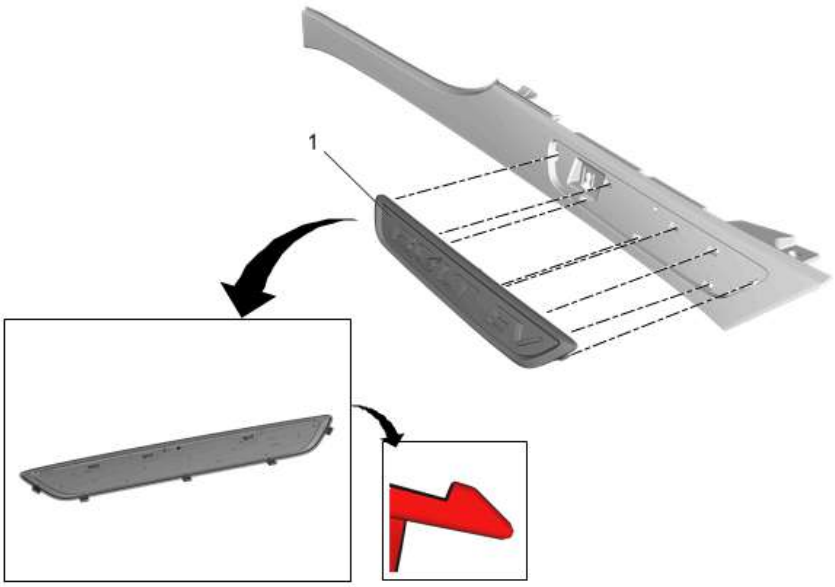
1. **BODY HARDWARE AND TRIM**
2. EXTERIOR TRIM
3. REPAIR INSTRUCTIONS
4.

Front Fender Emblem/Nameplate Replacement

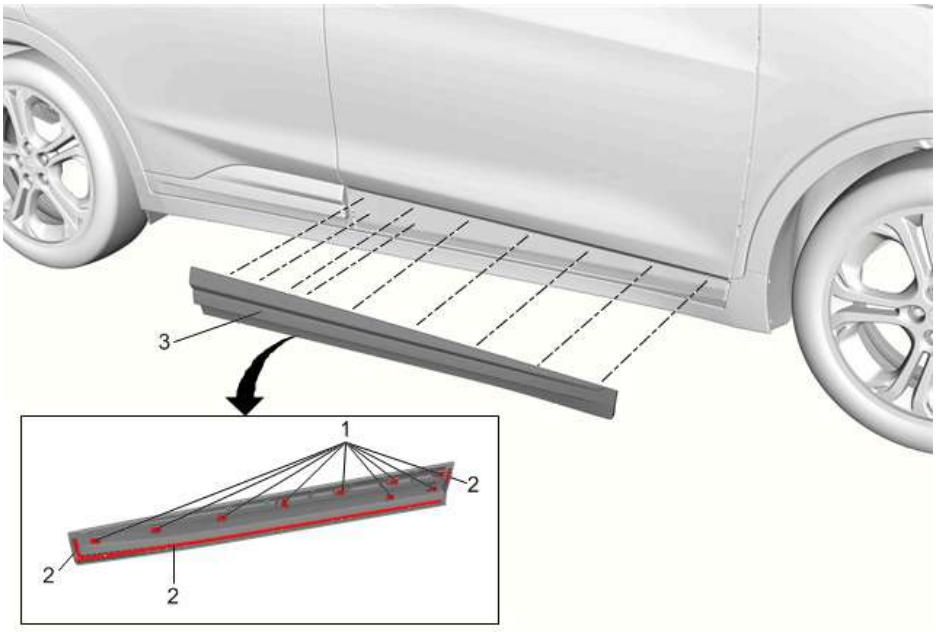


Click here for full size

Callout	Component Name
Preliminary Procedure Front Fender Upper Rear Molding Replacement	
1	Front Fender Emblem/Nameplate Caution: Use a plastic, flat-bladed tool to prevent paint damage when removing an emblem/name plate. Caution: Anytime the emblem/nameplate is removed from the vehicle, it MUST BE REPLACED. The locking tabs that secure the emblem/nameplate to the vehicle WILL BE DAMAGED when the emblem name/plate is removed, and under no circumstances may the emblem/nameplate be re-used. Procedure 1. Using a suitable flat bladed tool release the eight locking tabs and pull the emblem from the molding. 2. The part and surface should be 21Â°C (70Â°F) prior to installation. The vehicle should remain 21Â°C (70Â°F) for oneâ€‰hour after assembly to allow adhesive to develop sufficient bond strength. 3. Use a heat gun or equivalent to remove the liftgate emblem. Use a plastic flat bladed tool to assist in removal. 4. Clean any remaining residue with a 50/50 mixture by volume of isopropyl alcohol and clean drinkable water. Wipe surface dry with a clean lint-free towel. 5. When removing protective liners from the adhesive tape, be careful not to touch tape with hands and do not allow tape to come in contact with dirt or any foreign matter prior to adhesion. 6. Using the palm of the hand, wet out the liftgate emblem to ensure full adhesion is made.

1. **BODY HARDWARE AND TRIM**
2. EXTERIOR TRIM
3. REPAIR INSTRUCTIONS
4.

Front Side Door Lower Molding Replacement



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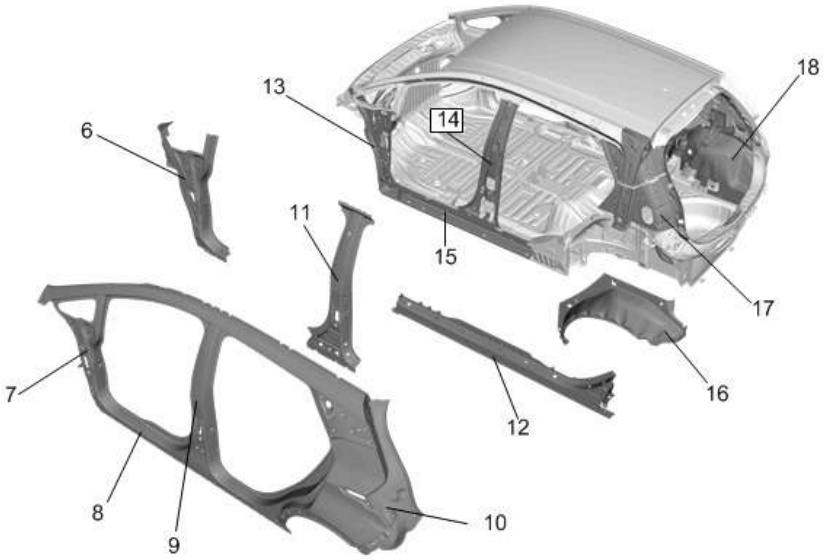
Callout	Component Name
1	Front Side Door Lower Molding Retainer [9x] Procedure Replace the front side door lower molding retainers as necessary.
2	Front Side Door Lower Molding Double Adhesive Tape
3	Front Side Door Lower Molding Procedure 1. Apply two layers of masking tape around the top edge of the service part to prevent paint damage. 2. Starting at the front top corner, use a suitable flat-bladed plastic trim tool to release the front side door lower molding retainers. 3. Remove any remaining adhesive residue with a 50/50 mixture by volume of isopropyl alcohol and clean drinkable water. Wipe the surface dry with a clean lint-free towel.

Related Part Information

Part Name	Catalog Name	Part Code
Front Side Door Lower Molding	MOLDING KIT,FRT S/D LWR	1849Z
Front Side Door Lower Molding	MOLDING,FRT S/D LWR	1850A
Front Side Door Lower Molding	MOLDING,FRT S/D LWR	1875A
Front Side Door Lower Molding	MOLDING KIT,FRT S/D LWR	0259Z
Front Side Door Lower Molding	MOLDING,FRT S/D LWR	0260A
Front Side Door Lower Molding	MOLDING,FRT S/D LWR	0260B
Front Side Door Lower Molding	MOLDING,FRT S/D LWR	SS838



Click here for full size

Number	Procedure	Material	Material Thickness
6	Body Hinge Pillar Panel Reinforcement Replacement	Dual Phase Steel	1.0
7	Body Hinge Pillar Outer Panel Sectioning	Mild Steel	0.65
8	Rocker Outer Panel Sectioning	Mild Steel	0.65
9	Center Pillar Sectioning - Outer	Mild Steel	0.65
10	Quarter Outer Panel Sectioning	Mild Steel	0.65
11,14	Center Pillar Replacement	Ultra High Strength Steel Dual Phase Steel	1.8 1.2
12	Rocker Outer Panel Reinforcement Replacement	Ultra High Strength Steel	1.2
13	Front Hinge Pillar Body Replacement	Dual Phase Steel	1.2
15	Rocker Inner Panel Replacement	Ultra High Strength Steel	1.4
16,17	Quarter Inner Lower Panel Replacement Body Side Inner Panel Replacement	Mild Steel	0.6
18	Rear Wheelhouse Inner Panel Replacement	Mild Steel	0.7

Rear End

1. **BODY REPAIR**
2. COLLISION REPAIR
3. DESCRIPTION AND OPERATION
4.

Metal Panel Bonding

This information is intended to provide general guidelines for adhesive bonding of steel panels. Panel bonding of steel is only recommended when the panel is originally bonded to the vehicle. In almost every application adhesive bonding is combined with resistance spot welding, rivet bonding or other types of mechanical fastening. Always refer to service procedure for recommended fastening strategy. The only joints that use adhesive only are joints which have no way to introduce a resistance spot weld or rivet or other mechanical fastener. These will always be outlined in their specified procedure.

The adhesives listed in this document are known to meet the General Motors specifications and requirements for bonding of steel body panels.

Bonding procedures in general are applicable only at factory joints.

The use of adhesive to section steel panels is not recommended by General Motors.

Rivets, or other mechanical fasteners, need to be used in combination with adhesive bonding of steel panels. The specified rivets, or fasteners, should be used with adhesive, when replacing the original panel.

Two types of adhesives are listed here. Impact Resistant Adhesive is used in joints in frame rail assemblies and strut tower assemblies and other body structure joints that have critical strength requirements. The factory applied Impact Resistant Adhesive is purple in color when cured. The Impact Resistant adhesives available for servicing these joints are considerably stronger once cured than panel bonding adhesives. The other bonding adhesives are non-impact resistant, offer a lower strength rating and are only used in door outer panel attachment hem joints.

Note**:**

Always follow the adhesive manufacturer's instructions for application, handling, and curing for the specific product.

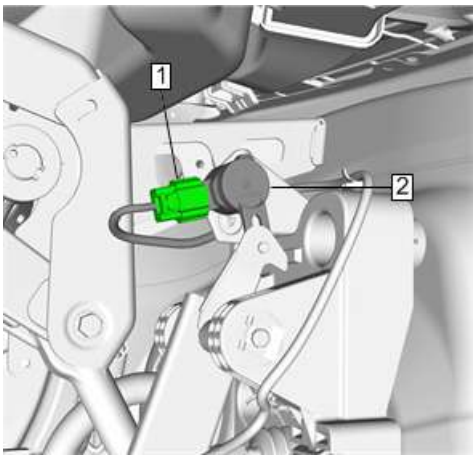
Adhesives currently meeting the performance requirements include the adhesive products listed below meet these guidelines:

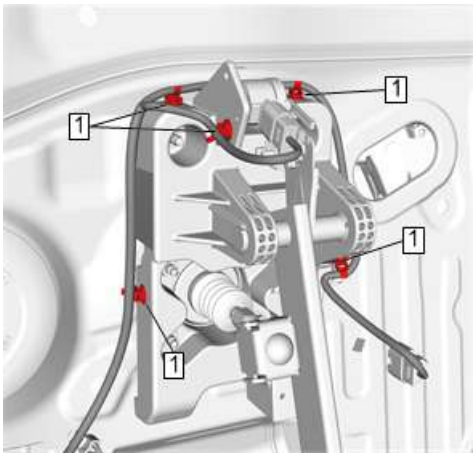
Steel Panel Bonding Impact Resistant

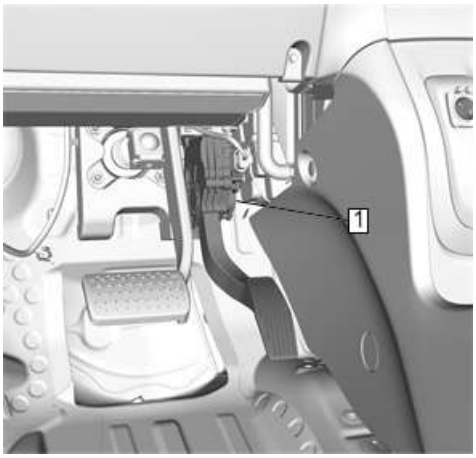
Manufacturer and Part Number	Description
Pliogrip 5770P	Pliogrip 5770P Structural Impact Durable Adhesive Available from Ashland 800-PLIOGRIP www.ashland.com/pages/pliogrip-5770
Fusor 2098	Fusor 2098 Impact Resistant Adhesive Available from Lord Fusor 800-234-3876 https://www.lord.com/products-and-solutions/adhesives/fusor-2098-crash-durable-structural-adhesive-%28slow%29
3M 07333	3M Impact Resistant Structural Adhesive Available from 3M www.3MCollision.com/IRSA
SEM 39757 Structural Impact Resistant Adhesive	www.semproducts.com/product/dual-mixtm-structural-impact-resistant-adhesive/39757

Steel Panel Bonding

Manufacturer and Part Number	Description
GM P/Nâ€‰12378566 (US)	Fast Set Panel Bonding Adhesive
GM P/Nâ€‰88901674 (Canada)	
Lord Fusor P/Nâ€‰110B/111B	
GM P/Nâ€‰12378567 (US)	Medium Set Panel Bonding Adhesive
GM P/Nâ€‰88901675 (Canada)	
Lord Fusor P/Nâ€‰108B/109B	
3M P/Nâ€‰8116	Panel Bonding Adhesive
Ashland Plio Grip Panel 60	Panel Bonding Adhesive
SEM 39337	Door Skin and SMC Adhesive

8. Brake Pedal Pushrod (3) @ Brake Pedal (2) >> Connect
9. 

Click here for full size
10. Electrical Connector (1) @ Brake Pedal Position Sensor (2) >> Connect
11. 

Click here for full size
12. Body Wiring Harness Retainer (1) @ Vehicle >> Install [5x]
13. 

Click here for full size
14. Accelerator Pedal Assembly (1) @ Vehicle >> Install - Accelerator Pedal Assembly Replacement

- If 2â€‰â„¦ or greater, repair the open/high resistance in the circuit.
- If less than 2â€‰â„¦, replace the K157 Video Processing Control Module.

10.

- **If greater than 7.2â€‰V**

11.

1. Ignition OFF, disconnect the harness connector at the K157 Video Processing Control Module, ignition ON.
2. Test for less than 1â€‰V between the 6â€‰V reference circuit and ground.
3.

- If 1â€‰V or greater, repair the short to voltage on the circuit.
- If less than 1â€‰V, replace the K157 Video Processing Control Module.

12.

- **If between 4.8â€“7.2â€‰V**

13. Ignition ON.
14. Test for less than 10â€‰V between the signal circuit terminals listed below and ground:
15.

- Vision Signal + signal circuit terminal 1
- Vision Signal - signal circuit terminal 4

16.

- **If 10â€‰V or greater**

17.

1. Ignition OFF, disconnect the X1 harness connector at the K157 Video Processing Control Module, ignition ON.
2. Test for less than 1â€‰V between the signal circuit and ground.
3.

- If 1â€‰V or greater, repair the short to voltage on the circuit.
- If less than 1â€‰V, replace the K157 Video Processing Control Module.

18.

- **If less than 10â€‰V**

19. Ignition OFF.
20. Test for greater than 100â€‰â„¦ between the signal circuit terminals listed below and ground:
21.

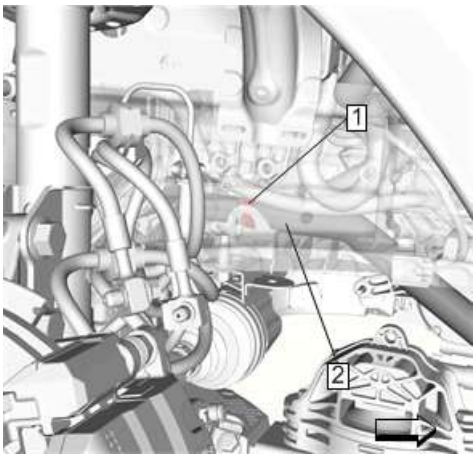
- Vision Signal + signal circuit terminal 1
- Vision Signal - signal circuit terminal 4

22.

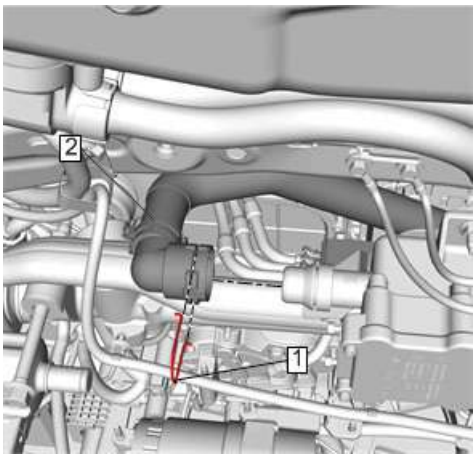
- **If less than 100â€‰â„¦**

23.

1. Disconnect the X1 harness connector at the K157 Video Processing Control Module.

8. 

Click here for full size

9. Retainer (1>) >> Remove
10. Drive Motor Battery Coolant Cooler Inlet Hose (2>) >> Remove
11. 

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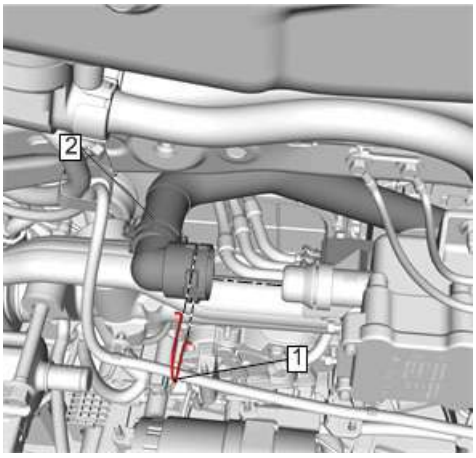
12. Clip (1>) >> Release
13. Drive Motor Battery Coolant Cooler Inlet Hose (2>) >> Remove

Installation Procedure

1. 

Click here for full size

2. Drive Motor Battery Coolant Cooler Inlet Hose (2>) >> Install
3. Clip (1>) >> Install

Blower Motor Control Module - Control Circuit = Voltage Out of Range - High

DTC B0193â€‰06

Blower Motor Control Module - Control Circuit = Voltage Out of Range - Low

Actions Taken When the DTC Sets

Blower Motor = Inoperative

Conditions for Clearing the DTC

The conditions for setting the DTC no longer exist.

Reference Information

Schematic Reference

HVAC Schematics

Connector End View Reference

Master Electrical Component List

Electrical Information Reference

- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

DTC Type Reference

Powertrain Diagnostic Trouble Code (DTC) Type Definitions

Scan Tool Reference

Control Module References

Circuit/System Testing

1. Note **:**

   It may take up to 2> min for all vehicle systems to power down before an accurate ground or low reference circuit continuity test can be performed.

2. Ignition/Vehicle & All vehicle systems >> Off
3. Disconnect the electrical connector: X1 @ K8 Blower Motor Control Module
4. Test for less than 10 Ω between the test points:Ground circuit terminal 5> & Ground
5.
   - **If 10 Ω or greater**
6.
   1. Test for less than 2> Ω between the test points:Ground circuit terminal 5> & The other end of the circuit
   2.
      - If 2> Ω or greater >> Repair the open/high resistance in the circuit.
      - If less than 2> Ω >> Repair the open/high resistance in the ground connection.
7.

1. Power and Signal Distribution
2. Electrical Component and Inline Harness Connector End Views
3. Visual Identification
4.

Component Connector End Views

1. **POWER AND SIGNAL DISTRIBUTION**
2. WIRE AND CONNECTOR REPAIR
3. REPAIR INSTRUCTIONS
4.

Yazaki Connectors (16-Way)

Special Tools

- *EL-38125-550* Terminal Release Tool Kit
- *EL-38125-580* Terminal Release Tool Kit
- *J-38125-215* Terminal Release Tool

For equivalent regional tools, refer to Special Tools.

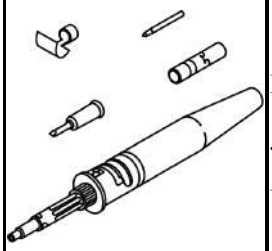
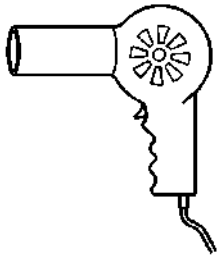
Terminal Removal Procedure

1. Click here for full size
2. While depressing the lock, pull the two connector halves apart.
3. Note**:**

   The terminal position assurance (TPA) is fragile and may break if not done carefully.
4. Use a small flat-blade tool to very carefully push the TPA towards the face of the connector on both sides of the connector.
5. Click here for full size
6. View of the male half of the connector with female terminals.
7. Click here for full size
8. View of the female half of the connector with male terminals.
9. Use the J-38125-215 tool to release the terminals by inserting the tool into the terminal release cavity.
10. Click here for full size
11. View of the female half of the connector with male terminals.
12. Click here for full size
13. View of the male half of the connector with female terminals.
14. While holding the removal tool in place, gently pull the wire out of the back of the connector. Always remember never use force when pulling a terminal out of a connector.
15. Repair the terminal by following the Repairing Connector Terminals procedure.
16. Insert the repaired terminal back into the cavity. Repeat the diagnostic procedure to verify the repair and reconnect the connector bodies.

1. **POWER AND SIGNAL DISTRIBUTION**
2. WIRING SYSTEMS AND POWER MANAGEMENT
3. SPECIAL TOOLS AND EQUIPMENT
4.

Special Tools

Illustration	Tool Number / Description
 Click here for full size	EL-38125-5A J-38125-5A Ultra Torch
 Click here for full size	EL-25070 J-25070 Heat Gun 500â€“700 F

1. **SAFETY AND SECURITY**
2. REMOTE FUNCTIONS
3. DIAGNOSTIC INFORMATION AND PROCEDURES
4.

Remote Vehicle Start Malfunction

Diagnostic Instructions

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

Circuit/System Description

Remote start begins as a radio frequency message sent from a keyless entry transmitter to the remote control door lock receiver. The message is then transferred to the body control module (BCM). The BCM monitors system conditions such as content theft deterrent, hood ajar status, and body DTCs to determine if a remote start event will occur. If conditions are determined to be acceptable, the BCM will activate the appropriate vehicle systems.

Diagnostic Aids

- The scan tool Body Control Module Remote Vehicle Start Disable History 1 Data and Remote Vehicle Start Disable History 2 Data lists can be used to help isolate an intermittent malfunction with remote vehicle starting. These data lists identify the status of various items that may disable remote vehicle starting during the past two remote vehicle start attempts. Any parameters that does not equal the expected result required for remote vehicle starting should be diagnosed in their respective subsection.
- Only the first and second vehicle transmitters are able to control the remote vehicle start function.
- Unwanted or inadvertent door lock/unlock activation may be requested by the OnStarÂ® Remote Link application. It is possible that a customer may be unaware of account usage, resulting in an unwanted or phantom door lock/unlock. If normal system diagnosis results in an inability to verify the customerâ€™s concern, contact Technical Assistance Center (TAC).
- If the vehicle has a current vehicle DTC that illuminates the malfunction indicator lamp, the cause of the DTC must be diagnosed before proceeding with the remote start malfunction diagnostic.

Reference Information

Schematic Reference

Remote Function Schematics

Connector End View Reference

Master Electrical Component List

Description and Operation

Keyless Entry System Description and Operation

Electrical Information Reference

- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Verify the scan tool Body Control Module Push Button Ignition Switch parameter changes between Active and Inactive when pressing and

1. **SUSPENSION**
2. TIRE PRESSURE MONITORING
3. DIAGNOSTIC INFORMATION AND PROCEDURES
4.

DTC C0775

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 C0775

Tire Pressure Monitoring System Sensors = Malfunction

Circuit/System Description

For an overview of the component/system, refer to: Tire Pressure Monitor Description and Operation

Conditions for Running the DTC

Ignition On/Vehicle in Service Mode.

Ignition Voltage 9â€“16 volts.

Conditions for Setting the DTC

Incomplete or failed Manual Learn (due to either timing out after learning at least one sensor and not learning all four sensors or exiting learn mode after learning at least one sensor and vehicle being out of PARK or vehicle power mode not in RUN/Propulsion).

Action Taken When the DTC Sets

- The tire pressure monitor indicator icon on the instrument panel cluster (IPC) flashes 60 to 90 seconds and then remains illuminated after the ignition switch is cycled ON and the IPC bulb check is complete.
- If equipped, the DIC displays a service tire monitor type message and dashes for all 4 tires.

Conditions for Clearing the DTC

A current DTC will be cleared after tire pressure sensors are learned through a manual learn, autolearn, or sensor ID write using EL-52545 tool.

A history DTC will clear after 40 ignition cycles.

Reference Information

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

Perform the following learn procedure: Tire Pressure Indicator Sensor Learn.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair.

Control Module References for control module replacement, programming, and setup.