

DTC U1026

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 Descriptors

DTC U1026

Lost Communication with Transfer Case Control Module

For symptom byte information, refer to [Symptom Byte List](#) .

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
B+	U0102, U1026	U0102, U1026	-	-
Ignition	U0102, U1026	U0102, U1026	-	-
Accessory WakeUp Serial Data	U1814, U2099, U0102, U1026	U0102, U1026	-	-
High Speed GMLAN Serial Data (+)	U0073*	U0073, U0102, U1026*	U0073*	-
High Speed GMLAN Serial Data (-)	U0073*	U0073, U0102, U1026*	U0073*	-
Ground	-	U0102, U1026	-	-
* Other DTCs may set with this fault.				

Circuit/System Description

Devices connected to the serial data circuits monitor for serial data communications during normal vehicle operation. Operating information and commands are exchanged among the devices. The devices have prerecorded information about what messages are needed to be exchanged on the serial data circuits, for each virtual network. The messages are supervised and also, some periodic messages are used by the receiver device as an availability indication of the transmitter device. Each message contains the identification number of the transmitter device.

Conditions for Running the DTC

The system voltage is between 9 - 16 V.

Conditions for Setting the DTC

A supervised periodic message that includes the transmitter device availability has not been received.

Action Taken When the DTC Sets

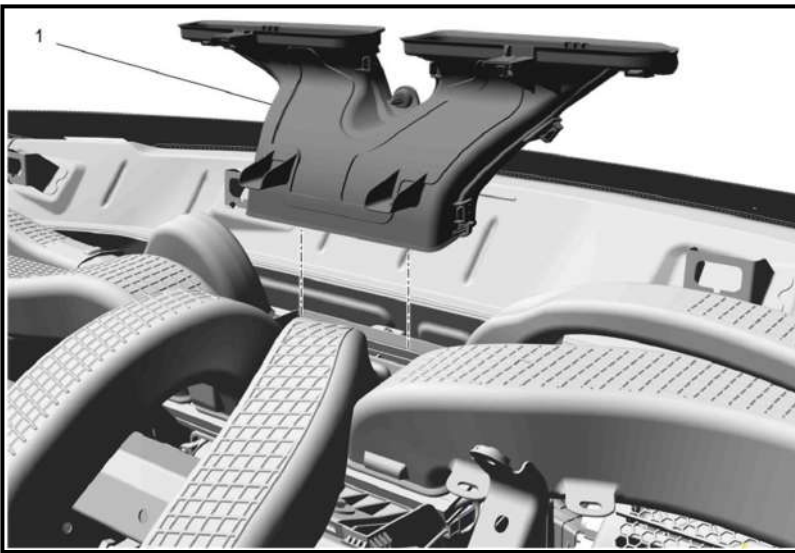
Specific subsystems will not function.

Conditions for Clearing the DTC

- A current DTC clears when the malfunction is no longer present.
- A history DTC clears when the device ignition cycle counter reaches the reset threshold of 50, without a repeat of the malfunction.

Reference Information

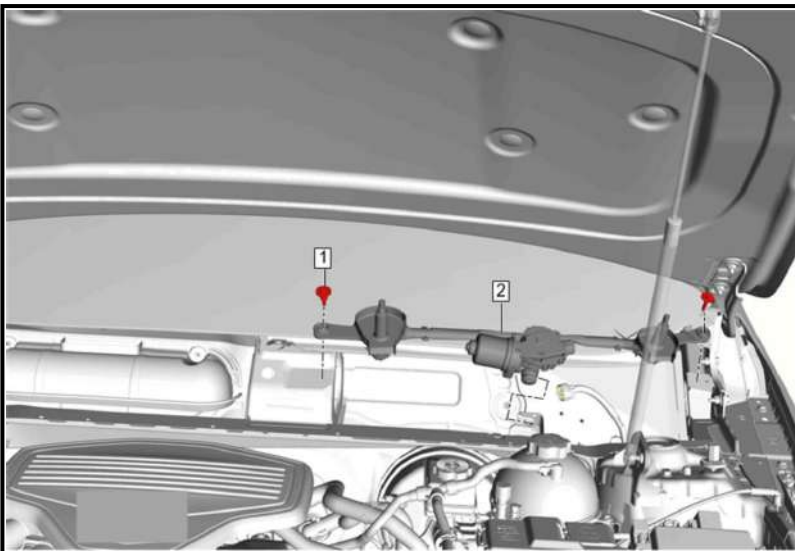
16.



Windshield Defroster Duct (1) - Install - [Windshield Defroster Duct Replacement](#)

17. Heater and Air Conditioning Evaporator and Blower Module Nut - Install - [Heater and Air Conditioning Evaporator and Blower Module Removal and Installation](#)

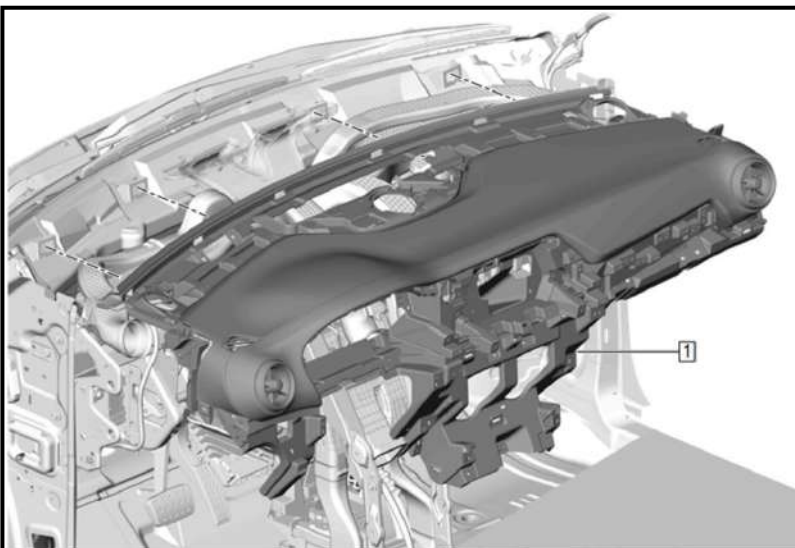
18.



Windshield Wiper Transmission (2) - Install - [Windshield Wiper Transmission Replacement](#)

19. Brake and Accelerator Pedal Assembly - Install - [Brake and Accelerator Pedal Assembly Replacement \(without JEO\)](#) , or [Brake and Accelerator Pedal Assembly Replacement \(with JEO\)](#)

20.



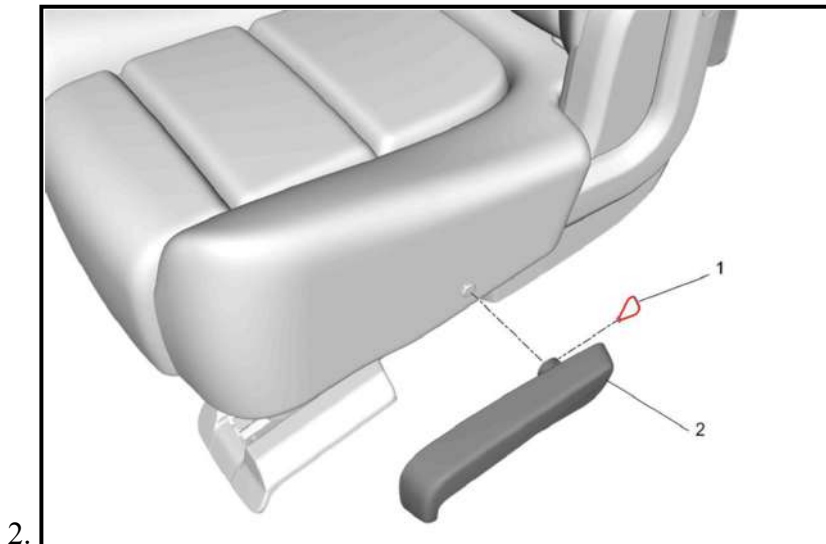
Rear Seat Recliner Handle (2) - Install - [Rear Seat Recliner Handle Replacement](#)

7. Rear Seat - Install - [Rear Seat Removal and Installation \(60 Percent Seat\)](#)

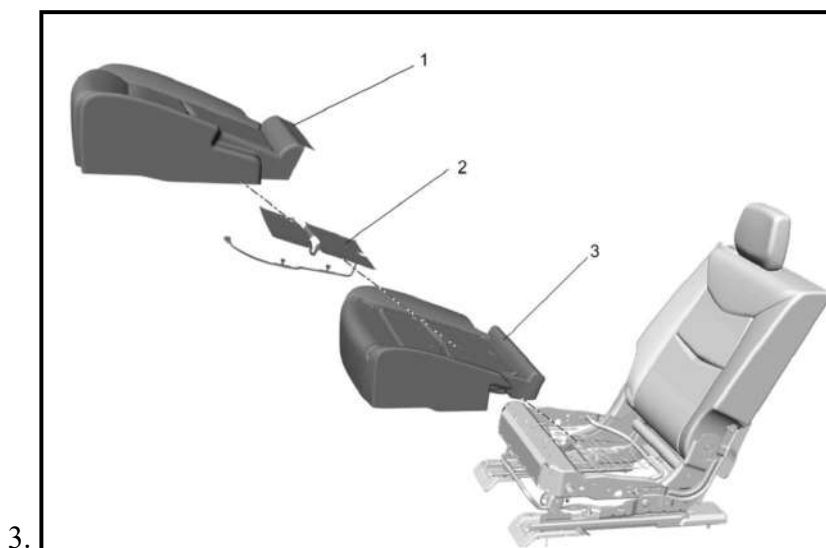
REAR SEAT CUSHION COVER AND PAD REPLACEMENT (40 PERCENT SEAT)

Removal Procedure

1. Rear Seat - Remove - [Rear Seat Removal and Installation \(40 Percent Seat\)](#)



Rear Seat Recliner Handle (2) - Remove - [Rear Seat Recliner Handle Replacement](#)



Disengage the J-channel retainers from the seat cushion frame.

4. Rear Seat Cushion Cover (1) - Remove

5. Rear Seat Cushion Heater (2) - Remove - [Rear Seat Cushion Heater Replacement](#)

6. Rear Seat Cushion Pad (3) - Remove

Installation Procedure

- [Circuit Testing](#)
- [Connector Repairs](#)
- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)

Scan Tool Reference

[Control Module References](#)

[Circuit/System Verification](#)

1. Ignition - On/Vehicle - In Service Mode
2. Operate the component: S13D Door Lock Switch - Driver - Lock Switch & Unlock Switch

Verify the component works as specified: M97 Fuel Fill Door Lock Actuator = Lock & Unlock

- **If the component does not work as specified**

Refer to: Circuit/System Testing

- **Go to next step: If the component works as specified**

3. All OK.

[Circuit/System Testing](#)

1. Ignition/Vehicle - Off
2. Disconnect the electrical connector: M97 Fuel Fill Door Lock Actuator
3. Connect a DMM between the test points: Control circuit terminal 1 & Ground
4. Ignition - On/Vehicle - In Service Mode
5. Operate the component: S13D Door Lock Switch - Driver - Unlock Switch & Lock Switch - Pressed

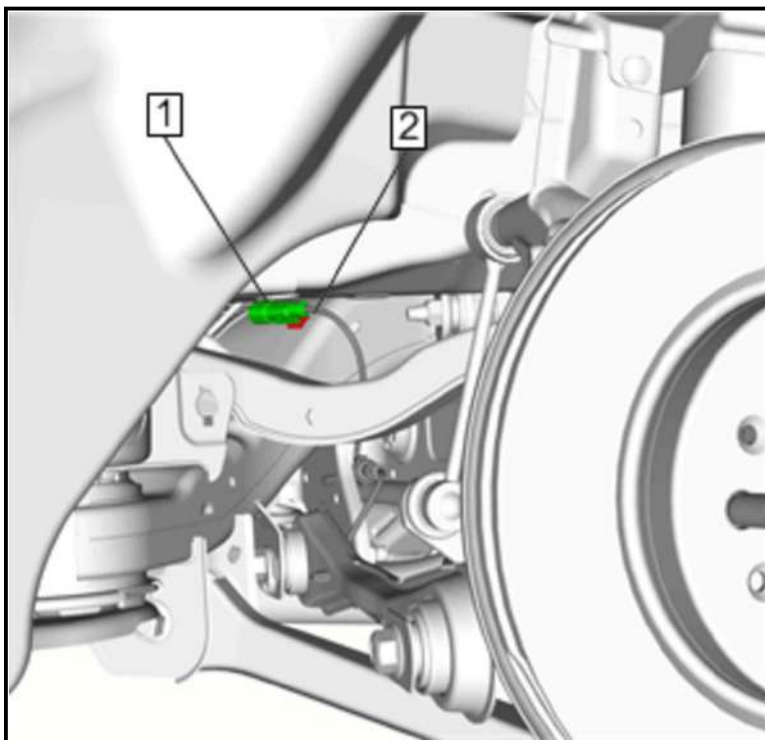
Verify the DMM displays the following: Less than 1 V / Greater than 10 V - (min/max)

- **If the value does not change**

1. Ignition/Vehicle - Off & Remove - Test lamp
2. Disconnect the electrical connector: K9 Body Control Module
3. Test for less than 1 V between the test points: Control circuit terminal 1 @ Component harness & Ground
 - If 1 V or greater - Repair the short to voltage on the circuit.
 - Go to next step: If less than 1 V
4. Test for infinite resistance between the test points: Control circuit terminal 1 @ Component harness & Ground
 - If less than infinite resistance - Repair the short to ground on the circuit.
 - Go to next step: If infinite resistance
5. Test for less than 2 ohms between the test points: Control circuit terminal 1 @ Component harness & Terminal 4 X6 @ Control module harness
 - If 2 ohms or greater - Repair the open/high resistance in the circuit.
 - If less than 2 ohms - Refer to [Power Door Locks Malfunction](#)

- **Go to next step: If the specified state**

6. Connect a DMM between the test points: Control circuit terminal 2 & Ground
7. Ignition - On/Vehicle - In Service Mode
8. Operate the component: S13D Door Lock Switch - Driver - Unlock Switch & Lock Switch - Pressed



6.

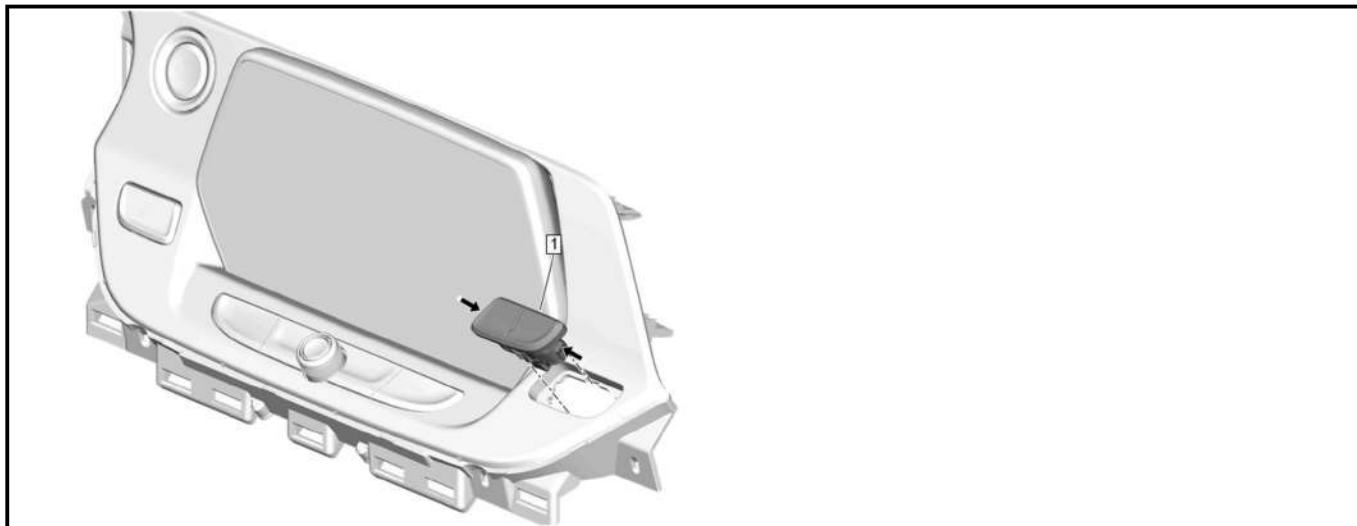
Wheel Speed Sensor Electrical Connector (1) - Connect

7. Retainer (2) @ Rear Cradle - Secure

8. Install the tire and wheel assembly. [Tire and Wheel Removal and Installation](#)

9. Verify the repair is complete. [Diagnostic Repair Verification](#)

VEHICLE STABILITY CONTROL SYSTEM SWITCH REPLACEMENT



Callout	Component Name
Preliminary Procedure Radio Control Assembly Replacement	
1	Vehicle Stability Control System Switch Procedure Release the retaining tabs.

VEHICLE YAW SENSOR LEARN

The yaw rate sensor does not require calibration often. Calibrating the yaw rate sensor might be required after certain service procedures are performed. Some of these procedures are as follows:

- Yaw Rate Sensor replacement

16. Apply the sealers and anti-corrosion materials to the repair area as necessary. [ANTI-CORROSION TREATMENT AND REPAIR](#) .
17. Paint the repaired area. [BASECOAT/CLEARCOAT PAINT SYSTEMS](#) .
18. Install all related panels and components.
19. Connect the battery negative cable. [Battery Negative Cable Disconnection and Connection](#) .
20. Enable the SIR System. [SIR Disabling and Enabling](#) .

FRONT END LOWER TIE BAR SUPPORT REPLACEMENT

CAUTION: Please refer to [BODY REPAIR PRECAUTIONS AND WARNINGS](#) before starting.

Removal Procedure

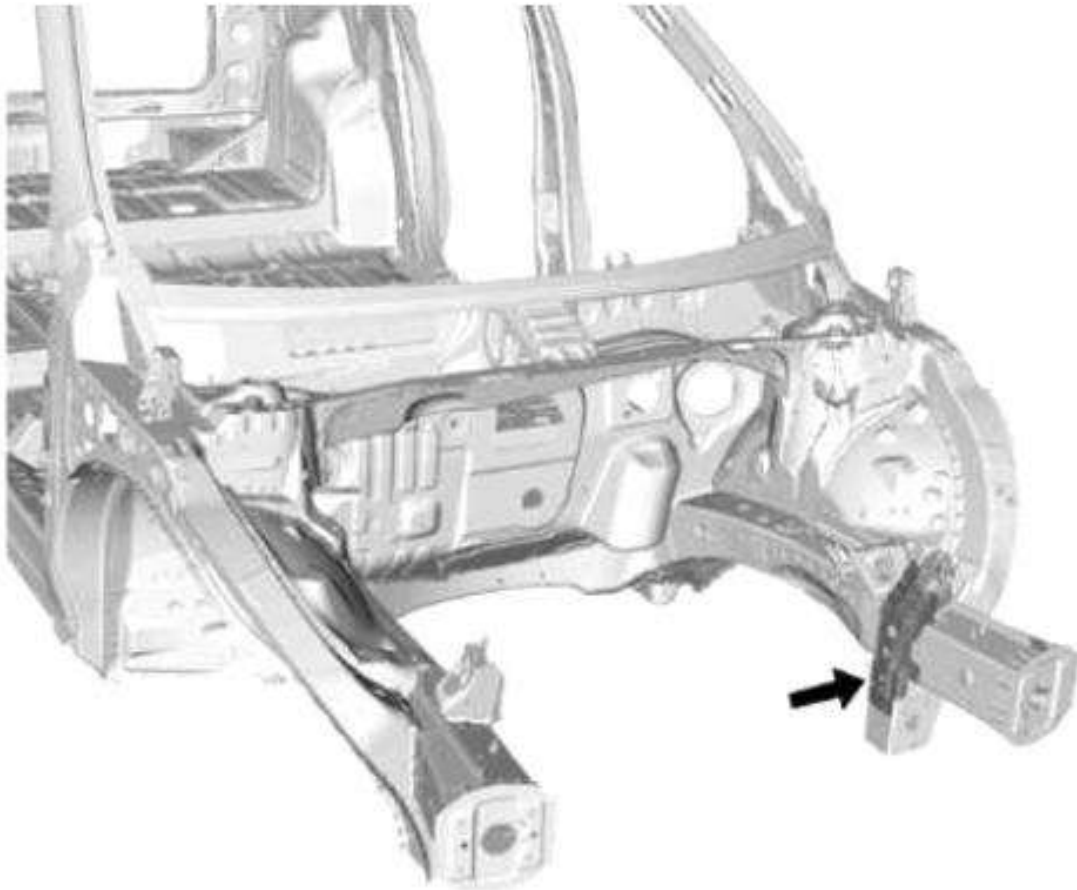


Fig. 6: Front End Lower Tie Bar Support Component Location

Courtesy of GENERAL MOTORS COMPANY

WARNING: Refer to [Approved Equipment for Collision Repair Warning](#) .

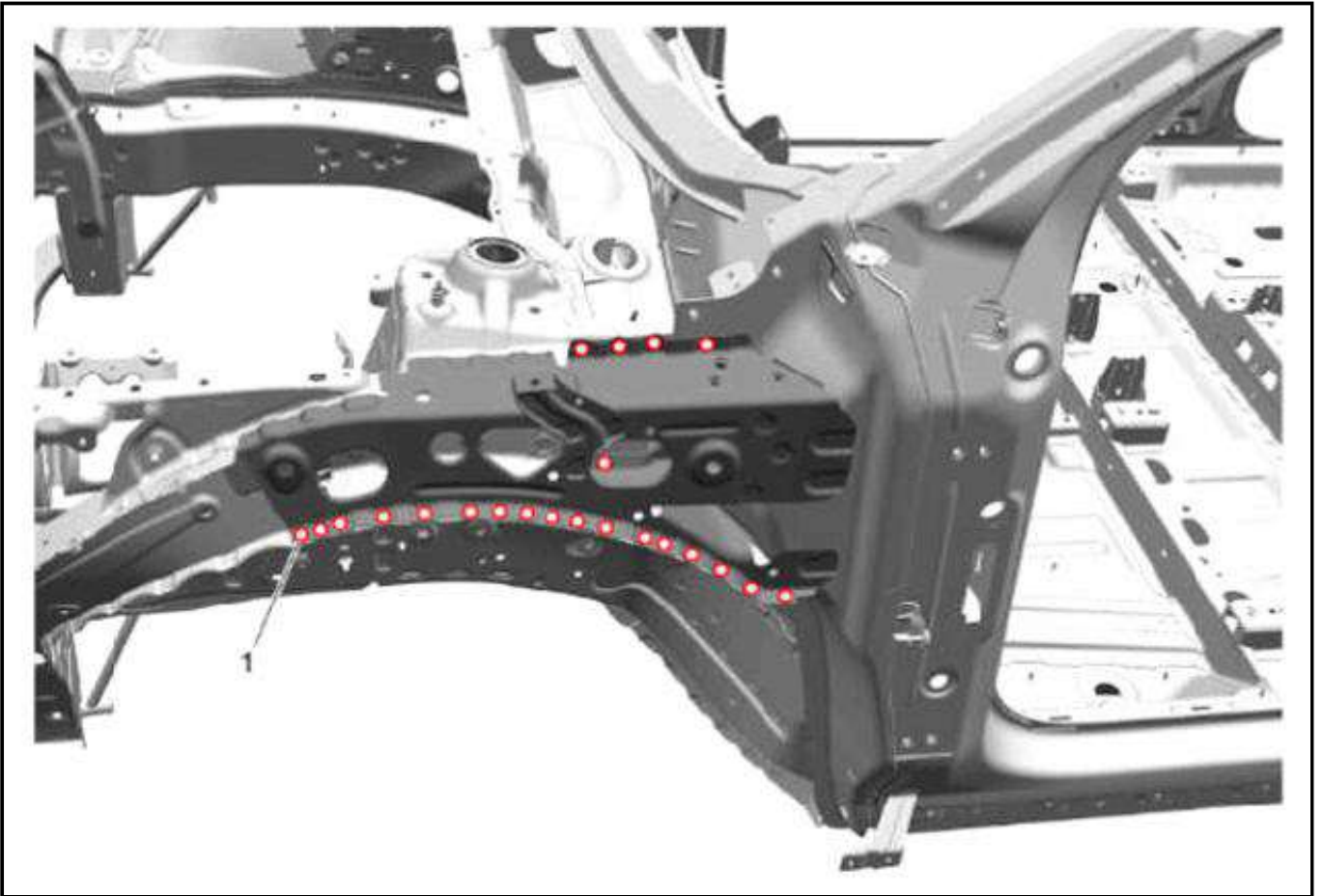
WARNING: Refer to [Collision Sectioning Warning](#) .

WARNING: Refer to [Glass and Sheet Metal Handling Warning](#) .

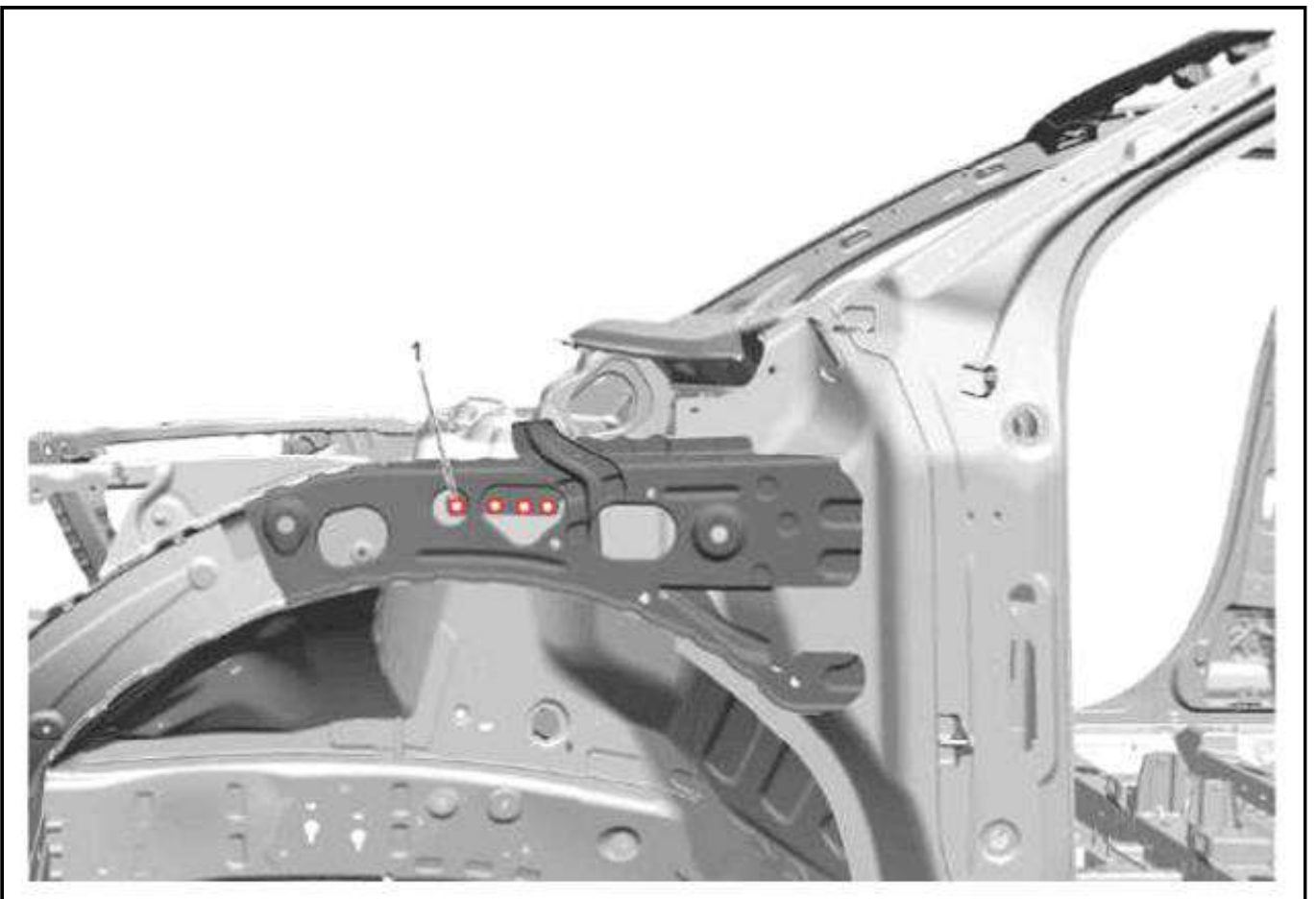
NOTE: The front end lower tie bar support is high strength low alloy steel. [HIGH STRENGTH LOW ALLOY STEEL](#) .

NOTE: Left shown, right similar.

1. Disable the SIR system. [SIR Disabling and Enabling](#) .
2. Disconnect the battery negative cable. [Battery Negative Cable Disconnection and Connection](#) .
3. Remove all related panels and components.



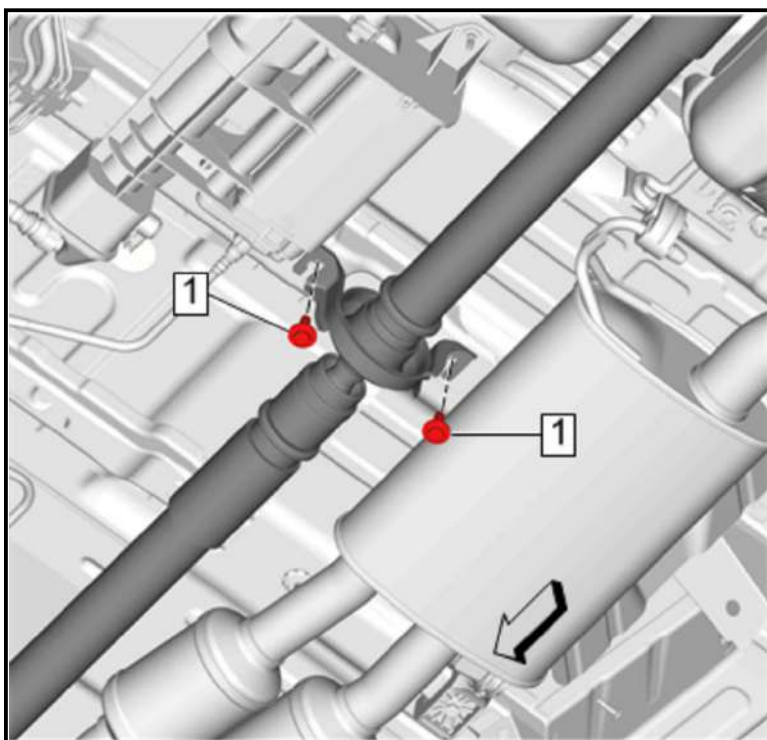
9. Install spot welds (1) on front compartment upper side rail. [22X]



10. Install spot welds (1) on front compartment upper side rail. [4X]

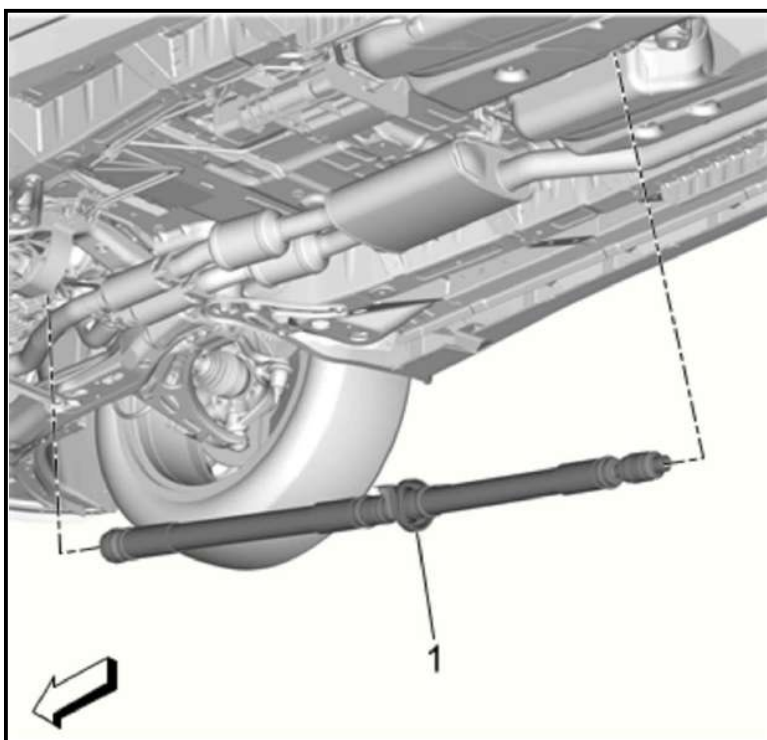
11. Apply the sealers and anti-corrosion materials to the repair area as necessary. **ANTI-CORROSION TREATMENT AND REPAIR** .

19.



Rear Propeller Shaft Bearing Bracket Bolt (1) - Remove [2x]

20.



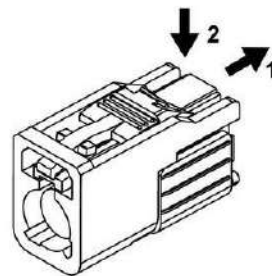
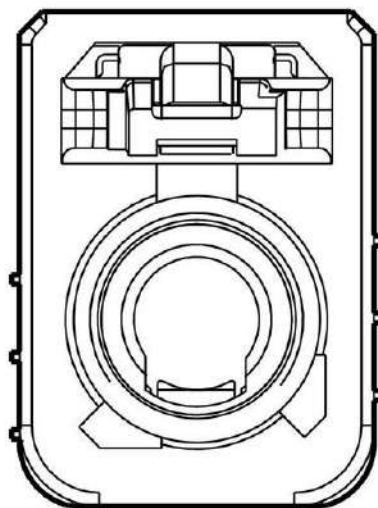
CAUTION:

When servicing the propeller shaft, support both ends of the propeller shaft evenly to limit the movement of propeller shaft joints to a maximum of 10 degrees. Do not let the propeller shaft hang unsupported at any time, as it will cause damage to the propeller shaft boots

NOTE:

Due to the weight and length of the propeller shaft, not allowing excessive movement of the joints may be difficult during removal and installation. It is recommended to use the aid of an assistant to remove and install the propeller shaft.

Propeller Shaft (1) - Remove



Connector Part Information

- Harness Type: Instrument Panel COAX
- OEM Connector: 13516055
- Service Connector: Service by Cable Assembly - See Part Catalog
- Description: 1 -Way F Coax Type (OG)

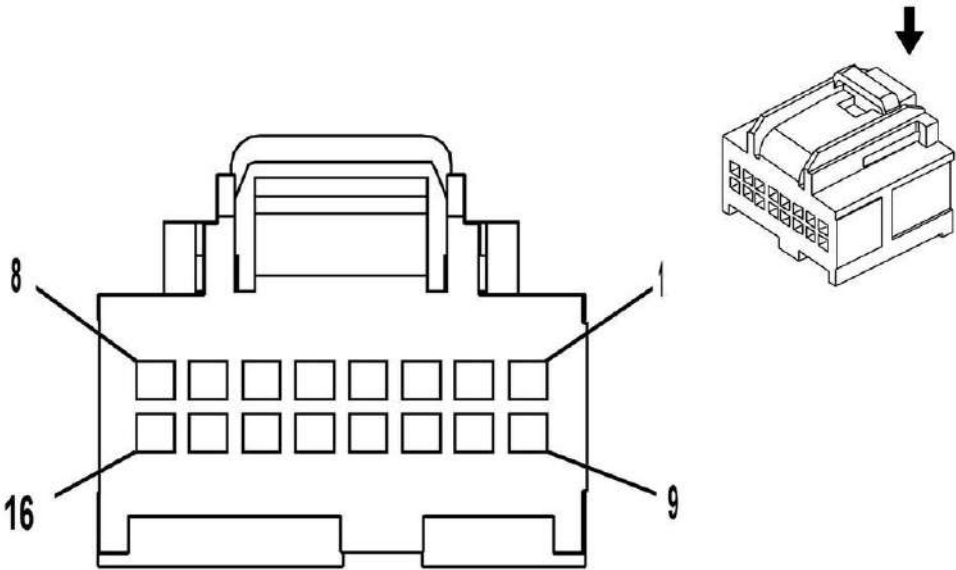
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
-	-	Coax Cable	-	Rear Vision Camera Coaxial Video Signal	I	-

A11 RADIO X5 (IOU)

K124 ACTIVE SAFETY CONTROL MODULE X2 (UGN)



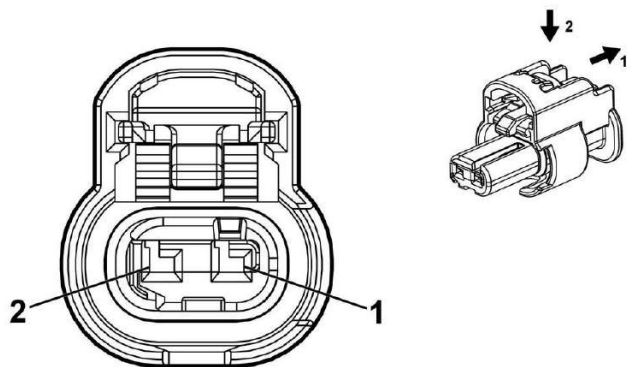
Connector Part Information

- Harness Type: Body
- OEM Connector: 35013094
- Service Connector: 13519737
- Description: 16 -Way F 0.64 OCS Series (BK)

Terminal Part Information

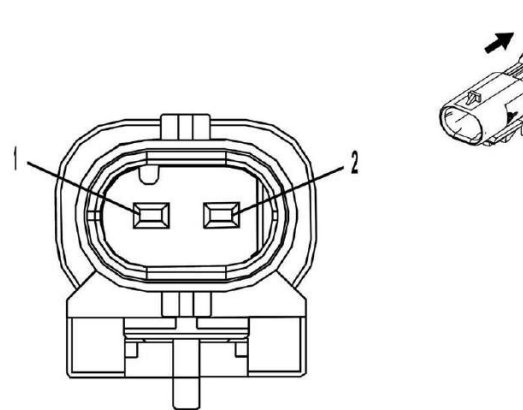
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	84619127	J-35616-64B (LT BU)	J-38125-215A

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU/YE	6105	High Speed GMLAN Serial Data [+] 2	I	-
2	0.35	BU/YE	6105	High Speed GMLAN Serial Data [+] 2	I	UGN
3	0.35	BU/VT	3813	High Speed GMLAN Serial Data [+] 4	I	UGN
4	0.35	BU/VT	3813	High Speed GMLAN Serial Data [+] 4	I	UGN
5	-	-	-	Not Occupied	-	-
6	0.35	BU/VT	3813	High Speed GMLAN Serial Data [+] 4	I	UGN
7	0.35	GN	5060	Low Speed GMLAN Serial Data	I	UGN
8	-	-	-	Not Occupied	-	-
9	0.35	WH	6106	High Speed GMLAN Serial Data [-] 2	I	-
10	0.35	WH	6106	High Speed GMLAN Serial Data [-] 2	I	UGN



Connector Part Information

- Harness Type: Engine
- OEM Connector: 13512365
- Service Connector: 85519075
- Description: 2 -Way F 1.2 MCON Series, Sealed (BK)



Connector Part Information

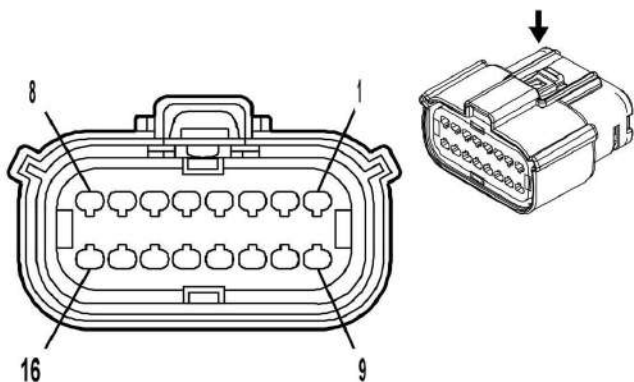
- Harness Type: Engine Coolant Temperature Sensor Jumper
- OEM Connector: 13591337
- Service Connector: Service by Harness - See Part Catalog
- Description: 2 -Way M 1.2 Multilock Series, Sealed (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (LT GN)	No Tool Required
II	Not required	J-35616-17 (LT GN)	No Tool Required

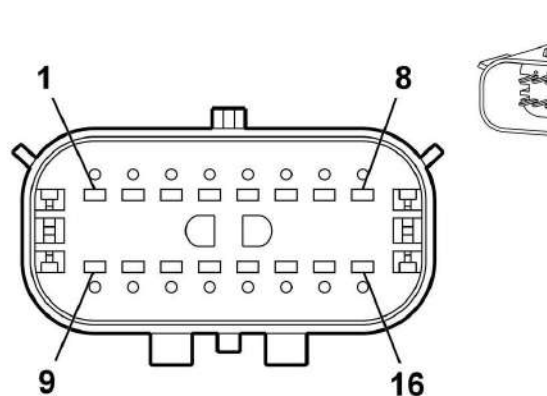
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	C
1	0.5	BU	410	I	LGX	Engine Coolant Temperature Sensor Signal	1	0.5	BU	410	II	
2	0.5	BK / YE	548	I	LGX	Engine Control Sensors Low Reference 1	2	0.5	BK / YE	548	II	

X104 BODY HARNESS TO FORWARD LAMP HARNESS



Connector Part Information

- Harness Type: Body
- OEM Connector: 33472-1606
- Service Connector: 13584788
- Description: 16 -Way F 1.5 MX Series, Sealed (BK)



Connector Part Information

- Harness Type: Forward Lamp
- OEM Connector: 33482-8601
- Service Connector: 19369662
- Description: 16 -Way M 1.5 MX Series, Sealed (BK)

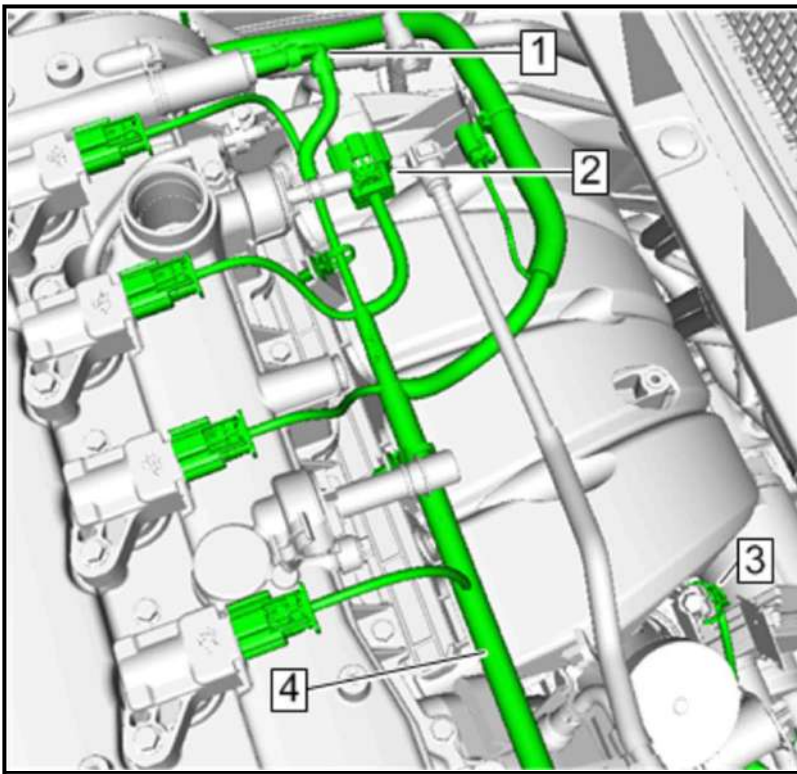
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368973	J-35616-14 (GN)	J-38125-557
II	19119842	J-35616-3 (GY)	J-38125-217

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	C
1	-	-	-	-	-	Not Occupied	1	-	-	-	-	
2	0.75	BU / BN	7539	I	-	Right Front DRL Control	2	0.5	BU / BN	7539	II	

Function	Battery Temperature Calculation	Battery Voltage Calculation	Amp-Hour Calculation	Action Taken
Load Shed 1 Start	-	Less Than 11 V	-	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle
Load Shed 1 End	-	Greater Than 12 V	Battery has a net loss of less than 2 Ah	Clear Load Shed 1
Idle Boost 3 Start	-	-	Battery has a net loss of 10 Ah	Third level Idle boost requested
Idle Boost 3 Start	-	Less Than 11 V	-	Third level Idle boost requested
Idle Boost 3 End	-	Greater Than 12 V	Battery has a net loss of less than 6.0 Ah	Third level Idle boost request cancelled
Load Shed 2 Start	-	-	Battery has a net loss greater than 12 Ah	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 Start	-	Less Than 11 V	-	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 End	-	Greater Than 12 V	Battery has a net loss of less than 8 Ah	Clear Load Shed 2
Load Shed 3 Start	-	Less Than 11.9 V	Battery has a net loss greater than 20 Ah	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 3 Start	-	Less Than 11 V	-	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their

16.



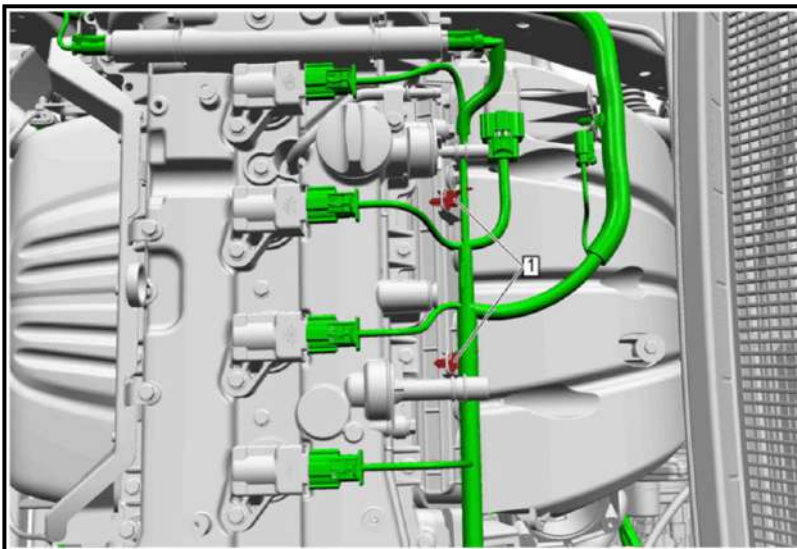
Engine Wiring Harness (4) - Reposition

17. Electrical Connector (3) - Connect

18. Electrical Connector (2) - Connect

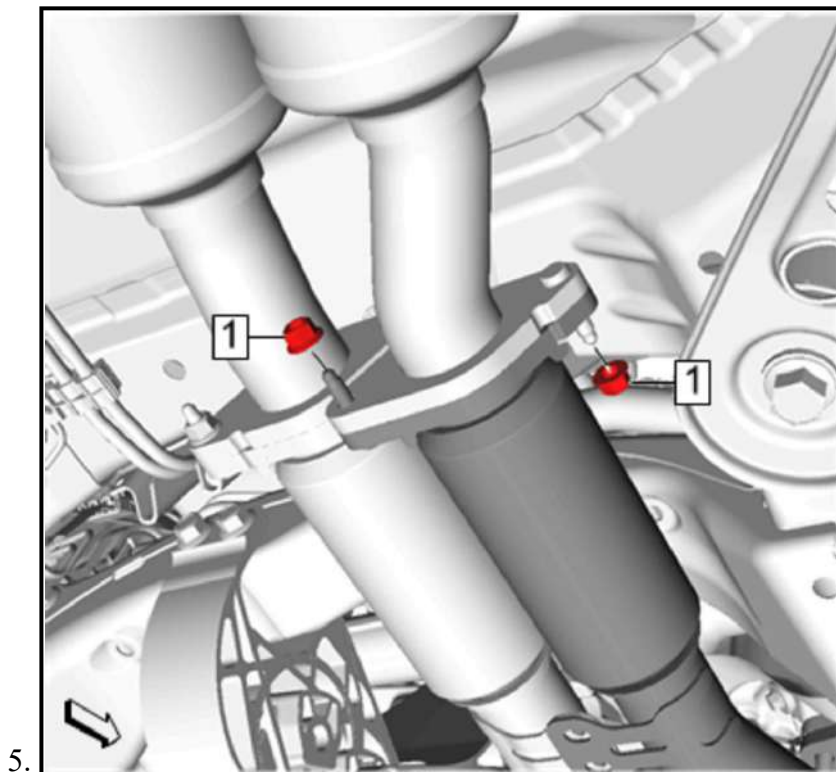
19. Electrical Connector (1) - Connect

20.

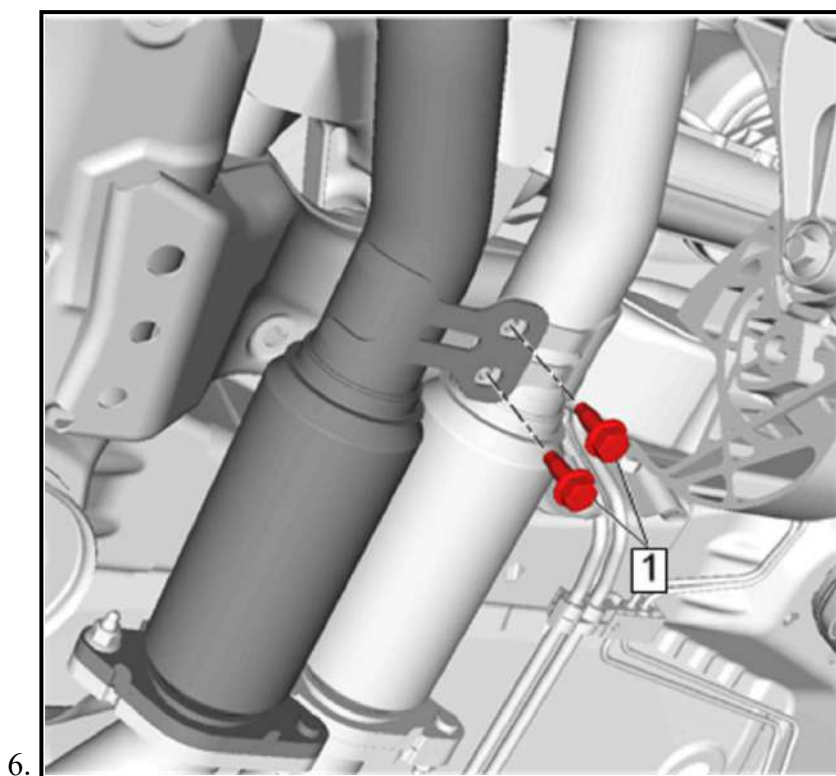


Engine Wiring Harness Retainer (1) @ Intake Manifold - Install [2x]

21. Engine Coolant Air Bleed Hose @ Engine Coolant Air Bleed Pipe - Connect - **Engine Coolant Air Bleed Pipe Replacement (LCV)**



Exhaust Front Pipe Nut (1) - Install and tighten [2x] 22 N.m (16 lb ft)



Exhaust Front Pipe Bracket Bolt (1) - Install and tighten [2x] 22 N.m (16 lb ft)

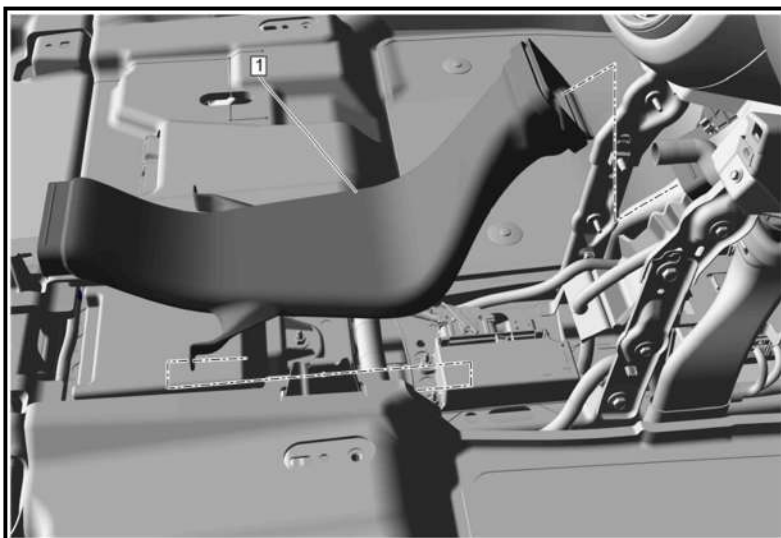
7. Heated Oxygen Sensor Electrical Connector- Bank 1 Sensor 2 - Connect - [Heated Oxygen Sensor Replacement - Bank 1 Sensor 2](#)

8. Start the engine and check for exhaust leaks.

EXHAUST FRONT PIPE REPLACEMENT (BANK 2, LGX)

Removal Procedure

8.

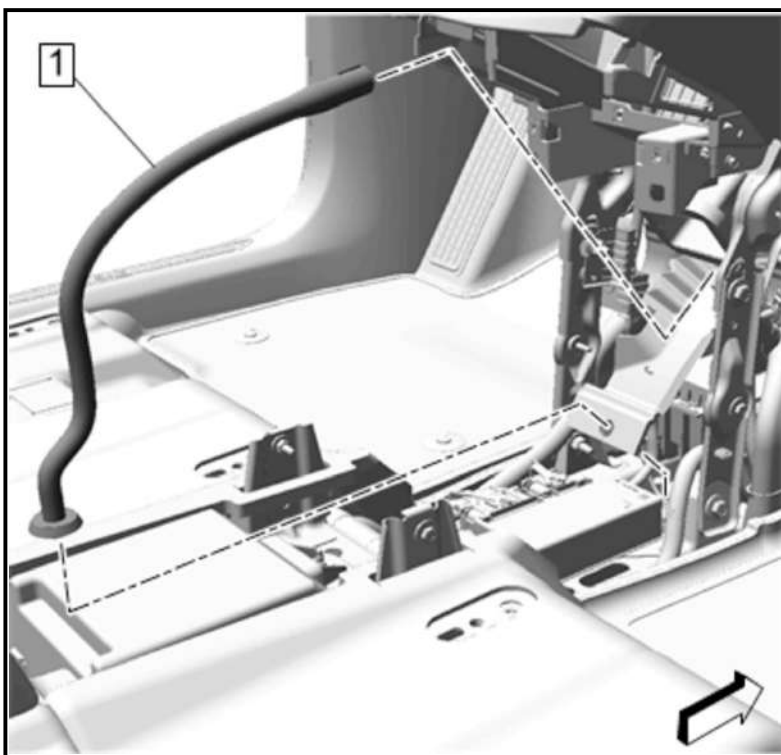


Front Floor Console Rear Air Duct- Front (1) - Remove - [Front Floor Console Rear Air Duct Replacement - Front](#)

CAUTION: Refer to [HVAC Module Drain Tube Caution](#) .

9. Prior to removing the air conditioning evaporator and blower module drain tube/hose, use clean and absorbent shop cloths/towels to cover the electrical components protecting the electrical components from water damage.

10.



Air Conditioning Evaporator and Blower Module Drain Hose (1) - Remove - [Air Conditioning Evaporator and Blower Module Drain Hose Replacement](#)