2).
5. Lower the vehicle.
6. Start the engine.
7. Check the engine oil pressure. The pressure specifications listed below represent oil temperature measured between 19°C to 126°C (66°F to 259°F).
   7.1. At 1000 rpm the desired oil pressure is **152 - 218 kPa (22 - 32 psi)**
   7.2. At 2500 rpm the desired oil pressure is **177 - 280 kPa (26 - 41 psi)**
   7.3. At 4000 rpm the desired oil pressure is **320 - 400 kPa (46 - 58 psi)**
   7.4. The "Oil Pressure Low Turn Vehicle Off" warning message will be displayed on the driver information center when pressures fall below the following values for more than 2 seconds of run time:
      - **35 kPa (5 psi) at 1000 rpm**
      - **50 kPa (7.25 psi) at 2500 rpm**
      - **160 kPa (23 psi) at 4000 rpm**
8. Turn the engine OFF.
9. Raise the vehicle.
10. Remove the *J-21867* Pressure Gauge (2).
11. Remove the *EN-52486* Oil Pressure Gauge Adapter (1).

15.4. Carbon tracking

15.5. Corroded terminals

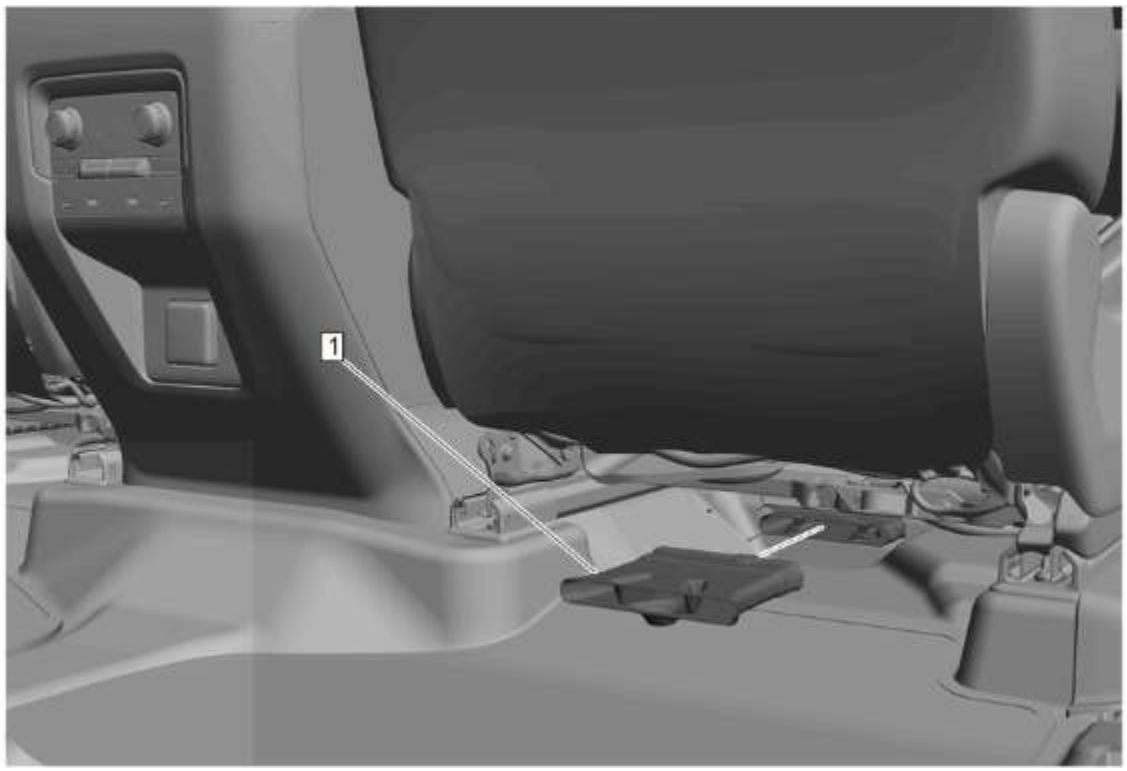
16. If corrosion, carbon tracking or arcing are indicated on a spark plug wire boot or on a terminal, replace the wire and the component connected to the wire.

Installation Procedure

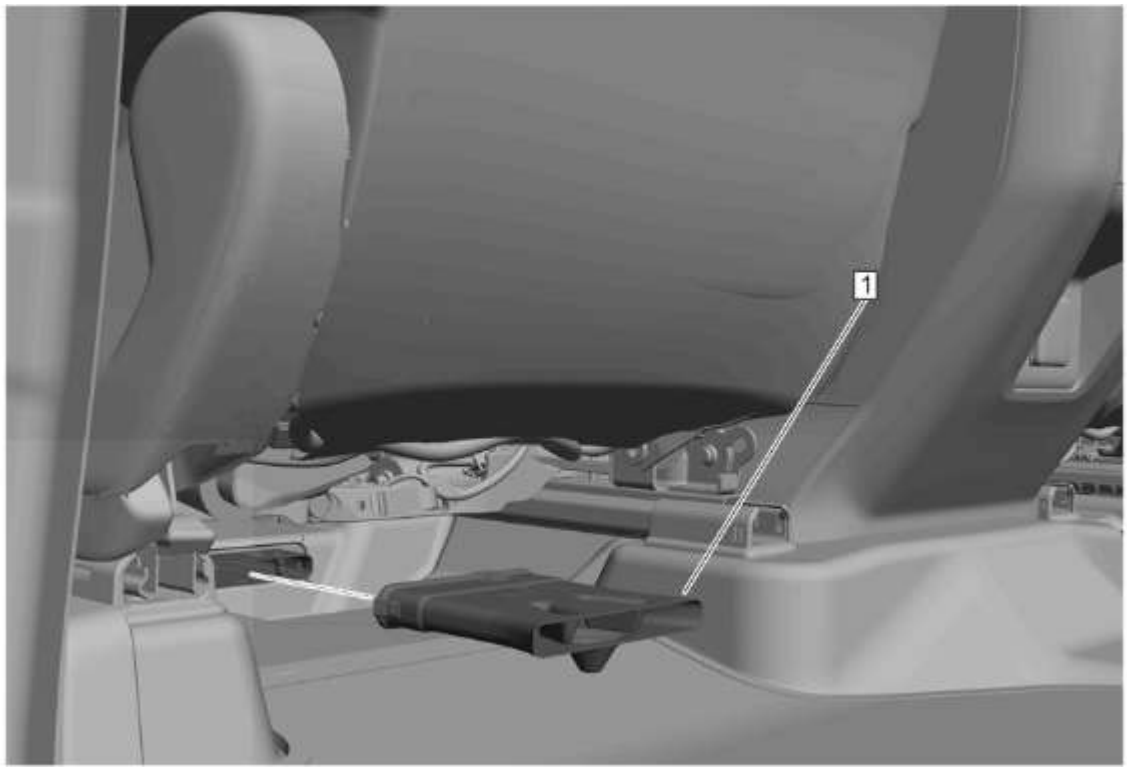


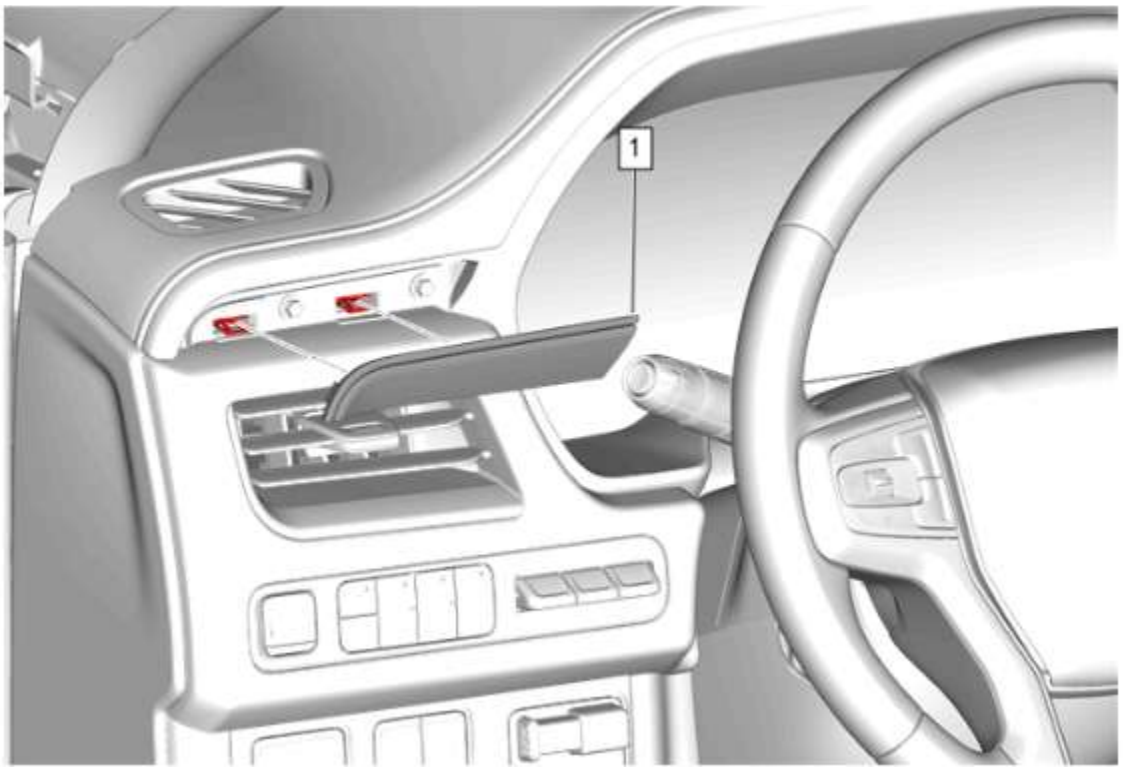
Note: Intake valve stem oil seal and exhaust valve stem oil seal are different. Ensure the valve stem oil seals are correctly installed.

1. Using the *EN-46116* Valve Stem Seal Remover/Installer (1) install the NEW valve stem oil seal (2).



18. Floor Rear Air Outlet Duct Adapter - Right Side (1) » Install





58. Instrument Panel Trim Plate Applique (1) » Install