

2017 ACCESSORIES & EQUIPMENT

Instrument Panel and Console Trim - CT6

SPECIFICATIONS

FASTENER SPECIFICATIONS

Reusable Threaded Fastener Tightening Specifications

NOTE: <i>All fasteners listed in this table can be reused after removal.</i>	
Application	Specification
	Metric (English)
Air Distributor Nut	9 N.m (80 lb in)
Brake Pedal Bolt	10 N.m (89 lb in)
Front Floor Console Bolt	2.5 N.m (22 lb in)
Front Floor Console Bolt to the floor panel tunnel panel	9 N.m (80 lb in)
Front Floor Console Cup Holder Bolt	2.5 N.m (22 lb in)
Heater and Air Conditioning Evaporator and Blower Module Bolt	9 N.m (80 lb in)
Instrument Carrier Bolt	2.5 N.m (22 lb in)
Instrument Panel Accessory Trim Plate Bolt	2.5 N.m (22 lb in)
Instrument Panel Airbag Bolt	9 N.m (80 lb in)
Instrument Panel Bolt	2.5 N.m (22 lb in)
Instrument Panel Cluster Lower Trim Plate Bolt	2.5 N.m (22 lb in)
Instrument Panel Compartment Bolt	2.5 N.m (22 lb in)
Instrument Panel Knee Bolster Bolt	2.5 N.m (22 lb in)
Instrument Panel Tie Bar Bolt	22 N.m (16 lb ft)
Instrument Panel Tie Bar Brace Bolt	9 N.m (80 lb in)
Instrument Panel Tie Bar Nut	22 N.m (16 lb ft)
Instrument Panel Tie Bar Reinforcement Bolt	9 N.m (80 lb in)
Instrument Panel Trim Pad Bolt	2.5 N.m (22 lb in)
Instrument Panel Trim Plate Bolt	2.5 N.m (22 lb in)
Instrument Panel Upper Trim Panel Bracket Bolt	2.5 N.m (22 lb in)
Instrument Panel Wiring Harness Fuse Block Bolt	2.5 N.m (22 lb in)

SCHEMATIC WIRING DIAGRAMS

INSTRUMENT PANEL COMPARTMENT WIRING SCHEMATICS

Instrument Panel Compartment Schematics

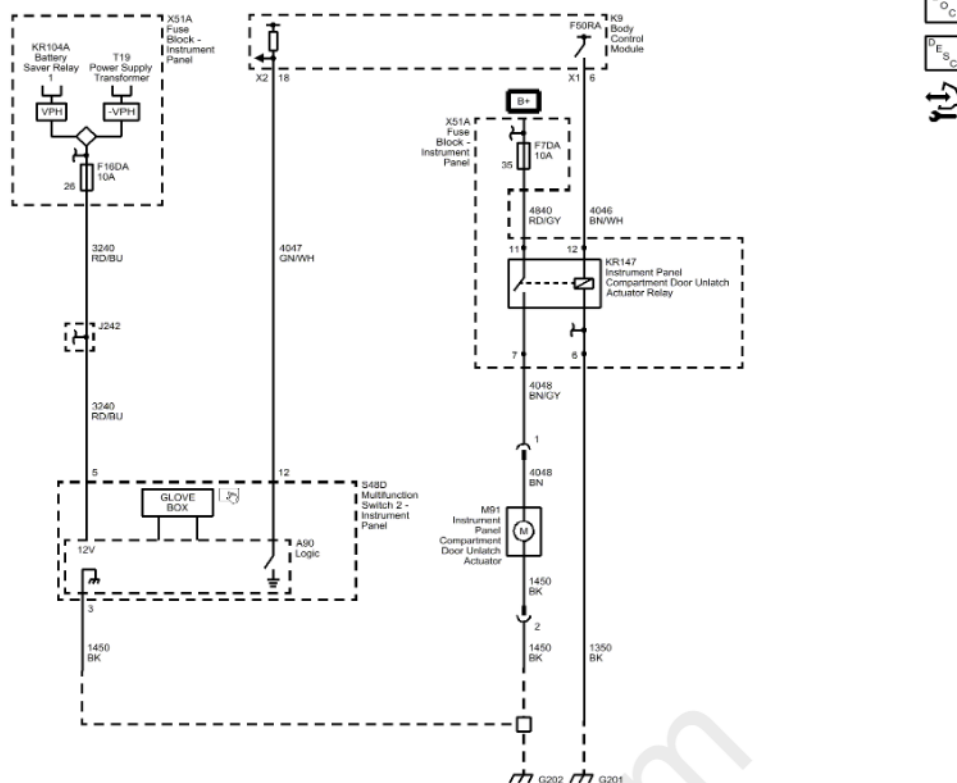


Fig. 1: Instrument Panel Compartment Schematics
Courtesy of GENERAL MOTORS COMPANY

DIAGNOSTIC INFORMATION AND PROCEDURES

DTC B324D: INSTRUMENT PANEL COMPARTMENT DOOR LATCH ACTUATOR

Diagnostic Instructions

- Perform the Diagnostic System Check prior to using this diagnostic procedure: [Diagnostic System Check - Vehicle](#)
- Review the description of Strategy Based Diagnosis: [Strategy Based Diagnosis](#)
- An overview of each diagnostic category can be found here: [Diagnostic Procedure Instructions](#)

DTC Descriptor

NOTE: This procedure may also diagnose malfunctions that are not detected by a DTC.

DTC B324D

Instrument Panel Compartment Door Latch Actuator

Symptom Byte Information: [Symptom Byte List](#)

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Control - Relay Coil	B324D 02	B324D 04	B324D01	-

Circuit/System Description

For an overview of the component/system, refer to [Instrument Panel Compartment Description and Operation](#)

Circuit	Description
Control - Relay Coil	The output circuit is switched to 12 V to activate the component.

Component	Description
X51A Fuse Block - Instrument Panel	The fuse block houses various fuses and relays.
K9 Body Control Module	The module controls various vehicle functions like lighting, central door locking, power windows, etc.

Conditions for Running the DTC

Ignition» On / Vehicle» In Service Mode

Conditions for Setting the DTC

- B324D 01» Control Circuit=Short to Battery
- B324D 02» Control Circuit=Short to Ground
- B324D 04» Control Circuit=Open

Actions Taken When the DTC Sets

M91 Instrument Panel Compartment Door Unlatch Actuator=Inoperative

Conditions for Clearing the DTC

- A current DTC will clear when the diagnostic runs and passes.
- A history DTC will clear after 50 consecutive malfunction-free ignition cycles.

Reference Information

Schematic Reference

Instrument Panel Compartment Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Component View Reference

Instrument Panel/Center Console Component Views

Electrical Information Reference

- 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: S48D Multifunction Switch 2 - Instrument Panel» Pressed

Verify the component produces a clicking sound: M91 Instrument Panel Compartment Door Unlatch Actuator

- **If the component does not produce a sound**

- **If the component produces a sound**

3. All OK.

Circuit/System Testing

1. Ignition/Vehicle $\hat{A}$ » Off
2. Disconnect the electrical connector: X1K9 Body Control Module
3. Ignition $\hat{A}$ » On / Vehicle $\hat{A}$ » In Service Mode
4. Test for less than 1 V between the test points: Control circuit terminal 6 X1 @ Control module harness & Ground
 - **If 1 V or greater**
 - Replace the component: X51A Fuse Block - Instrument Panel
 - **If less than 1 V**
5. Momentarily connect a 3 A fused jumper wire between the test points:Control circuit terminal 6 X1 & B+
6. Verify a click can be heard or felt at the component when it is turned On and Off: M91 Instrument Panel Compartment Door Unlatch Actuator
 - **If a click cannot be heard or felt**
 - Replace the component: X51A Fuse Block - Instrument Panel
 - **If a click can be heard or felt**
7. Replace the component: K9 Body Control Module

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair: [Diagnostic Repair Verification](#)

- [Instrument Panel Wiring Harness Junction Block Replacement](#)
- For control module replacement, programming and setup, refer to [Control Module References](#)

SYMPTOMS-INSTRUMENT PANEL AND CONSOLE TRIM

NOTE: The following steps must be completed before using the symptom tables.

1. Perform the [Diagnostic System Check - Vehicle](#) before using the Symptom Tables in order to verify that all of the following are true:
 - There are no DTCs set.
 - The control modules can communicate via the serial data link.
2. Review the system operation in order to familiarize yourself with the system functions. Refer to [Instrument Panel Compartment Description and Operation](#).

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the system. Refer to [Checking Aftermarket Accessories](#) .
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

Intermittent

Faulty electrical connections or wiring may be the cause of intermittent conditions. Refer to [Testing for Intermittent Conditions and Poor Connections](#) .

Symptom List

Refer to the symptom diagnostic procedure below in order to diagnose the symptom:

[Instrument Panel Compartment Door Latch Release Malfunction](#)

INSTRUMENT PANEL COMPARTMENT DOOR LATCH RELEASE MALFUNCTION

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.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Instrument Panel Multifunction Switch 2 B+	B324D01, B324D 04	B324D01, B324D 04	-	-
Instrument Panel Compartment Door Unlatch Actuator Relay B+	1	1	-	-
Instrument Panel Compartment Door Unlatch Actuator Relay Control	B324D 02	B324D 04	B324D 01	-
Instrument Panel Compartment Door Unlatch Actuator Relay Ground	-	B324D 04	-	-
Instrument Panel Compartment Door Unlatch Actuator Control	1	1	1	-
Instrument Panel Compartment Door Unlatch Actuator Ground	-	1	-	-
Glove Box Release Signal	2	2	2	-
Instrument Panel Multifunction Switch 2 Ground	-	2	-	-
1. Instrument Panel Compartment Door Unlatch Actuator Inoperative 2. Glove Box Release Switch Inoperative				

Circuit/System Description

The body control module supplies a 12V reference voltage to the instrument panel multifunction switch through the release switch signal circuit. When the instrument panel multifunction switch is pressed, the release switch signal circuit is grounded through the instrument panel multifunction switch ground circuit and the reference voltage is pulled low within the body control module. In response, the body control module applies battery positive voltage to the instrument panel compartment door unlatch actuator relay control circuit, which energizes the coil side of the relay. The switch side of the instrument panel compartment door unlatch actuator relay then closes, supplying battery positive voltage through the relay and the instrument panel compartment door latch control circuit activating the latch releasing the instrument panel compartment door.

Reference Information

Schematic Reference

- [Instrument Panel Compartment Schematics](#)
- [Door Lock/Indicator Schematics](#)

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Instrument Panel Compartment 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. Ignition On/Vehicle in Service Mode.
2. Verify the scan tool Glove Box Unlatch Switch parameter changes from Inactive to Active to Inactive when pressing the appropriate switch on the S48D Multifunction Switch 2 - Instrument Panel.
 - **If the parameter does not change**

Refer to Circuit/System Testing - Instrument Panel Compartment Door Release Switch Inoperative.
 - **If the parameter changes**
3. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates when pressing the appropriate switch on the S48D Multifunction Switch 2 - Instrument Panel.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate**

Refer to Circuit/System Testing - Instrument Panel Compartment Door Latch Inoperative.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator activates**
4. All OK.

Circuit/System Testing

Instrument Panel Compartment Door Release Switch Inoperative

1. Ignition/Vehicle Off and all vehicle systems Off. Disconnect the harness connector at the S48D Multifunction Switch 2 - Instrument Panel. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 3 and ground.
 - **If 10 Ω or greater**
 1. Ignition/Vehicle Off.
 2. Test for less than 2 Ω in the ground circuit end to end.
 - 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.
 - **If less than 10 Ω**
3. Ignition On/Vehicle in Service Mode.
4. Verify a test lamp illuminates between the B+ circuit terminal 5 and ground.
 - **If the test lamp does not illuminate and the circuit fuse is good**
 1. Ignition/Vehicle Off. Remove the test lamp.
 2. Test for less than 2 Ω in the B+ circuit end to end.

- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , verify the fuse is not open and there is voltage at the fuse.
- **If the test lamp does not illuminate and the circuit fuse is open**
 1. Ignition/Vehicle Off. Remove the test lamp.
 2. Test for infinite resistance between the B+ circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance, replace the S48D Multifunction Switch 2 - Instrument Panel.
- **If the test lamp illuminates**
- 5. Test for greater than 10 V between the signal circuit terminal 12 and ground.
 - **If 10 V or less**
 1. Ignition/Vehicle Off. Disconnect the X2 harness connector at the K9 Body Control Module.
 2. Test for infinite resistance between the signal circuit and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 Ω in the signal circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K9 Body Control Module.
 - **If greater than 10 V**
- 6. Test or replace the S48D Multifunction Switch 2 - Instrument Panel.

Instrument Panel Compartment Door Latch Inoperative

1. Ignition/Vehicle Off and all vehicle systems Off. Disconnect the harness connector at the M91 Instrument Panel Compartment Door Unlatch Actuator. It may take up to 2 minutes for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal 2 and ground.
 - **If 10 Ω or greater**
 1. Ignition/Vehicle Off.
 2. Test for less than 2 Ω in the ground circuit end to end.
 - 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.
 - **If less than 10 Ω**
3. Ignition On/Vehicle in Service Mode.
4. Connect a test lamp between the control circuit terminal 1 and ground, Ignition On/Vehicle in Service Mode.
5. Verify the test lamp does not turn ON and OFF when pressing the appropriate switch on the S48D Multifunction Switch 2 - Instrument Panel
 - **If the test lamp turns ON and OFF**

Test or replace the M91 Instrument Panel Compartment Door Unlatch Actuator.
 - **If the test lamp does not turn ON and OFF**
6. Ignition/Vehicle Off. Connect the harness connector at the M91 Instrument Panel Compartment Door Unlatch Actuator. Disconnect the harness connector at the X51A Fuse Block-Instrument Panel. Ignition On/Vehicle in Service Mode.
7. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator is activated**
 1. Ignition/Vehicle Off. Disconnect the harness connector at the M91 Instrument Panel Compartment Door Unlatch Actuator. Ignition On/Vehicle in Service Mode.
 2. Test for less than 1 V between the control circuit terminal 1 and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.

- If less than 1 V, test or replace the M91 Instrument Panel Compartment Door Unlatch Actuator.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated**
8. Connect a 10 A fused jumper wire between the control circuit terminal 7 and B+.
 9. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate**
 1. Ignition/Vehicle Off. Remove the jumper wire, disconnect the harness connector at the M91 Instrument Panel Compartment Door Unlatch Actuator. Ignition On/Vehicle in Service Mode.
 2. Test for infinite resistance between the control circuit and ground.
 - If less than Infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 Ω in the control circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , test or replace the M91 Instrument Panel Compartment Door Unlatch Actuator.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator activates**
 10. Ignition/Vehicle Off and all vehicle systems Off. It may take up to 2 minutes for all vehicle systems to power down
 11. Test for less than 10 Ω between the X51A Fuse Block-Instrument Panel ground circuit terminal 6 and ground.
 - **If 10 Ω or greater**
 1. Ignition/Vehicle Off.
 2. Test for less than 2 Ω in the ground circuit end to end.
 - 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.
 - **If less than 10 Ω**
 12. Connect the X2 harness connector at the X51A Fuse Block-Instrument Panel. Disconnect the X1 harness connector at the K9 Body Control Module. Ignition On/Vehicle in Service Mode.
 13. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator is activated**
 1. Ignition/Vehicle Off. Disconnect the harness connector at the X51A Fuse Block-Instrument Panel.
 2. Test for less than 1 V between the K9 Body Control Module control circuit terminal 6 X1 and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the X51A Fuse Block-Instrument Panel.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator is not activated**
 14. Connect a 3 A fused jumper wire between the control circuit terminal 6 and B+.
 15. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate**
 1. Ignition/Vehicle Off. Remove the jumper wire, disconnect the harness connector at the X51A Fuse Block-Instrument Panel. Ignition On/Vehicle in Service Mode.
 2. Test for infinite resistance between the K9 Body Control Module control circuit terminal 6 X1 and ground
 - If less than Infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
 3. Test for less than 2 Ω in the control circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the X51A Fuse Block-Instrument Panel.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator activates**

16. Replace the K9 Body Control Module.

Component Testing

Instrument Panel Compartment Door Release Actuator

1. Ignition/Vehicle Off. Disconnect the harness connector at the M91 Instrument Panel Compartment Door Unlatch Actuator.
2. Install a 10 A fused jumper wire between the control terminal 1 and 12 V. Install a jumper wire between the ground terminal 2 and ground.
3. Verify the M91 Instrument Panel Compartment Door Unlatch Actuator activates.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does not activate.**

Replace the M91 Instrument Panel Compartment Door Unlatch Actuator.
 - **If the M91 Instrument Panel Compartment Door Unlatch Actuator does activate.**
4. All OK.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the repair.

- [Instrument Panel Compartment Door Latch Actuator Replacement](#)
- [Instrument Panel Wiring Harness Junction Block Replacement](#)
- [Radio Control Assembly Replacement](#)
- [Control Module References](#) for body control module, programming and setup.

REPAIR INSTRUCTIONS

INSTRUMENT PANEL LOWER TRIM PANEL INSULATOR REPLACEMENT - LEFT SIDE

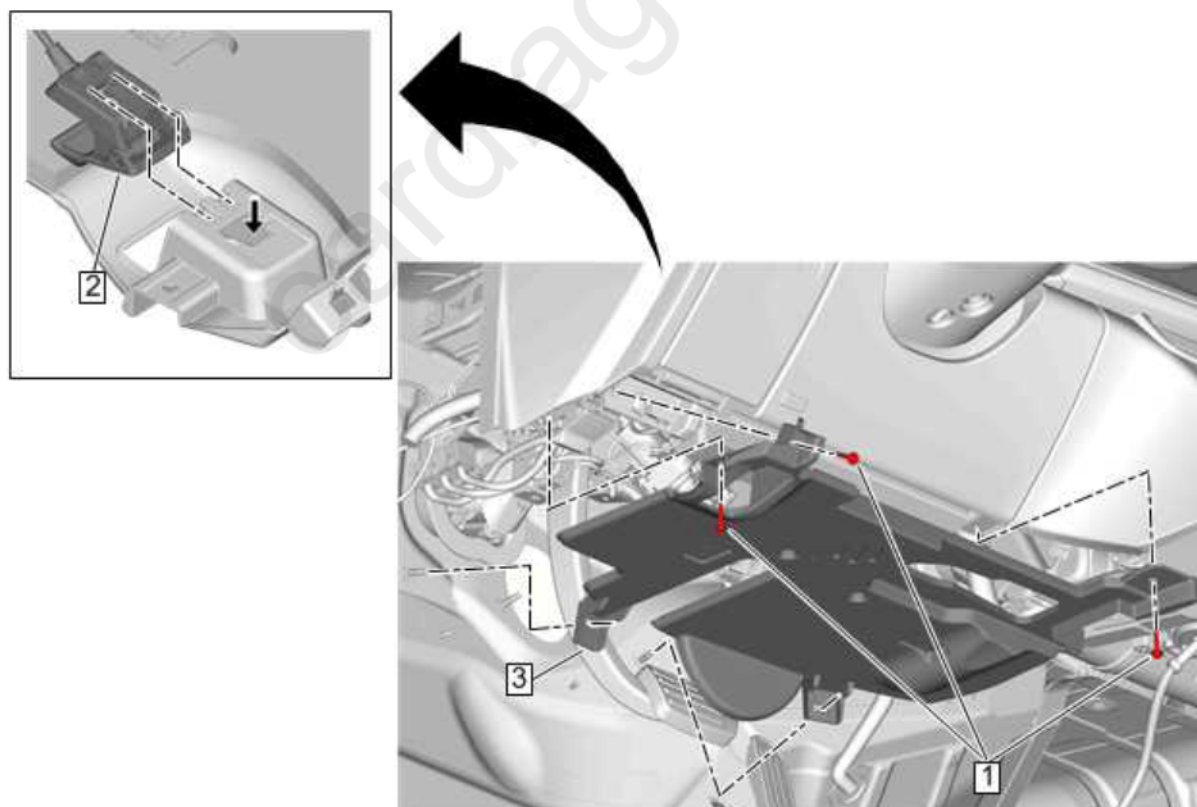


Fig. 2: Instrument Panel Lower Trim Panel Insulator - Left Side

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name

Callout	Component Name
WARNING: Refer to SIR Warning .	
Preliminary Procedure Disable the SIR system. Refer to SIR Disabling and Enabling	
1	Instrument Panel Trim Pad Bolt [3x] CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)
2	Hood Primary Latch Release Cable Handle Procedure Release the retaining tab.
3	Instrument Panel Lower Trim Panel Insulator Procedure 1. Disconnect the electrical connectors. 2. Transfer components as necessary. 3. Enable the SIR System. Refer to SIR Disabling and Enabling

INSTRUMENT PANEL LOWER TRIM PANEL INSULATOR REPLACEMENT - RIGHT SIDE

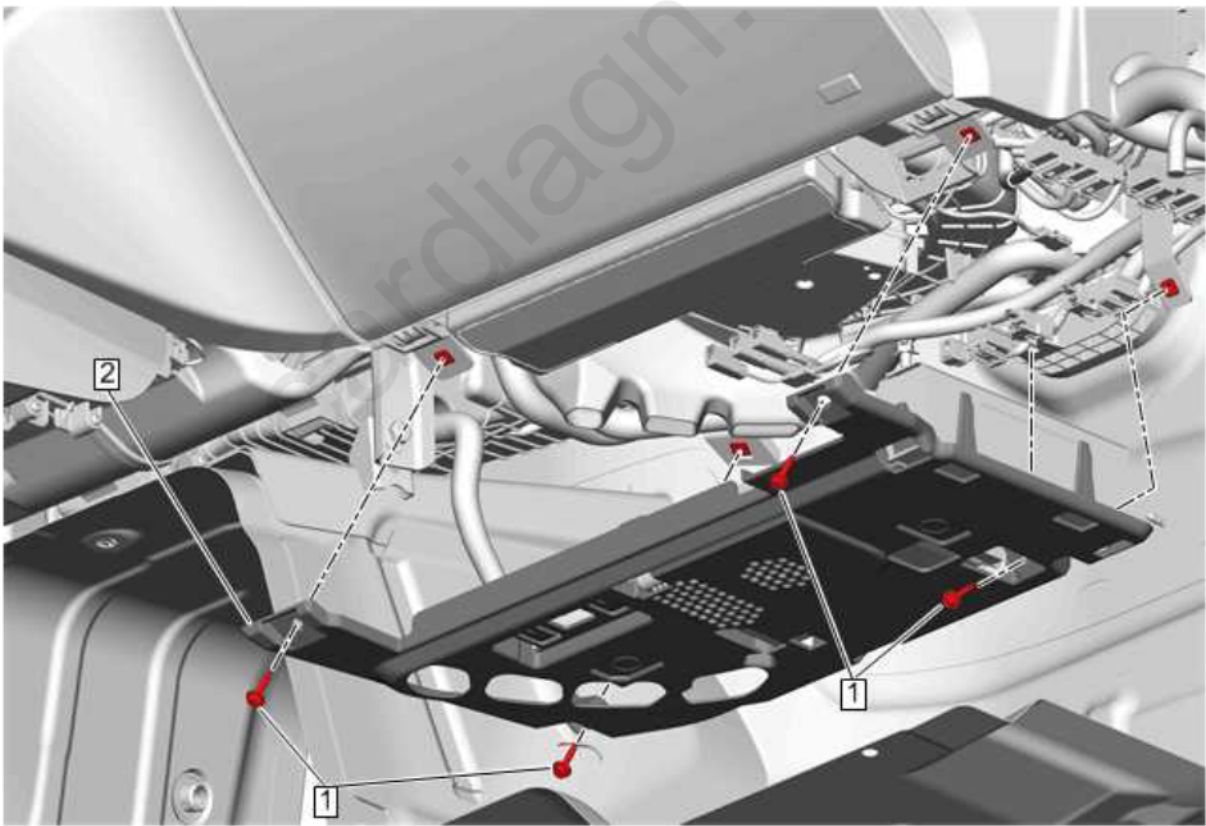


Fig. 3: Instrument Panel Lower Trim Panel Insulator - Right Side
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name

Callout	Component Name
WARNING: Refer to SIR Warning . Preliminary Procedure Disable the SIR system. Refer to SIR Disabling and Enabling NOTE: When removing the instrument panel lower trim panel insulator for any reason, it is required that the connectors to the heater and air conditioning remote control be disconnected. If the vehicle battery has NOT been disconnected, when reinstalling or reconnecting the remote control, the BROWN J2 connector must be connected last. Once all the parts are all in place, check and clear all DTCs in the heater and air conditioning remote control.	
1	Instrument Panel Trim Pad Bolt [4x] CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)
2	Instrument Panel Lower Trim Panel Insulator Procedure 1. Disconnect the electrical connectors. 2. Transfer components as necessary. 3. Enable the SIR System. Refer to SIR Disabling and Enabling

INSTRUMENT PANEL EXTENSION REPLACEMENT

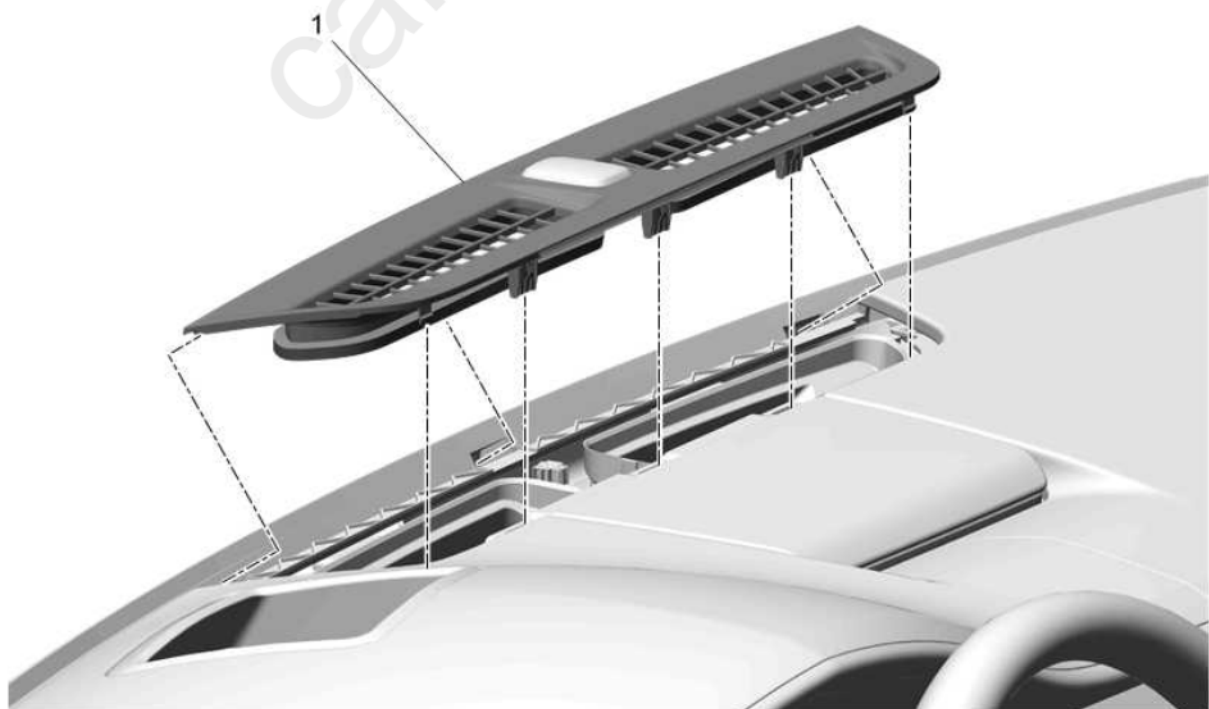


Fig. 4: Instrument Panel Extension

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Instrument Panel Extension Procedure 1. Use a flat bladed plastic trim tool. 2. Disconnect the electrical connector. 3. Transfer components as necessary.

INSTRUMENT PANEL KNEE BOLSTER REPLACEMENT

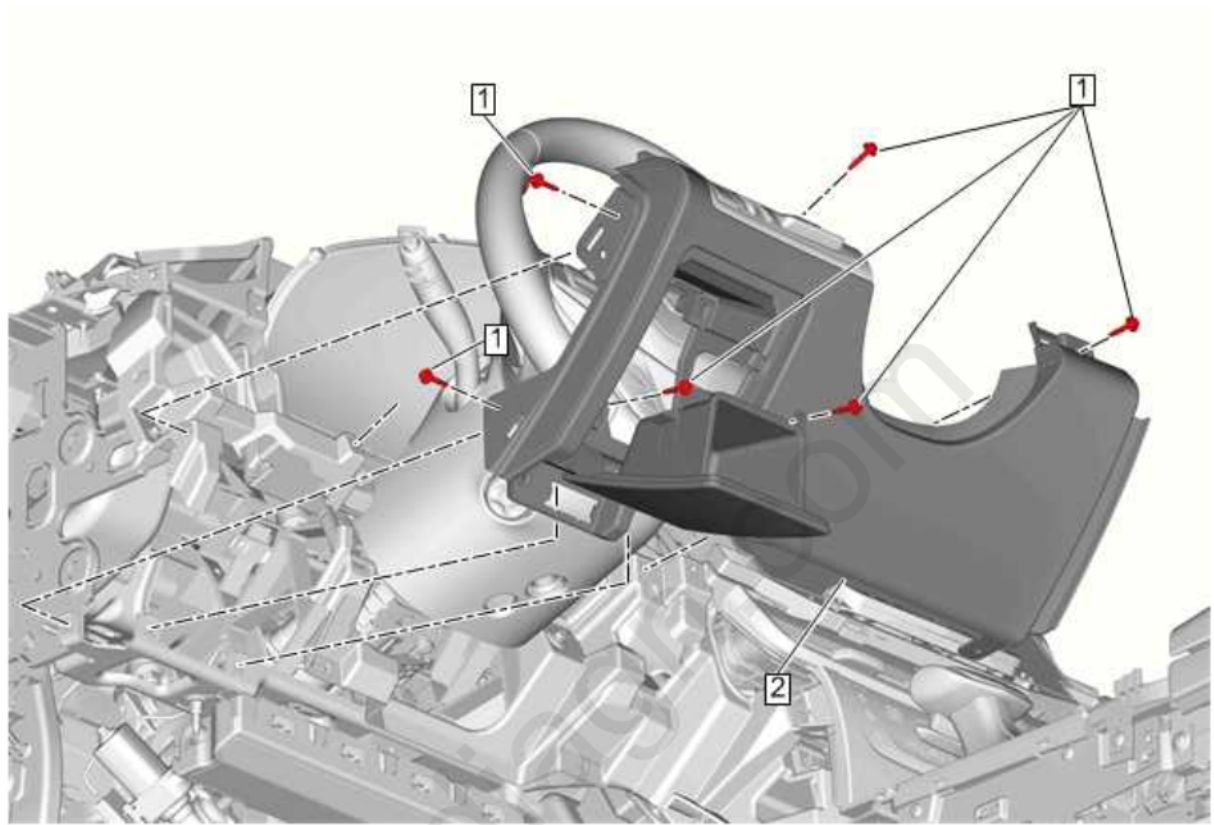


Fig. 5: Instrument Panel Knee Bolster
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. <u>Instrument Panel Lower Trim Panel Insulator Replacement - Left Side</u> 2. <u>Instrument Panel Cluster Trim Plate Replacement</u> 3. <u>Front Floor Console Extension Panel Replacement - Left Side</u>	
1	Instrument Panel Knee Bolster Bolt [6x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)

Callout	Component Name
2	Instrument Panel Knee Bolster Procedure 1. Open the bin to access the two hidden fasteners. 2. Disconnect the data link connector. 3. Disconnect the electrical connectors. 4. Transfer components as necessary.

INSTRUMENT PANEL TRIM PLATE REPLACEMENT

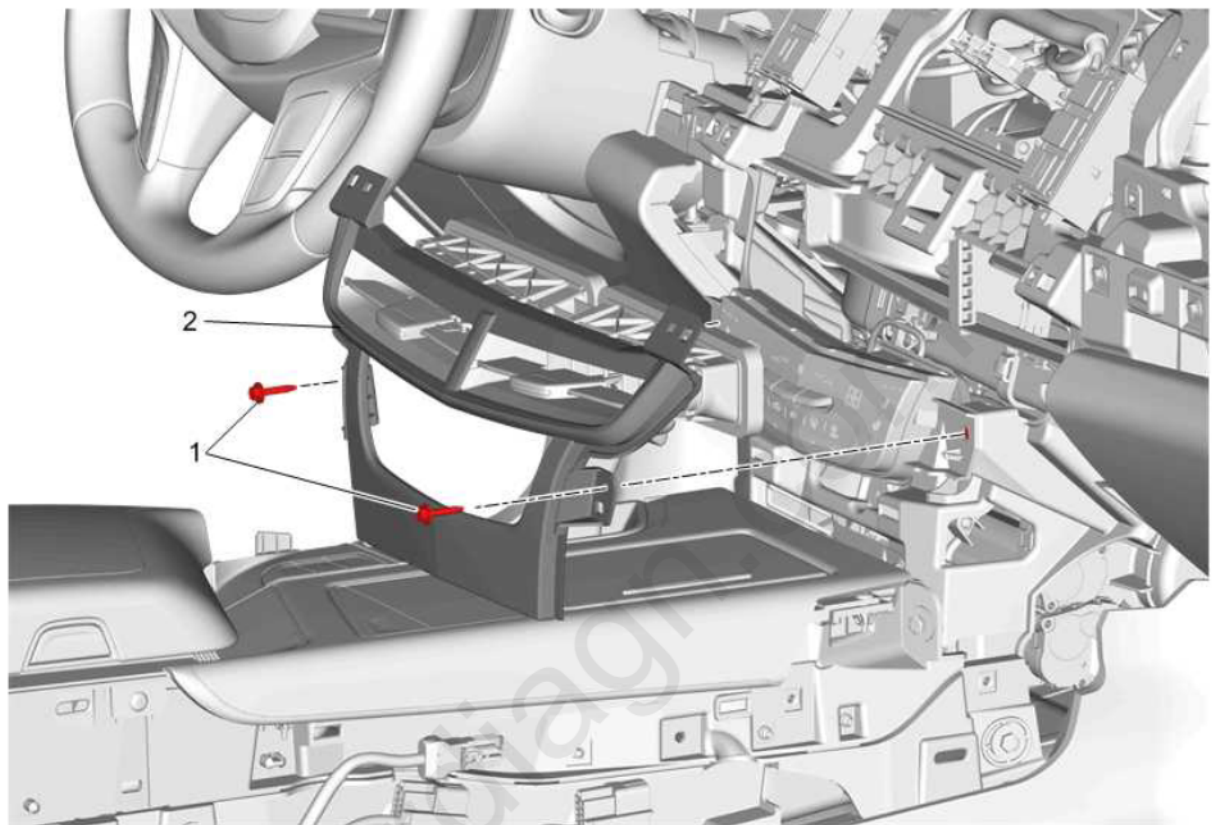


Fig. 6: Instrument Panel Trim Plate
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Radio Control Assembly Replacement 2. Front Floor Console Extension Panel Replacement - Left Side 3. Front Floor Console Extension Panel Replacement - Right Side	
1	Instrument Panel Trim Plate Bolt [2x] CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)

Callout	Component Name
2	Instrument Panel Trim Plate Procedure 1. Lift the plate to clear the front floor console. 2. Disconnect the electrical connectors. 3. Transfer components as necessary.

INSTRUMENT PANEL LOWER TRIM PLATE APPLIQUE REPLACEMENT - RIGHT SIDE

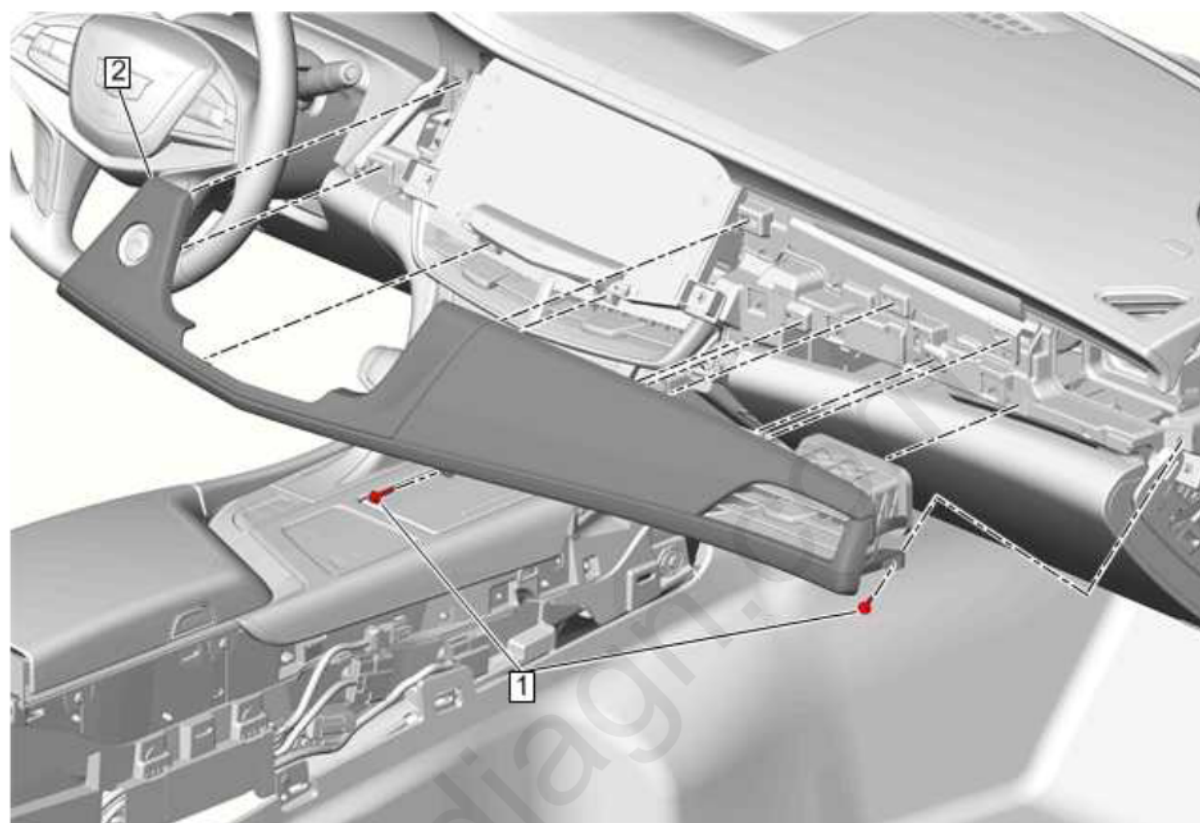


Fig. 7: Instrument Panel Lower Trim Plate Applique

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. <u>Instrument Panel Outer Trim Cover Replacement</u> 2. <u>Front Floor Console Extension Panel Replacement - Right Side</u>	
1	Instrument Panel Bolt [2x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Instrument Panel Lower Trim Plate Applique - Right Side Procedure 1. Use a flat bladed plastic trim tool. 2. Disconnect all electrical connectors. 3. Transfer components as necessary.

INSTRUMENT PANEL LOWER TRIM PLATE APPLIQUE REPLACEMENT - LEFT SIDE

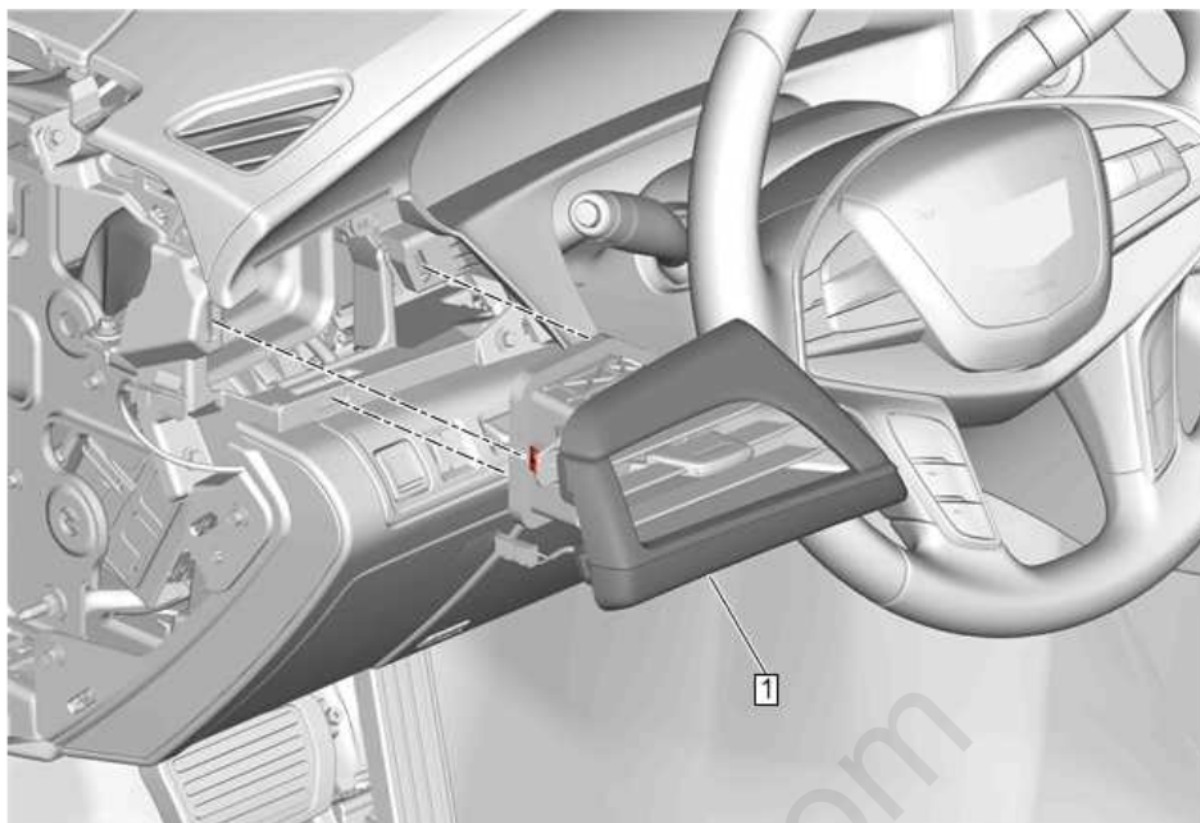


Fig. 8: Instrument Panel Lower Trim Plate Applique - Left Side

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure <u>Instrument Panel Outer Trim Cover Replacement</u>	
	Instrument Panel Lower Trim Plate Applique - Left Side
1	Procedure 1. Disconnect the electrical connector. 2. Use a plastic trim tool if necessary. 3. Transfer components as necessary.

INSTRUMENT PANEL UPPER TRIM PANEL REPLACEMENT

Removal Procedure

1. **Instrument Panel Lower Trim Plate Applique Replacement - Right Side** (2)» Remove

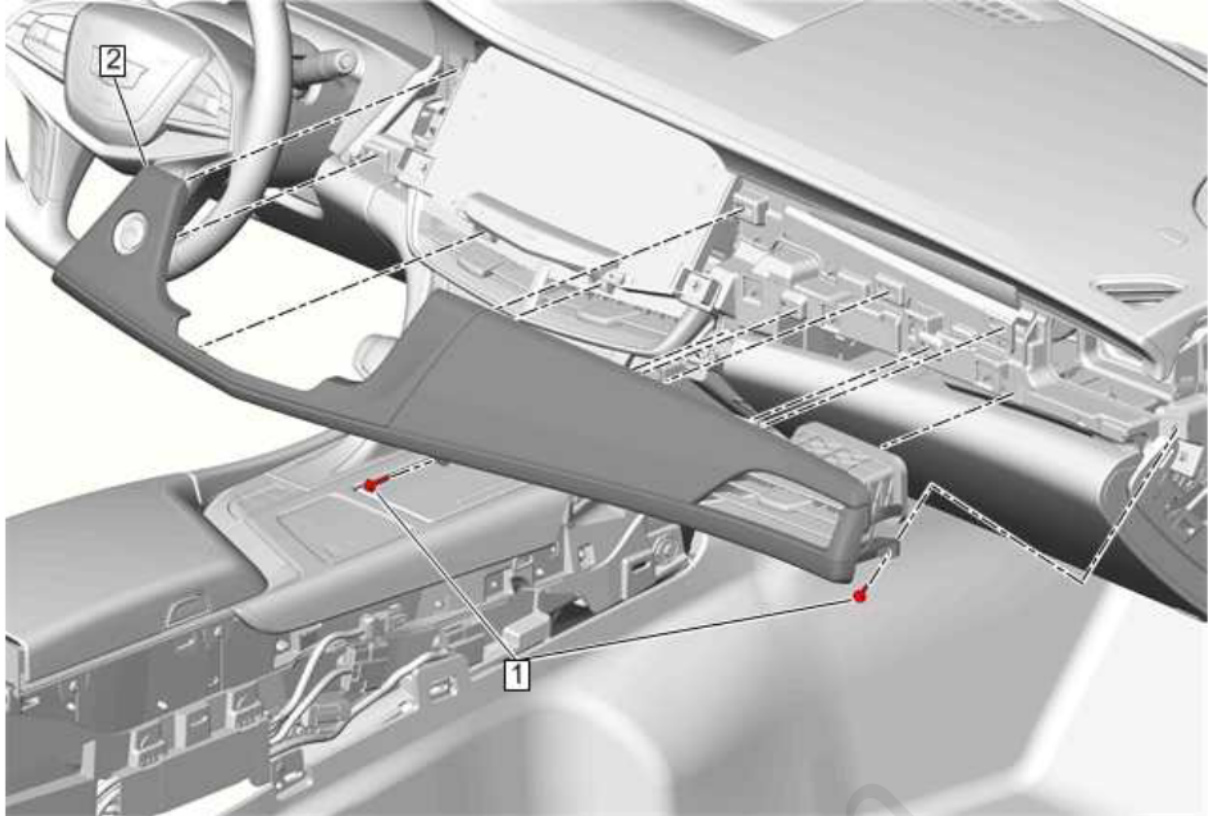


Fig. 9: Instrument Panel Lower Trim Plate Applique
 Courtesy of GENERAL MOTORS COMPANY

2. **Instrument Panel Lower Trim Plate Applique Replacement - Left Side** (1)» Remove

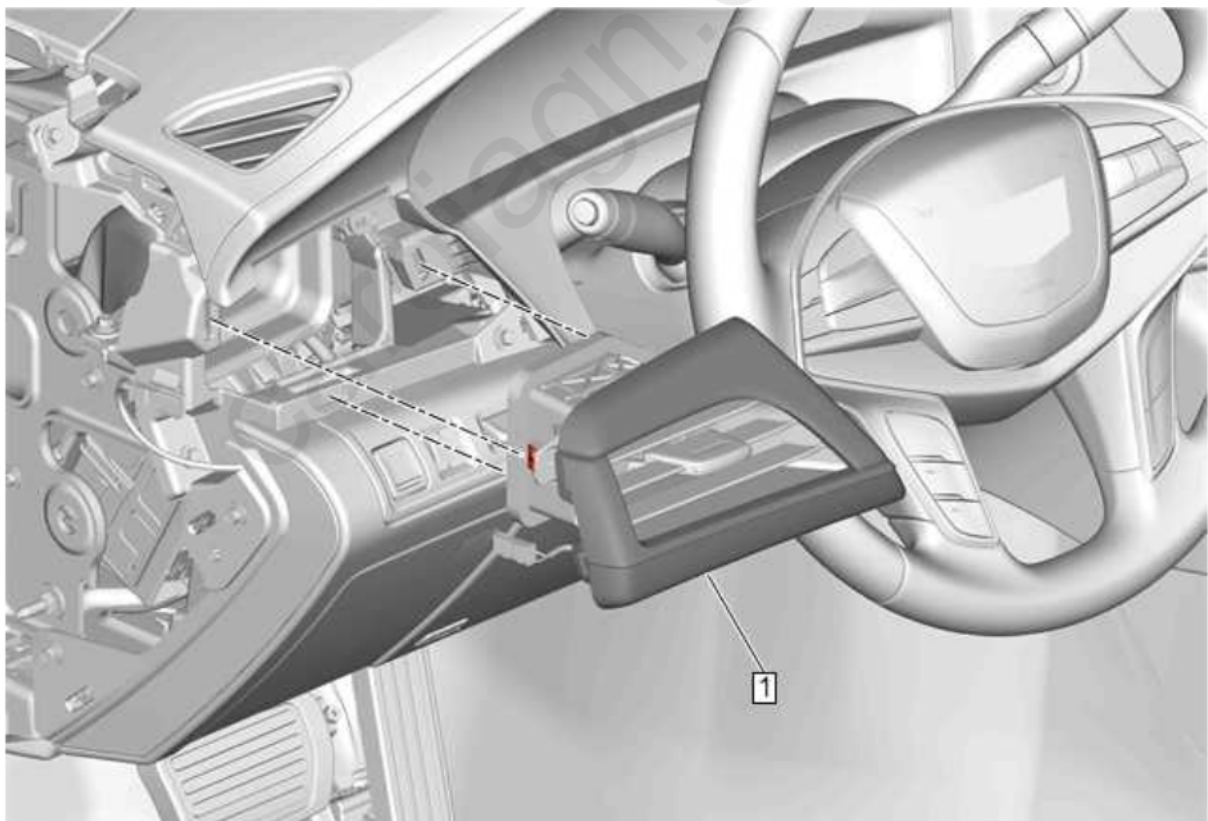


Fig. 10: Instrument Panel Lower Trim Plate Applique - Left Side
 Courtesy of GENERAL MOTORS COMPANY

3. **Instrument Panel Compartment Replacement** (2)» Remove

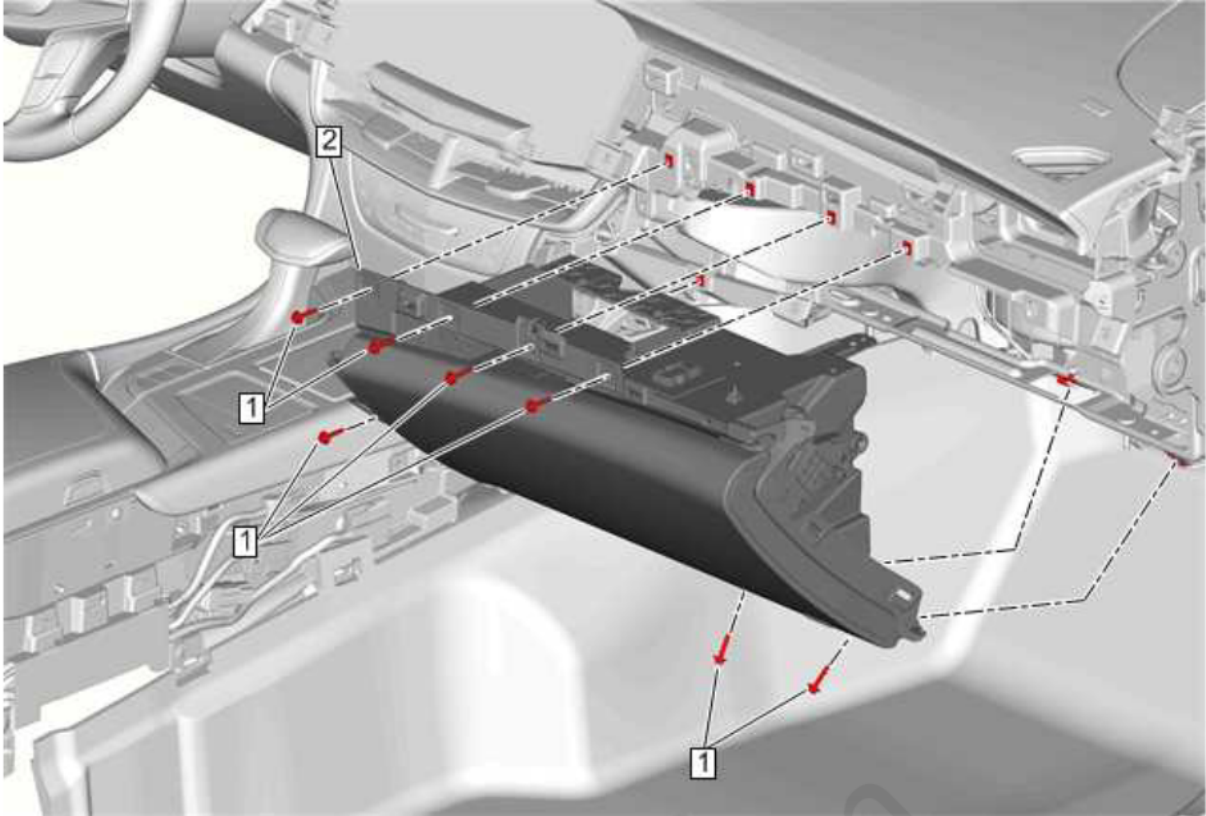


Fig. 11: Instrument Panel Compartment

Courtesy of GENERAL MOTORS COMPANY

4. **Instrument Panel Extension Replacement** (1) » Remove

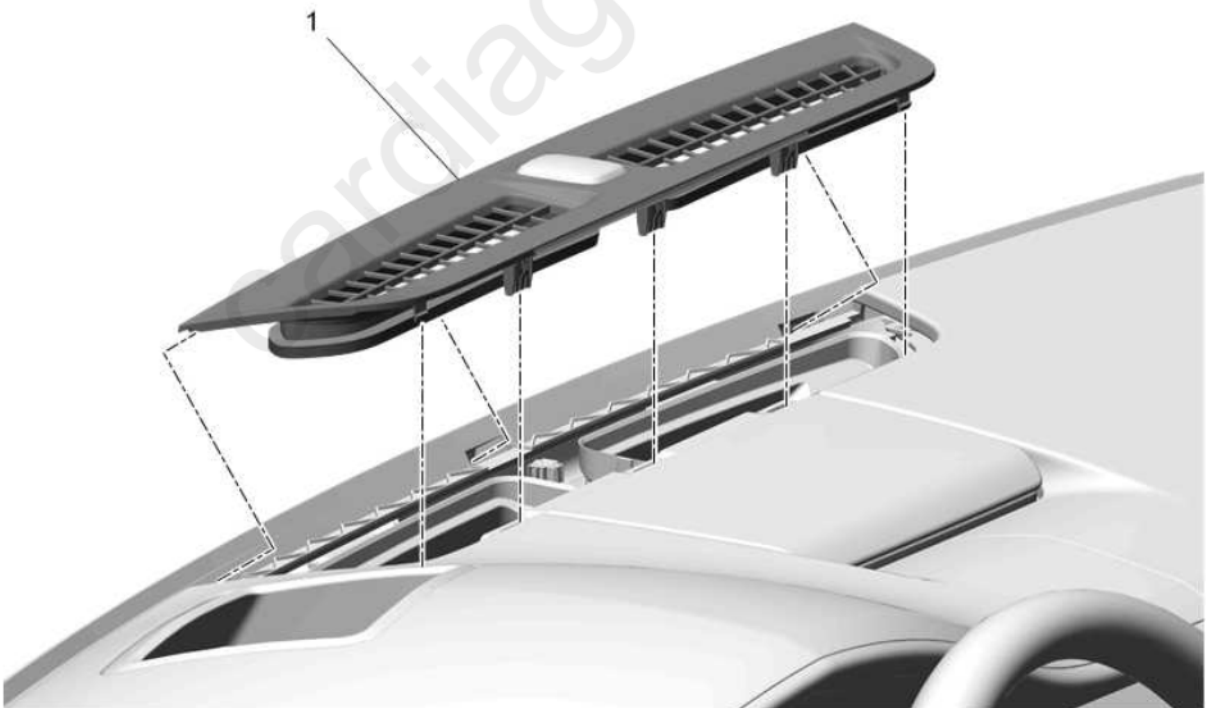


Fig. 12: Instrument Panel Extension

Courtesy of GENERAL MOTORS COMPANY

5. **Instrument Panel Trim Pad Radio Center Speaker Opening Cover Replacement** (1) » Remove

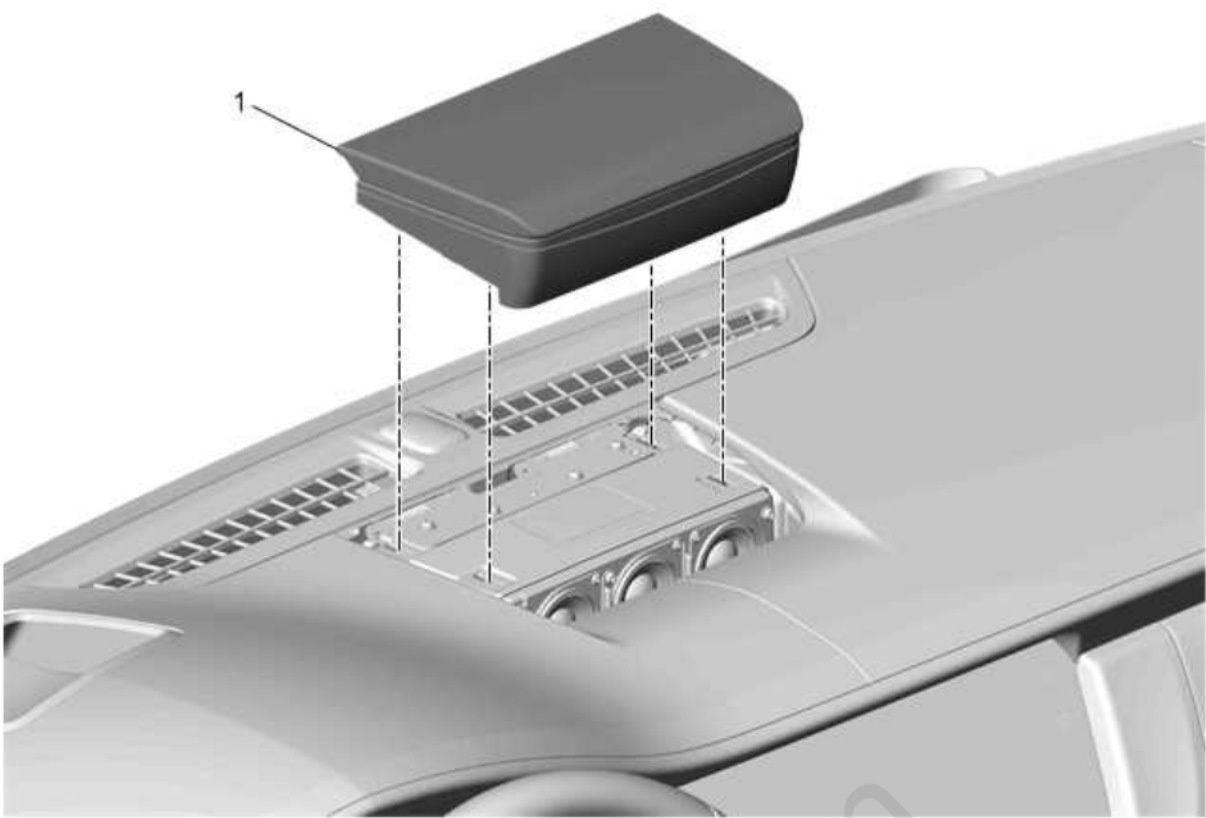


Fig. 13: Instrument Panel Trim Pad Radio Center Speaker Opening Cover
 Courtesy of GENERAL MOTORS COMPANY

6. **Radio Front Speaker Replacement** (2)» Remove

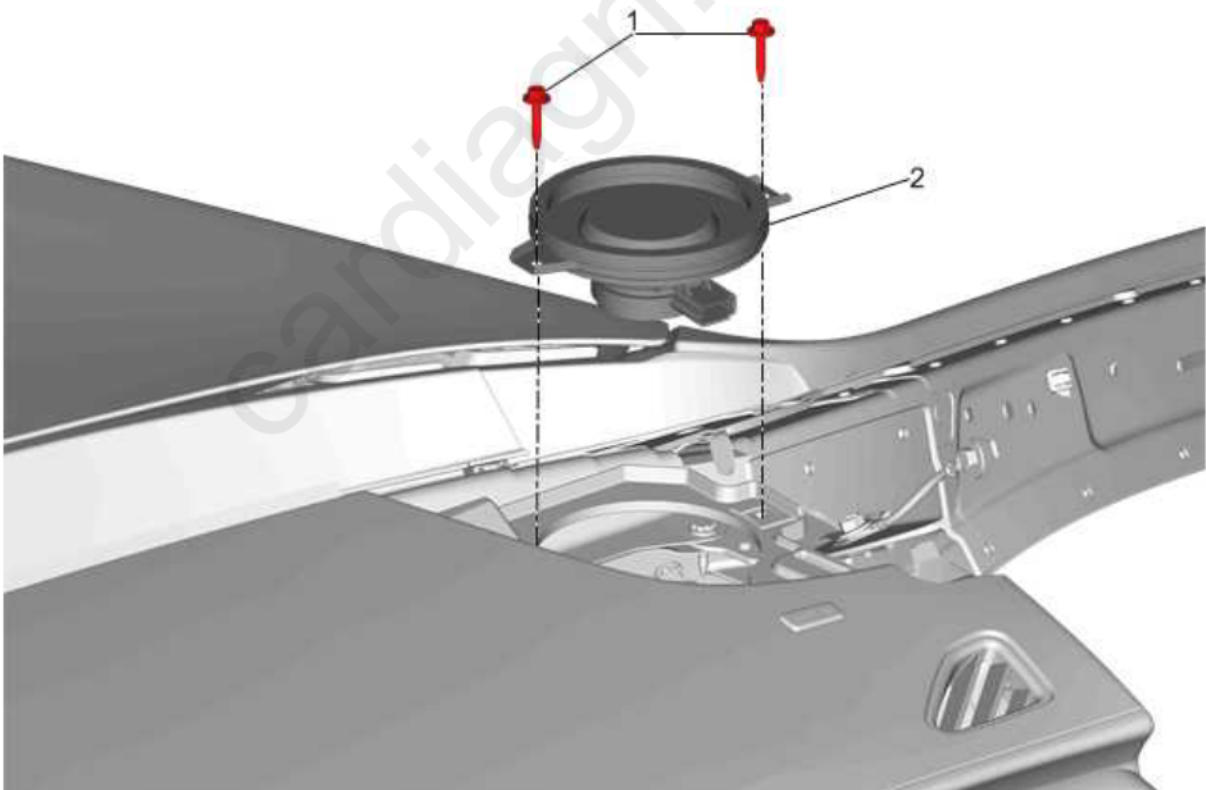


Fig. 14: Radio Front Speaker
 Courtesy of GENERAL MOTORS COMPANY

7. Instrument Panel Accessory Trim Plate Bolt (1)» Remove [3x]

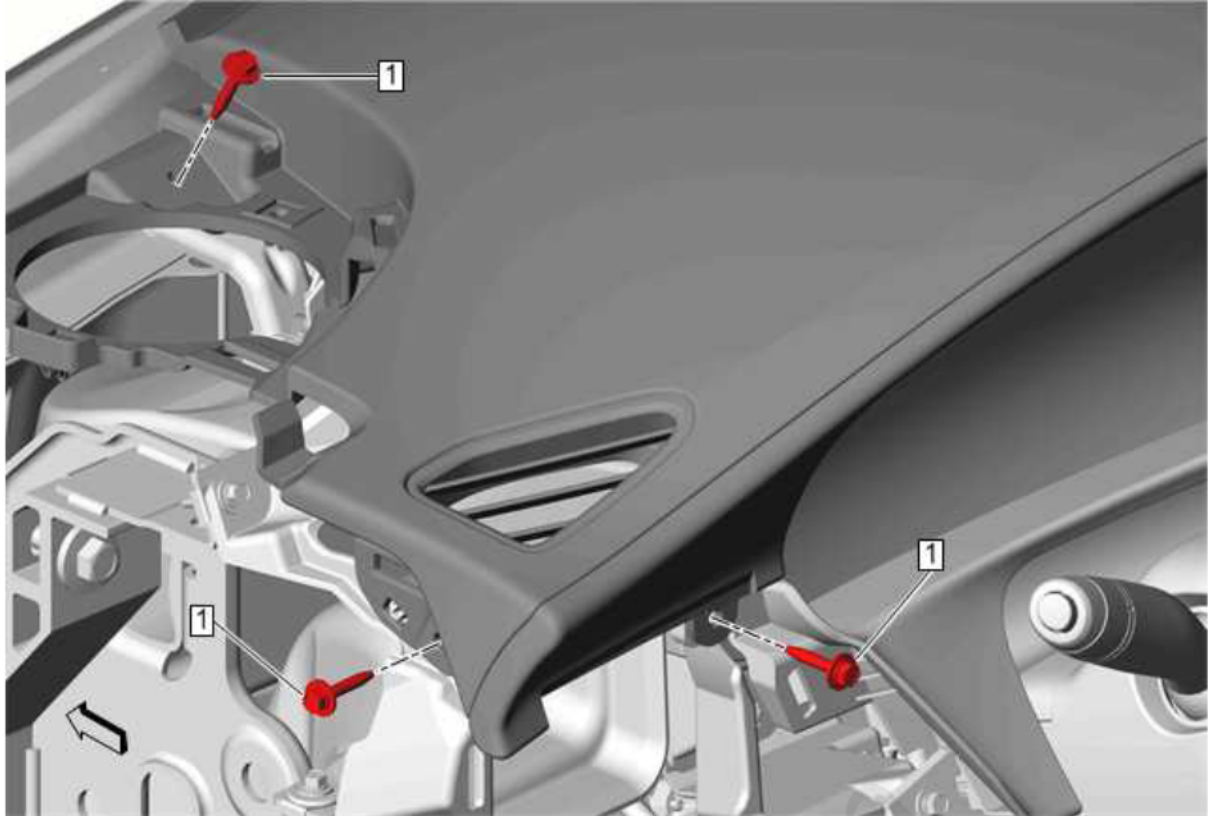


Fig. 15: Instrument Panel Accessory Trim Plate Bolt
 Courtesy of GENERAL MOTORS COMPANY

8. Instrument Panel Accessory Trim Plate Bolt (1) » Remove [4x]

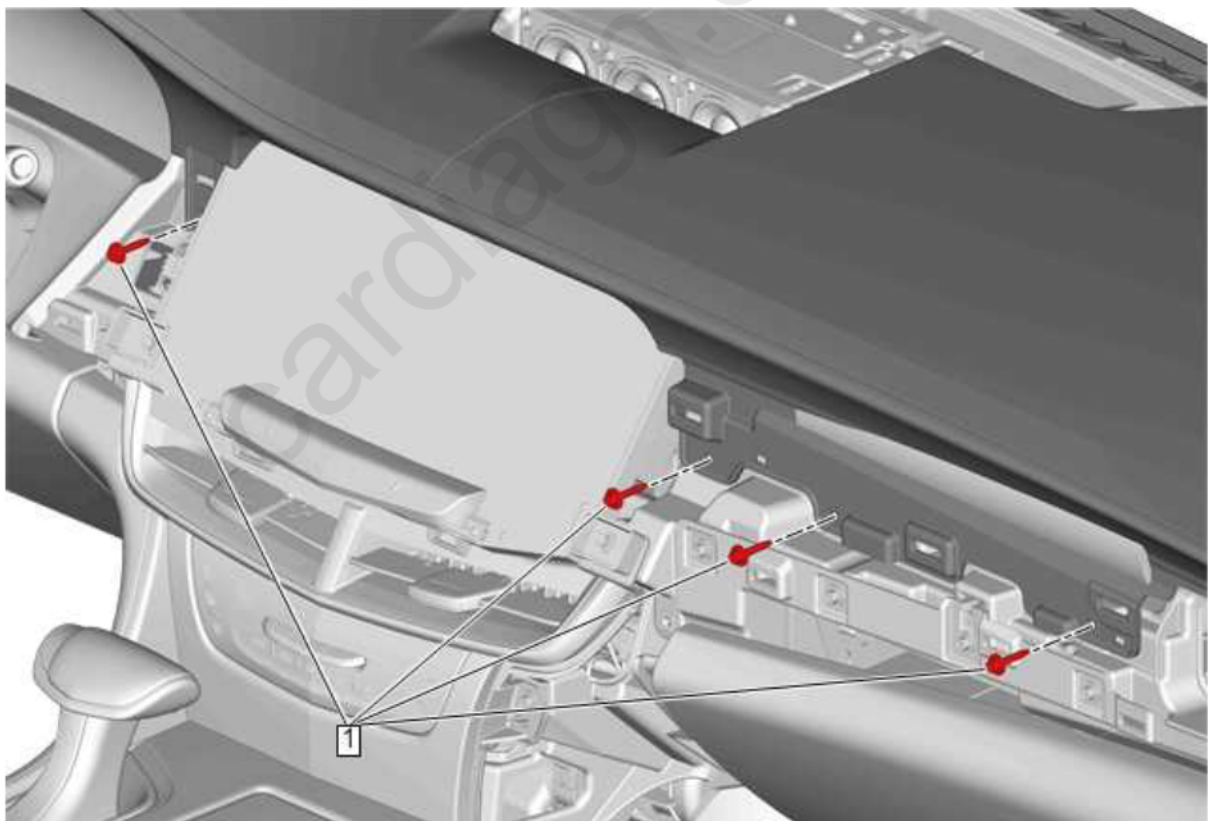


Fig. 16: Instrument Panel Accessory Trim Plate Bolt
 Courtesy of GENERAL MOTORS COMPANY

9. Instrument Panel Accessory Trim Plate Bolt (1) » Remove [2x]

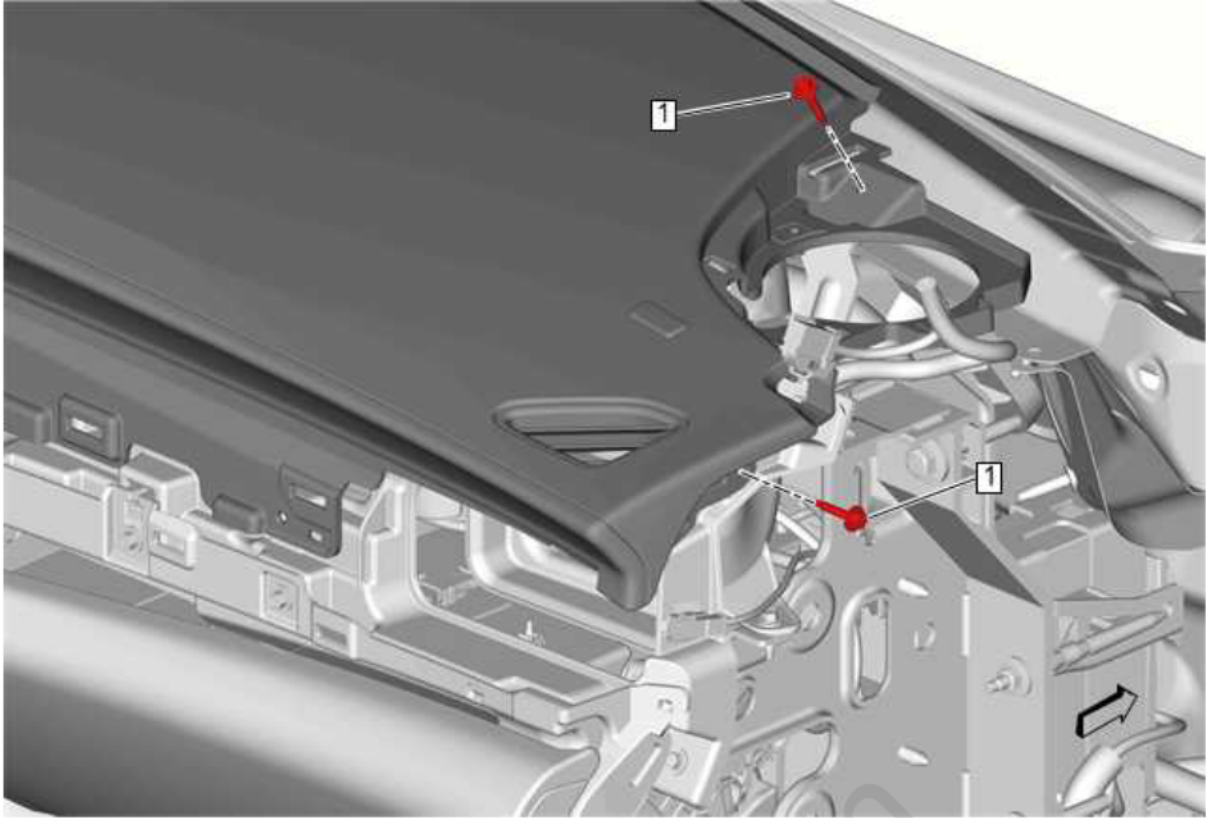


Fig. 17: Instrument Panel Accessory Trim Plate Bolt
 Courtesy of GENERAL MOTORS COMPANY

10. Instrument Panel Airbag Bolt (1)» Remove [3x]

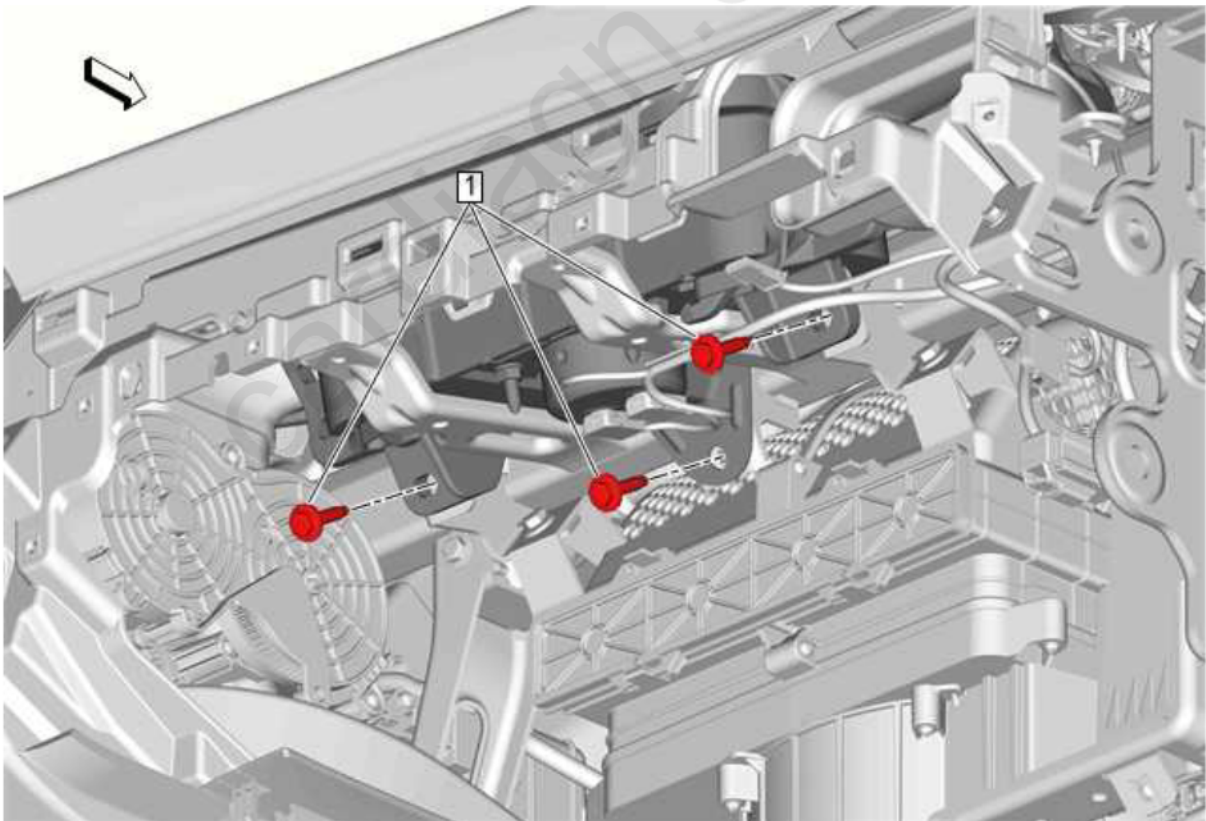


Fig. 18: Instrument Panel Airbag Bolt
 Courtesy of GENERAL MOTORS COMPANY

11. Instrument Panel Upper Trim Panel (1)» Remove

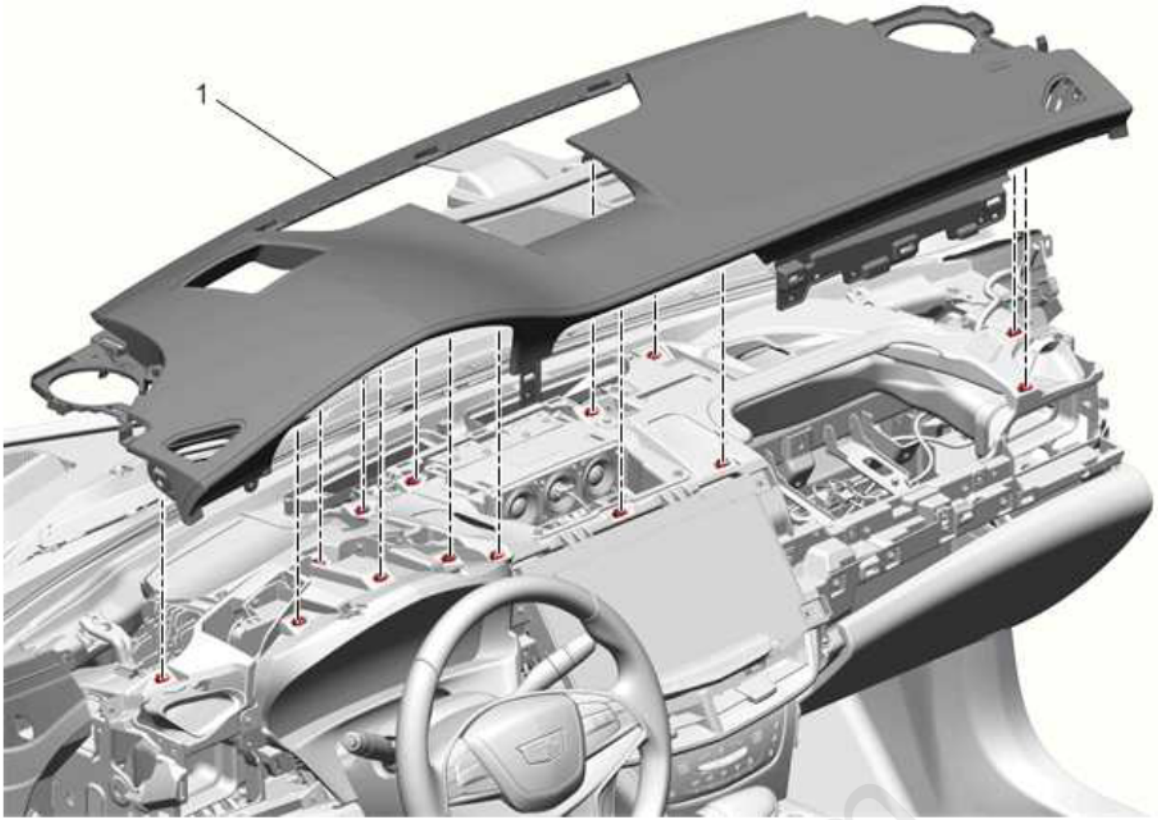


Fig. 19: Instrument Panel Upper Trim Panel
Courtesy of GENERAL MOTORS COMPANY

12. Disconnect electrical connections, if applicable.
13. With the aid of an assistant, remove the instrument panel upper trim panel from the vehicle.
14. Transfer components as necessary.

Installation Procedure

1. Instrument Panel Upper Trim Panel (1) » Install

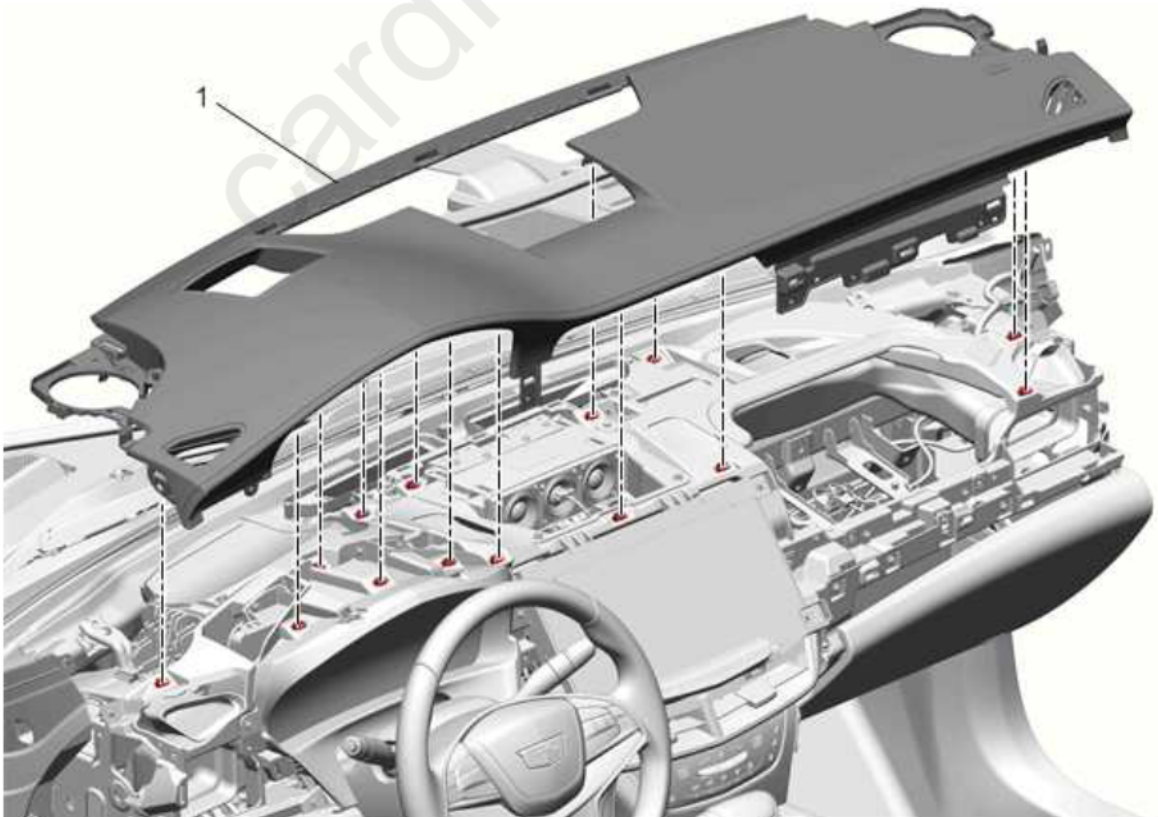


Fig. 20: Instrument Panel Upper Trim Panel
Courtesy of GENERAL MOTORS COMPANY

2. Connect electrical connections, if applicable.

3. Instrument Panel Airbag Bolt (1)A» Install and tighten [3x] 9 N.m (80 lb in)

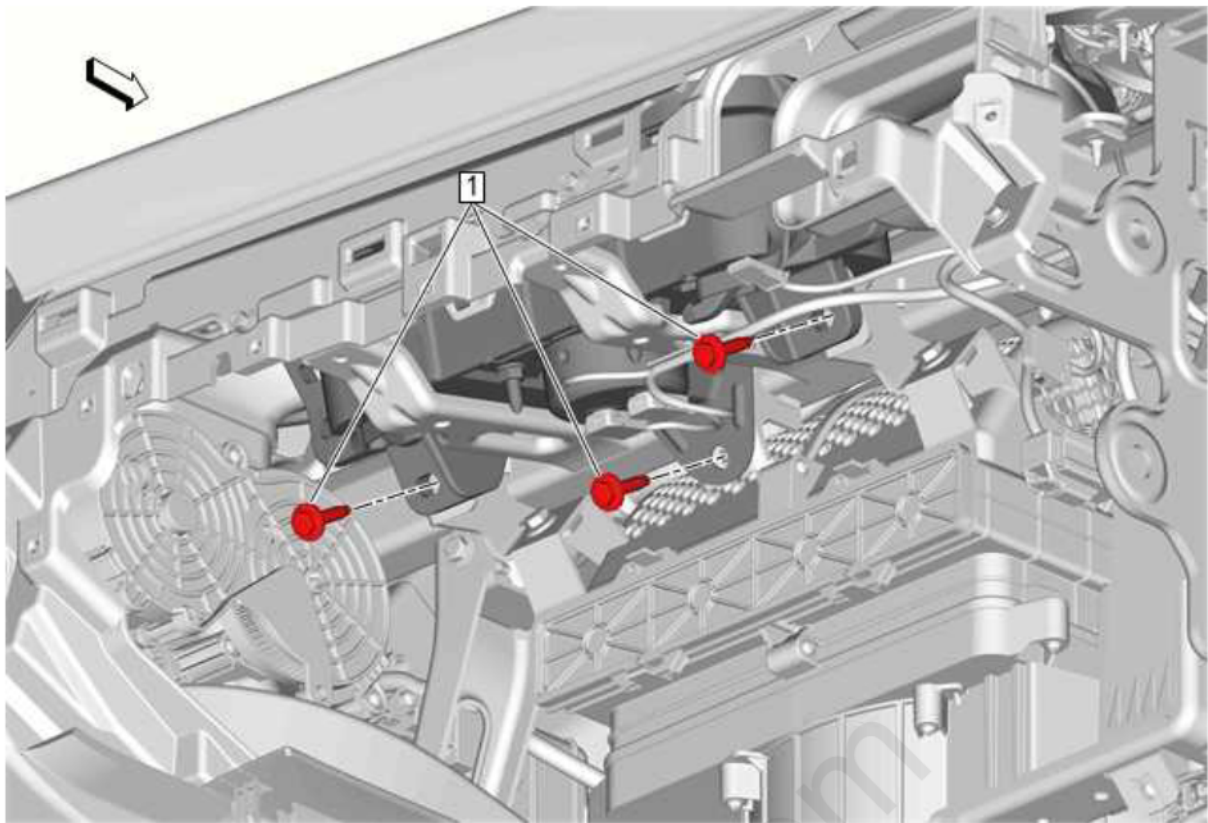


Fig. 21: Instrument Panel Airbag Bolt
Courtesy of GENERAL MOTORS COMPANY

4. Instrument Panel Accessory Trim Plate Bolt (1)A» Install and tighten [2x] 2.5 N.m (22 lb in)

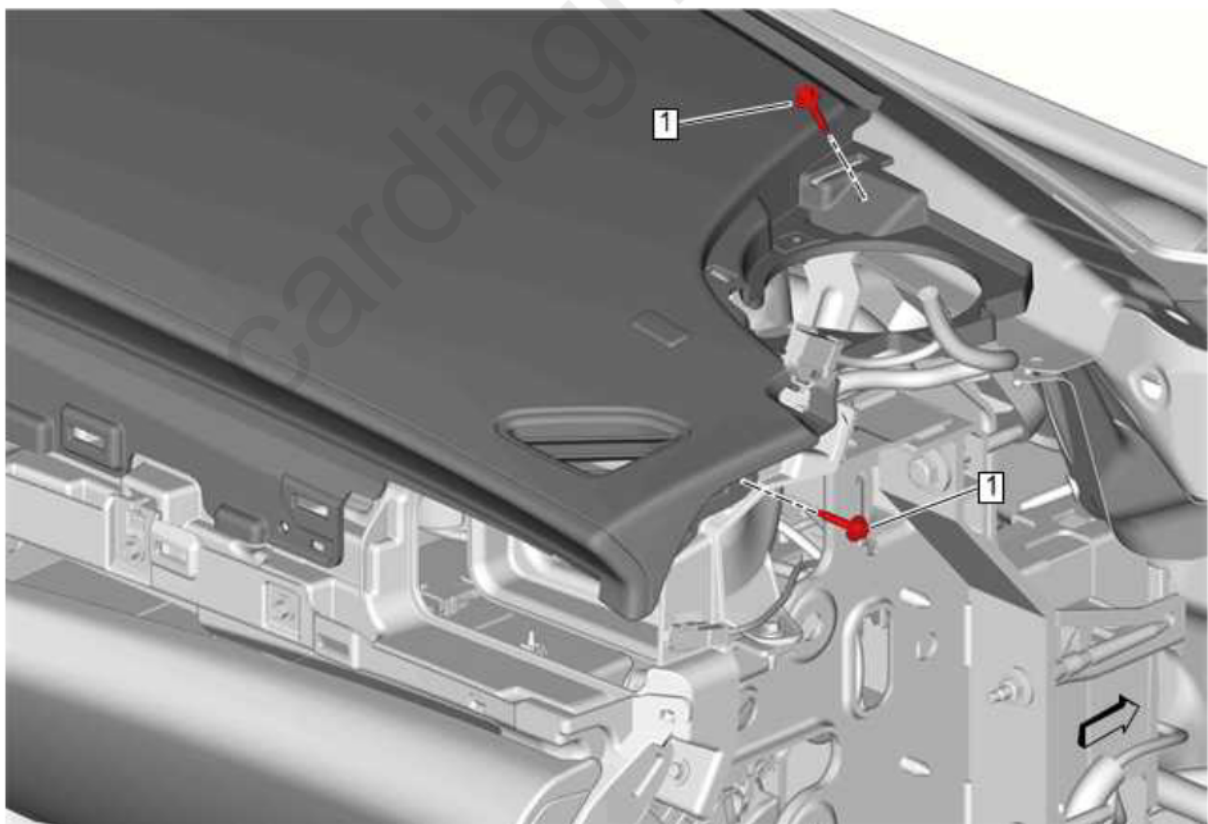


Fig. 22: Instrument Panel Accessory Trim Plate Bolt
Courtesy of GENERAL MOTORS COMPANY

5. Instrument Panel Accessory Trim Plate Bolt (1)A» Install and tighten [4x] 2.5 N.m (22 lb in)

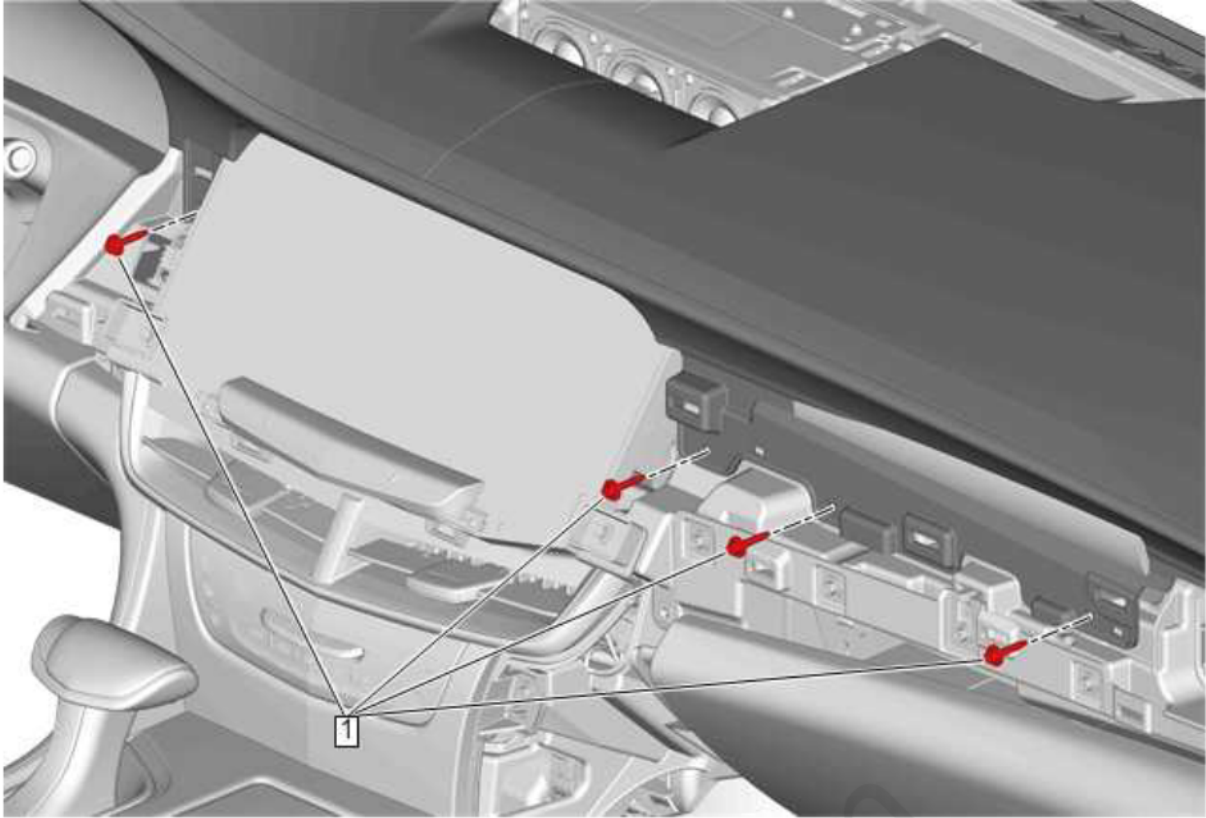


Fig. 23: Instrument Panel Accessory Trim Plate Bolt
 Courtesy of GENERAL MOTORS COMPANY

6. Instrument Panel Accessory Trim Plate Bolt (1)» Install and tighten [3x] 2.5 N.m (22 lb in)

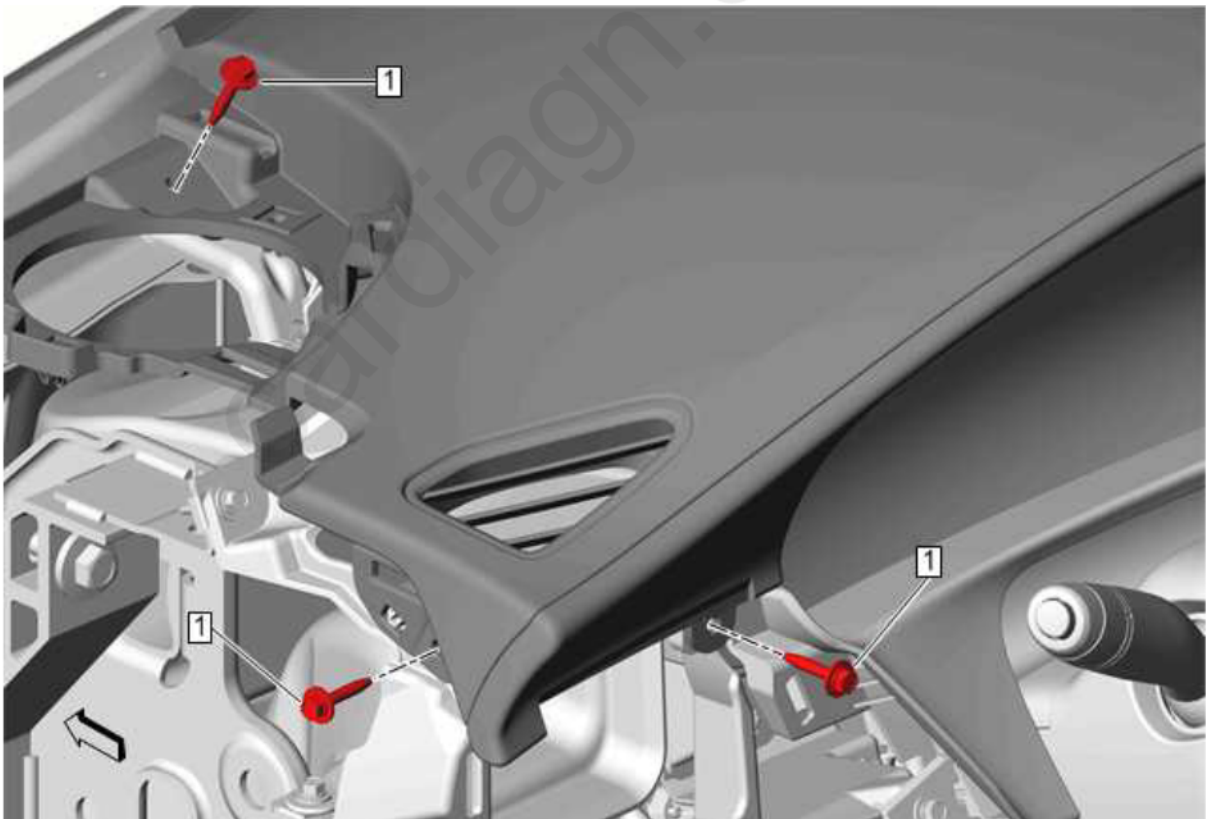


Fig. 24: Instrument Panel Accessory Trim Plate Bolt
 Courtesy of GENERAL MOTORS COMPANY

7. **Radio Front Speaker Replacement** (2)» Install

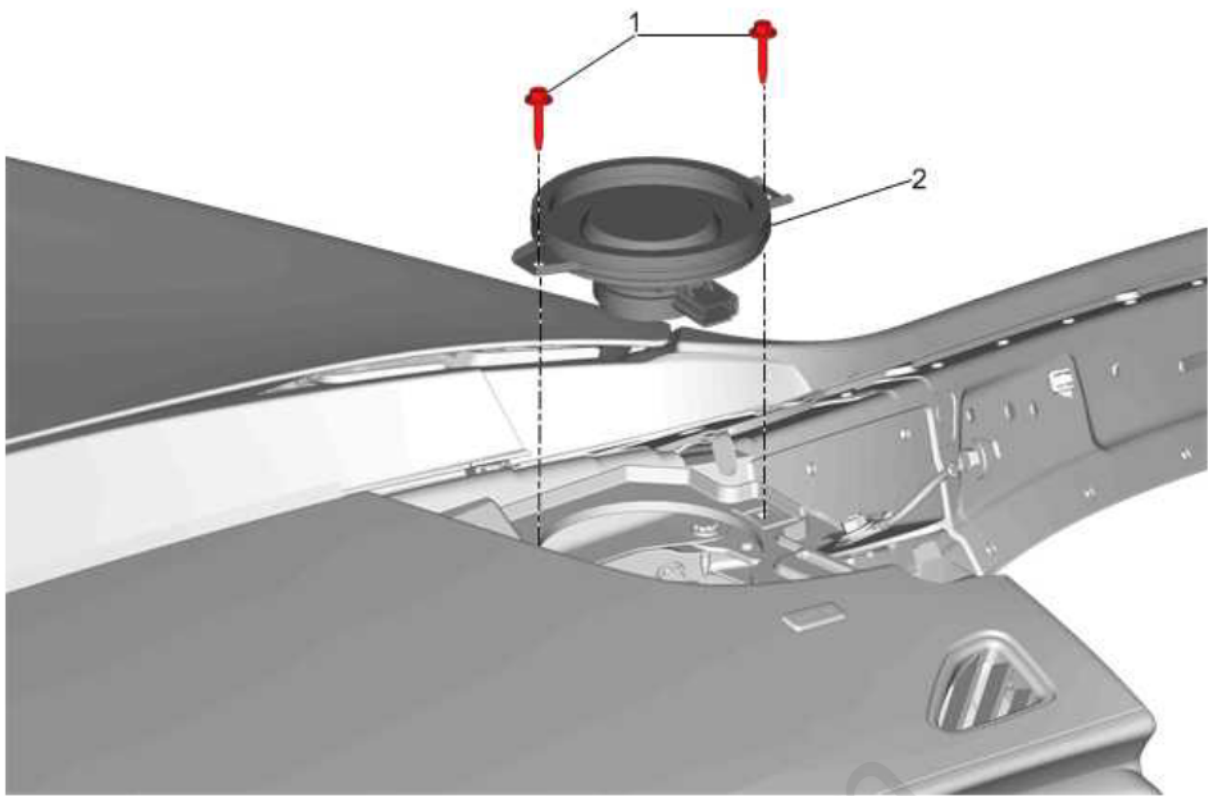


Fig. 25: Radio Front Speaker

Courtesy of GENERAL MOTORS COMPANY

8. **Instrument Panel Trim Pad Radio Center Speaker Opening Cover Replacement** (1)» Install

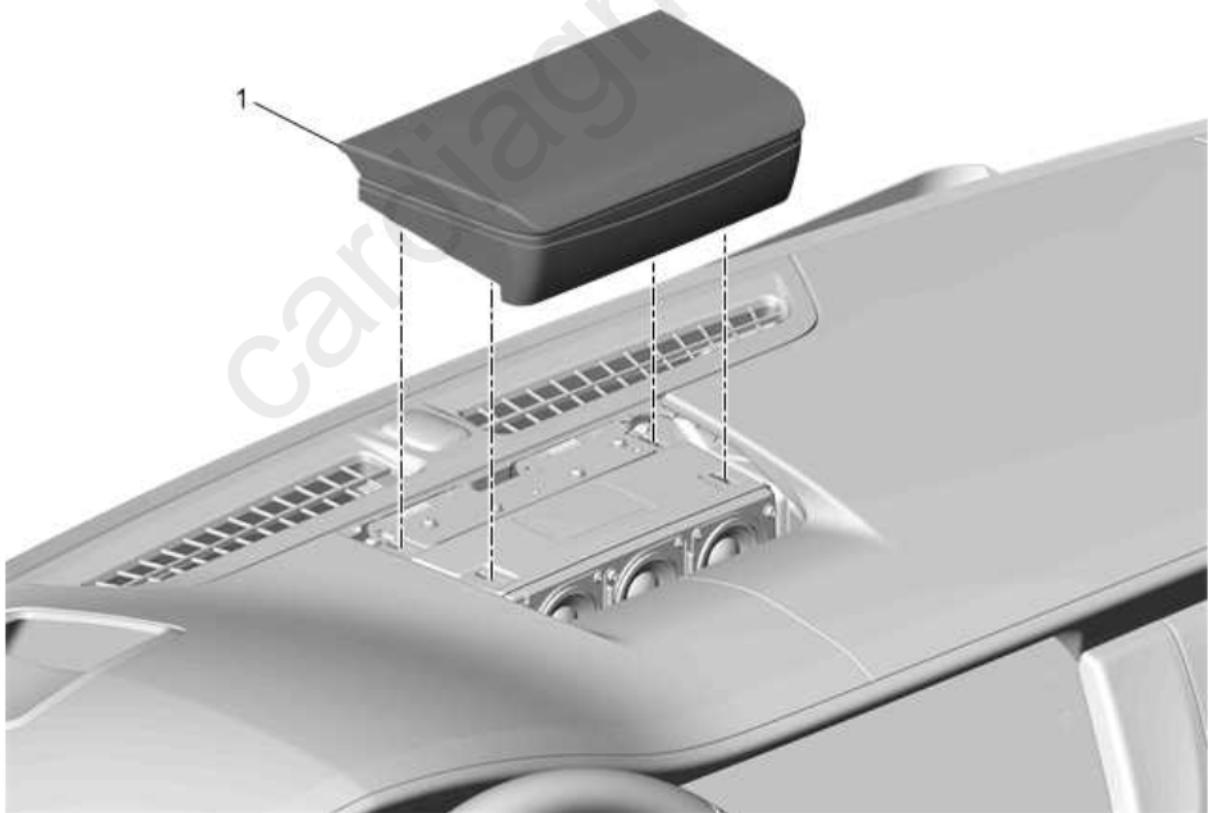


Fig. 26: Instrument Panel Trim Pad Radio Center Speaker Opening Cover

Courtesy of GENERAL MOTORS COMPANY

9. **Instrument Panel Extension Replacement** (1)» Install

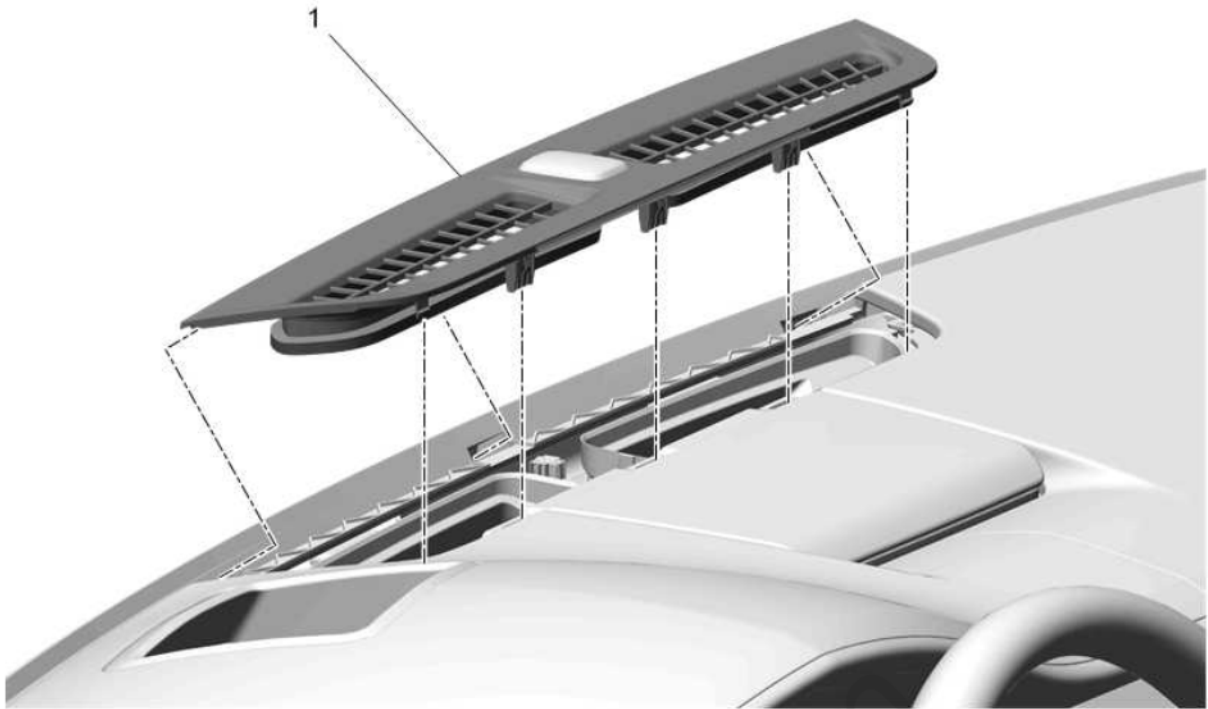


Fig. 27: Instrument Panel Extension

Courtesy of GENERAL MOTORS COMPANY

10. **Instrument Panel Compartment Replacement** (2) » Install

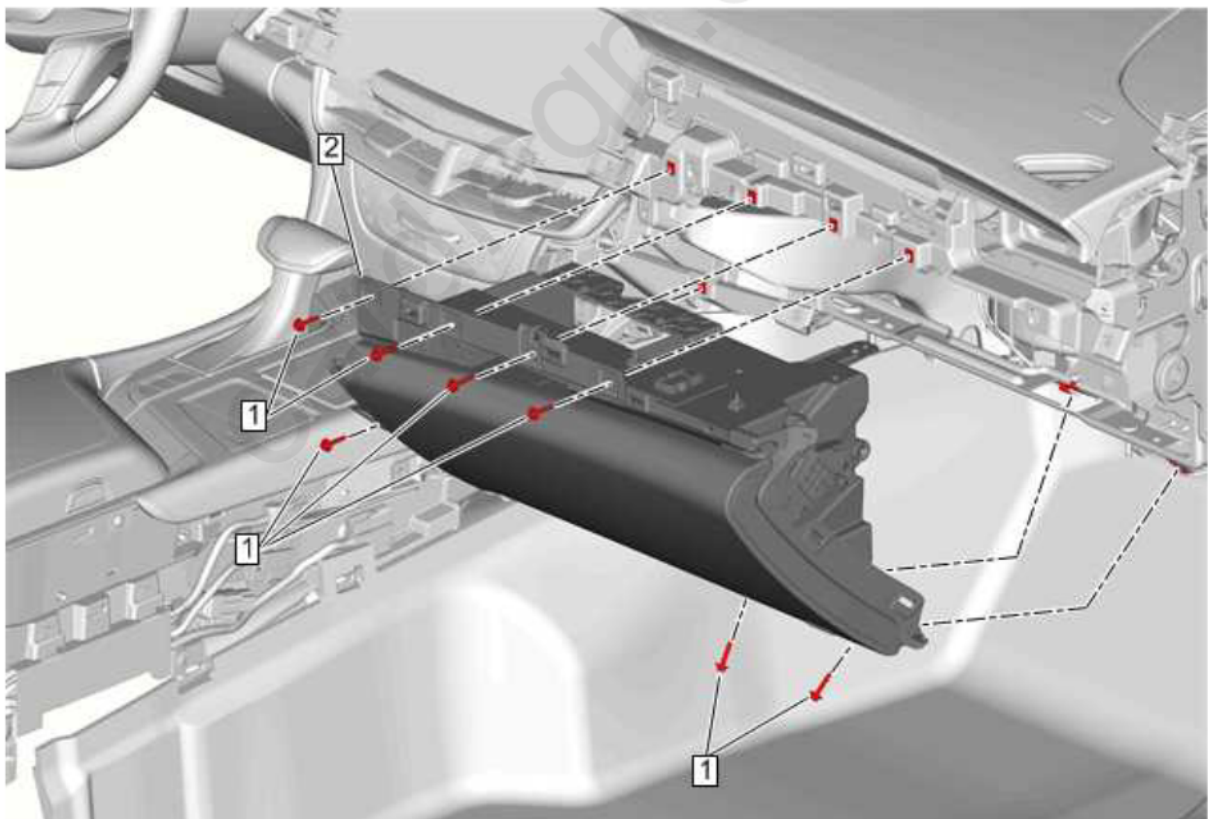


Fig. 28: Instrument Panel Compartment

Courtesy of GENERAL MOTORS COMPANY

11. **Instrument Panel Lower Trim Plate Applique Replacement - Left Side** (1) » Install

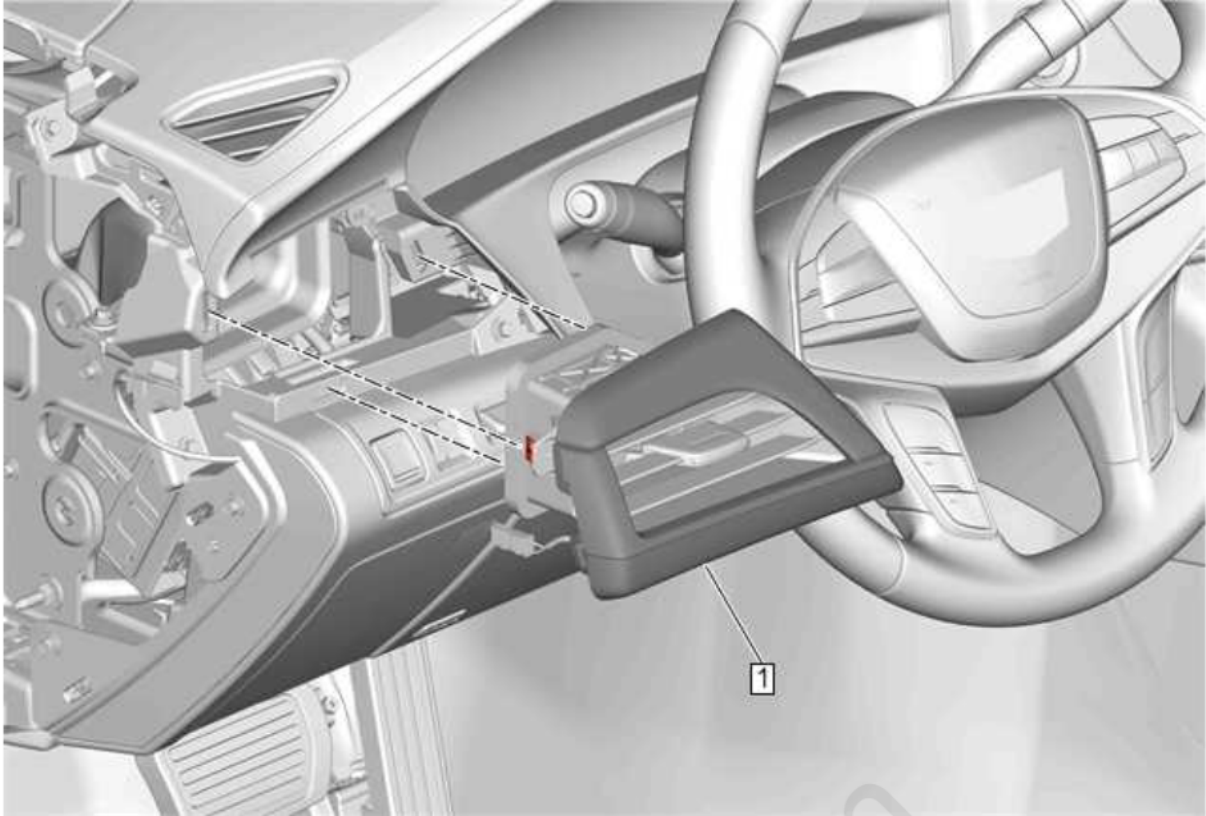


Fig. 29: Instrument Panel Lower Trim Plate Applique - Left Side
 Courtesy of GENERAL MOTORS COMPANY

12. **Instrument Panel Lower Trim Plate Applique Replacement - Right Side** (2)» Install

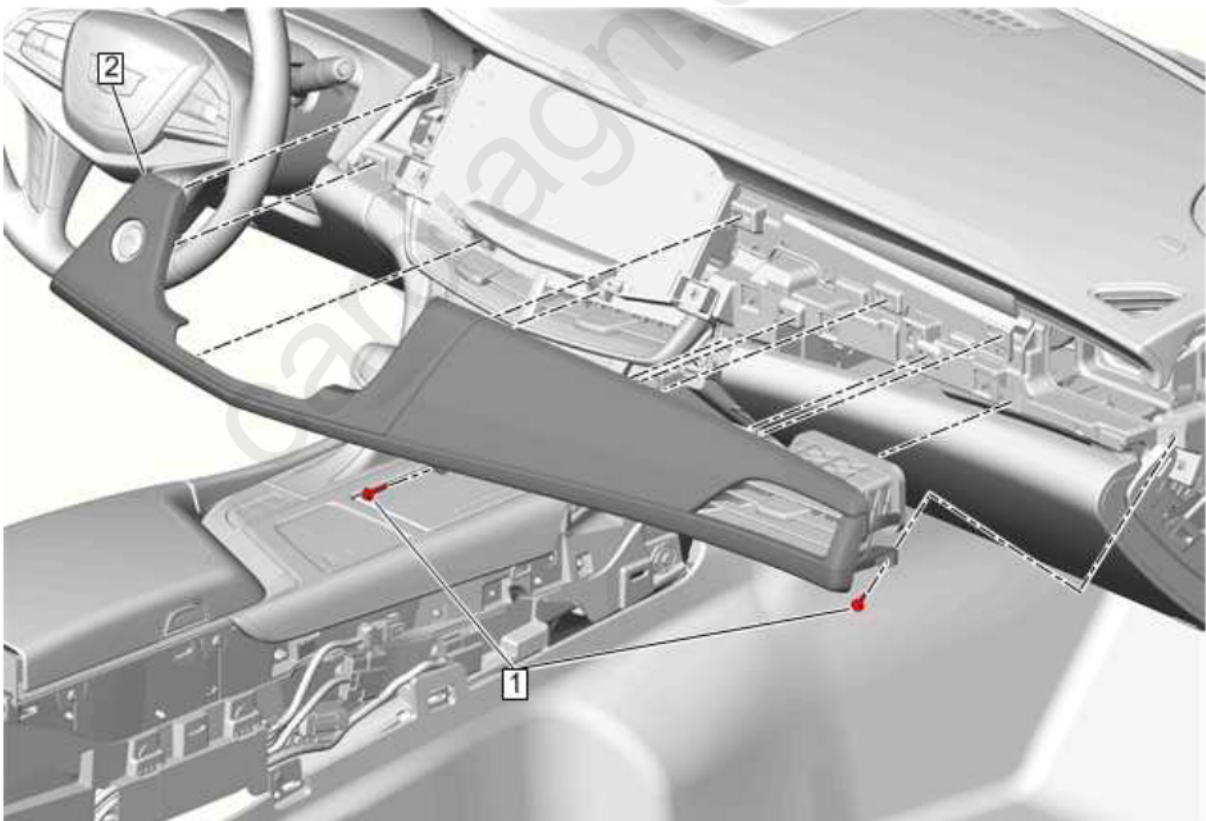


Fig. 30: Instrument Panel Lower Trim Plate Applique
 Courtesy of GENERAL MOTORS COMPANY

INSTRUMENT PANEL UPPER TRIM PANEL BRACKET REPLACEMENT

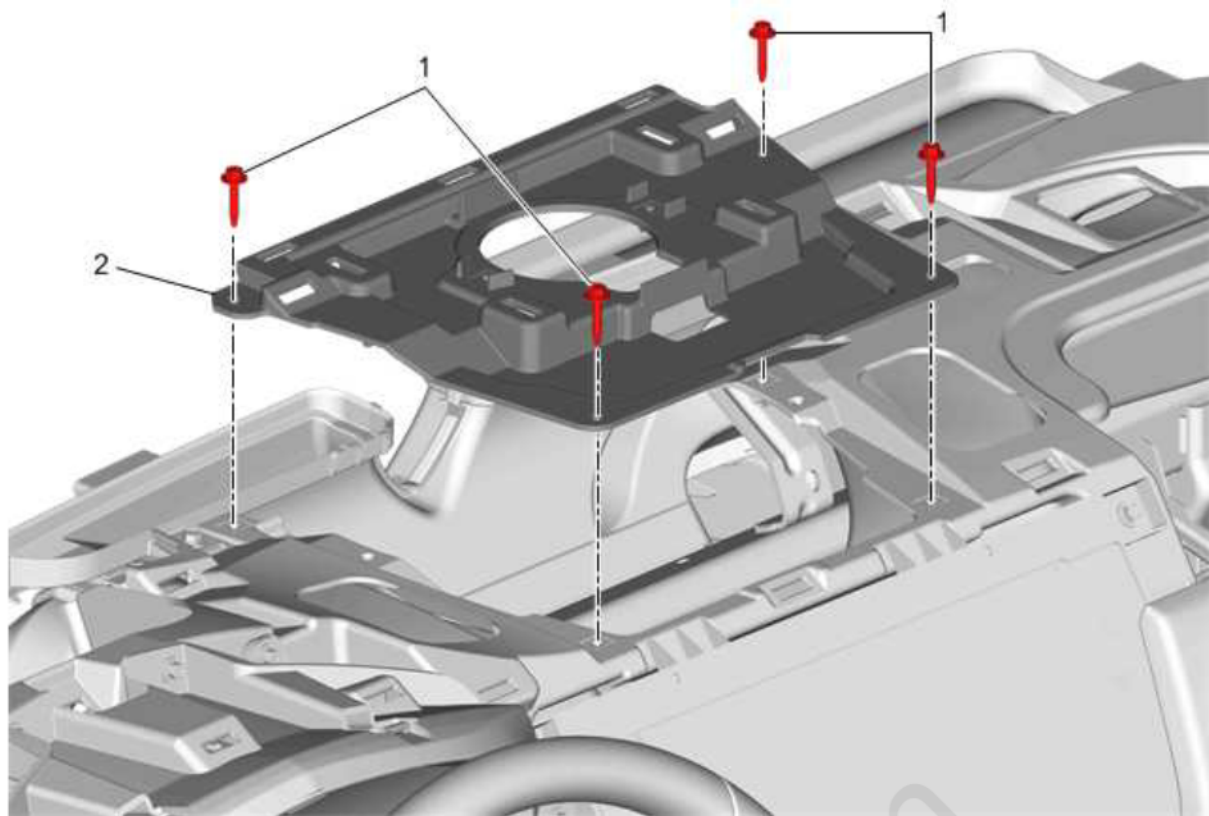


Fig. 31: Instrument Panel Upper Trim Panel Bracket
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
<u>Instrument Panel Upper Trim Panel Replacement</u>	
1	Instrument Panel Upper Trim Panel Bracket Bolt [4x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Instrument Panel Upper Trim Panel Bracket

INSTRUMENT PANEL ACCESSORY BEZEL REPLACEMENT

Removal Procedure

1. Instrument Panel Outer Trim Cover - Left (1)» Remove - **Instrument Panel Outer Trim Cover Replacement**

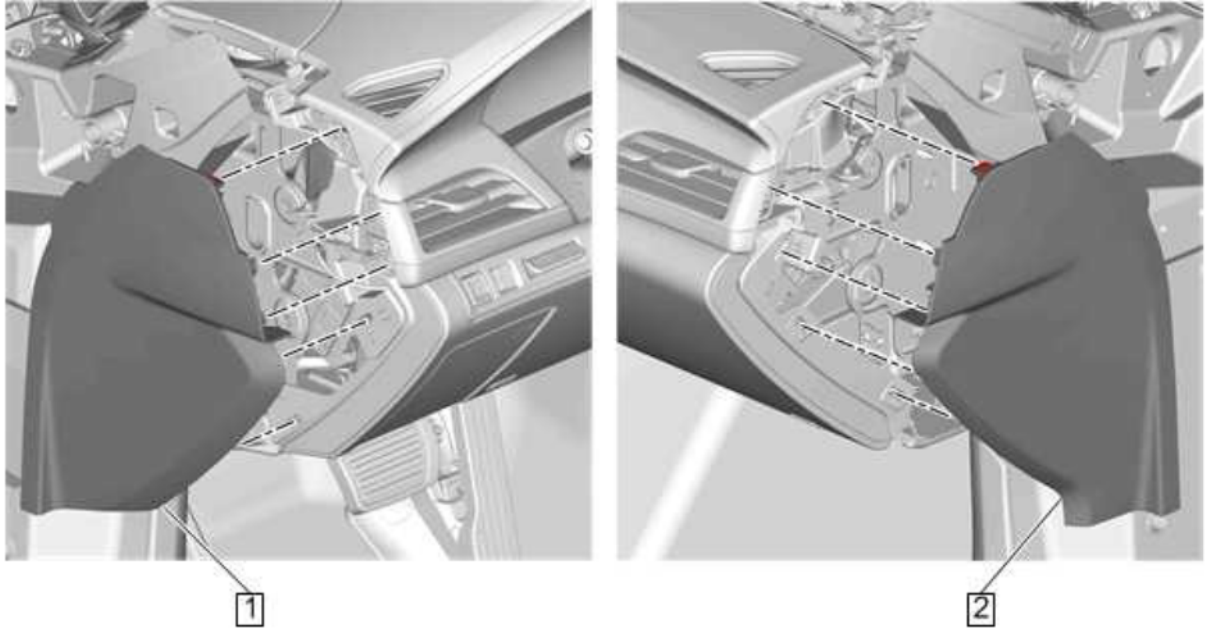


Fig. 32: Instrument Panel Outer Trim Cover

Courtesy of GENERAL MOTORS COMPANY

2. Instrument Panel Lower Trim Plate Applique - Left Side (2)» Remove - **Instrument Panel Lower Trim Plate Applique Replacement - Left Side**

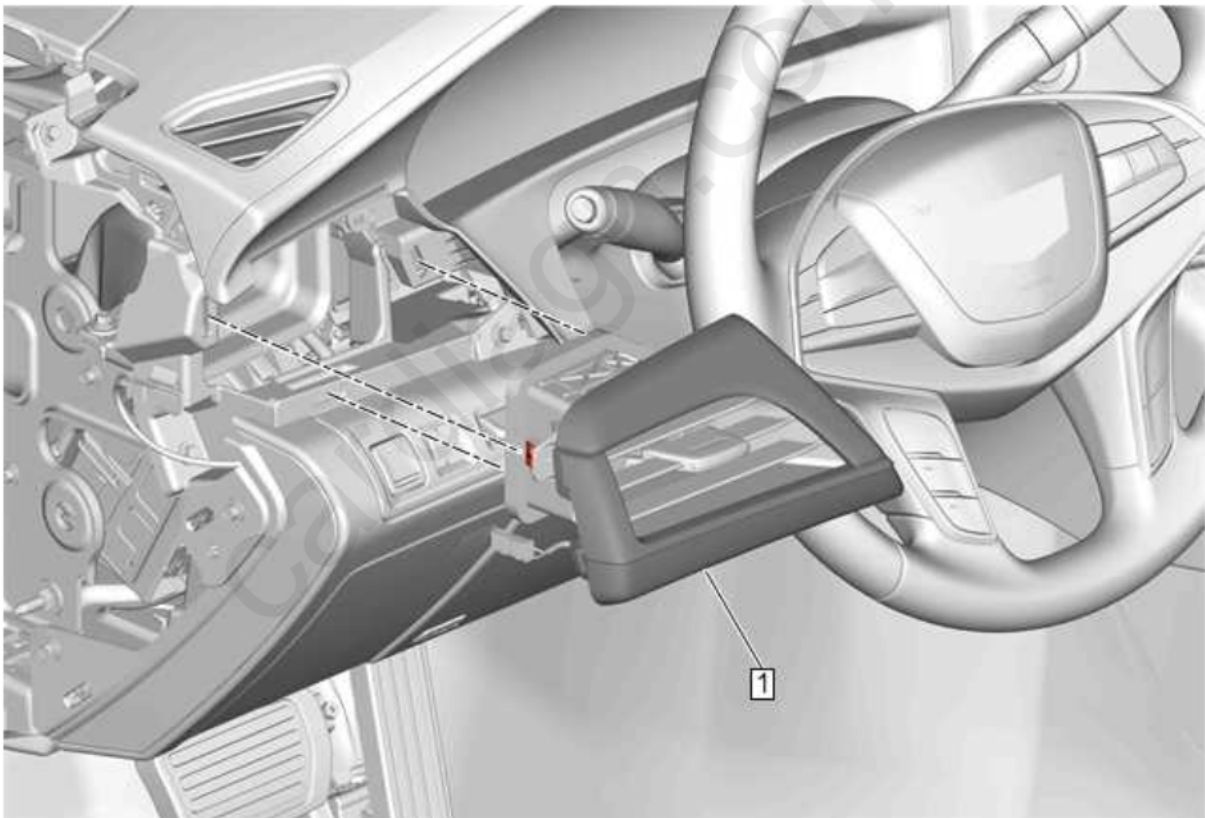


Fig. 33: Instrument Panel Lower Trim Plate Applique - Left Side

Courtesy of GENERAL MOTORS COMPANY

3. Tape off or use a soft material to protect the section of the bezel (1) where indicated. If not protected, the bezel (1) will rub against the cluster trim plate (2).

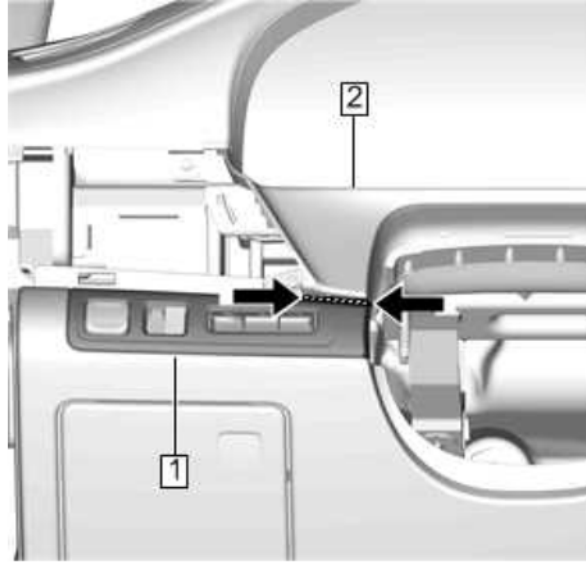


Fig. 34: Bezel and Cluster Trim Plate

Courtesy of GENERAL MOTORS COMPANY

CAUTION: Be sure to follow the service procedure when removing the trim panel. Failure to follow service procedure may cause damage to the trim panel.

NOTE: For clarity the steering wheel and column have been removed in the illustrations.

4. Release the retainer clip with a plastic trim tool on the inboard side of the instrument panel accessory bezel (1). Clear the right edge from the instrument panel cluster trim plate.

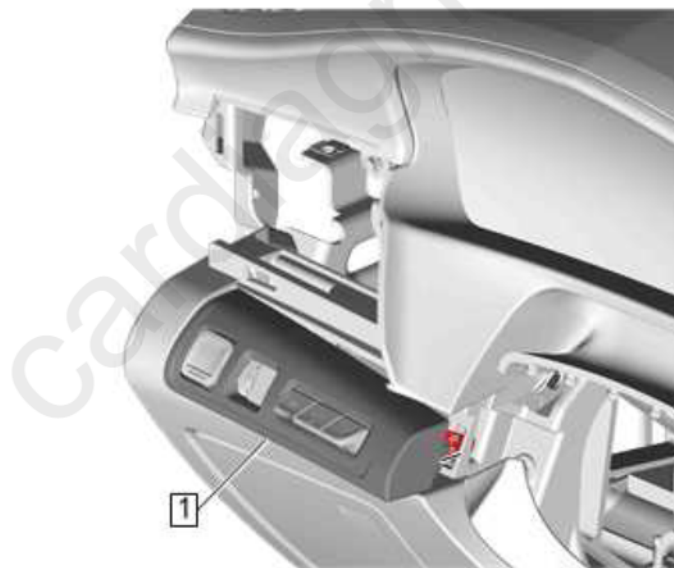


Fig. 35: View Of Instrument Panel Accessory Bezel

Courtesy of GENERAL MOTORS COMPANY

5. Slide the instrument panel accessory bezel (1) to the right to release the tab from the instrument panel knee bolster.



Fig. 36: Instrument Panel Accessory Bezel
Courtesy of GENERAL MOTORS COMPANY

6. Instrument Panel Accessory Bezel (1) » Remove

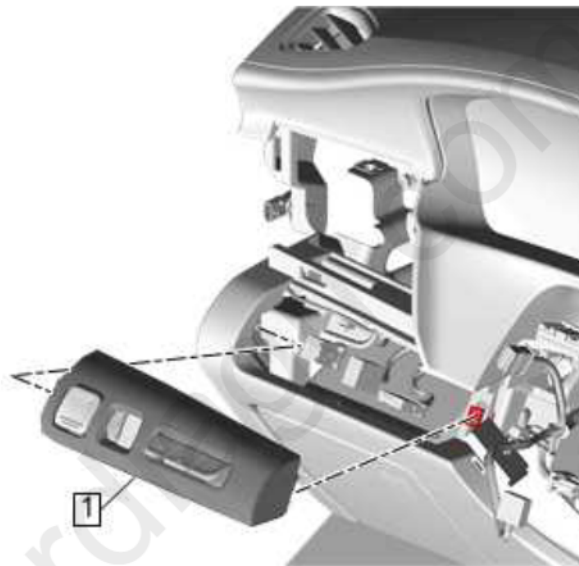


Fig. 37: Instrument Panel Accessory Bezel
Courtesy of GENERAL MOTORS COMPANY

7. Disconnect the electrical connectors.
8. Transfer components as necessary.

Installation Procedure

1. Connect the electrical connectors.

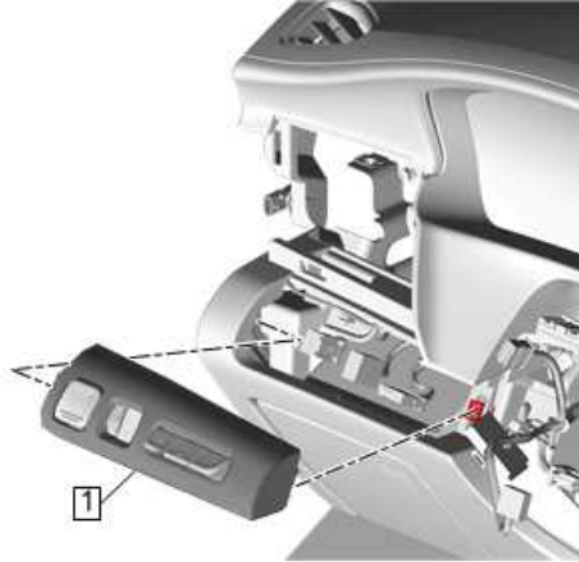


Fig. 38: Instrument Panel Accessory Bezel
Courtesy of GENERAL MOTORS COMPANY

2. Add tape to the area of the bezel that may interfere with the instrument panel cluster trim plate.

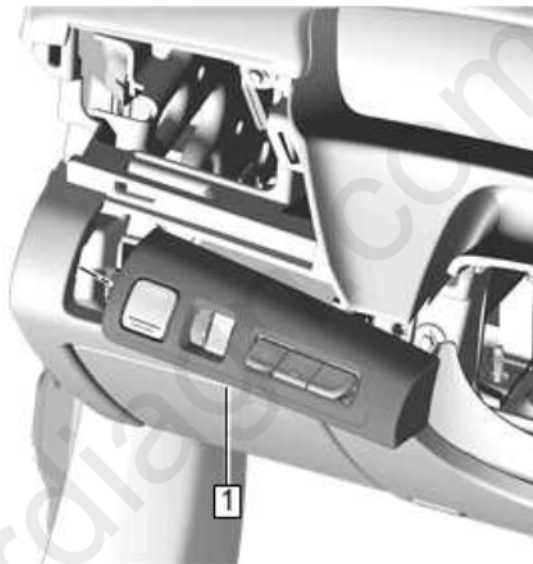
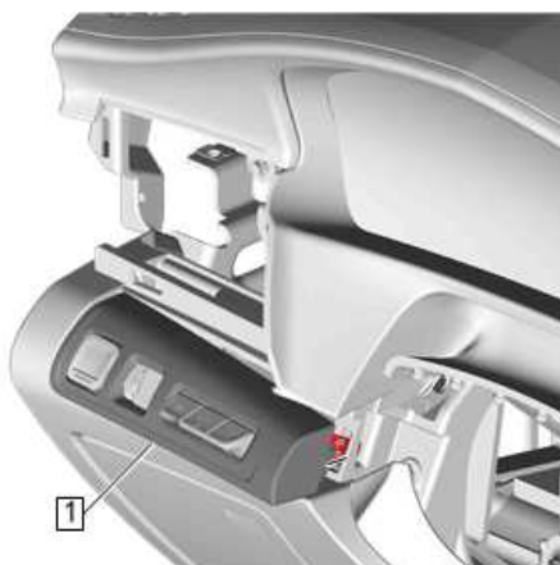


Fig. 39: Instrument Panel Accessory Bezel
Courtesy of GENERAL MOTORS COMPANY

3. Insert the instrument panel accessory bezel tab (1) into the instrument panel knee bolster careful to clear the instrument panel cluster trim plate.
4. Engage the instrument panel accessory bezel retainer clip (1) into the instrument panel knee bolster.



5. Remove the protective material from the instrument panel accessory bezel (1).
6. Instrument Panel Lower Trim Plate Applique - Left Side (1)» Install - [Instrument Panel Lower Trim Plate Applique Replacement - Left Side](#)

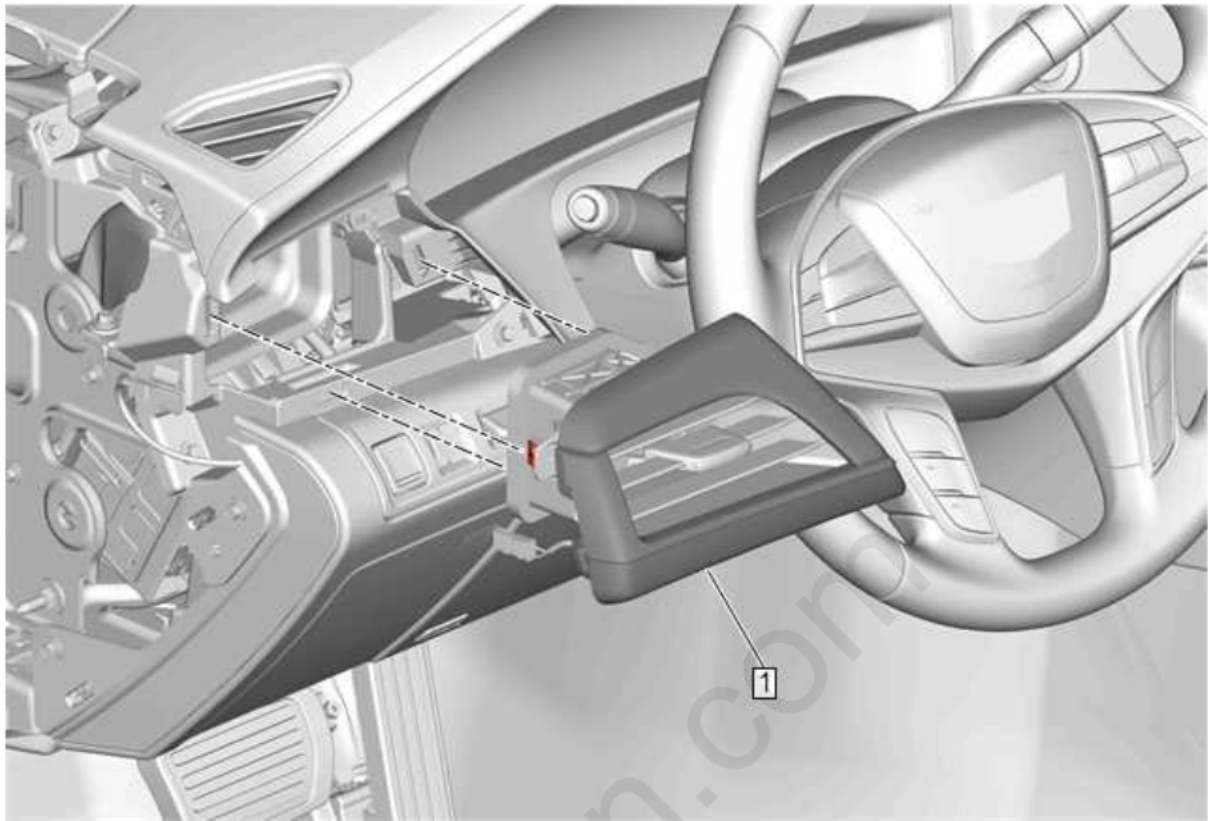


Fig. 41: Instrument Panel Lower Trim Plate Applique - Left Side
Courtesy of GENERAL MOTORS COMPANY

7. Instrument Panel Outer Trim Cover - Left (1)» Install - [Instrument Panel Outer Trim Cover Replacement](#)

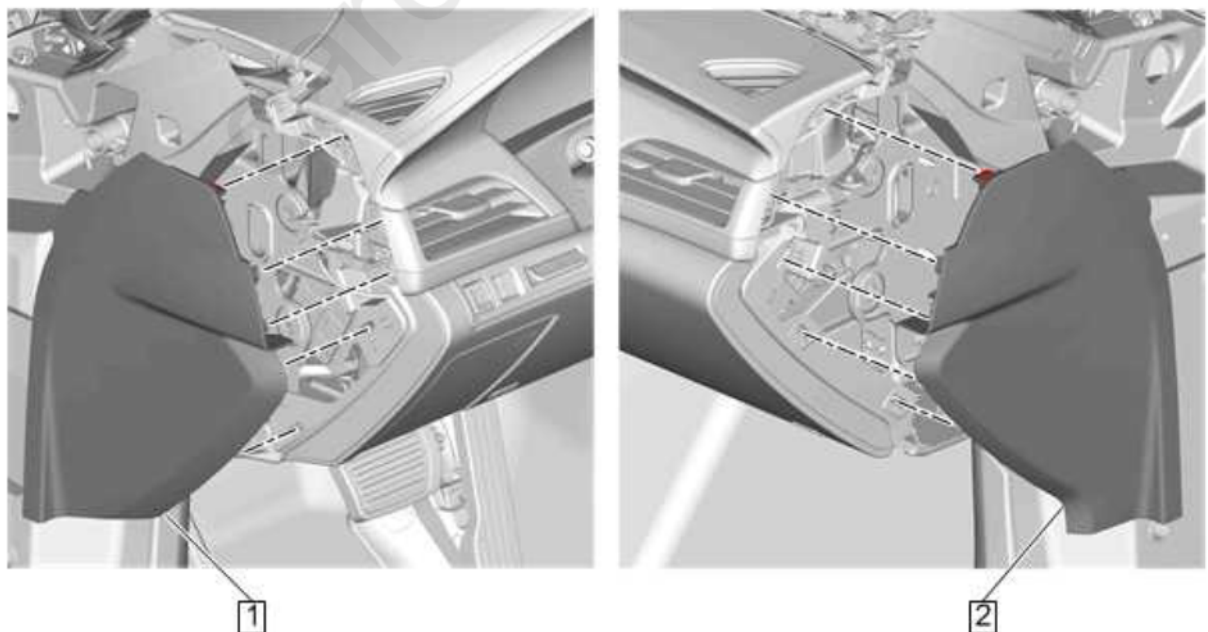


Fig. 42: Instrument Panel Outer Trim Cover
Courtesy of GENERAL MOTORS COMPANY

INSTRUMENT PANEL TRIM PAD RADIO CENTER SPEAKER OPENING COVER REPLACEMENT

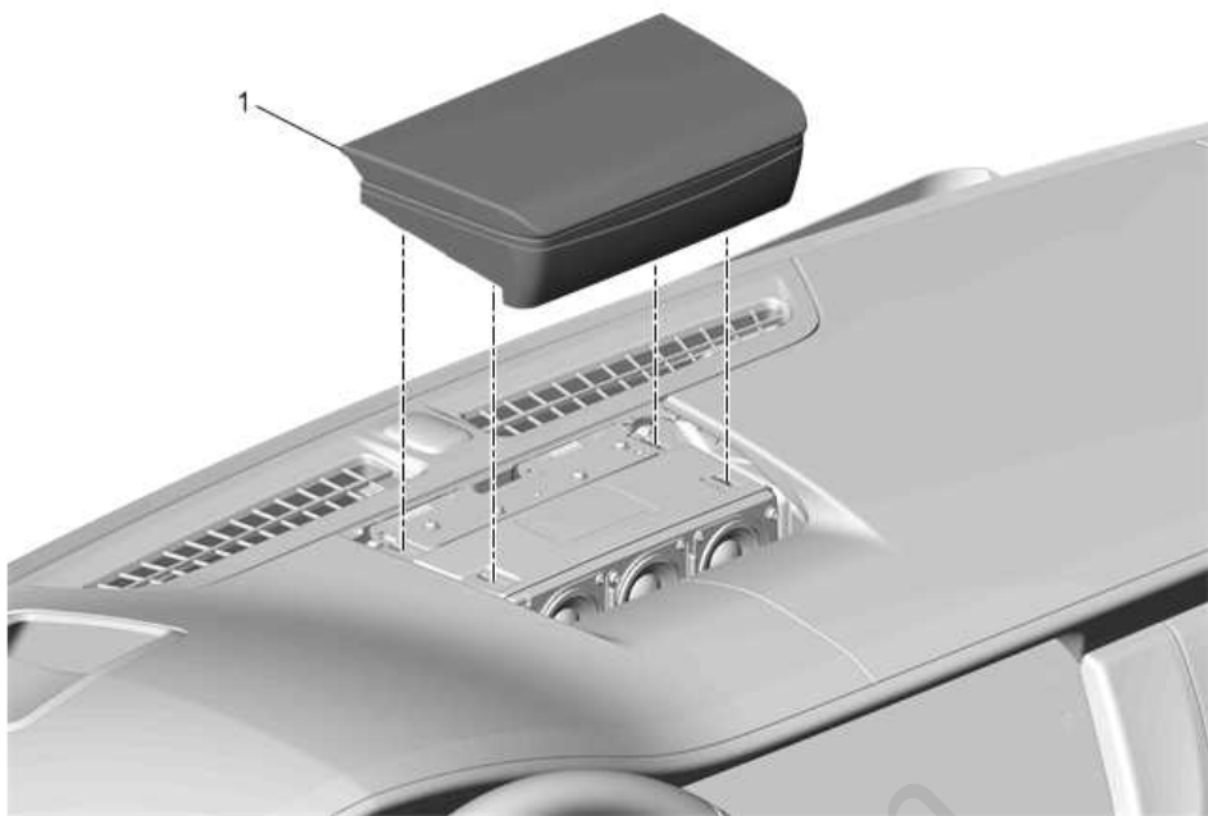


Fig. 43: Instrument Panel Trim Pad Radio Center Speaker Opening Cover
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Instrument Panel Trim Pad Radio Center Speaker Opening Cover Procedure Use a flat bladed plastic tool to remove.

INSTRUMENT PANEL CLUSTER TRIM PLATE REPLACEMENT

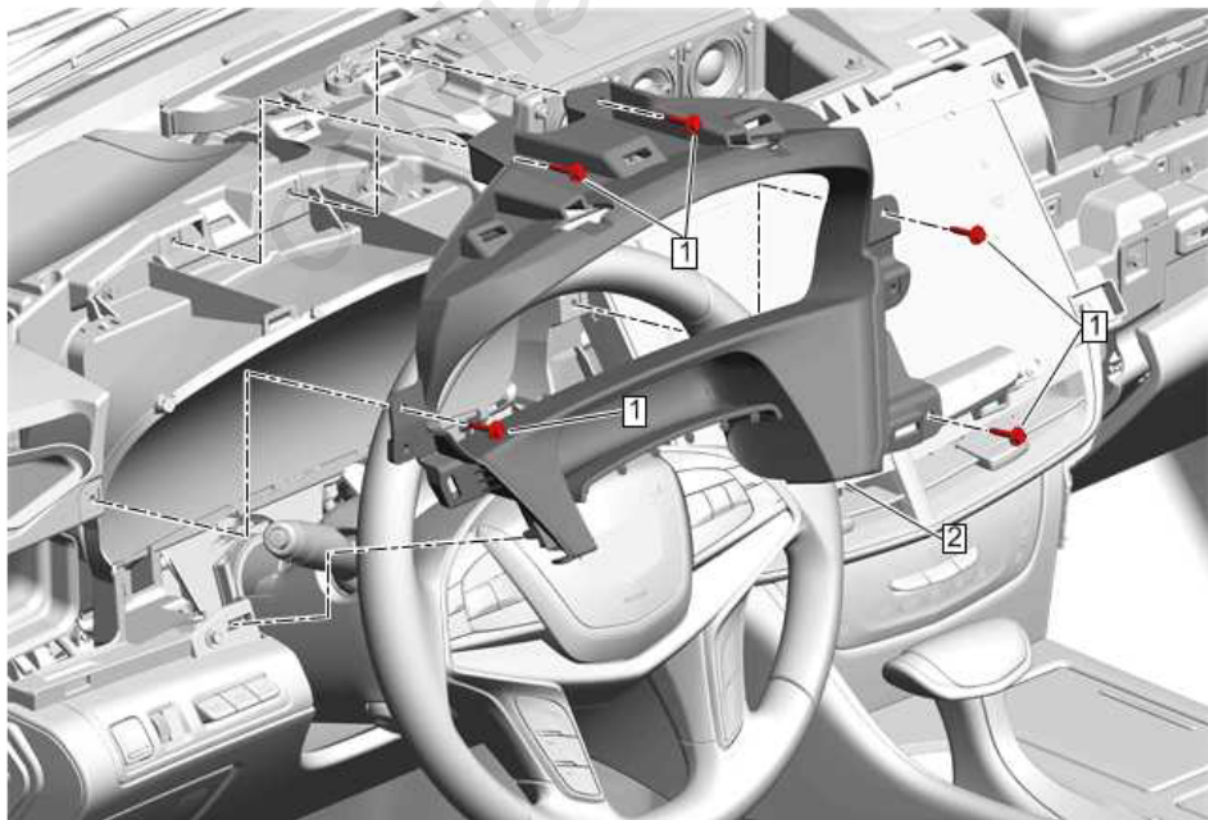


Fig. 44: Instrument Panel Cluster Trim Plate
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name

Callout	Component Name
Preliminary Procedure Instrument Panel Upper Trim Panel Replacement	
1	Instrument Panel Cluster Lower Trim Plate Bolt [5x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Instrument Panel Cluster Trim Plate Procedure Use a plastic trim tool if necessary.

INSTRUMENT PANEL OUTER TRIM COVER REPLACEMENT

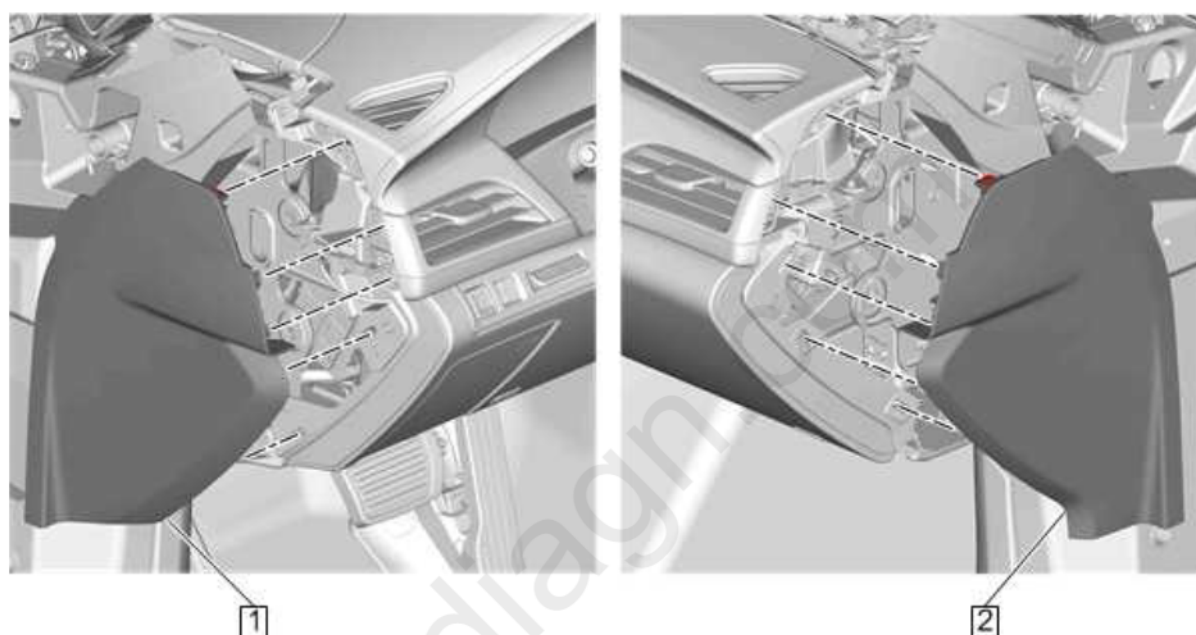


Fig. 45: Instrument Panel Outer Trim Cover
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Instrument Panel Outer Trim Cover - Left Procedure Use a flat bladed plastic trim tool.
2	Instrument Panel Outer Trim Cover - Right Procedure Use a flat bladed plastic trim tool.

INSTRUMENT PANEL COMPARTMENT SHELF REPLACEMENT (WITHOUT RPO WCN)

Removal Procedure

1. **Instrument Panel Outer Trim Cover Replacement** » Remove
2. Disconnect the instrument panel compartment door dampener from the instrument panel compartment door. (1)



Fig. 46: Instrument Panel Compartment Door Dampener
 Courtesy of GENERAL MOTORS COMPANY

3. Open the instrument panel compartment door. (1)

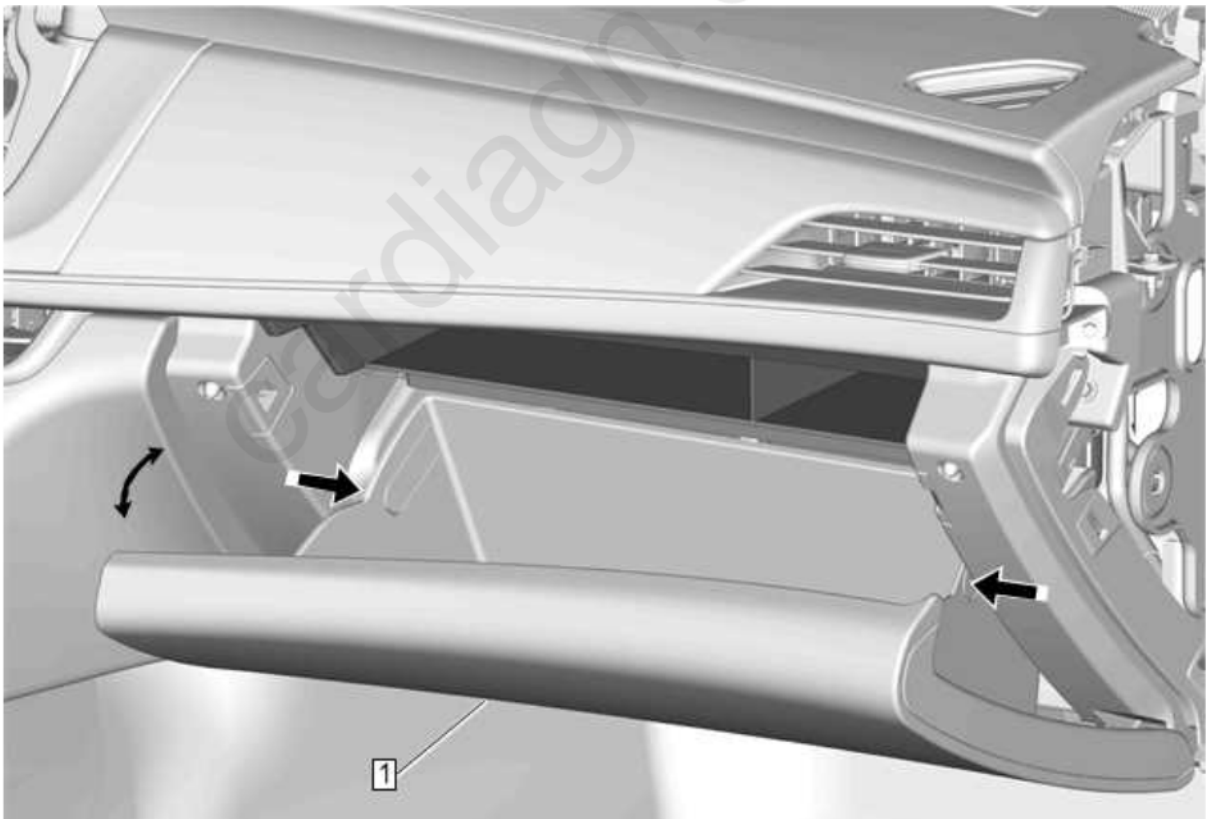


Fig. 47: Instrument Panel Compartment Door
 Courtesy of GENERAL MOTORS COMPANY

4. Squeeze the sides of the compartment and lower the compartment past the stops.
5. Instrument Panel Compartment Bolt (1) » Remove [6x]

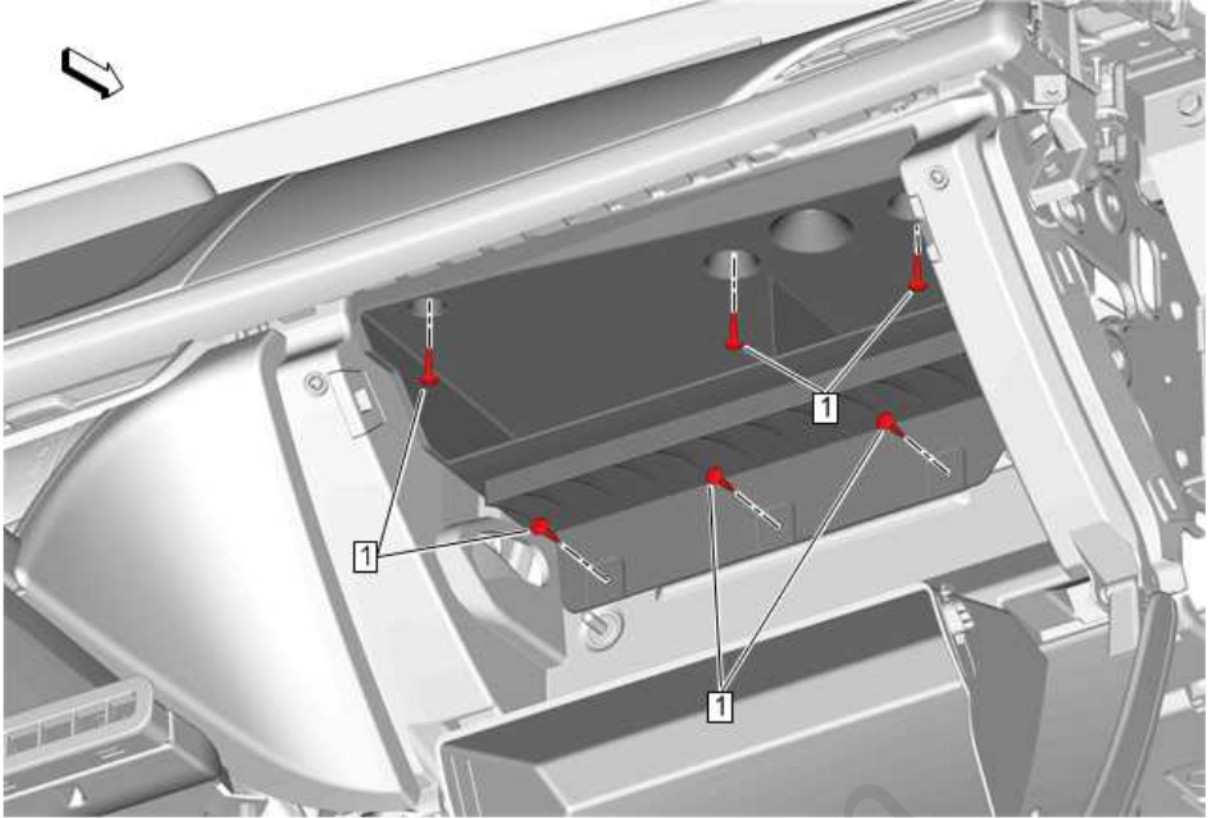


Fig. 48: Instrument Panel Compartment Bolt
 Courtesy of GENERAL MOTORS COMPANY

6. Instrument Panel Compartment Shelf (1)» Remove

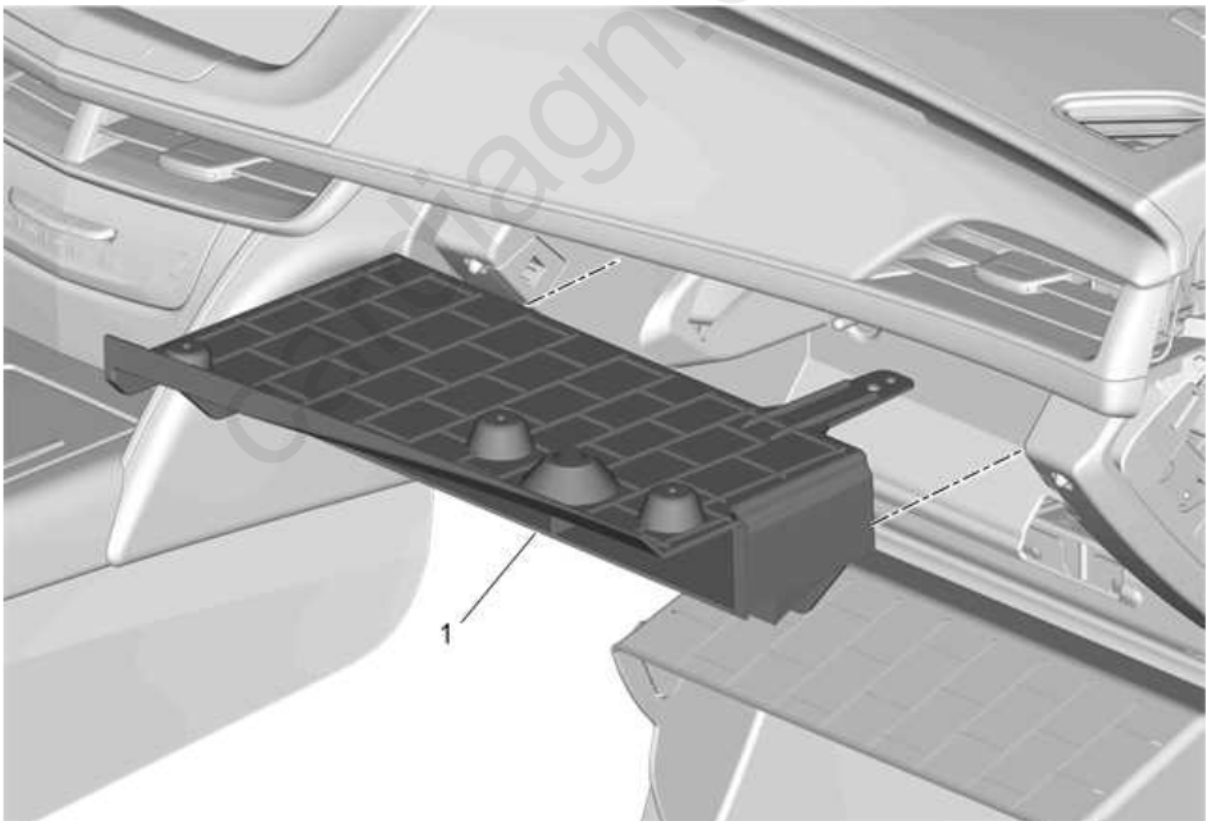


Fig. 49: Instrument Panel Compartment Shelf
 Courtesy of GENERAL MOTORS COMPANY

7. Disconnect the electrical connectors.

Installation Procedure

1. Connect the electrical connectors.

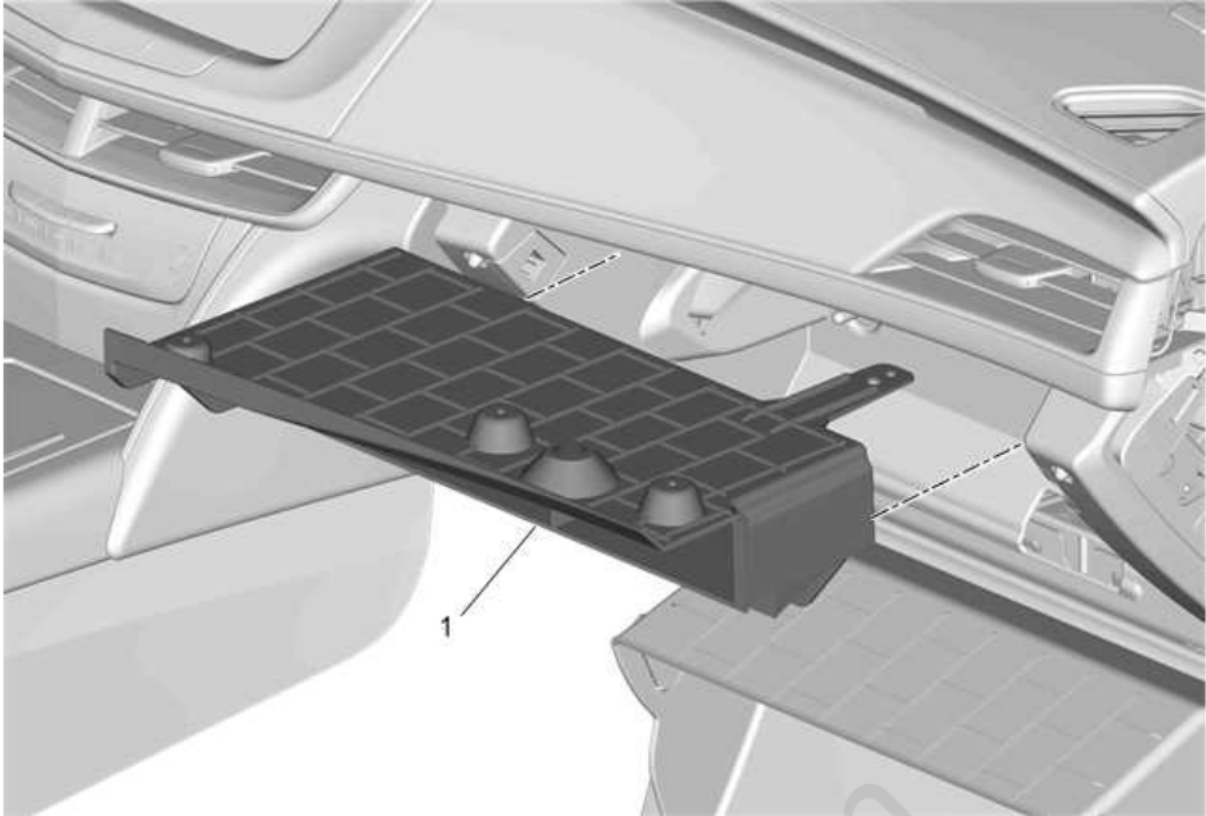


Fig. 50: Instrument Panel Compartment Shelf
Courtesy of GENERAL MOTORS COMPANY

2. Instrument Panel Compartment Shelf (1)» Install
3. Instrument Panel Compartment Bolt (1)» Install and tighten [6x] 2.5 N.m (22 lb in)

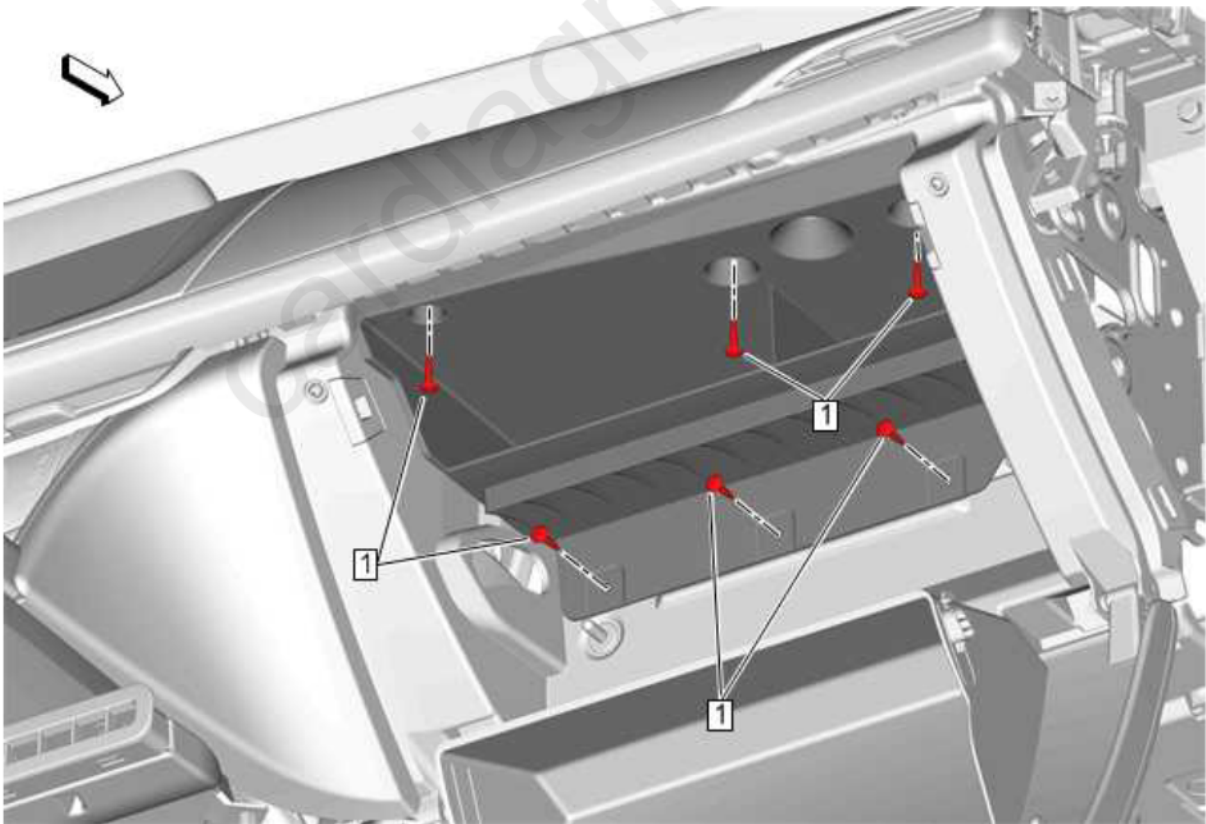


Fig. 51: Instrument Panel Compartment Bolt
Courtesy of GENERAL MOTORS COMPANY

4. Squeeze the sides of the compartment to return the compartment stops to the compartment door opening frame.

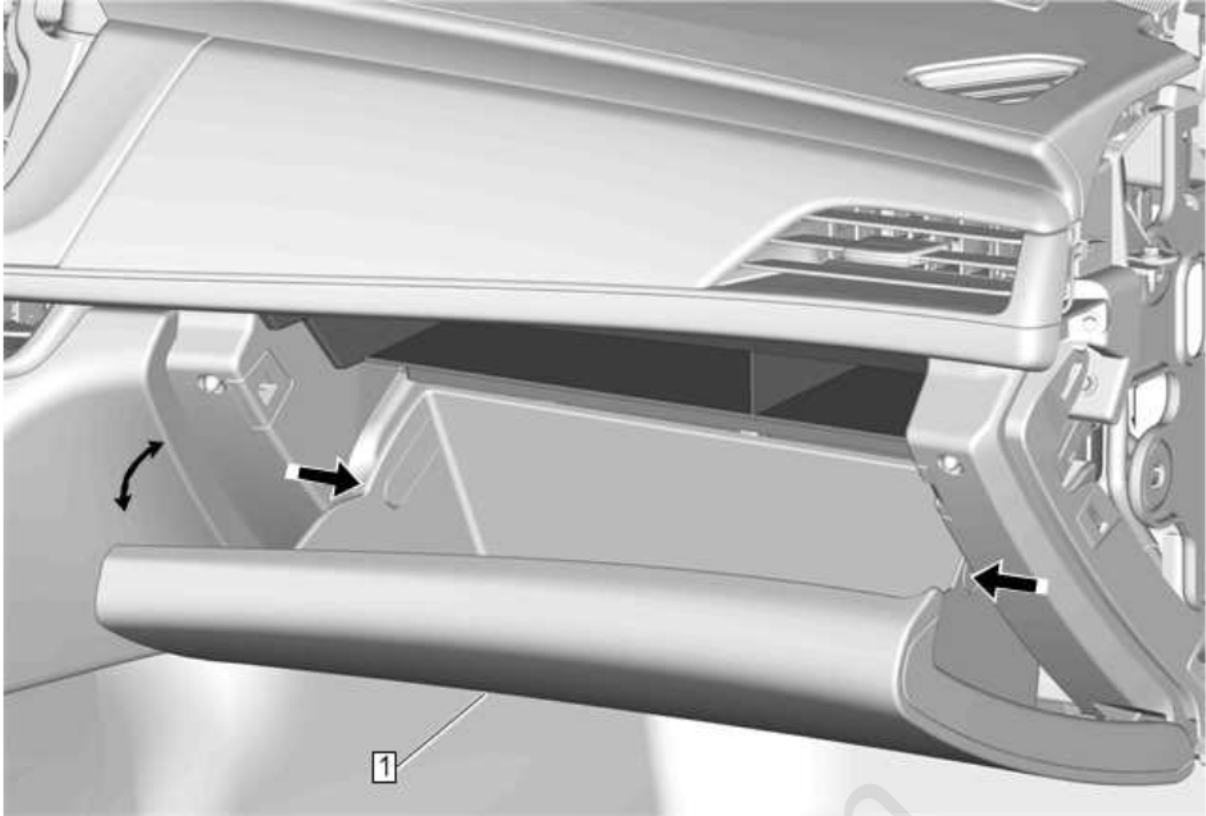


Fig. 52: Instrument Panel Compartment Door
 Courtesy of GENERAL MOTORS COMPANY

5. Close the instrument panel compartment door. (1)
6. Connect the instrument panel compartment door dampener to the instrument panel compartment door. (1)



Fig. 53: Instrument Panel Compartment Door Dampener
 Courtesy of GENERAL MOTORS COMPANY

7. **Instrument Panel Outer Trim Cover Replacement** » Install

INSTRUMENT PANEL COMPARTMENT SHELF REPLACEMENT (WITH RPO WCN)

Removal Procedure

1. **Instrument Panel Outer Trim Cover Replacement** » Remove
2. Disconnect the instrument panel compartment door dampener from the instrument panel compartment door. (1)



Fig. 54: Instrument Panel Compartment Door Dampener
Courtesy of GENERAL MOTORS COMPANY

3. Open the instrument panel compartment door. (1)

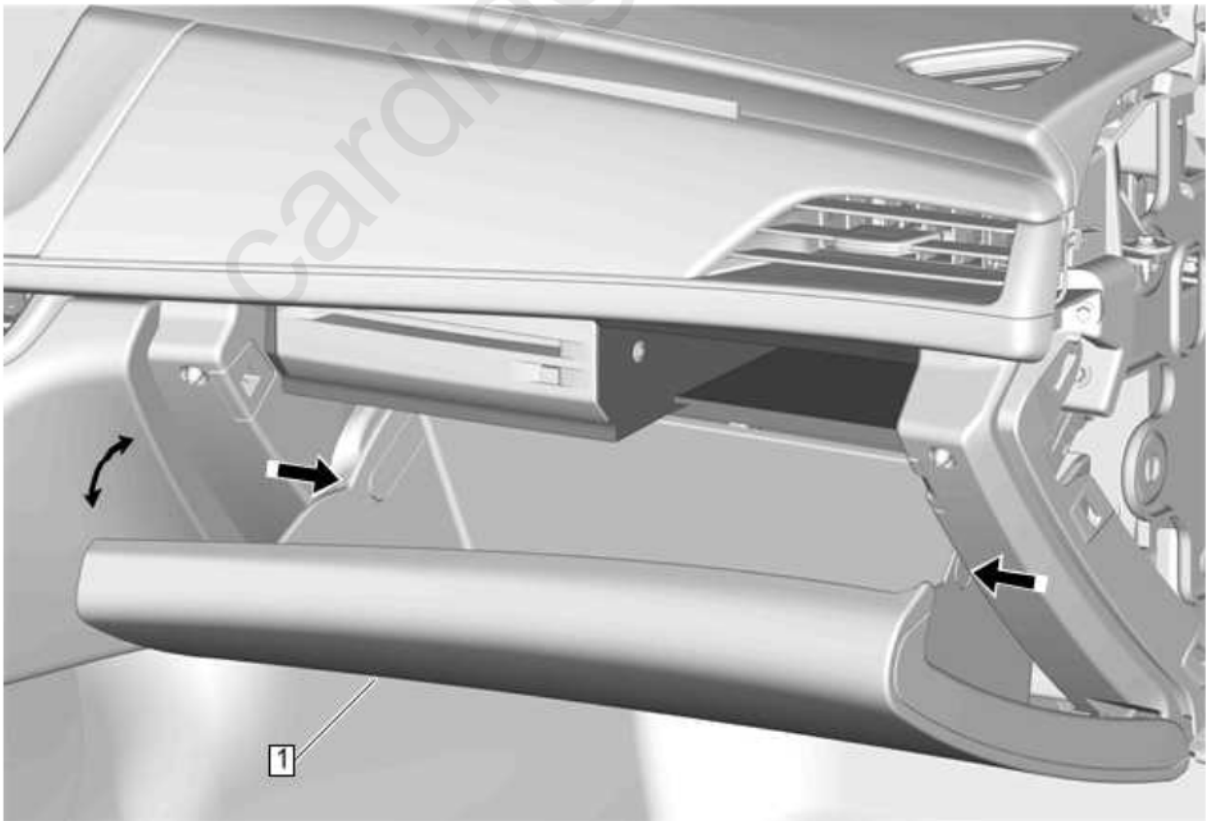


Fig. 55: Instrument Panel Compartment Door
Courtesy of GENERAL MOTORS COMPANY

4. Squeeze the sides of the compartment and lower the compartment past the stops.
5. Instrument Panel Compartment Bolt (1) » Remove [6x]

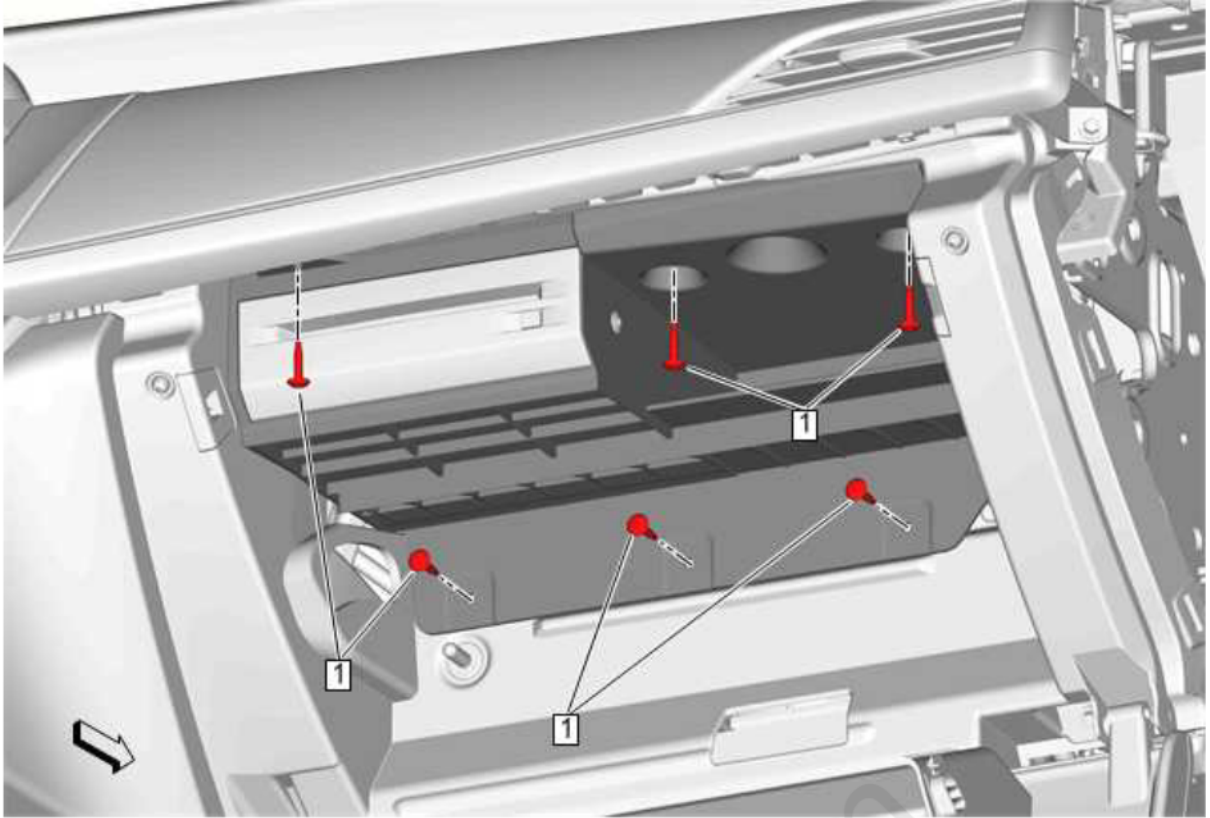


Fig. 56: Instrument Panel Compartment Bolt
 Courtesy of GENERAL MOTORS COMPANY

6. Instrument Panel Compartment Shelf (1)» Remove

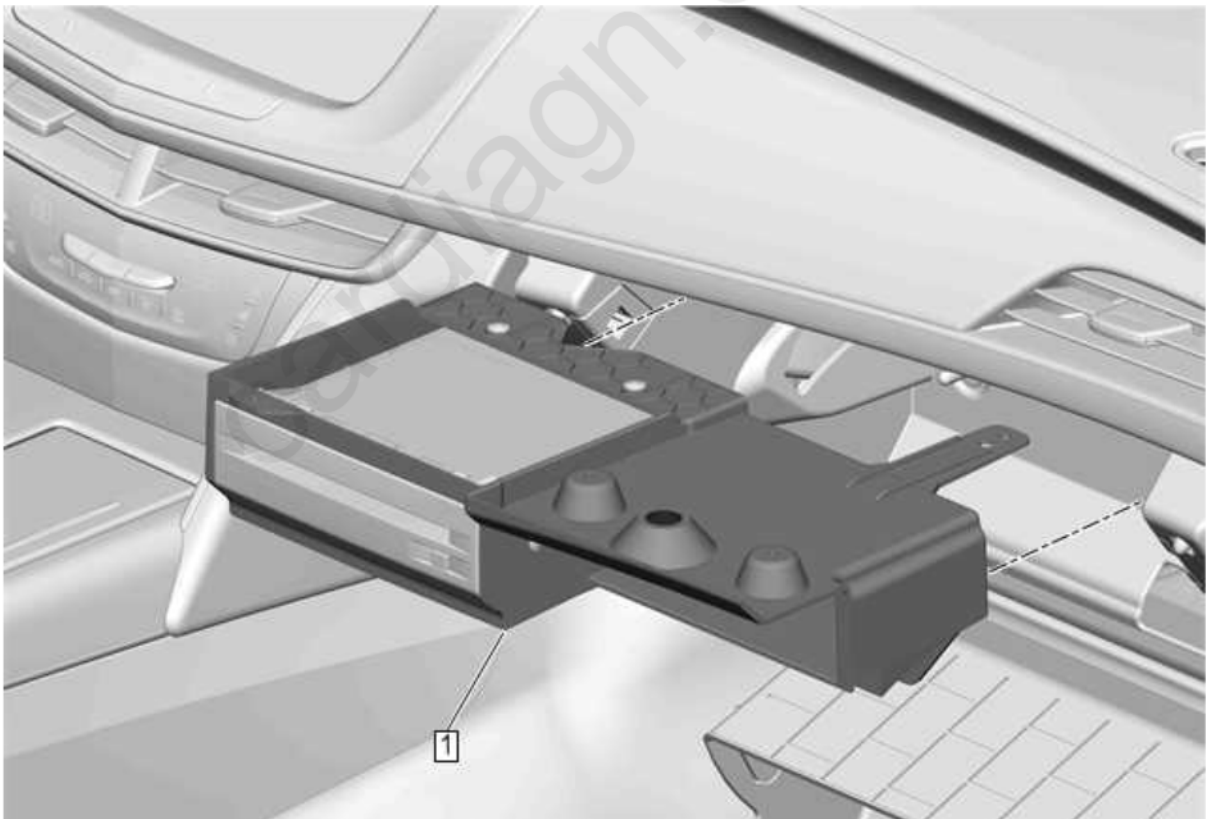


Fig. 57: Instrument Panel Compartment Shelf
 Courtesy of GENERAL MOTORS COMPANY

7. Disconnect the electrical connectors.
8. Transfer components as necessary.

Installation Procedure

1. Connect the electrical connectors.

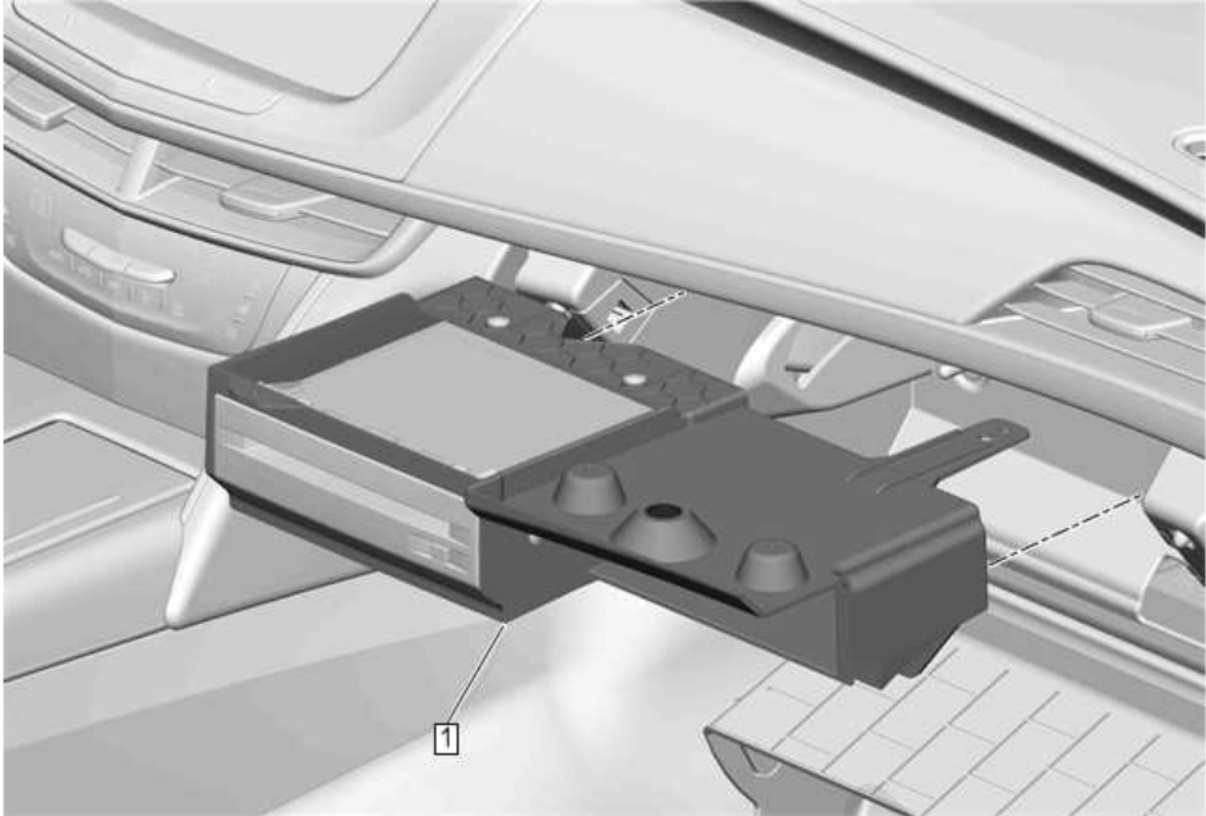


Fig. 58: Instrument Panel Compartment Shelf
 Courtesy of GENERAL MOTORS COMPANY

2. Instrument Panel Compartment Shelf (1) » Install
3. Instrument Panel Compartment Bolt (1) » Install and tighten [6x] 2.5 N.m (22 lb in)

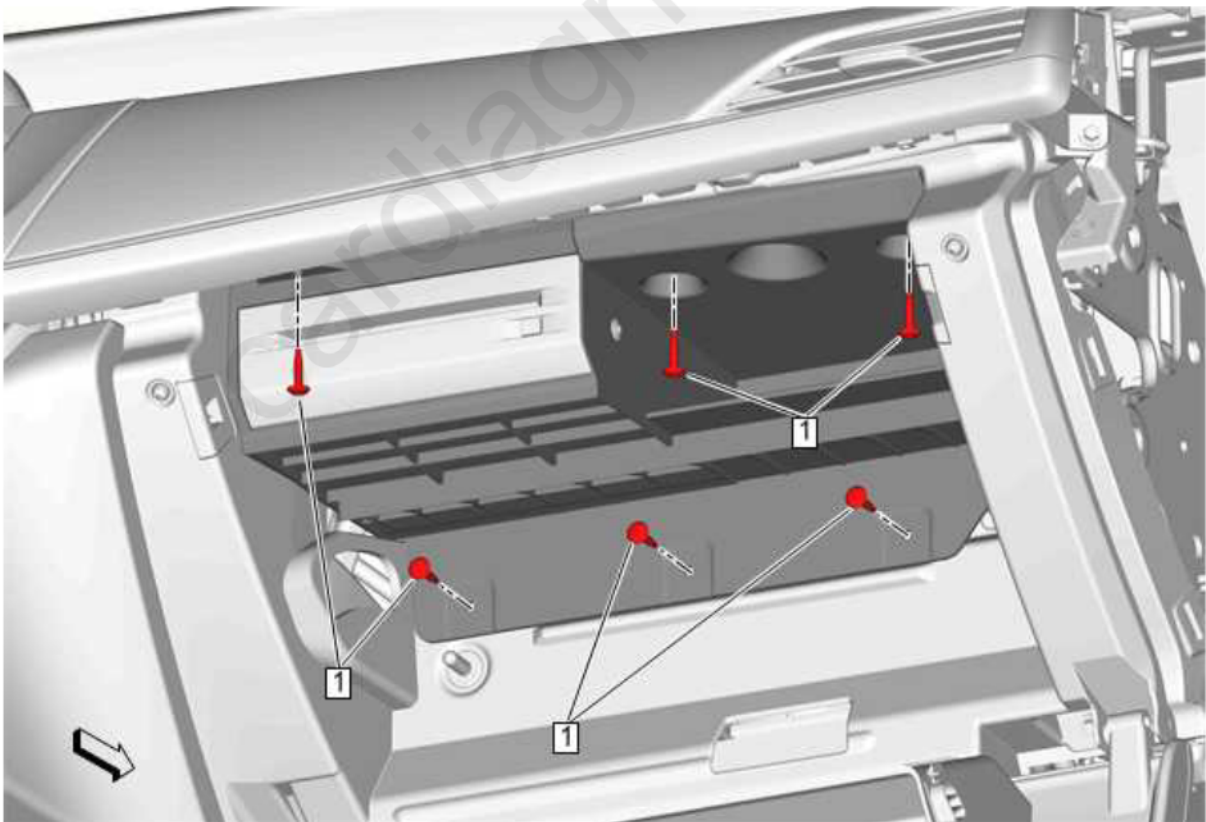


Fig. 59: Instrument Panel Compartment Bolt
 Courtesy of GENERAL MOTORS COMPANY

4. Squeeze the sides of the compartment to return the compartment stops to the compartment door opening frame.

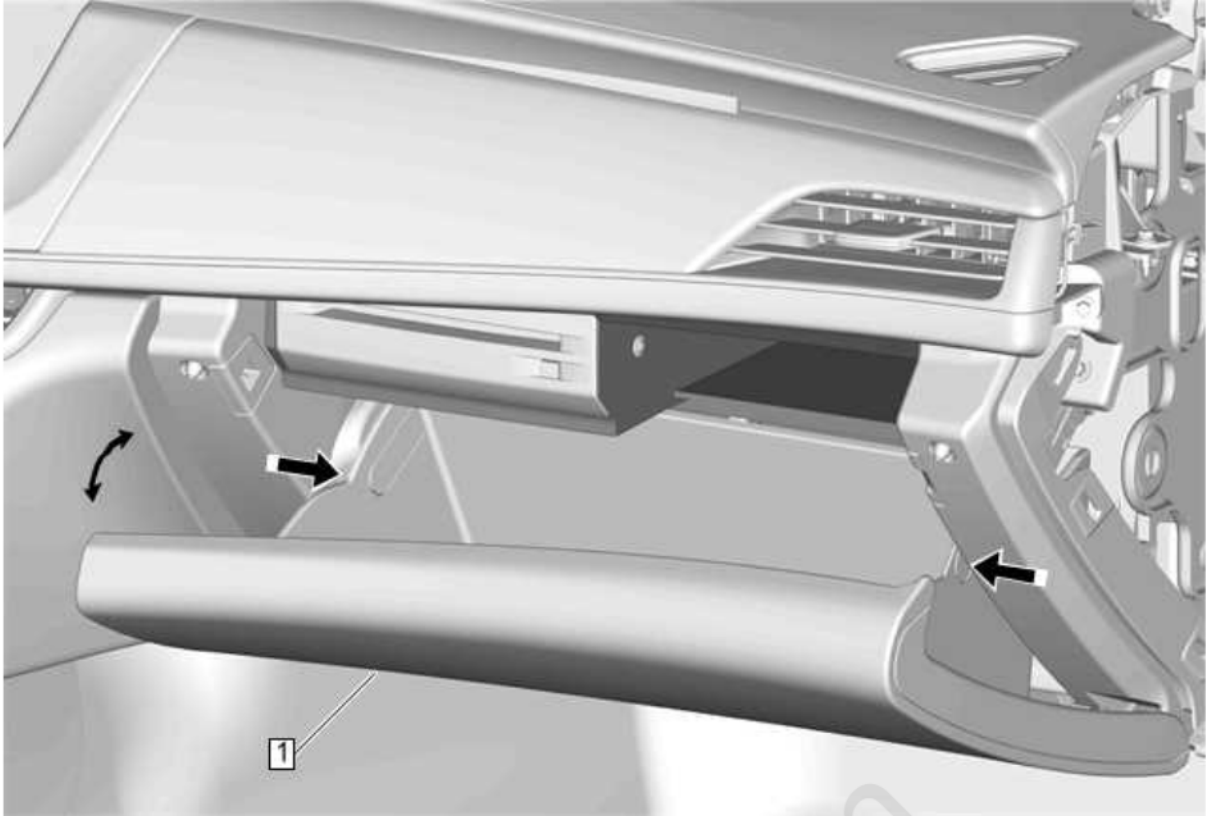


Fig. 60: Instrument Panel Compartment Door
Courtesy of GENERAL MOTORS COMPANY

5. Close the instrument panel compartment door. (1)
6. Connect the instrument panel compartment door dampener to the instrument panel compartment door. (1)



Fig. 61: Instrument Panel Compartment Door Dampener
Courtesy of GENERAL MOTORS COMPANY

7. **Instrument Panel Outer Trim Cover Replacement** » Install

INSTRUMENT PANEL COMPARTMENT REPLACEMENT

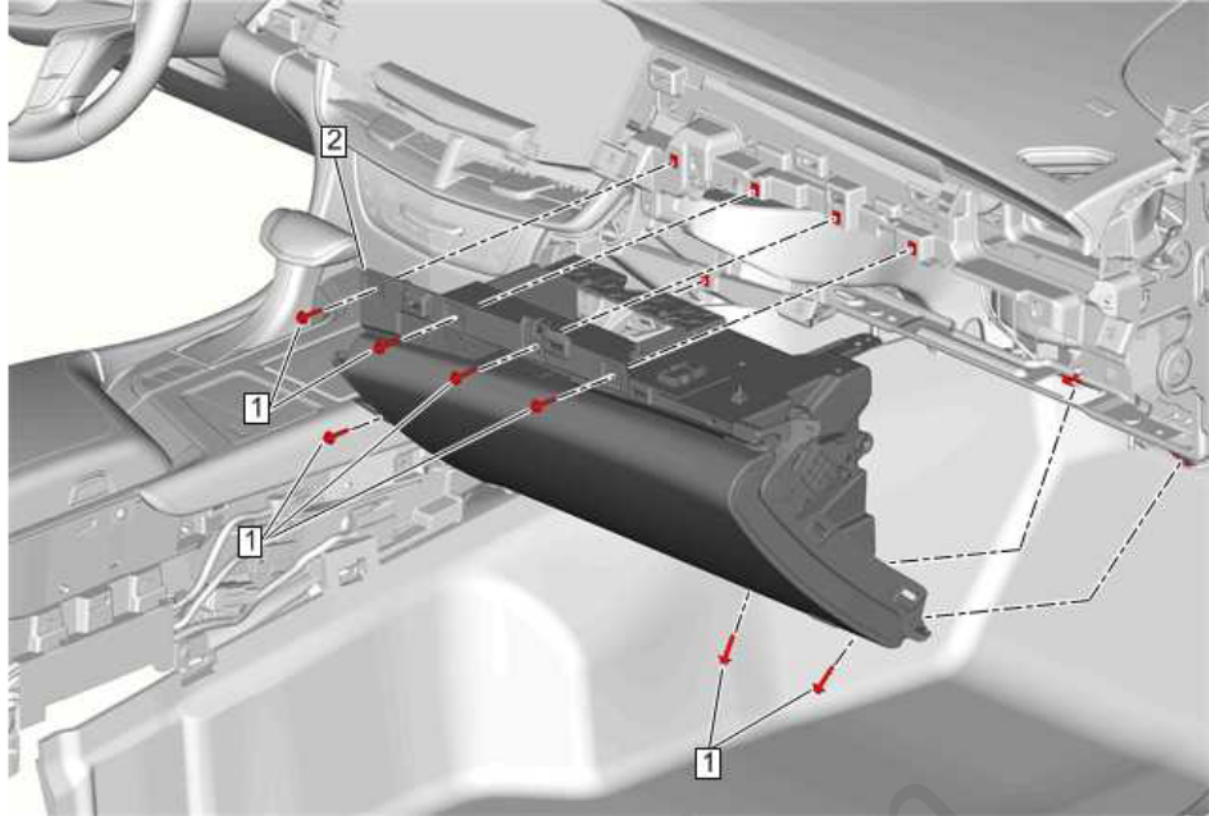


Fig. 62: Instrument Panel Compartment
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Instrument Panel Lower Trim Panel Insulator Replacement - Right Side 2. Instrument Panel Lower Trim Plate Applique Replacement - Right Side 3. Instrument Panel Lower Airbag Replacement - Passenger Side	
1	Instrument Panel Compartment Bolt [7x] CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)
2	Instrument Panel Compartment Procedure 1. Disconnect the electrical connectors. 2. Transfer components as necessary.

INSTRUMENT PANEL COMPARTMENT DOOR REPLACEMENT

Removal Procedure

- [1. Instrument Panel Outer Trim Cover Replacement](#) » Remove
2. Disconnect the instrument panel compartment door dampener from the instrument panel compartment door. (1)



Fig. 63: Instrument Panel Compartment Door Dampener
 Courtesy of GENERAL MOTORS COMPANY

3. Open the instrument panel compartment door. (1)

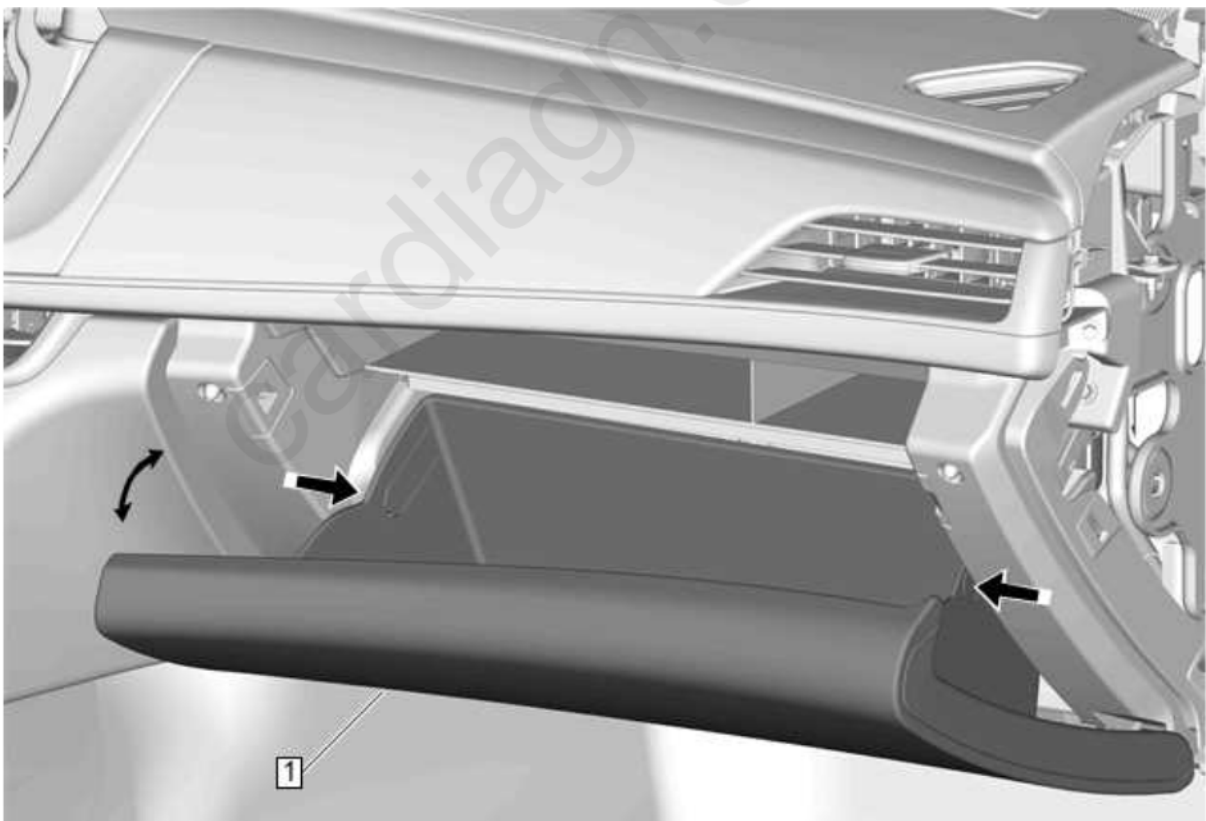


Fig. 64: Instrument Panel Compartment Door
 Courtesy of GENERAL MOTORS COMPANY

4. Squeeze the sides of the compartment and lower the compartment past the stops.
5. Use a suitable tool.

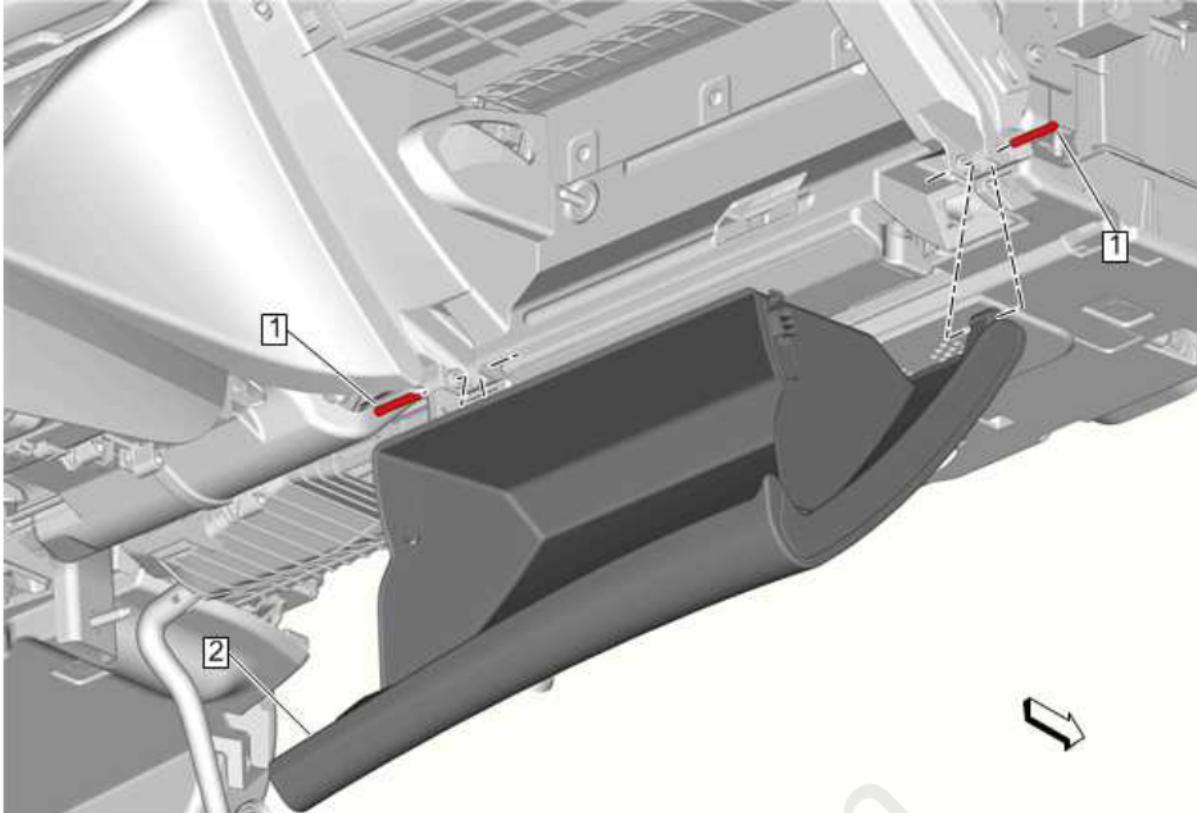


Fig. 65: Instrument Panel Compartment Door Hinge

Courtesy of GENERAL MOTORS COMPANY

6. Instrument Panel Compartment Door Hinge (1) » Remove
7. Instrument Panel Compartment Door (2) » Remove

Installation Procedure

1. Instrument Panel Compartment Door (2) » Install

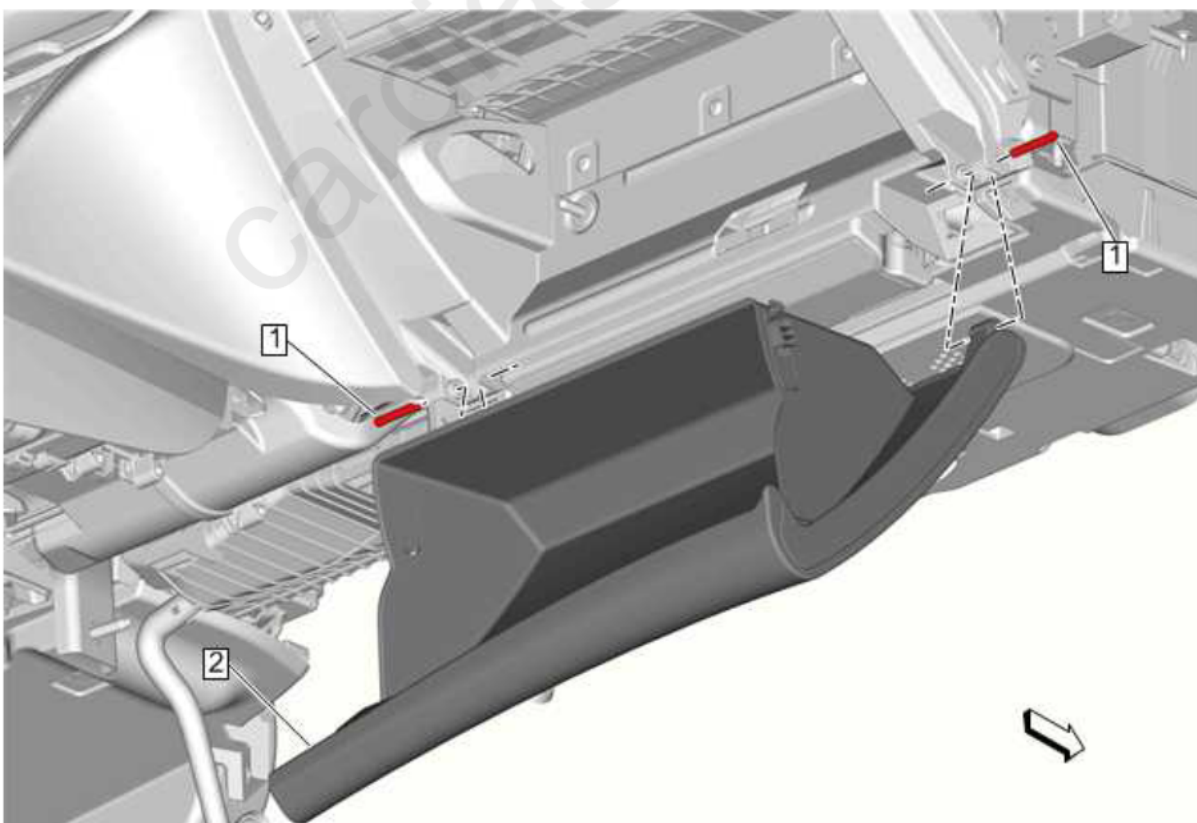


Fig. 66: Instrument Panel Compartment Door Hinge

Courtesy of GENERAL MOTORS COMPANY

2. Instrument Panel Compartment Door Hinge (1) » Install

3. Squeeze the sides of the compartment to return the compartment stops to the compartment door opening frame.

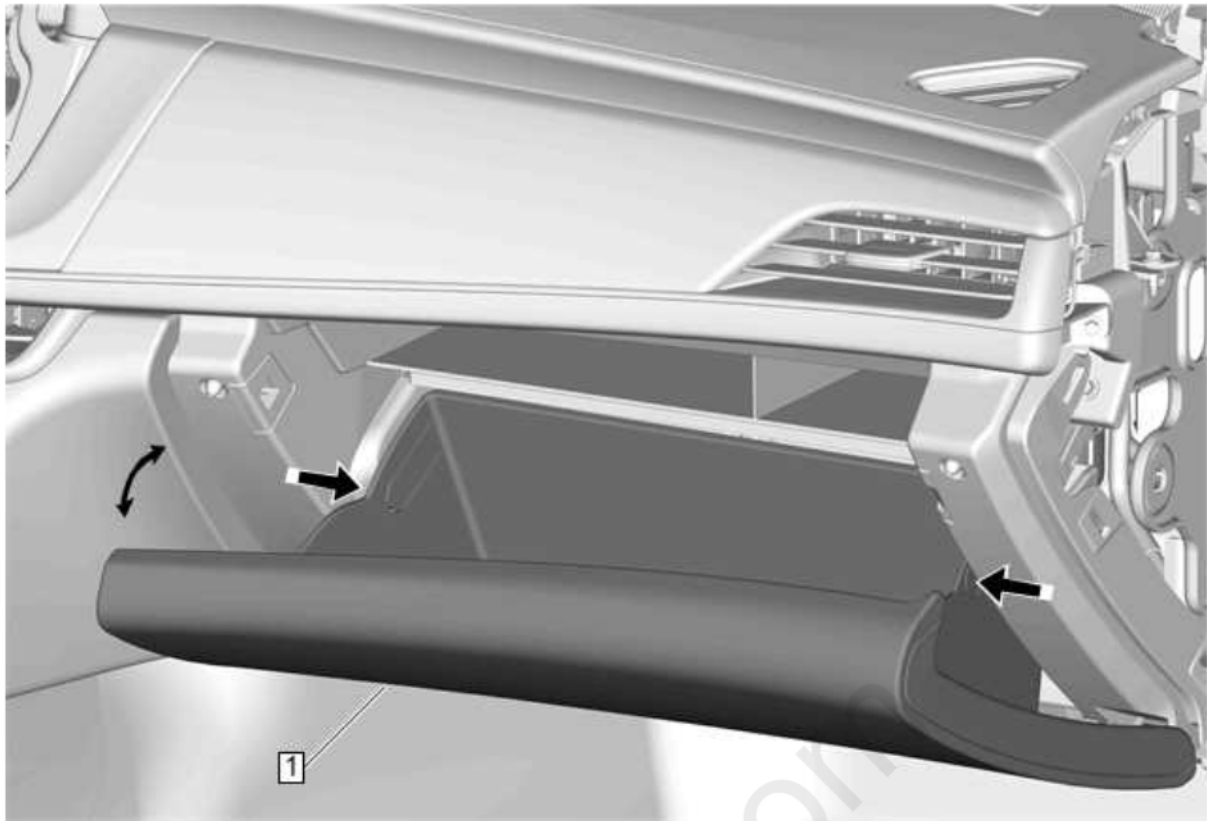


Fig. 67: Instrument Panel Compartment Door
Courtesy of GENERAL MOTORS COMPANY

4. Close the instrument panel compartment door. (1)
5. Connect the instrument panel compartment door dampener to the instrument panel compartment door. (1)



Fig. 68: Instrument Panel Compartment Door Dampener
Courtesy of GENERAL MOTORS COMPANY

6. **Instrument Panel Outer Trim Cover Replacement** » Install

INSTRUMENT PANEL COMPARTMENT DOOR LATCH ACTUATOR REPLACEMENT

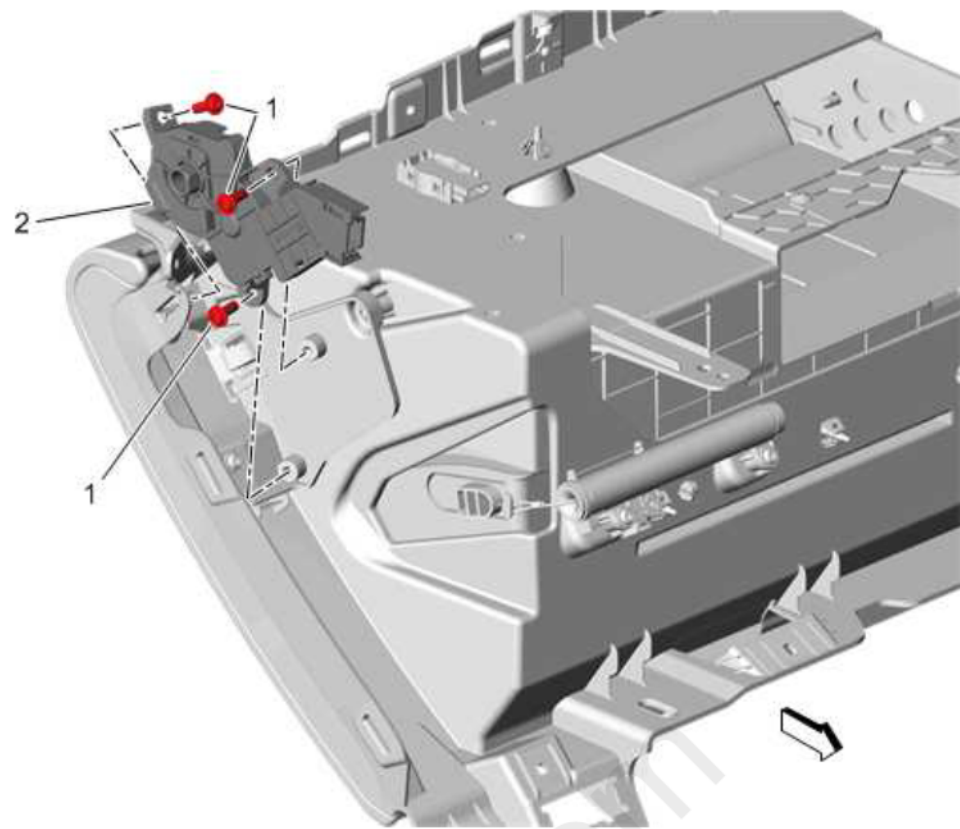


Fig. 69: Instrument Panel Compartment Door Latch Actuator
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Instrument Panel Compartment Replacement	
1	Instrument Panel Compartment Bolt [3x] CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)
2	Instrument Panel Compartment Door Latch Actuator

INSTRUMENT PANEL COMPARTMENT DOOR DAMPENER REPLACEMENT

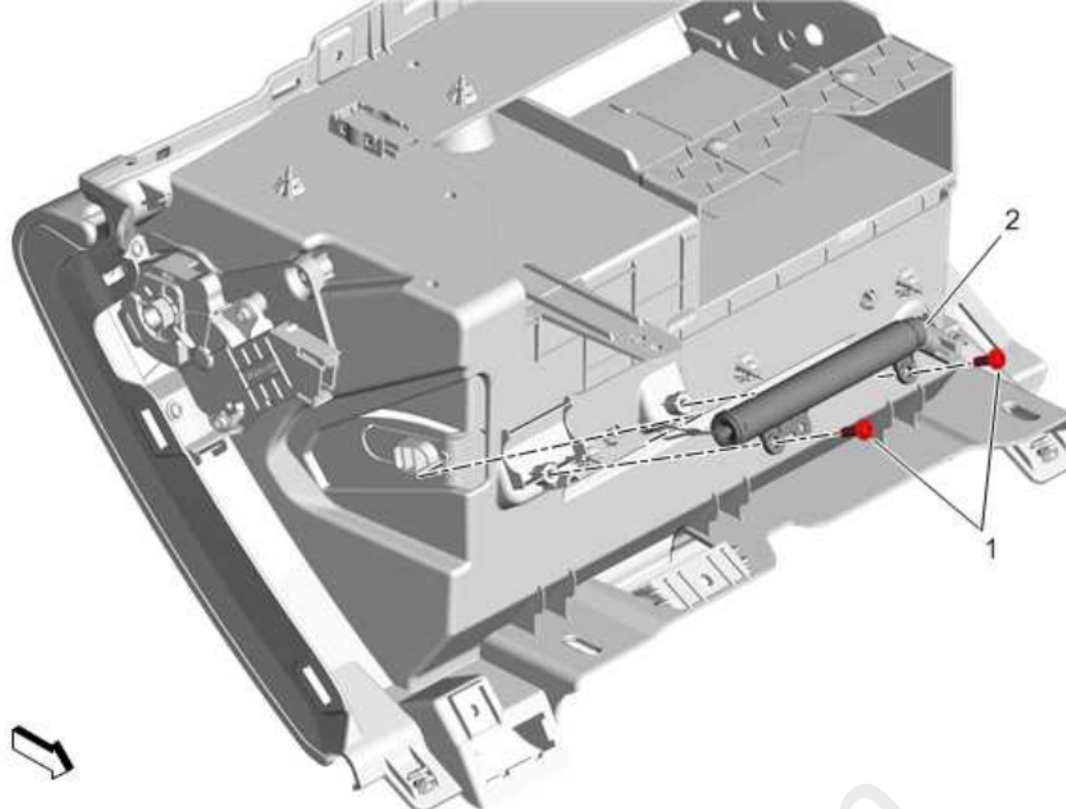


Fig. 70: Instrument Panel Compartment Door Dampener

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
<u>Instrument Panel Compartment Replacement</u>	
1	Instrument Panel Compartment Bolt [2x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Instrument Panel Compartment Door Dampener Procedure Disconnect the instrument panel compartment door dampener from the instrument panel compartment door.

INSTRUMENT PANEL CENTER SUPPORT BRACKET REPLACEMENT

Removal Procedure

1. **Floor Front Air Outlet Duct Replacement - Right Side** Â» Remove
2. **Instrument Panel Compartment Replacement**Â» Remove
3. **Communication Interface Module Bracket Replacement** Â» Remove
4. Instrument Carrier Bolt (1)Â» Remove

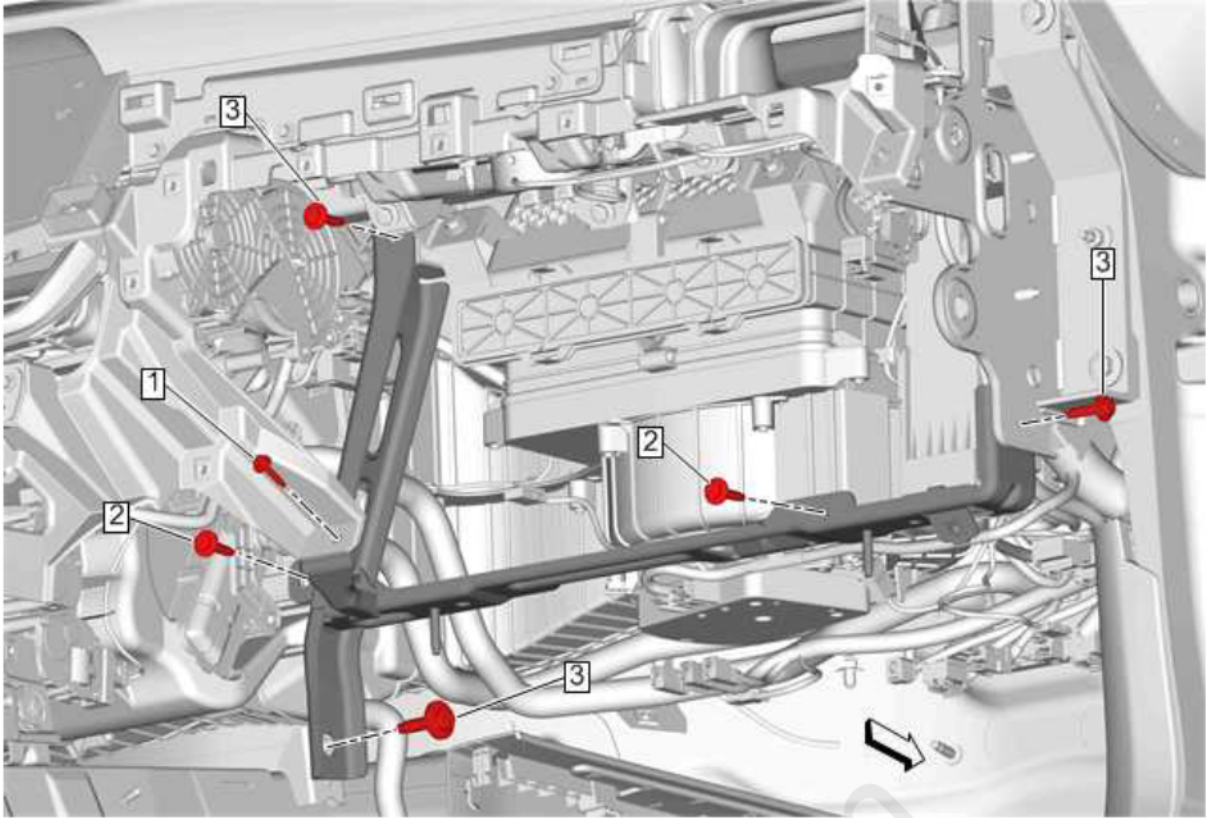


Fig. 71: Instrument Carrier Bolt

Courtesy of GENERAL MOTORS COMPANY

5. Instrument Panel Tie Bar Reinforcement Bolt (2)» Remove [2x]
6. Reposition the front floor panel carpet as necessary.
7. Instrument Panel Tie Bar Bolt (3)» Remove [3x]
8. Instrument Panel Center Support Bracket (1)» Remove

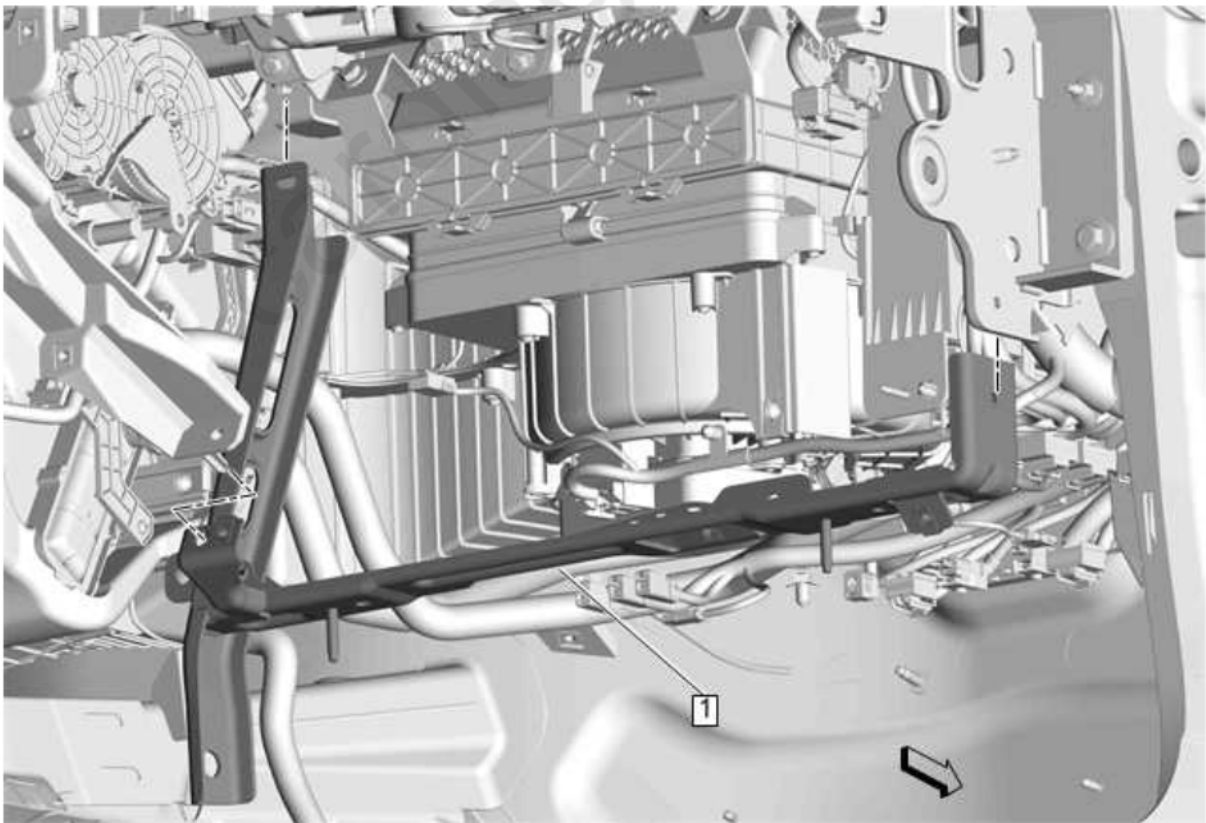


Fig. 72: Instrument Panel Center Support Bracket

Courtesy of GENERAL MOTORS COMPANY

Installation Procedure

1. Instrument Panel Center Support Bracket (1)» Install



Fig. 73: Instrument Panel Center Support Bracket
Courtesy of GENERAL MOTORS COMPANY

2. Instrument Panel Tie Bar Bolt (3)» Install and tighten [3x] 22 N.m (16 lb ft)

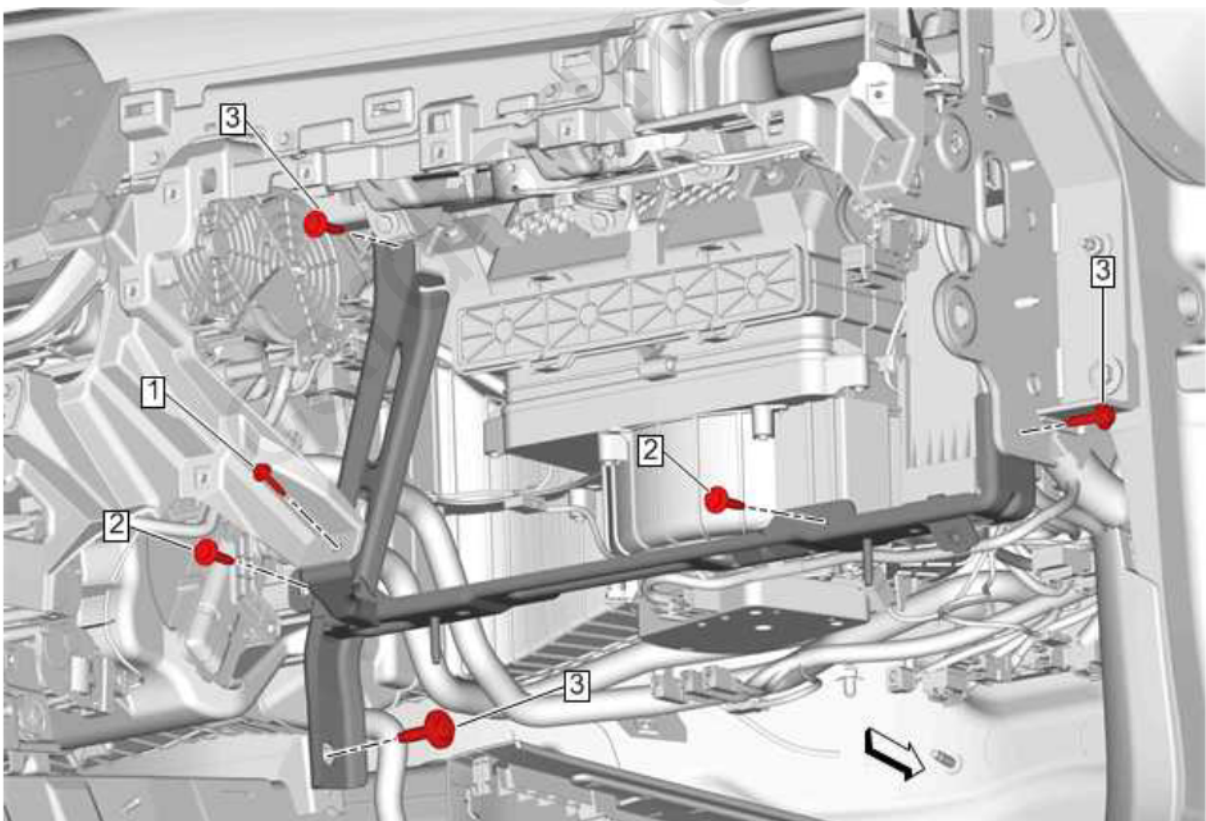


Fig. 74: Instrument Carrier Bolt
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

3. Instrument Panel Tie Bar Reinforcement Bolt (2)» Install and tighten [2x] 9 N.m (80 lb in)
4. Instrument Carrier Bolt (1)» Install and tighten 2.5 N.m (22 lb in)
5. **Communication Interface Module Bracket Replacement** » Install
6. **Instrument Panel Compartment Replacement**» Install

INSTRUMENT PANEL CARRIER REPLACEMENT (UQH)

Removal Procedure

1. Disable the SIR system. Refer to [SIR Disabling and Enabling](#)
2. Instrument Panel Knee Bolster (2)» Remove - [Instrument Panel Knee Bolster Replacement](#)

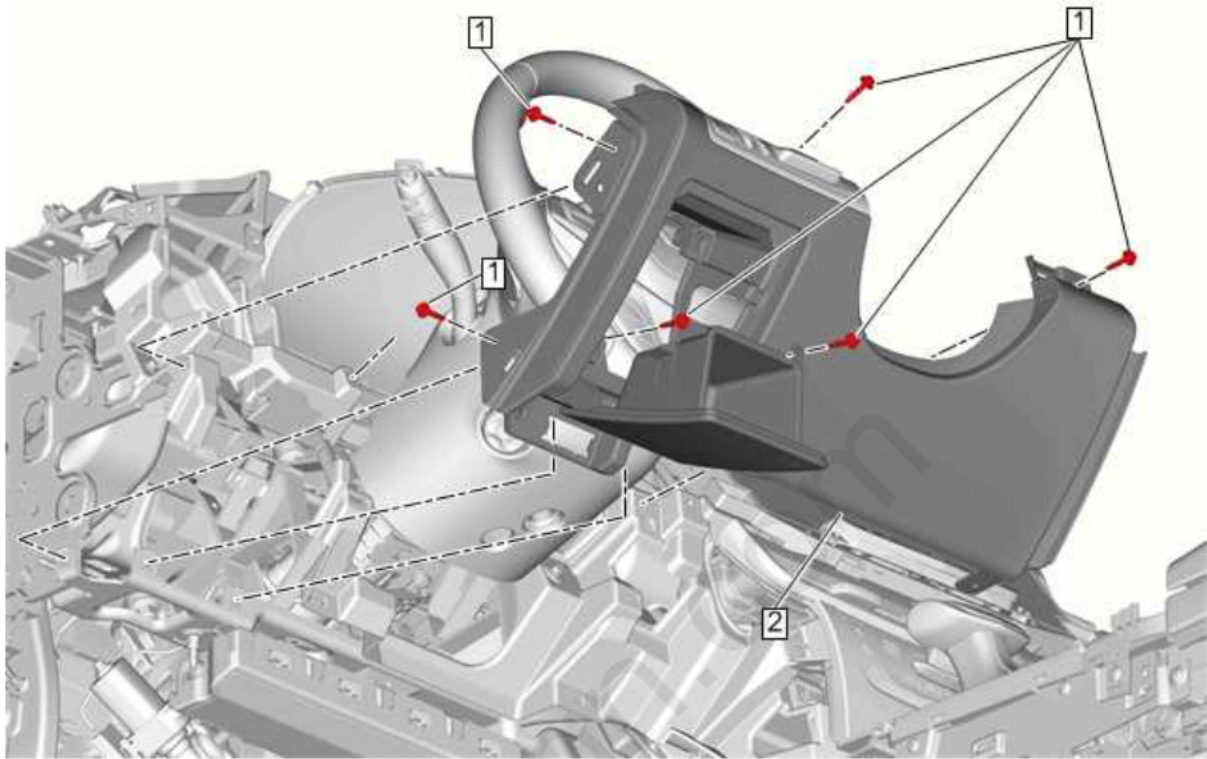


Fig. 75: Instrument Panel Knee Bolster
Courtesy of GENERAL MOTORS COMPANY

3. Instrument Panel Trim Plate (2)» Remove - [Instrument Panel Trim Plate Replacement](#)

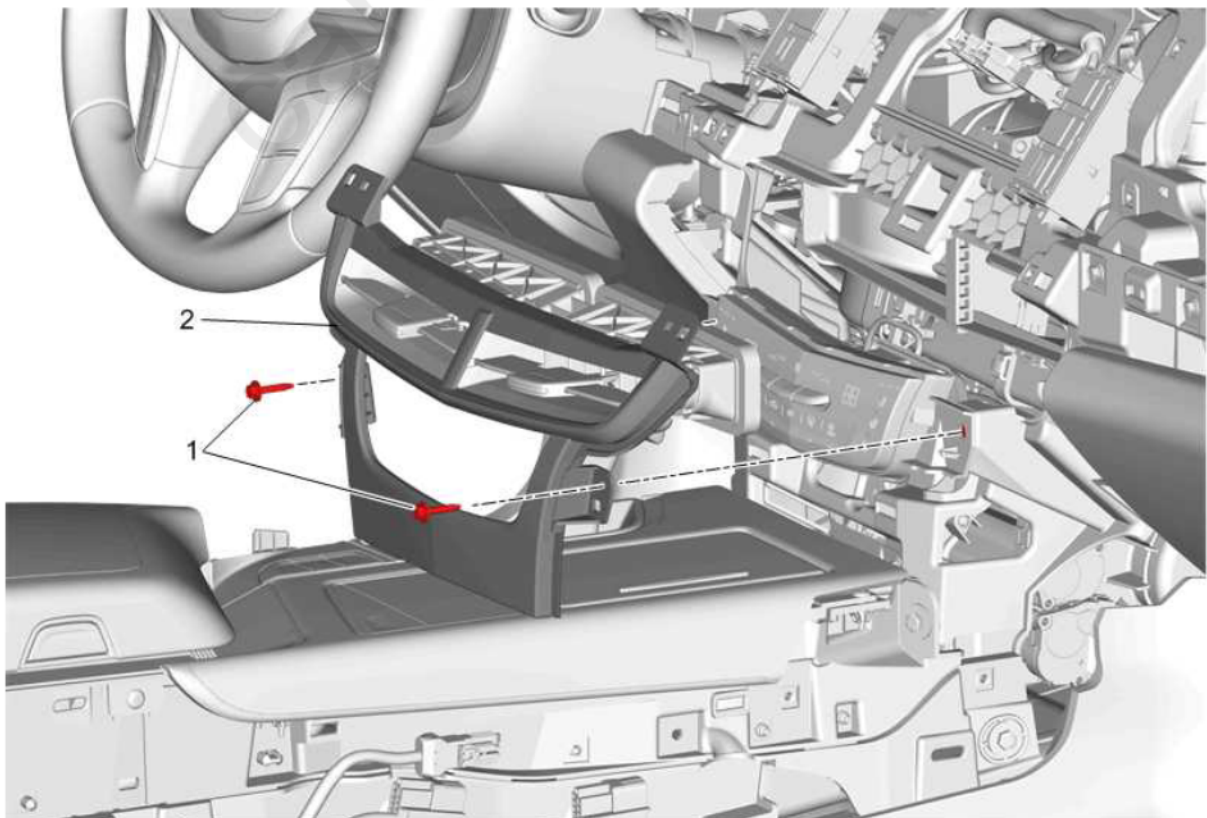


Fig. 76: Instrument Panel Trim Plate
Courtesy of GENERAL MOTORS COMPANY

4. Heater and Air Conditioning User Interface Control (1)» Remove - **Heater and Air Conditioning User Interface Control Replacement**

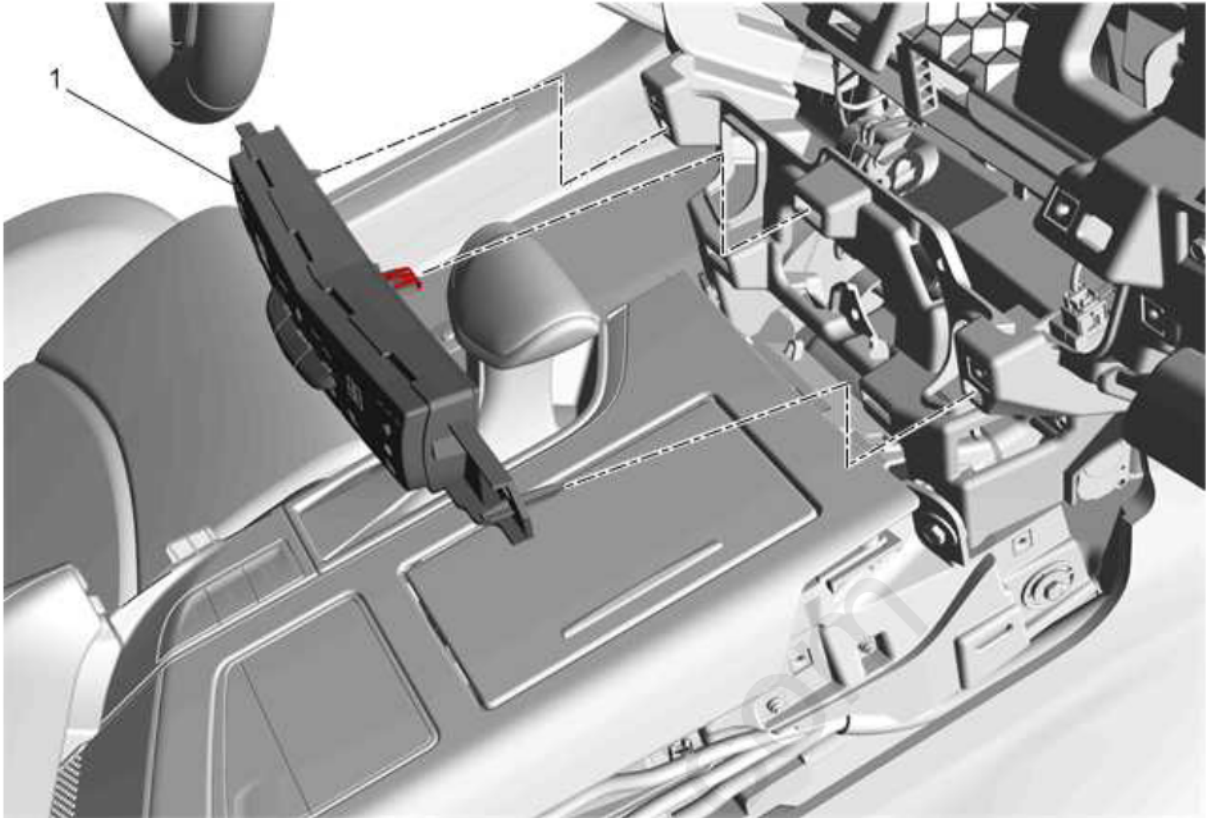


Fig. 77: Heater and Air Conditioning User Interface Control
Courtesy of GENERAL MOTORS COMPANY

5. Instrument Cluster (2)» Remove - **Instrument Cluster Replacement**

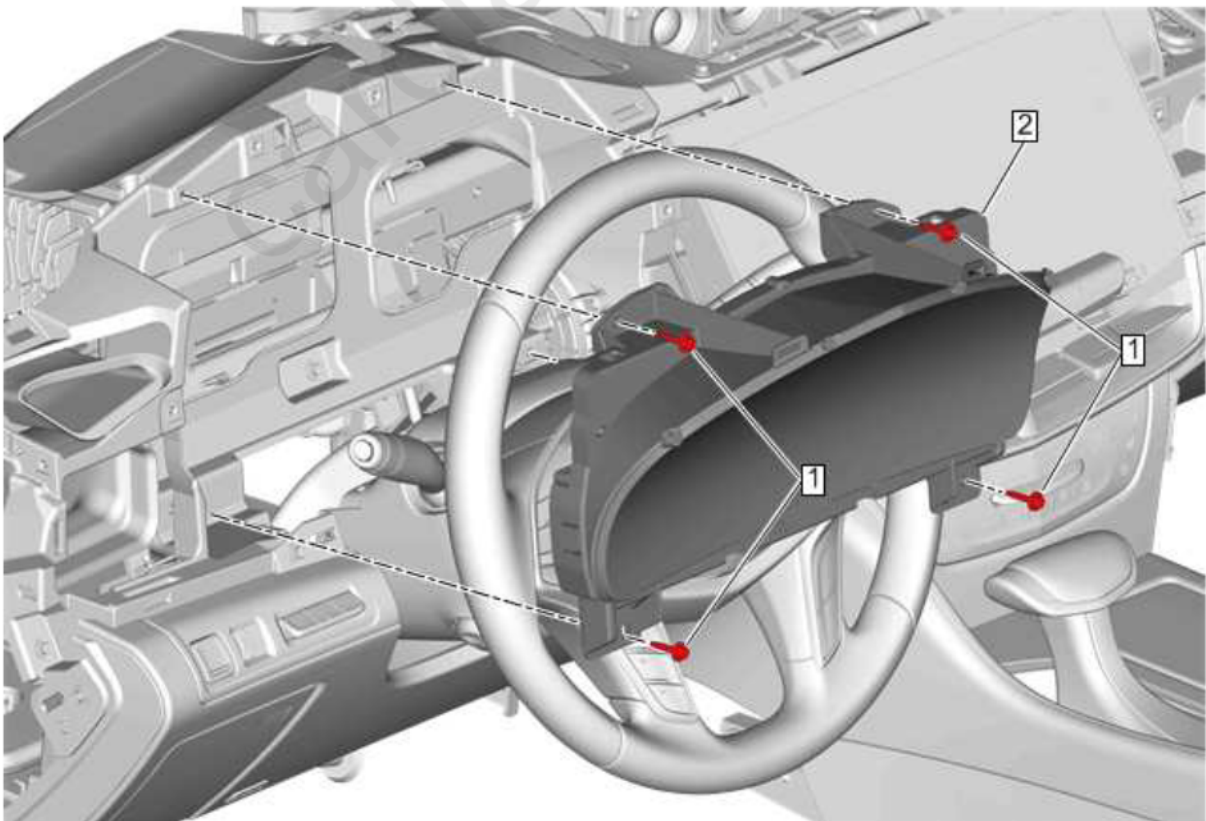


Fig. 78: Instrument Cluster
Courtesy of GENERAL MOTORS COMPANY

6. Radio Front Center Speaker (2)» Remove - **Radio Front Center Speaker Replacement (UQH)**

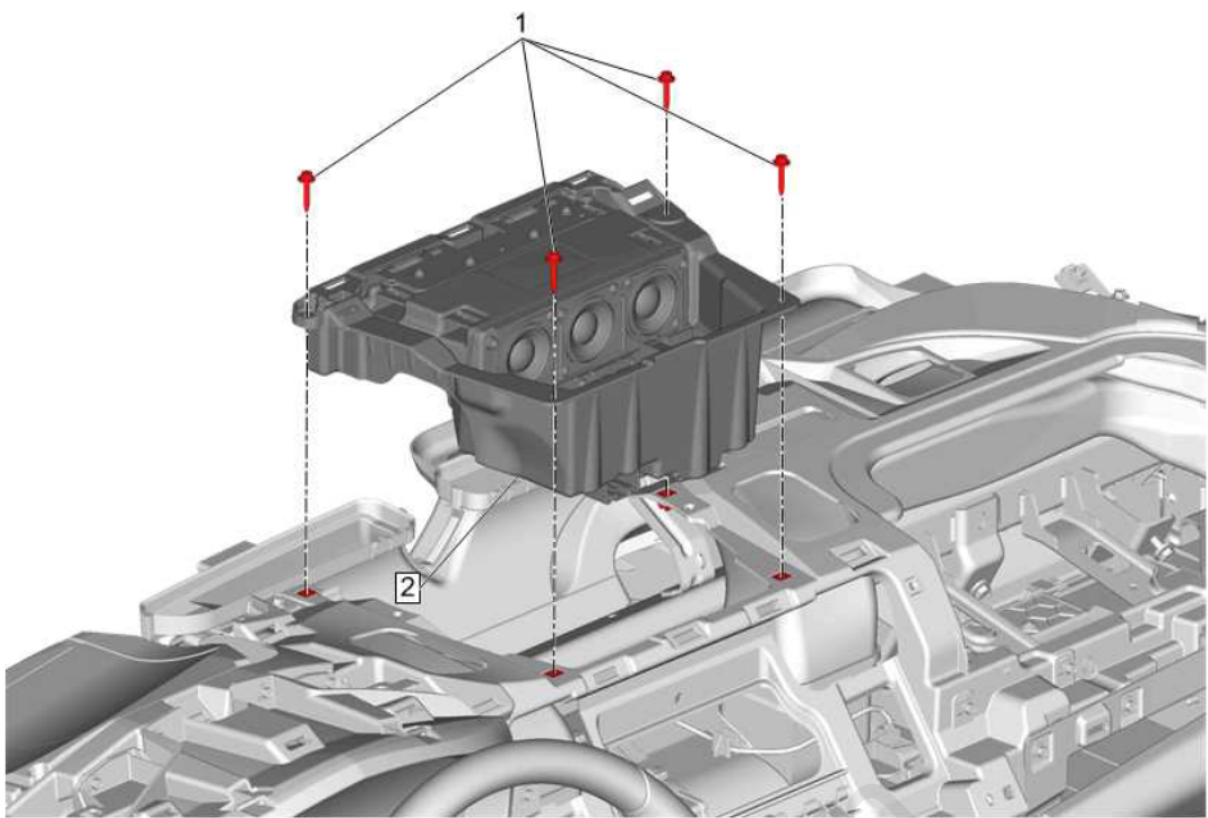


Fig. 79: Radio Front Center Speaker

Courtesy of GENERAL MOTORS COMPANY

7. Instrument Panel Lower Airbag - Driver Side (2)» Remove - **Instrument Panel Lower Airbag Replacement - Driver Side**

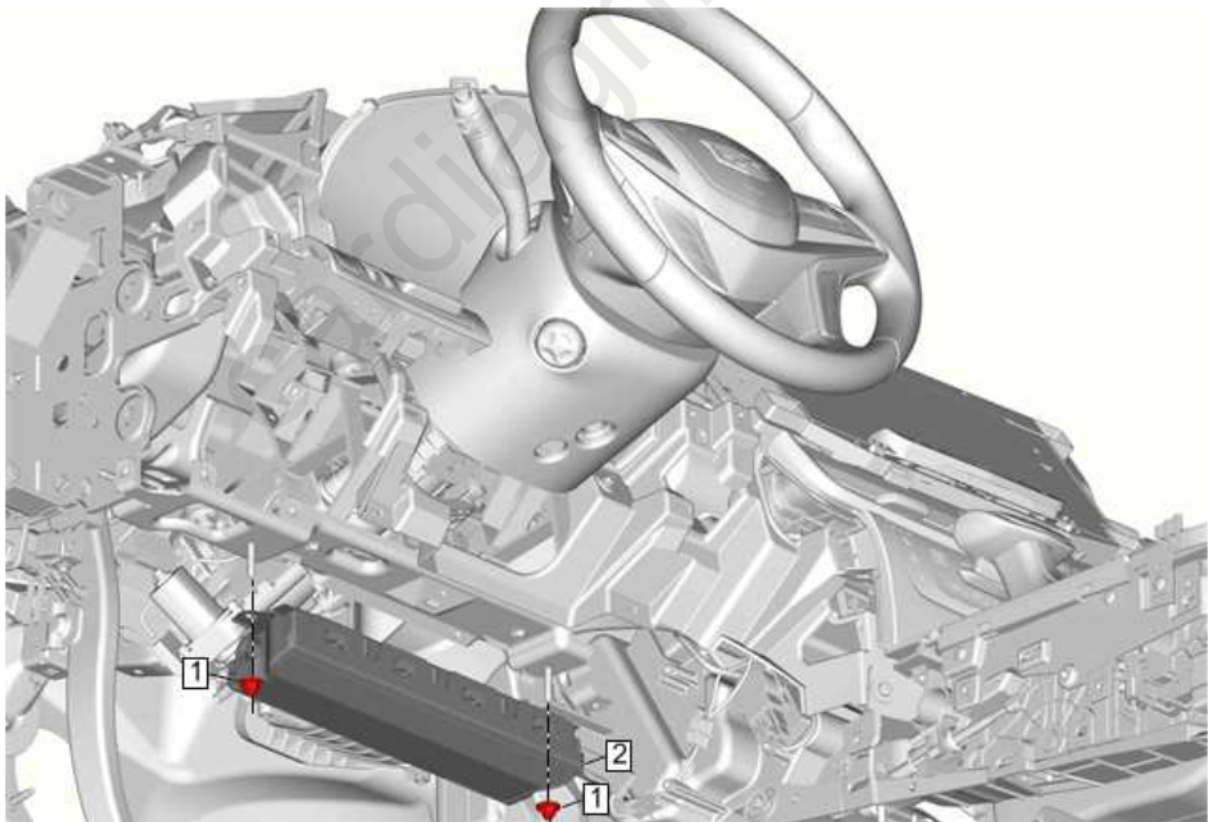


Fig. 80: Instrument Panel Lower Airbag - Driver Side

Courtesy of GENERAL MOTORS COMPANY

8. Steering Column (1)» Remove - **Steering Column Replacement**

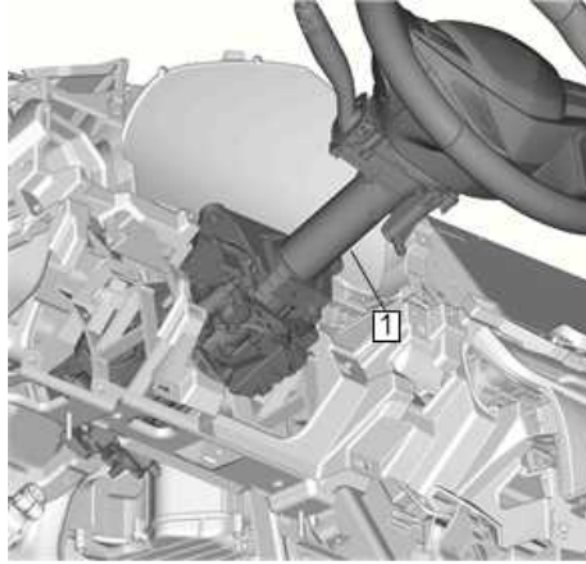


Fig. 81: Steering Column

Courtesy of GENERAL MOTORS COMPANY

9. Front Floor Console (2) » Remove - **Front Floor Console Replacement**

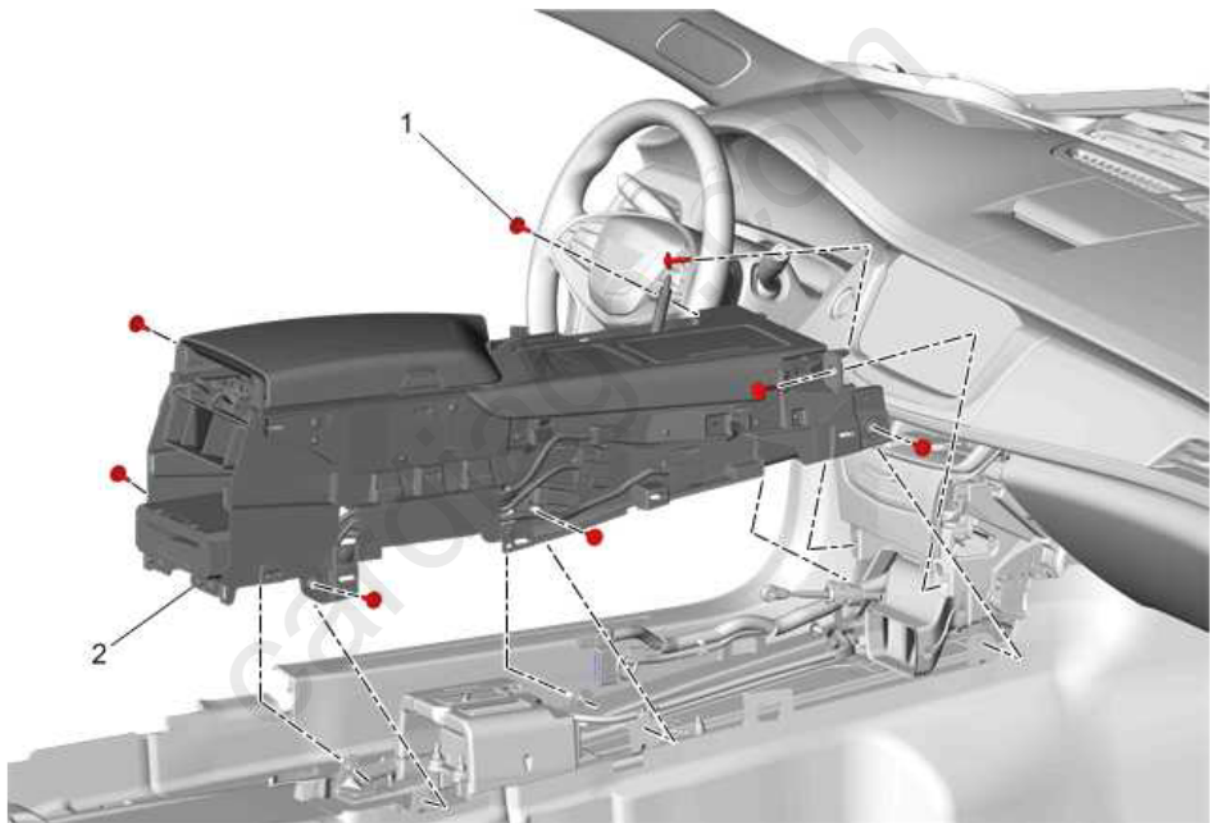


Fig. 82: Front Floor Console

Courtesy of GENERAL MOTORS COMPANY

10. Instrument Carrier Bolt (1) » Remove [15x]

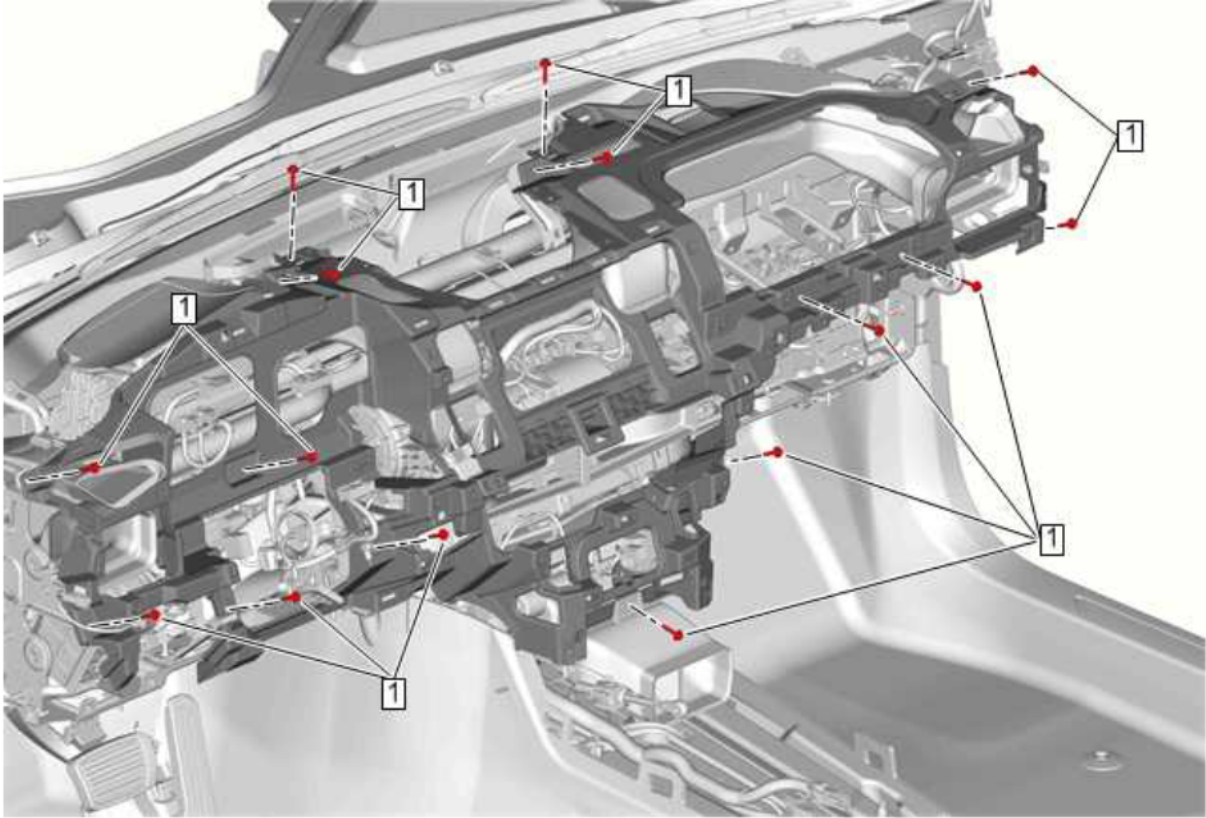


Fig. 83: Instrument Carrier Bolt

Courtesy of GENERAL MOTORS COMPANY

11. Note the location and routing of the instrument panel wiring harness prior to removal to ensure proper installation.

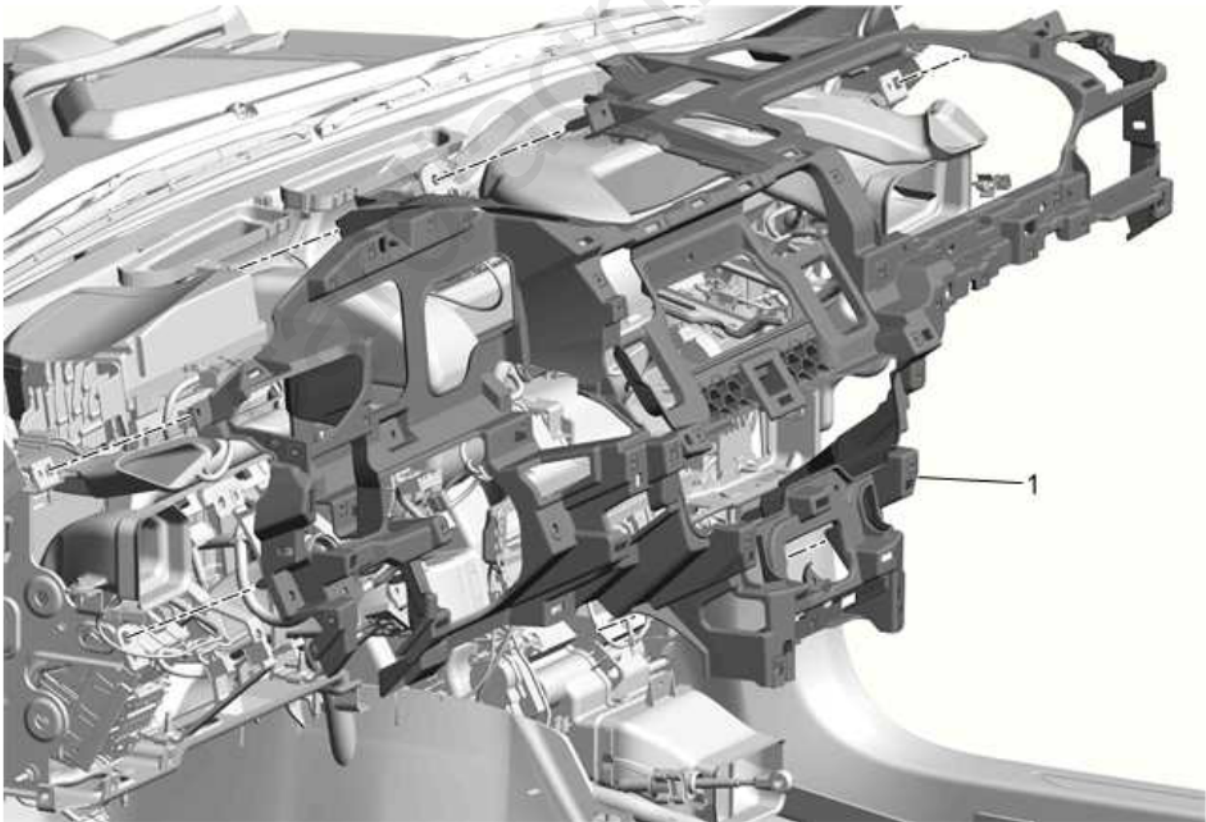


Fig. 84: Instrument Panel Carrier Assembly

Courtesy of GENERAL MOTORS COMPANY

12. Disconnect the wiring harness from the instrument panel carrier.
13. With the aid of an assistant, remove the instrument panel carrier assembly from the vehicle. (1)
14. Transfer components as necessary.

Installation Procedure

1. With the aid of an assistant, position the instrument carrier in the vehicle. (1)

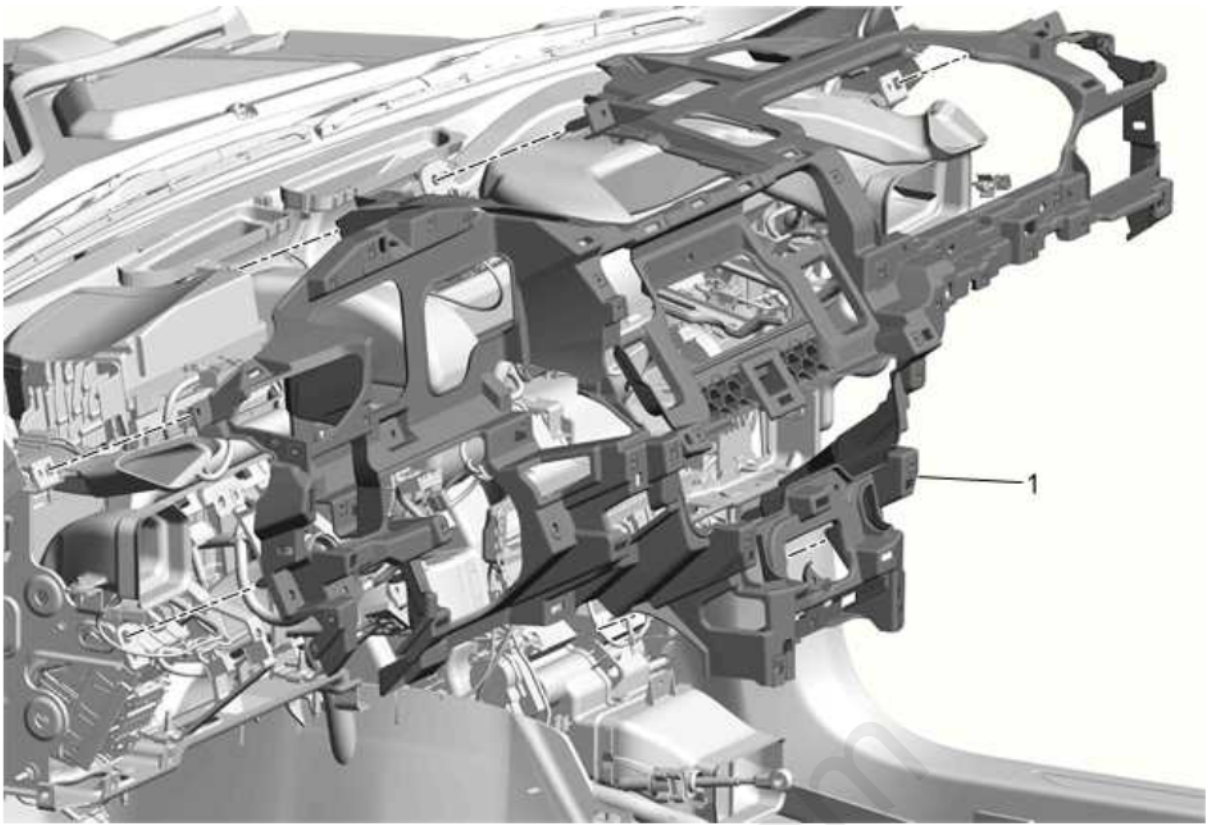


Fig. 85: Instrument Panel Carrier Assembly
Courtesy of GENERAL MOTORS COMPANY

2. Reposition the instrument panel wiring harness into the vehicle position as was noted in the removal and connect the fasteners securing the instrument panel wiring harness to the instrument carrier.
3. Instrument Carrier Bolt (1) » Install and tighten [2x] 2.5 N.m (22 lb in)

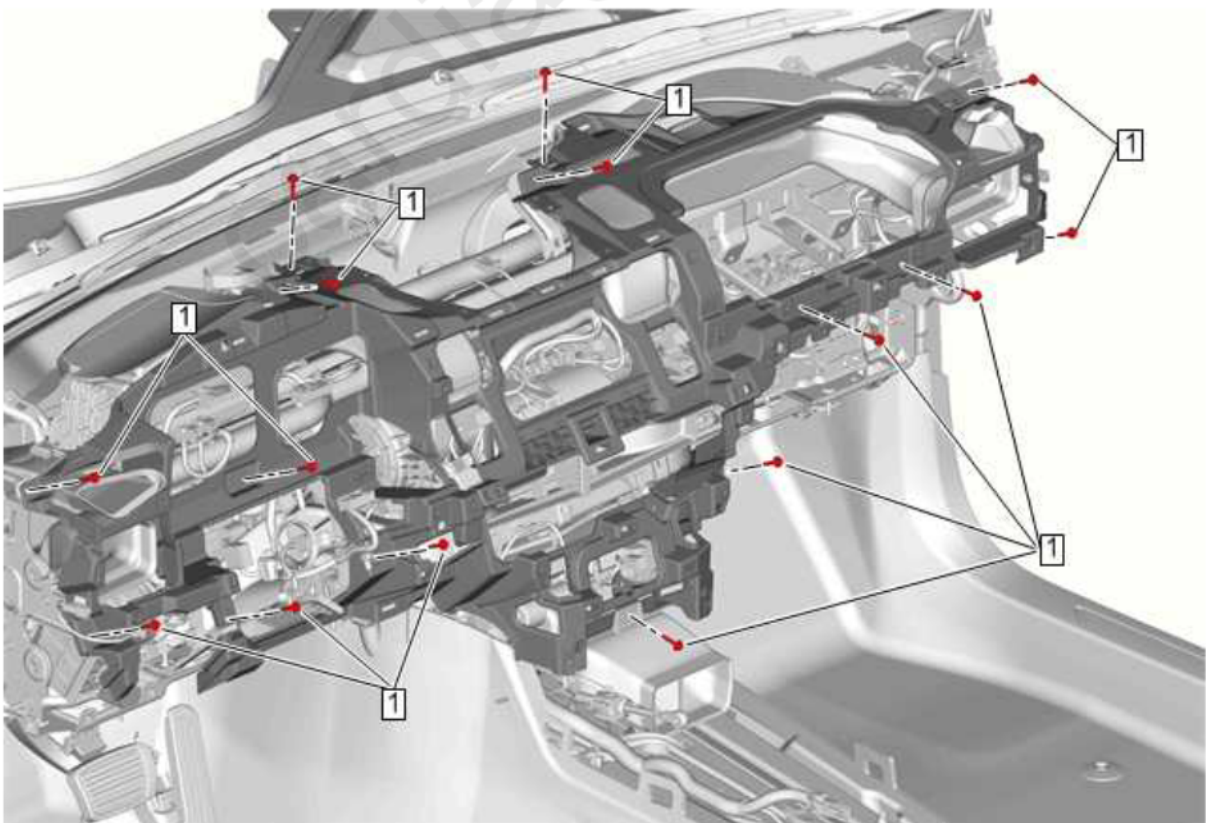


Fig. 86: Instrument Carrier Bolt
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to [Fastener Caution](#) .

4. Front Floor Console (2)A» Install - [Front Floor Console Replacement](#)

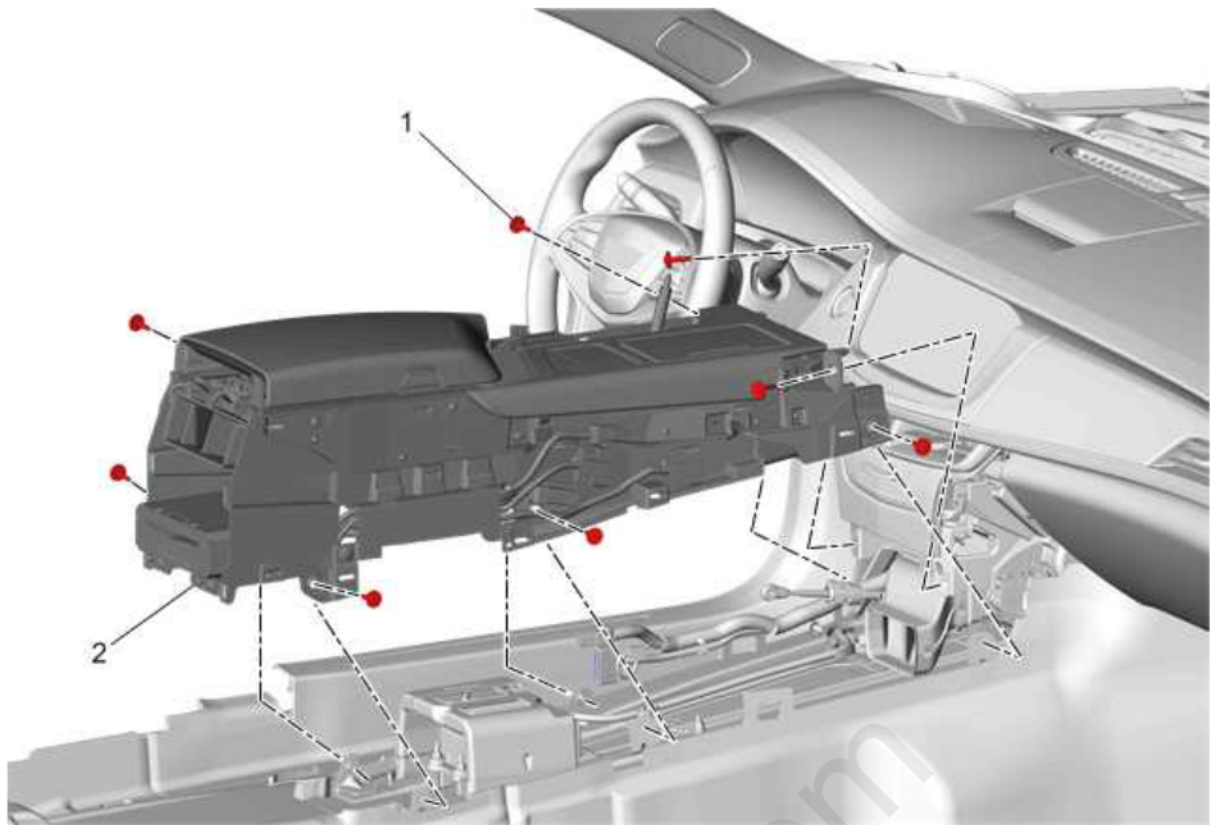


Fig. 87: Front Floor Console

Courtesy of GENERAL MOTORS COMPANY

5. Steering Column (1)A» Install - [Steering Column Replacement](#)

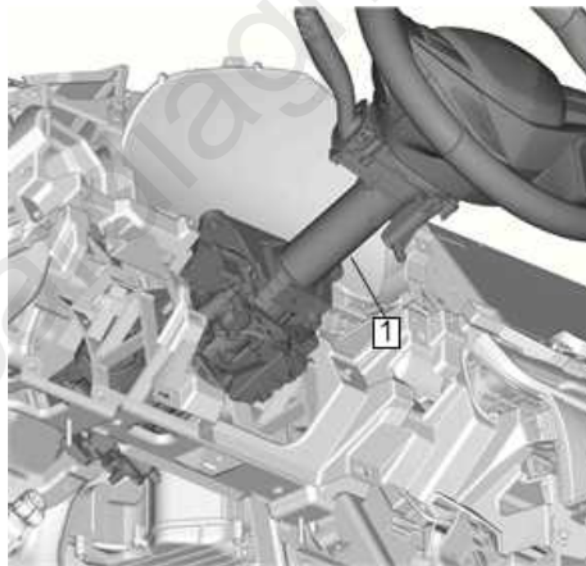


Fig. 88: Steering Column

Courtesy of GENERAL MOTORS COMPANY

6. Instrument Panel Lower Airbag - Driver Side (2)A» Install - [Instrument Panel Lower Airbag Replacement - Driver Side](#)

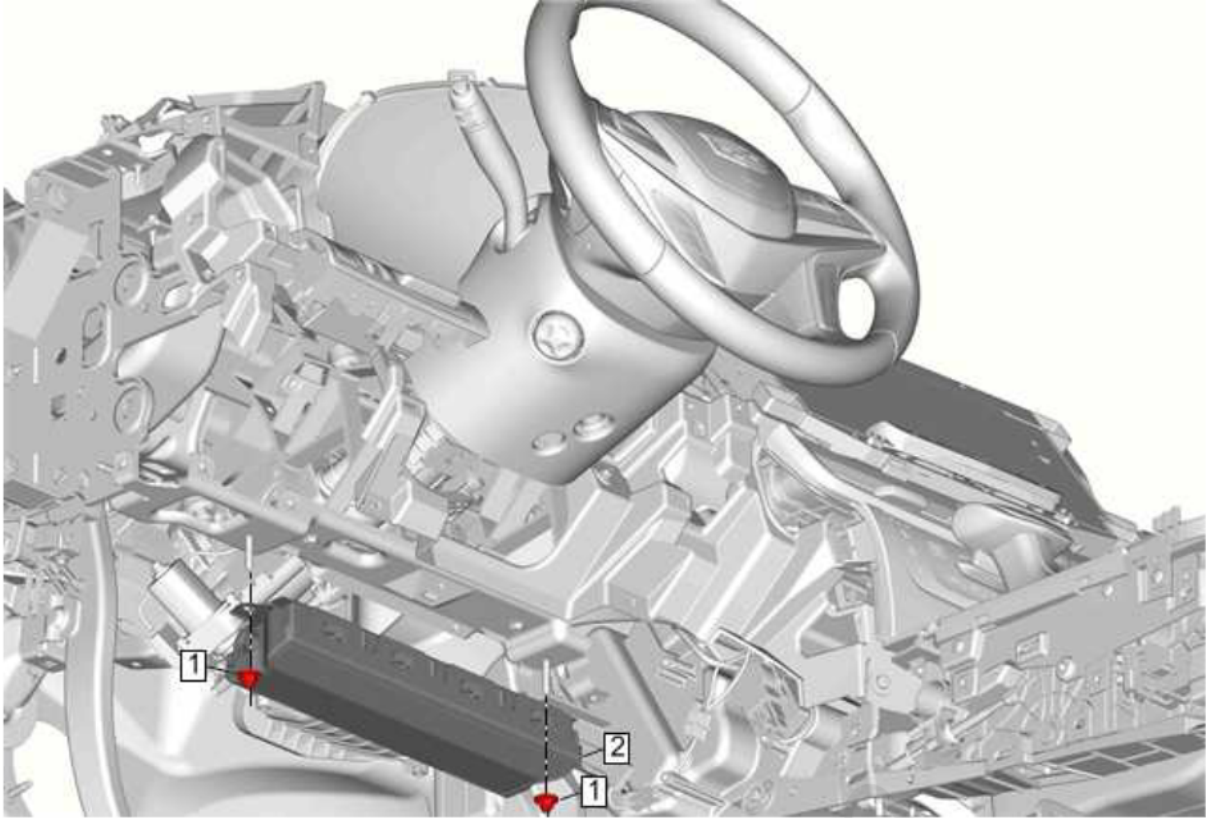


Fig. 89: Instrument Panel Lower Airbag - Driver Side
 Courtesy of GENERAL MOTORS COMPANY

7. Radio Front Center Speaker (2)» Install - [**Radio Front Center Speaker Replacement \(UQH\)**](#)

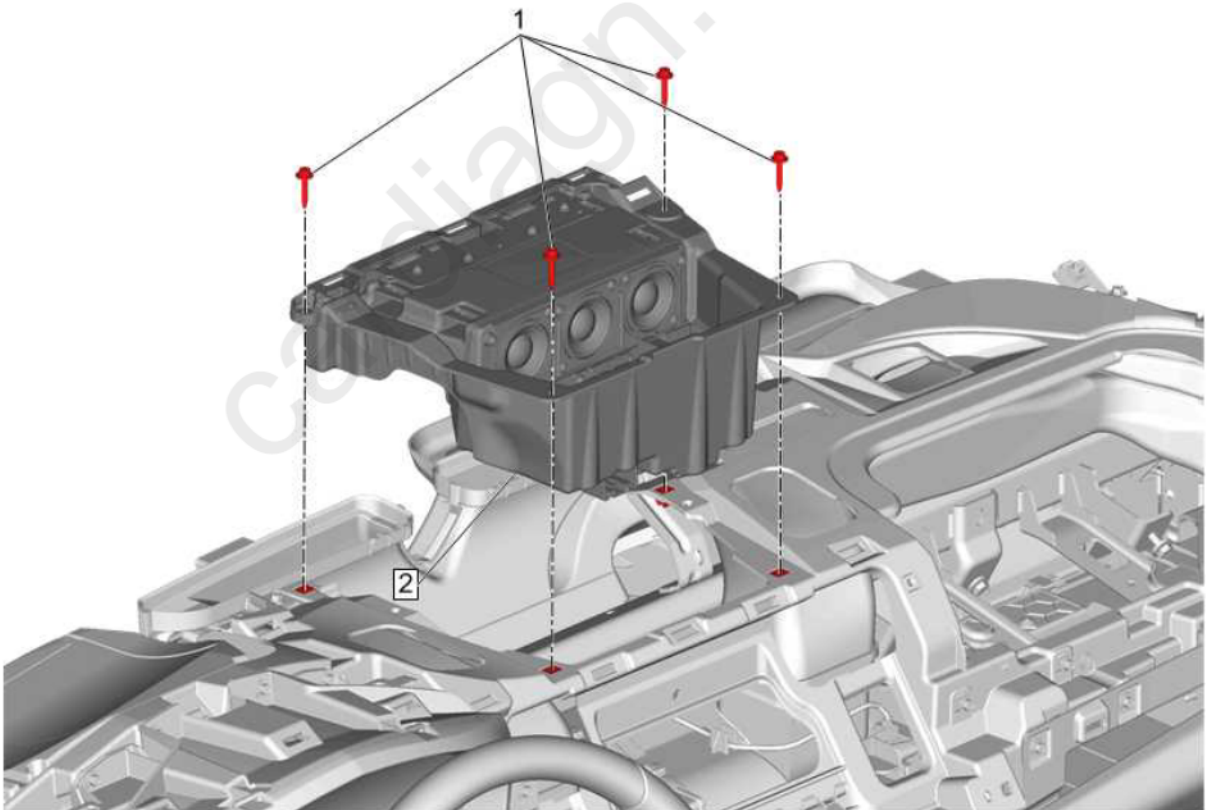


Fig. 90: Radio Front Center Speaker
 Courtesy of GENERAL MOTORS COMPANY

8. Instrument Cluster (2)» Install - [**Instrument Cluster Replacement**](#)

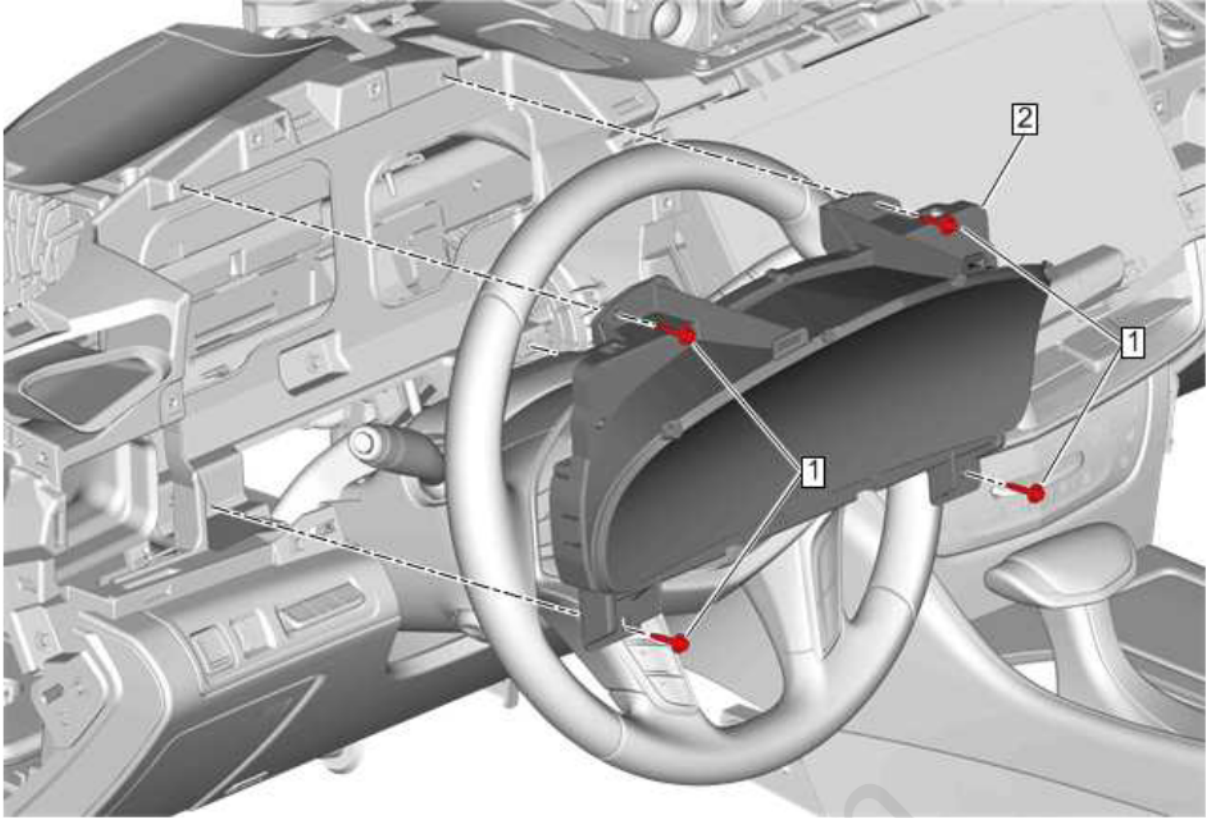


Fig. 91: Instrument Cluster

Courtesy of GENERAL MOTORS COMPANY

9. Heater and Air Conditioning User Interface Control (1)» Install - **Heater and Air Conditioning User Interface Control Replacement**

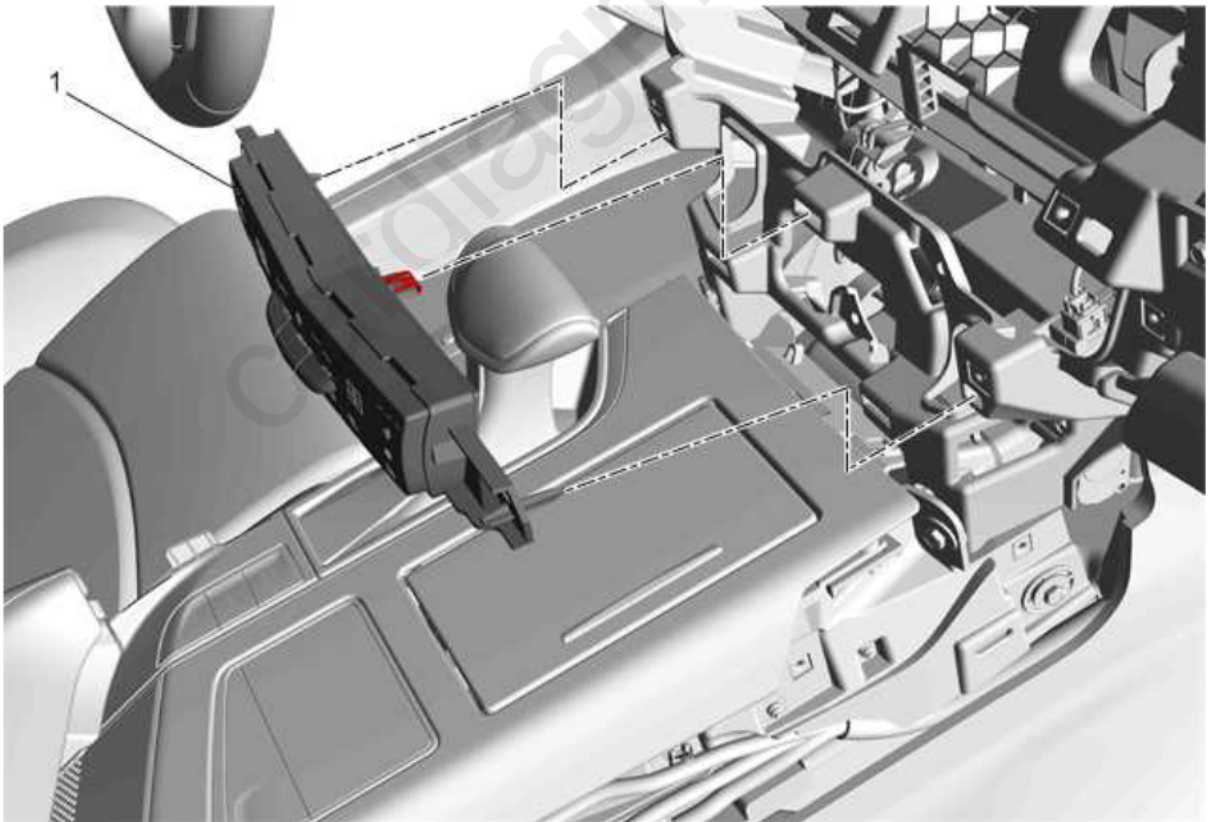


Fig. 92: Heater and Air Conditioning User Interface Control

Courtesy of GENERAL MOTORS COMPANY

10. Instrument Panel Trim Plate (2)» Install - **Instrument Panel Trim Plate Replacement**

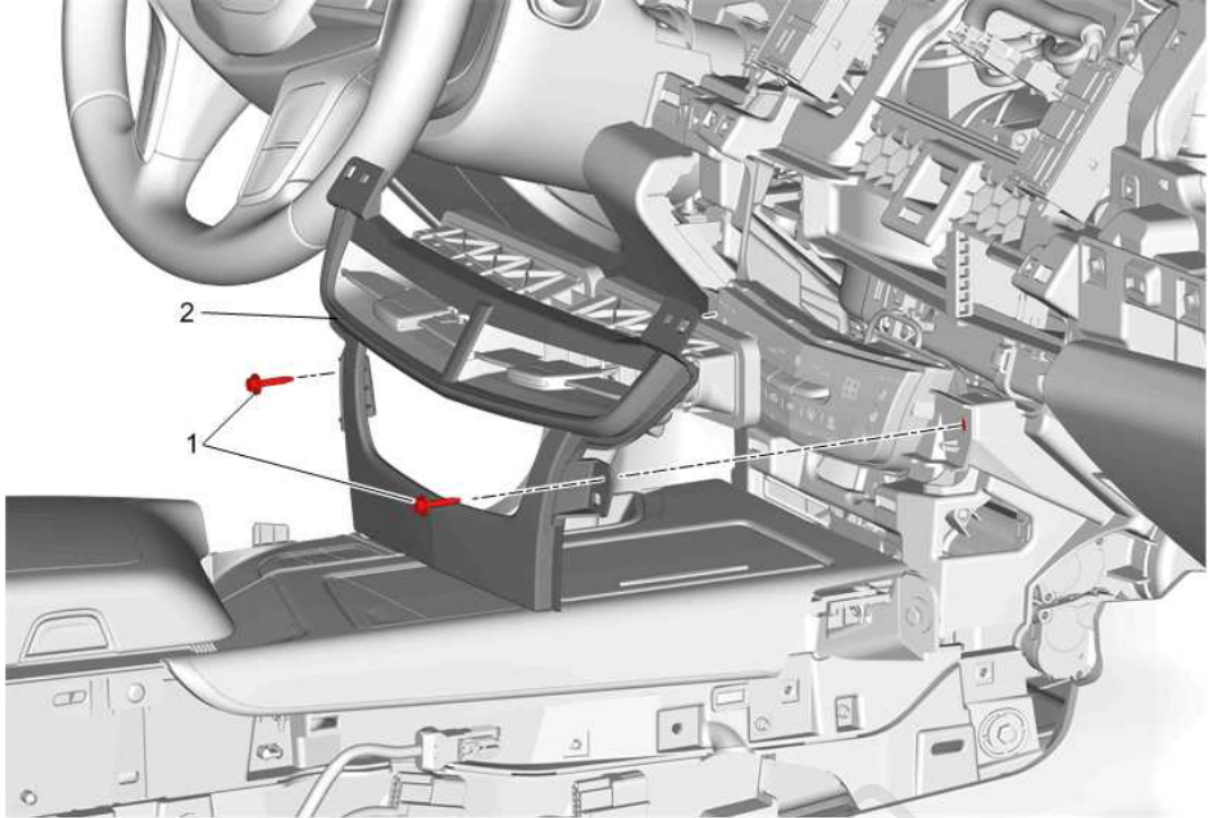


Fig. 93: Instrument Panel Trim Plate

Courtesy of GENERAL MOTORS COMPANY

11. Instrument Panel Knee Bolster (2)» Install - **Instrument Panel Knee Bolster Replacement**

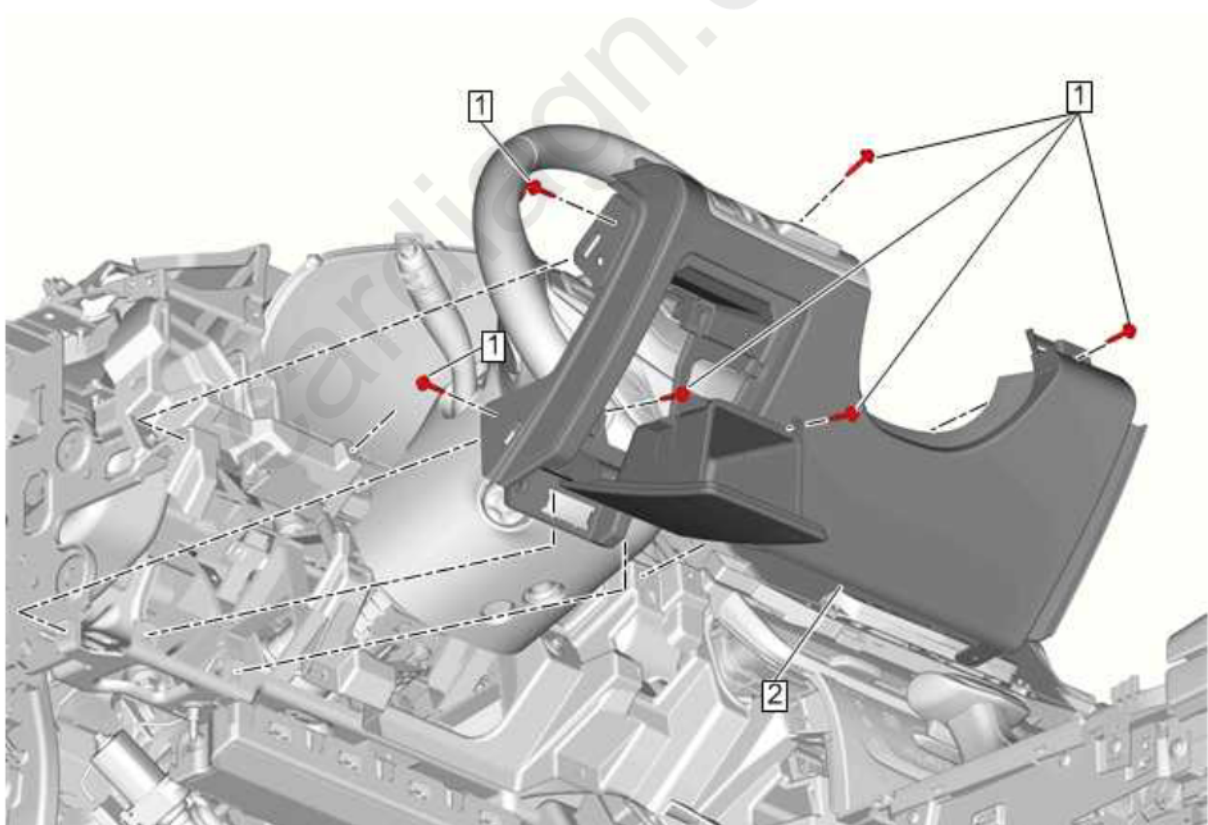


Fig. 94: Instrument Panel Knee Bolster

Courtesy of GENERAL MOTORS COMPANY

12. Enable the SIR System. Refer to **SIR Disabling and Enabling**

INSTRUMENT PANEL CARRIER REPLACEMENT (UQA)

Removal Procedure

1. Disable the SIR system. Refer to **SIR Disabling and Enabling**

2. Instrument Panel Knee Bolster (2)» Remove - [Instrument Panel Knee Bolster Replacement](#)

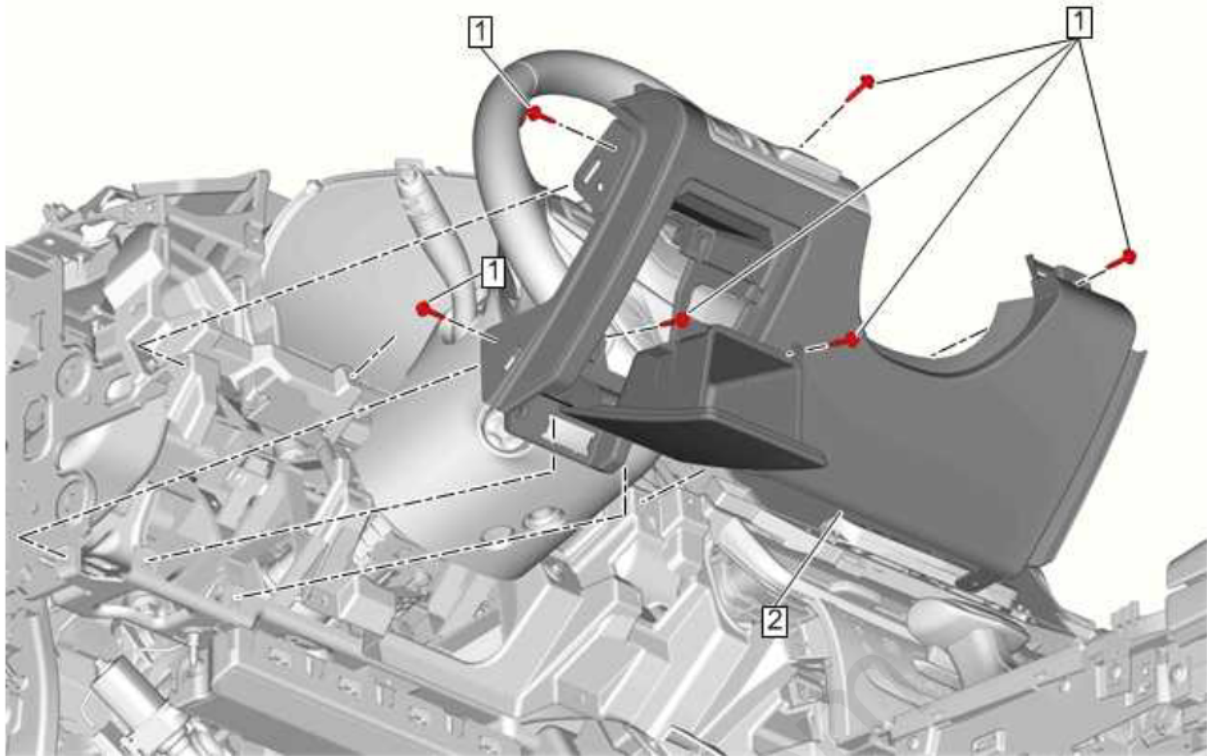


Fig. 95: Instrument Panel Knee Bolster
Courtesy of GENERAL MOTORS COMPANY

3. Instrument Panel Trim Plate (2)» Remove - [Instrument Panel Trim Plate Replacement](#)

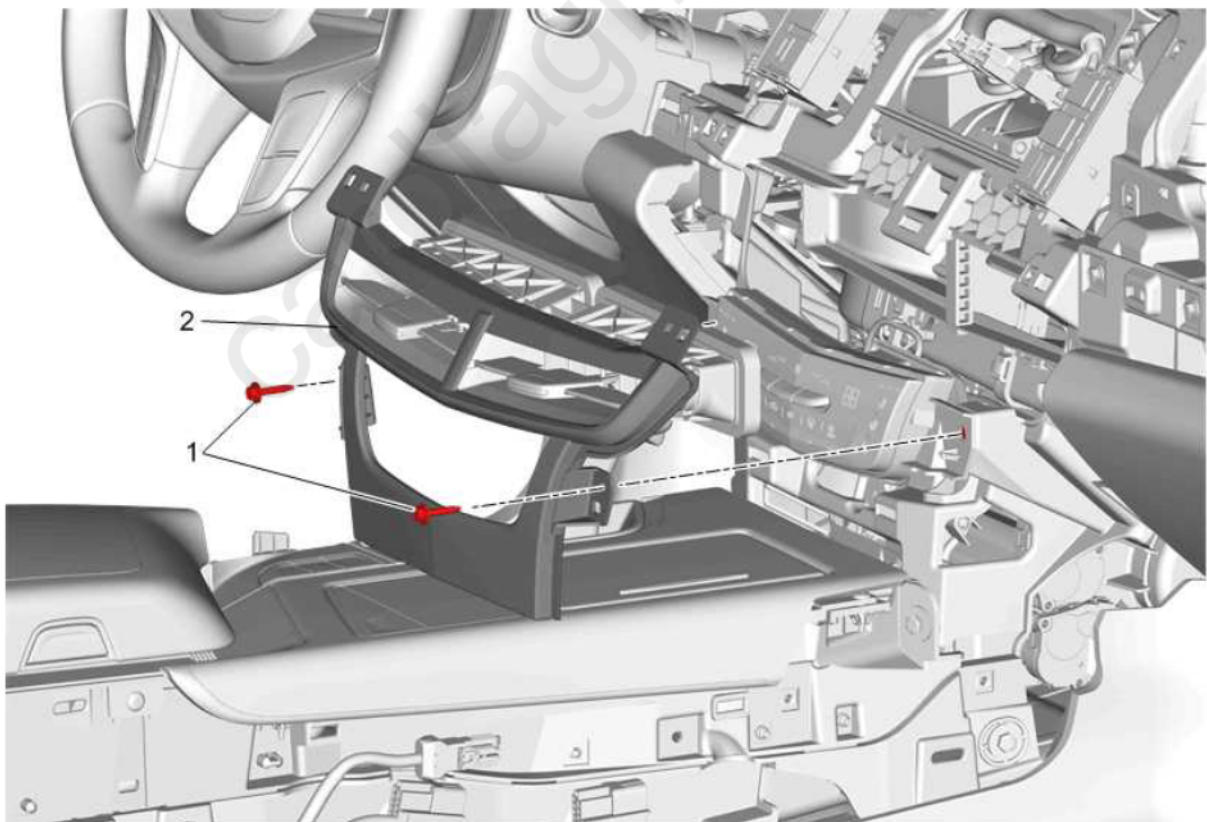


Fig. 96: Instrument Panel Trim Plate
Courtesy of GENERAL MOTORS COMPANY

4. Heater and Air Conditioning User Interface Control (1)» Remove - [Heater and Air Conditioning User Interface Control Replacement](#)

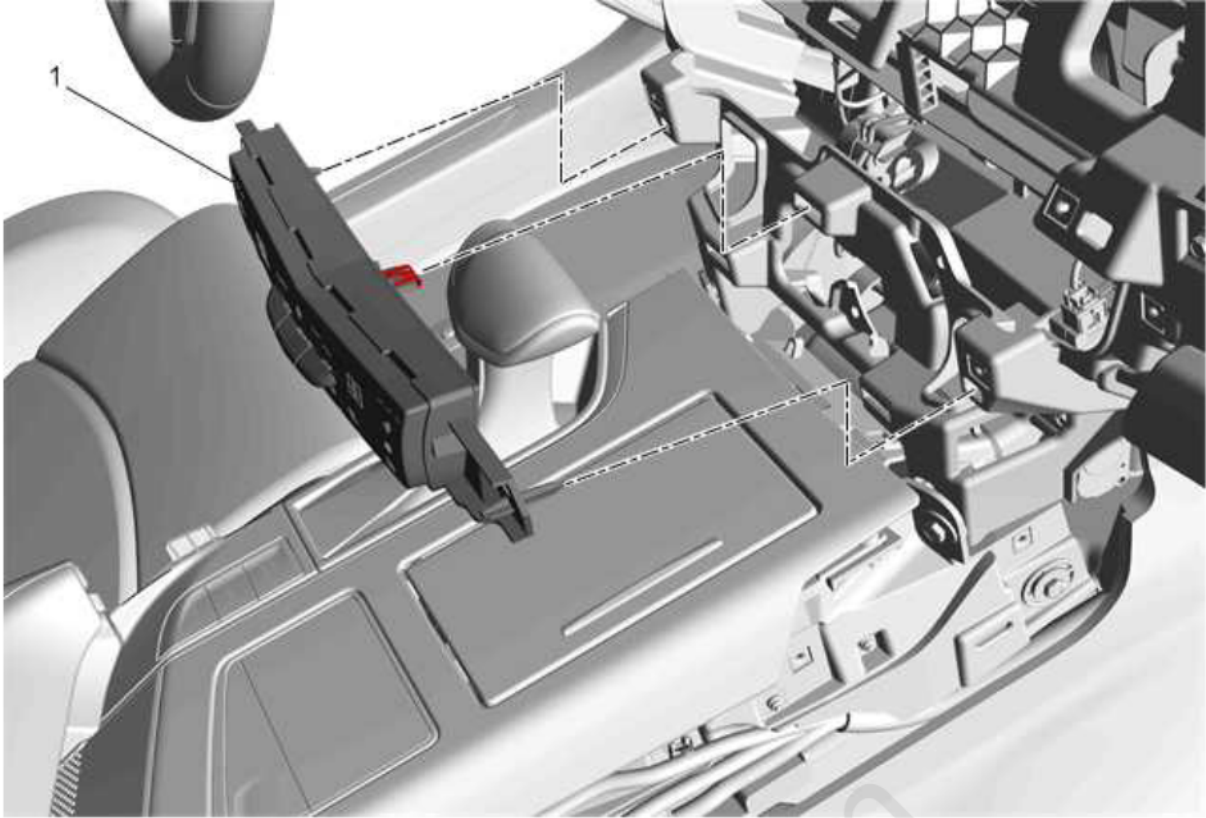


Fig. 97: Heater and Air Conditioning User Interface Control

Courtesy of GENERAL MOTORS COMPANY

5. Instrument Cluster (2)» Remove - **Instrument Cluster Replacement**

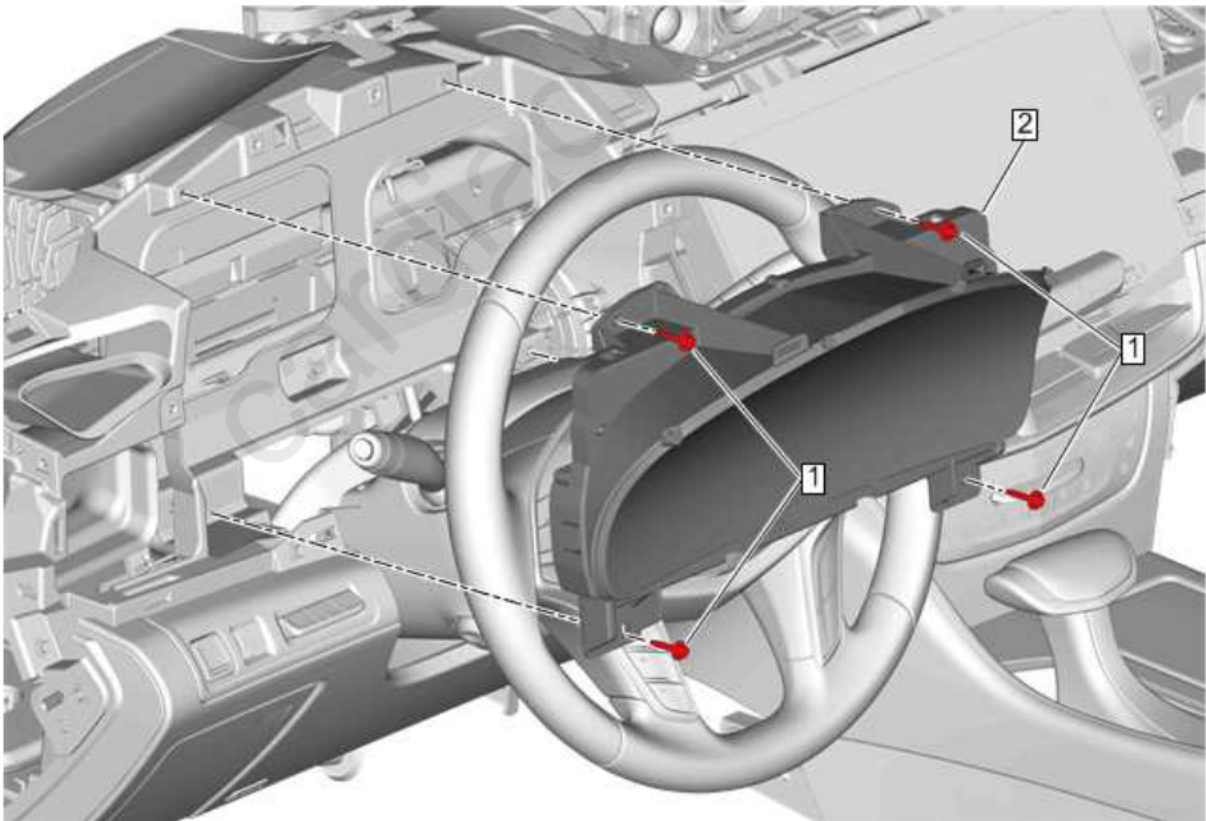


Fig. 98: Instrument Cluster

Courtesy of GENERAL MOTORS COMPANY

6. Radio Front Center Speaker (2)» Remove - **Radio Front Center Speaker Replacement (UQA, UQS)**

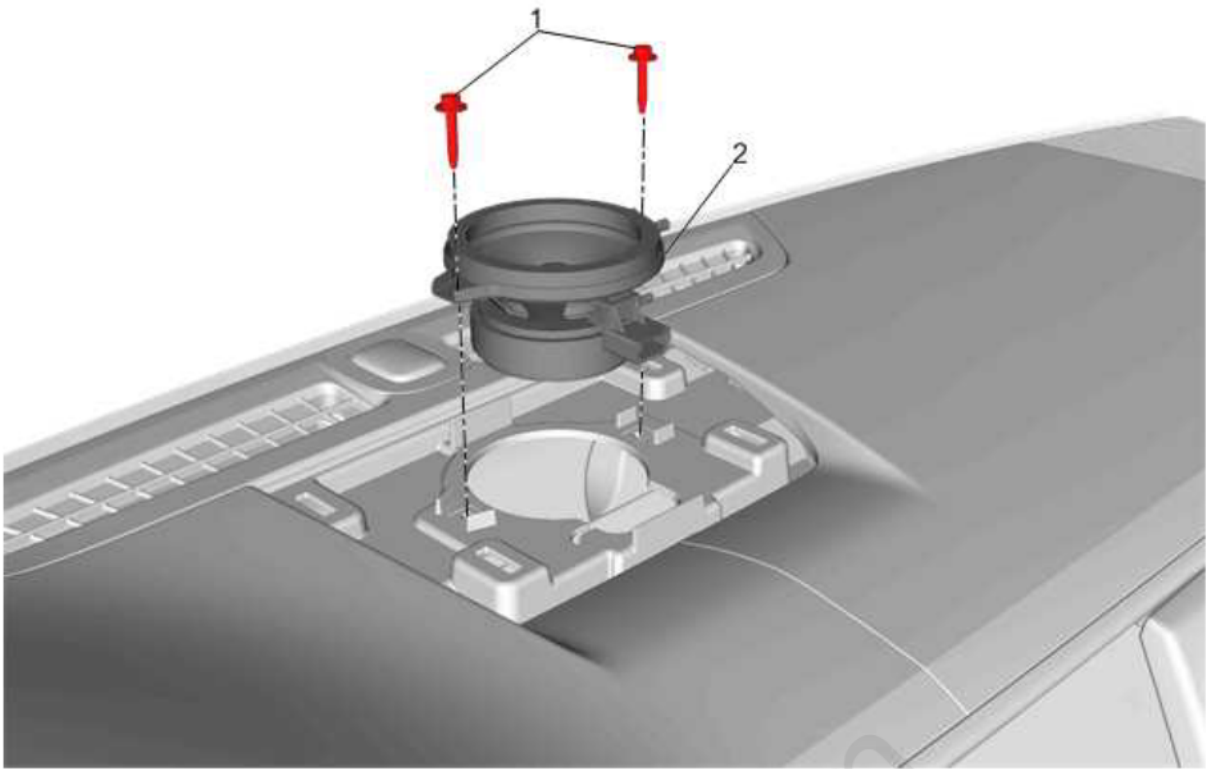


Fig. 99: Radio Front Center Speaker

Courtesy of GENERAL MOTORS COMPANY

7. Instrument Panel Upper Trim Panel Bracket (2) » Remove - [Instrument Panel Upper Trim Panel Bracket Replacement](#)

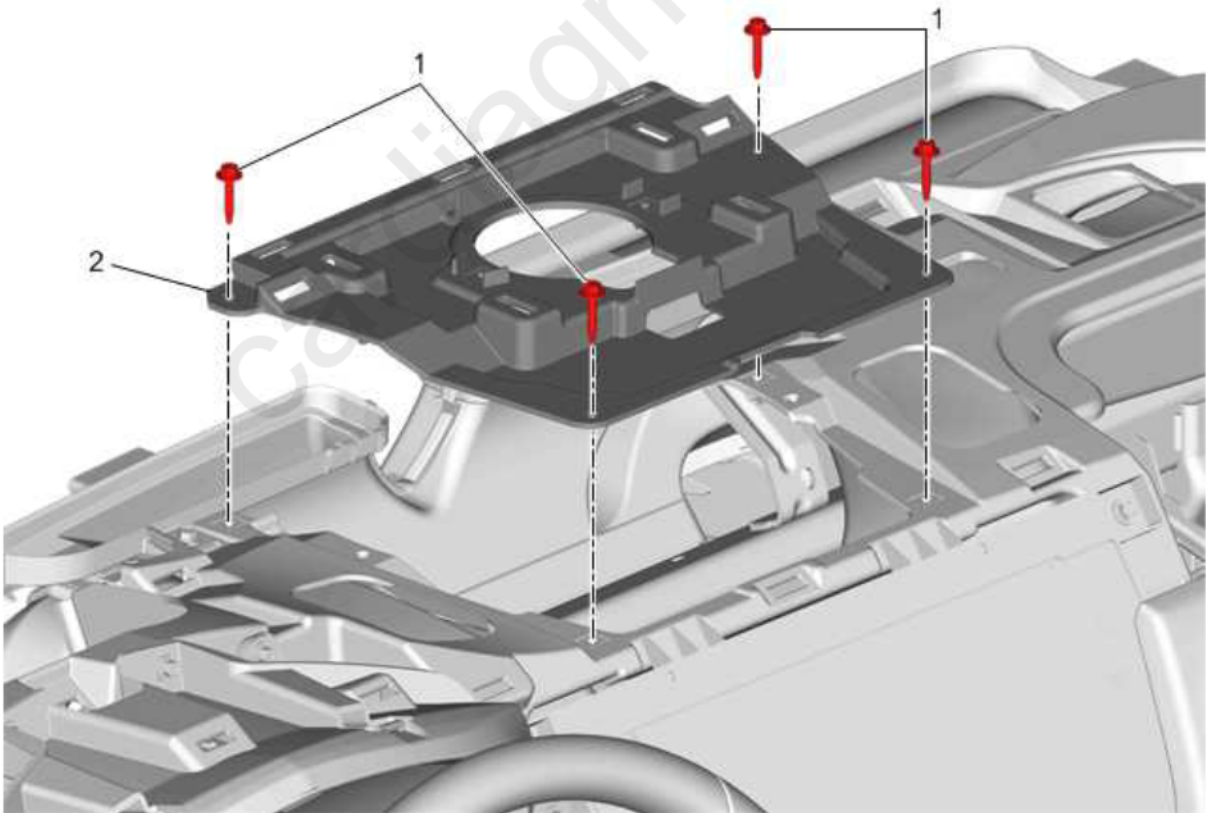


Fig. 100: Instrument Panel Upper Trim Panel Bracket

Courtesy of GENERAL MOTORS COMPANY

8. Instrument Panel Lower Airbag - Driver Side (2) » Remove - [Instrument Panel Lower Airbag Replacement - Driver Side](#)

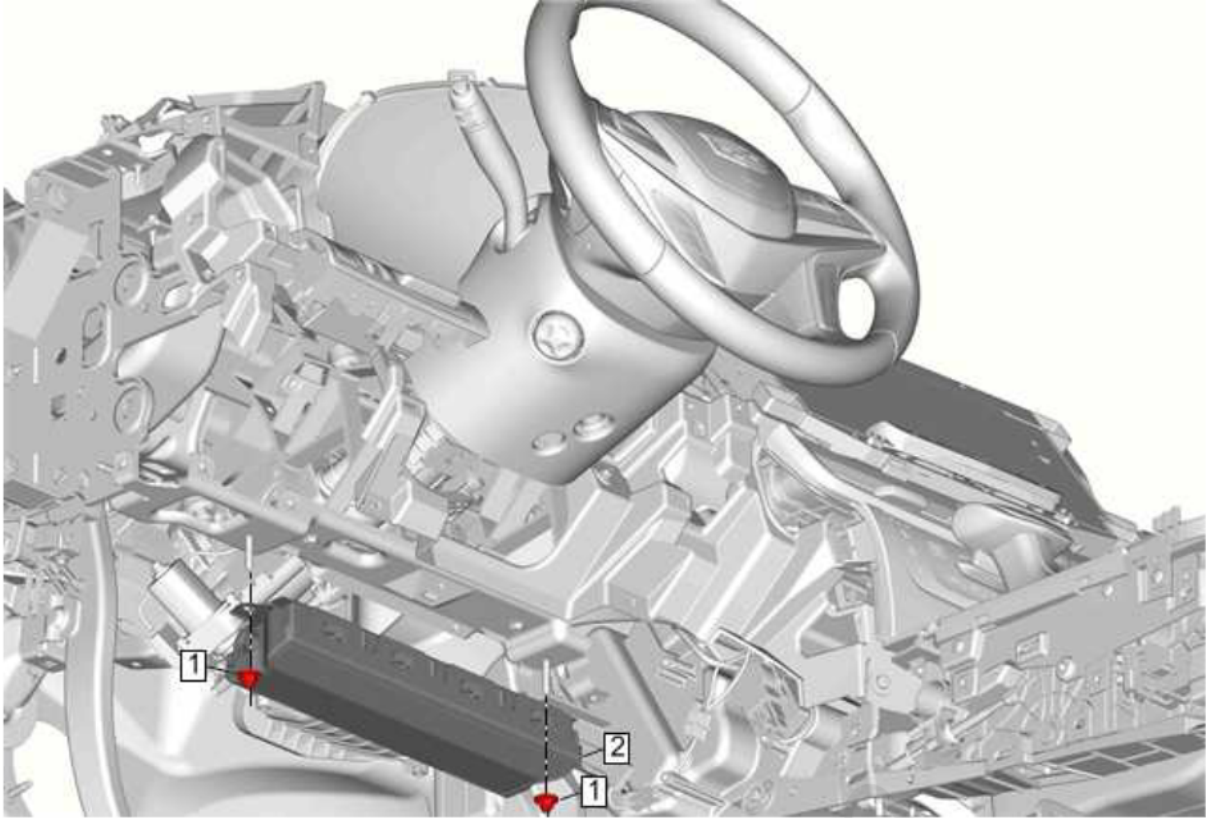


Fig. 101: Instrument Panel Lower Airbag - Driver Side
 Courtesy of GENERAL MOTORS COMPANY

9. Steering Column (1)» Remove - **Steering Column Replacement**

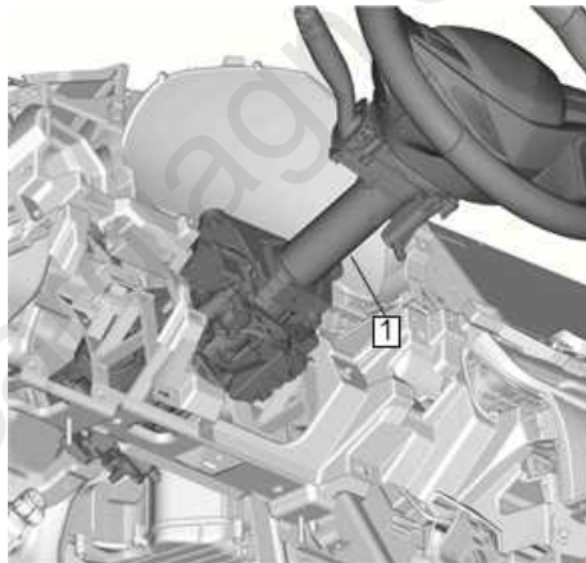


Fig. 102: Steering Column
 Courtesy of GENERAL MOTORS COMPANY

10. Front Floor Console (2)» Remove - **Front Floor Console Replacement**

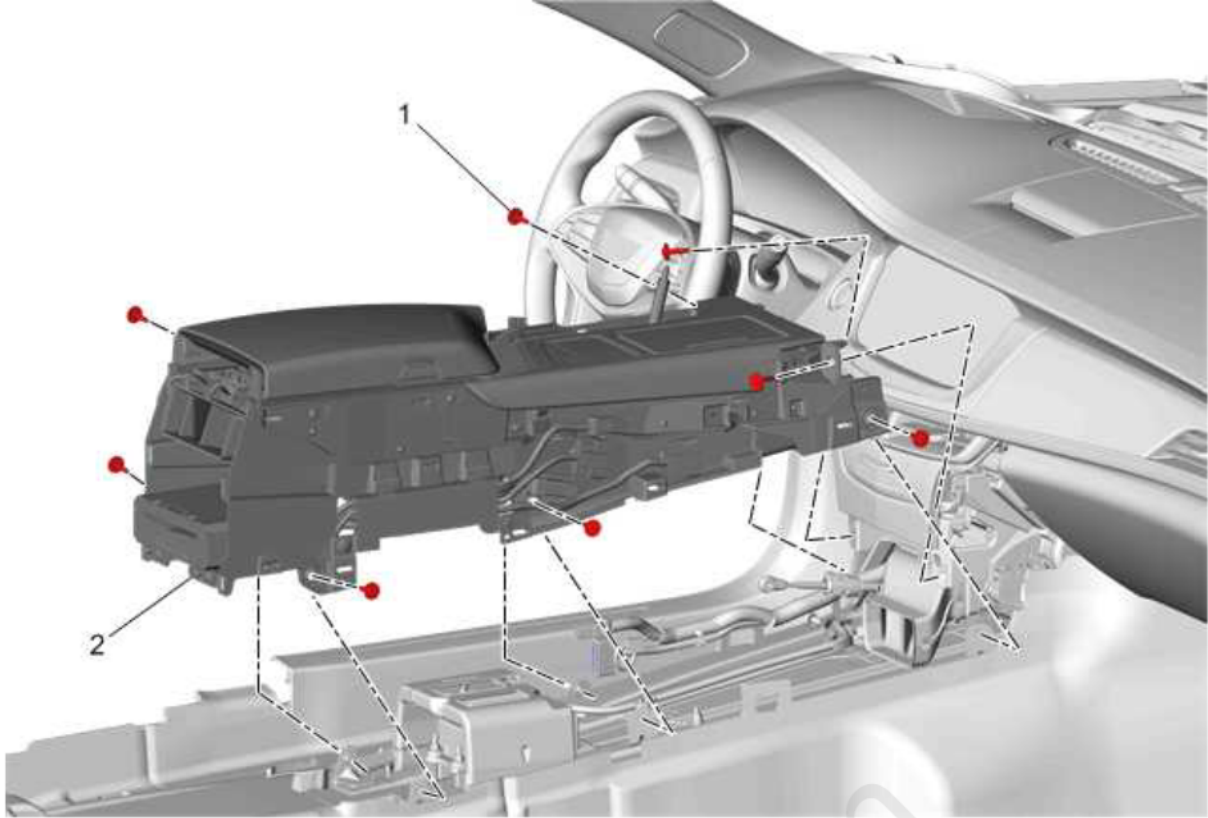


Fig. 103: Front Floor Console

Courtesy of GENERAL MOTORS COMPANY

11. Instrument Carrier Bolt (1) » Remove [15x]

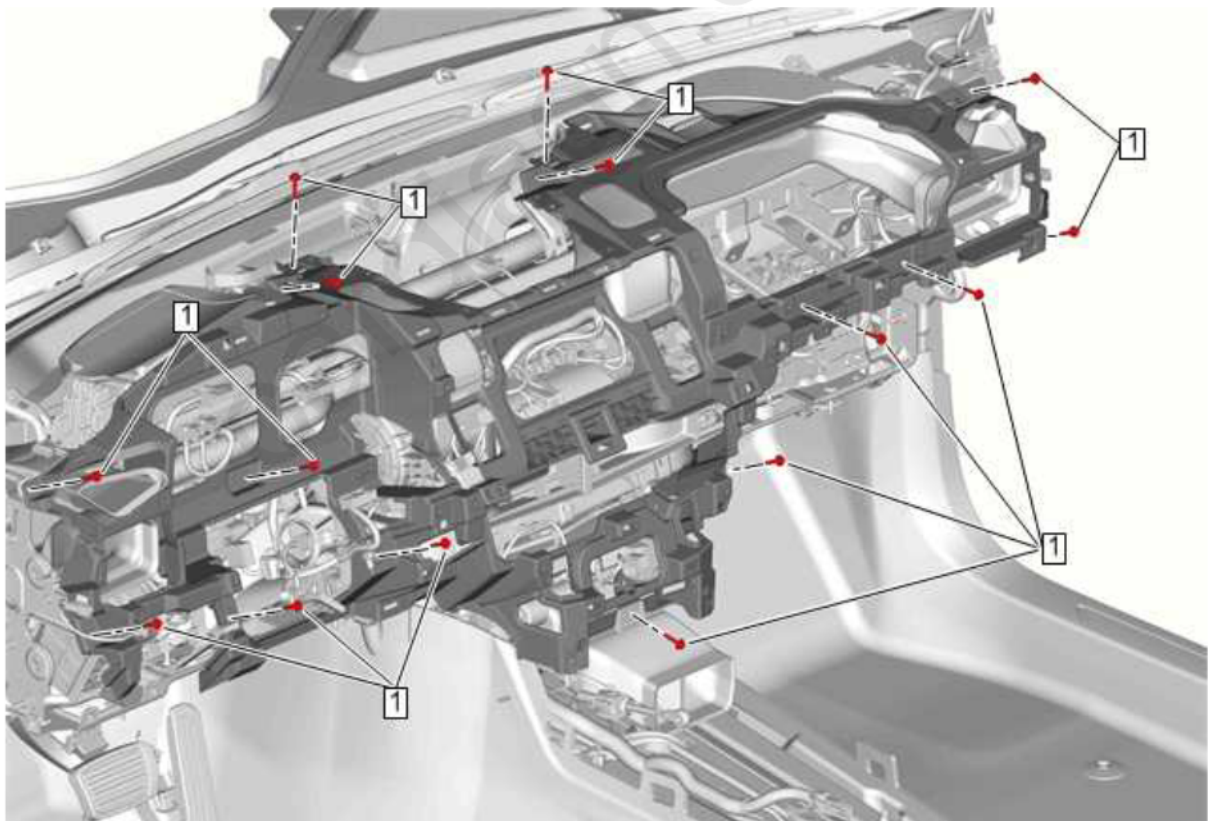


Fig. 104: Instrument Carrier Bolt

Courtesy of GENERAL MOTORS COMPANY

12. Note the location and routing of the instrument panel wiring harness prior to removal to ensure proper installation.

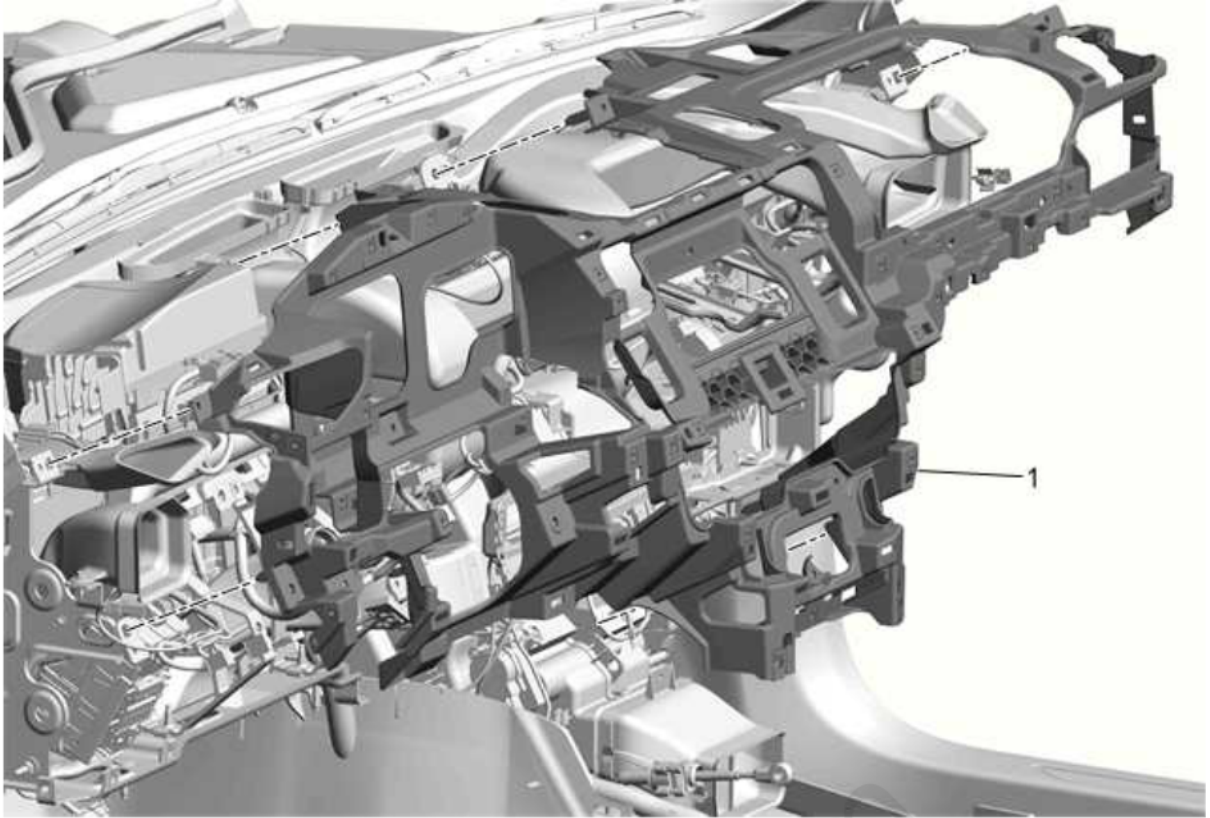


Fig. 105: Instrument Panel Carrier Assembly
 Courtesy of GENERAL MOTORS COMPANY

13. Disconnect the wiring harness from the instrument panel carrier.
14. With the aid of an assistant, remove the instrument panel carrier assembly from the vehicle. (1)
15. Transfer components as necessary.

Installation Procedure

1. With the aid of an assistant, position the instrument carrier in the vehicle. (1)

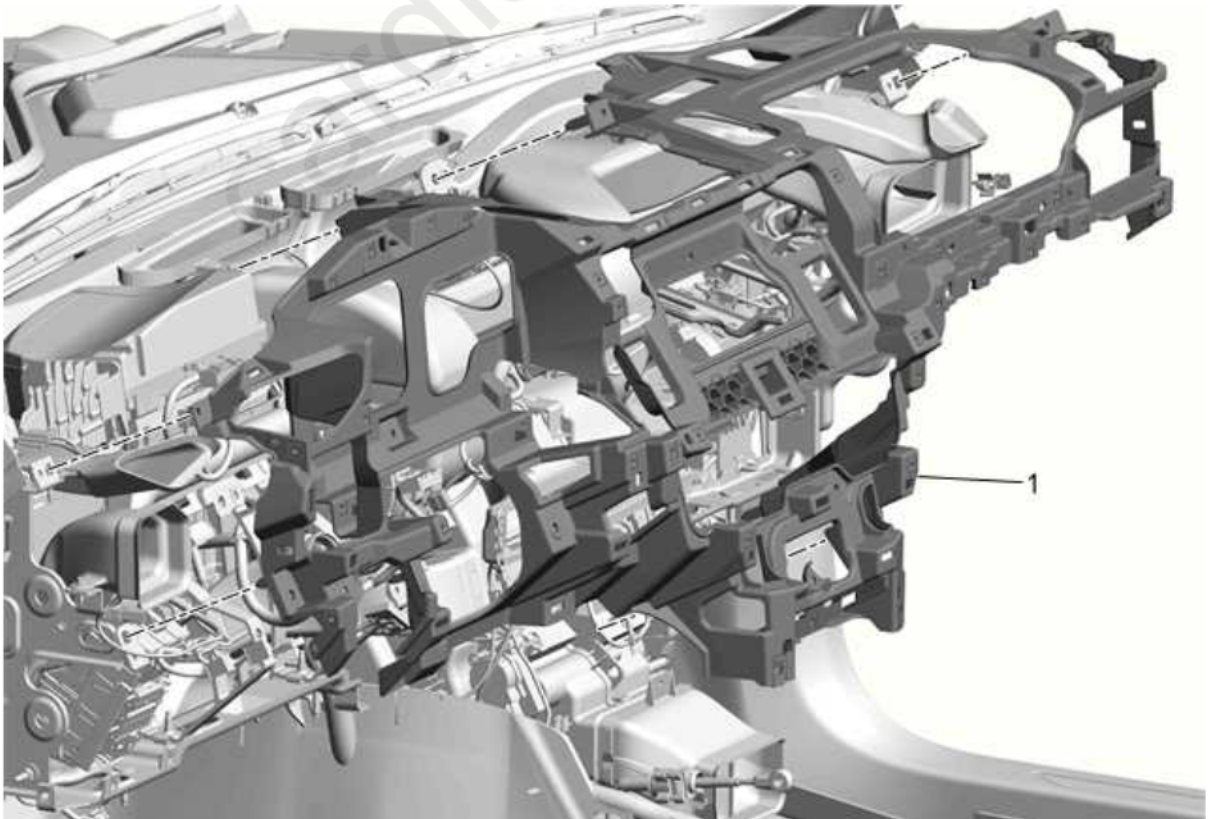


Fig. 106: Instrument Panel Carrier Assembly
 Courtesy of GENERAL MOTORS COMPANY

2. Reposition the instrument panel wiring harness into the vehicle position as was noted in the removal and connect the fasteners securing the instrument panel wiring harness to the instrument carrier.
3. Instrument Carrier Bolt (1)» Install and tighten [2x] 2.5 N.m (22 lb in)

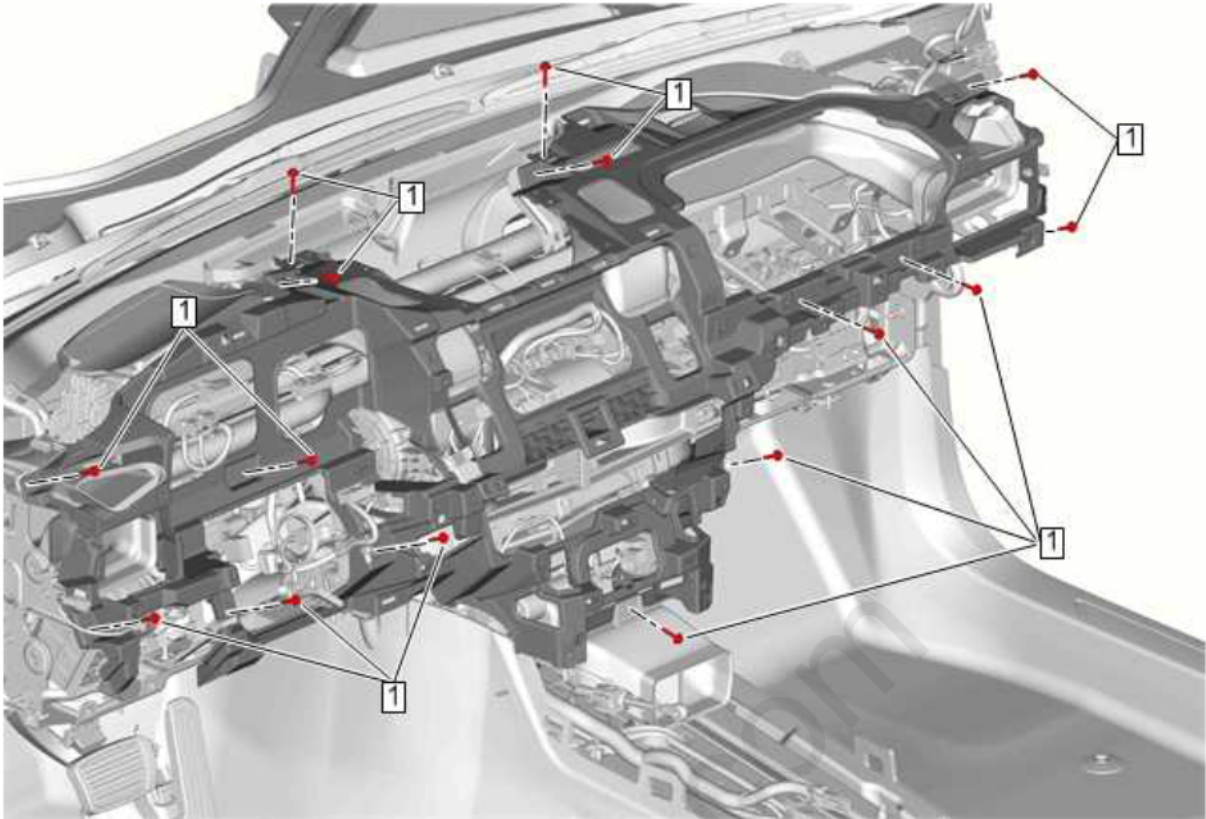


Fig. 107: Instrument Carrier Bolt
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

4. Front Floor Console (2)» Install - **Front Floor Console Replacement**

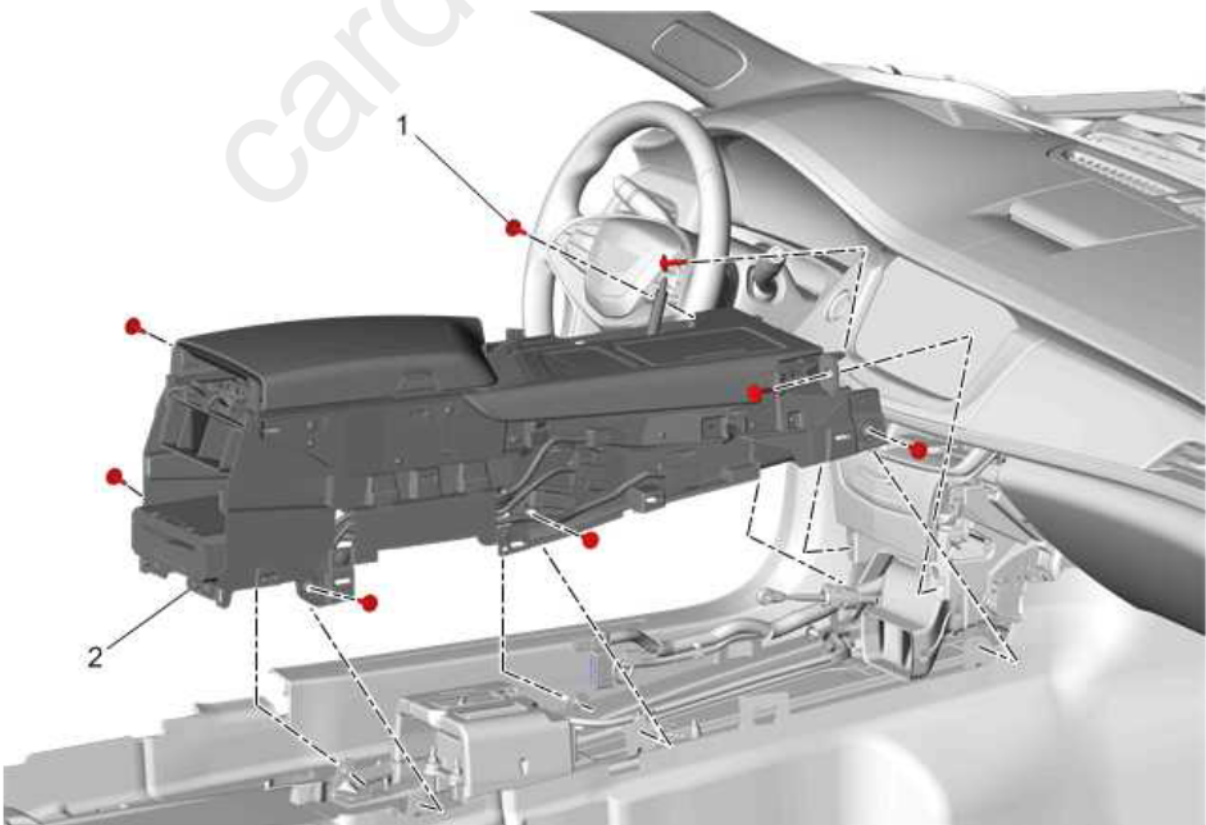


Fig. 108: Front Floor Console
Courtesy of GENERAL MOTORS COMPANY

5. Steering Column (1)A» Install - [Steering Column Replacement](#)

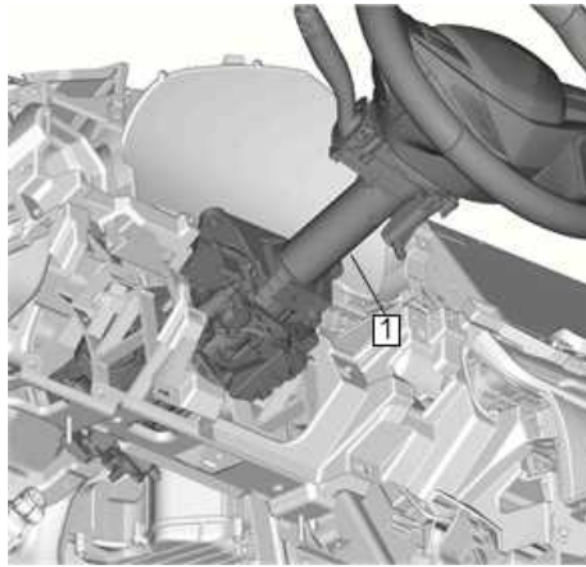


Fig. 109: Steering Column

Courtesy of GENERAL MOTORS COMPANY

6. Instrument Panel Lower Airbag - Driver Side (2)A» Install - [Instrument Panel Lower Airbag Replacement - Driver Side](#)

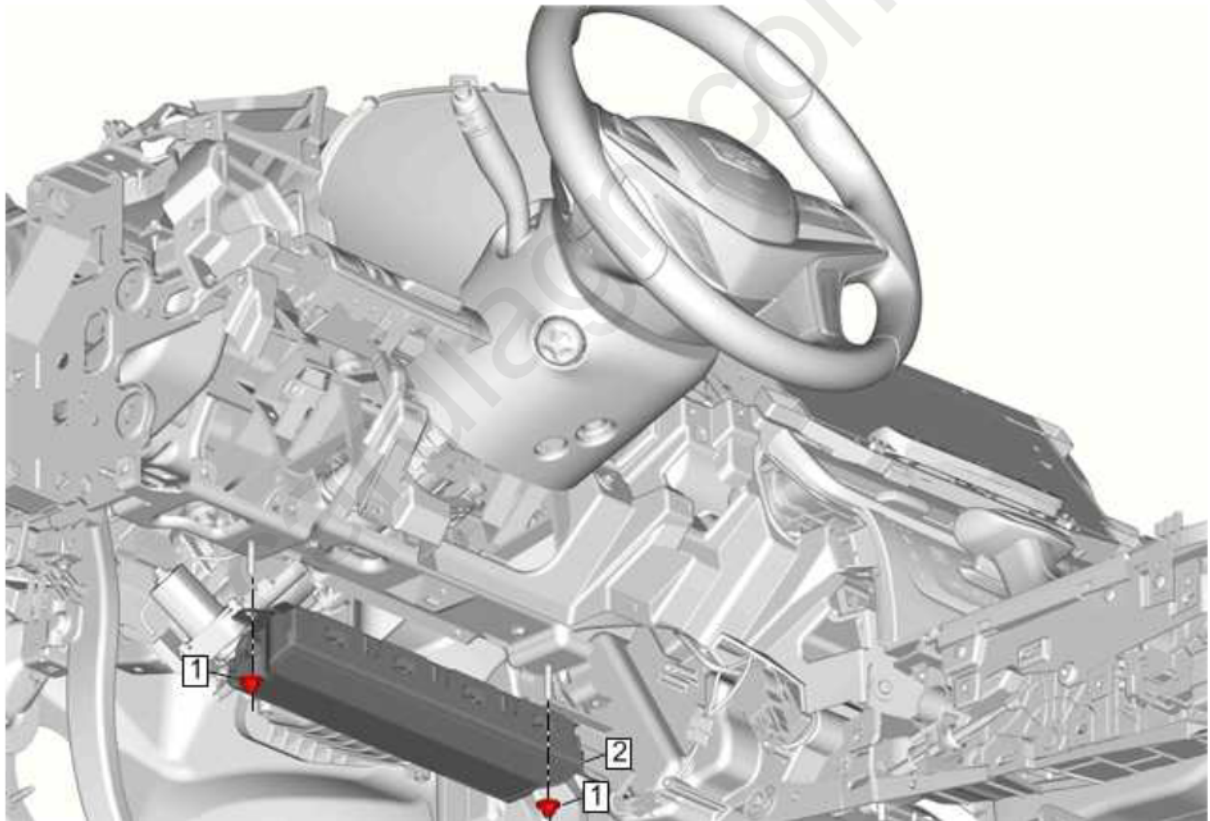


Fig. 110: Instrument Panel Lower Airbag - Driver Side

Courtesy of GENERAL MOTORS COMPANY

7. Instrument Panel Upper Trim Panel Bracket (2)A» Install - [Instrument Panel Upper Trim Panel Bracket Replacement](#)

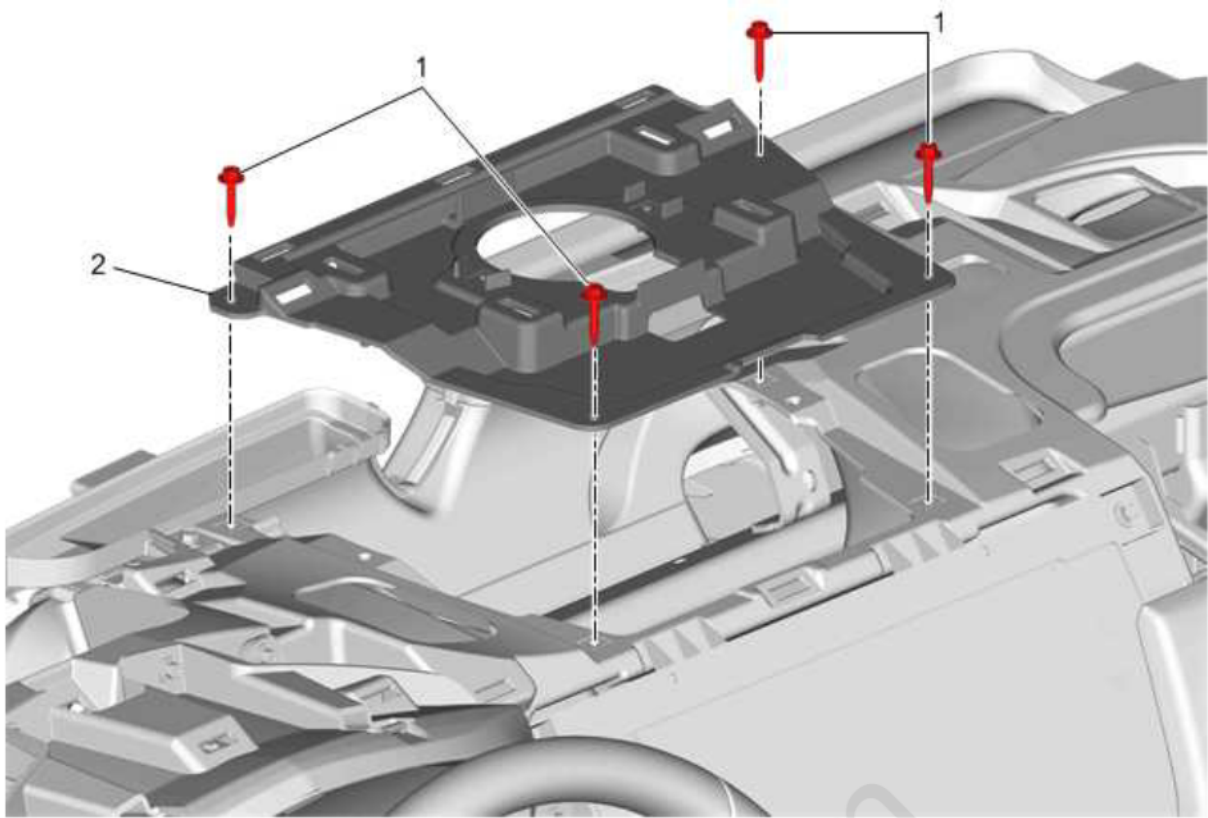


Fig. 111: Instrument Panel Upper Trim Panel Bracket

Courtesy of GENERAL MOTORS COMPANY

8. Radio Front Center Speaker (2)» Install - [Radio Front Center Speaker Replacement \(UQA, UQS\)](#)

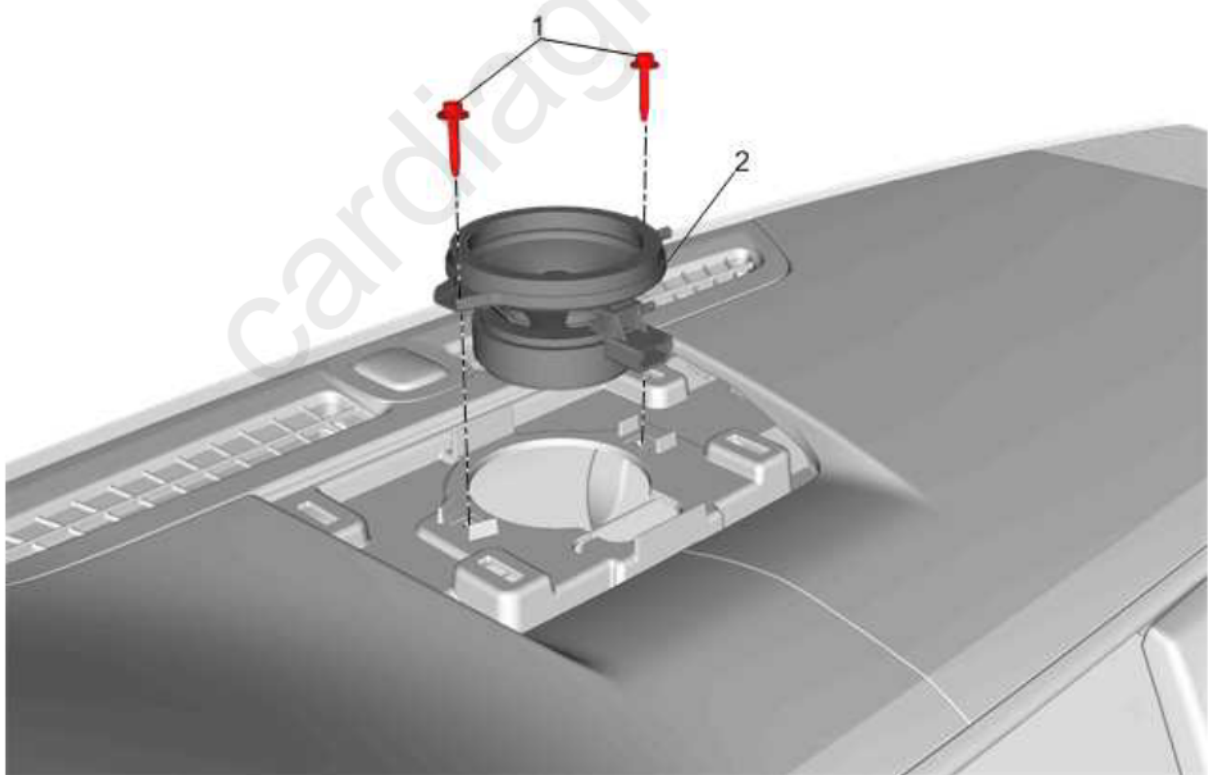


Fig. 112: Radio Front Center Speaker

Courtesy of GENERAL MOTORS COMPANY

9. Instrument Cluster (2)» Install - [Instrument Cluster Replacement](#)

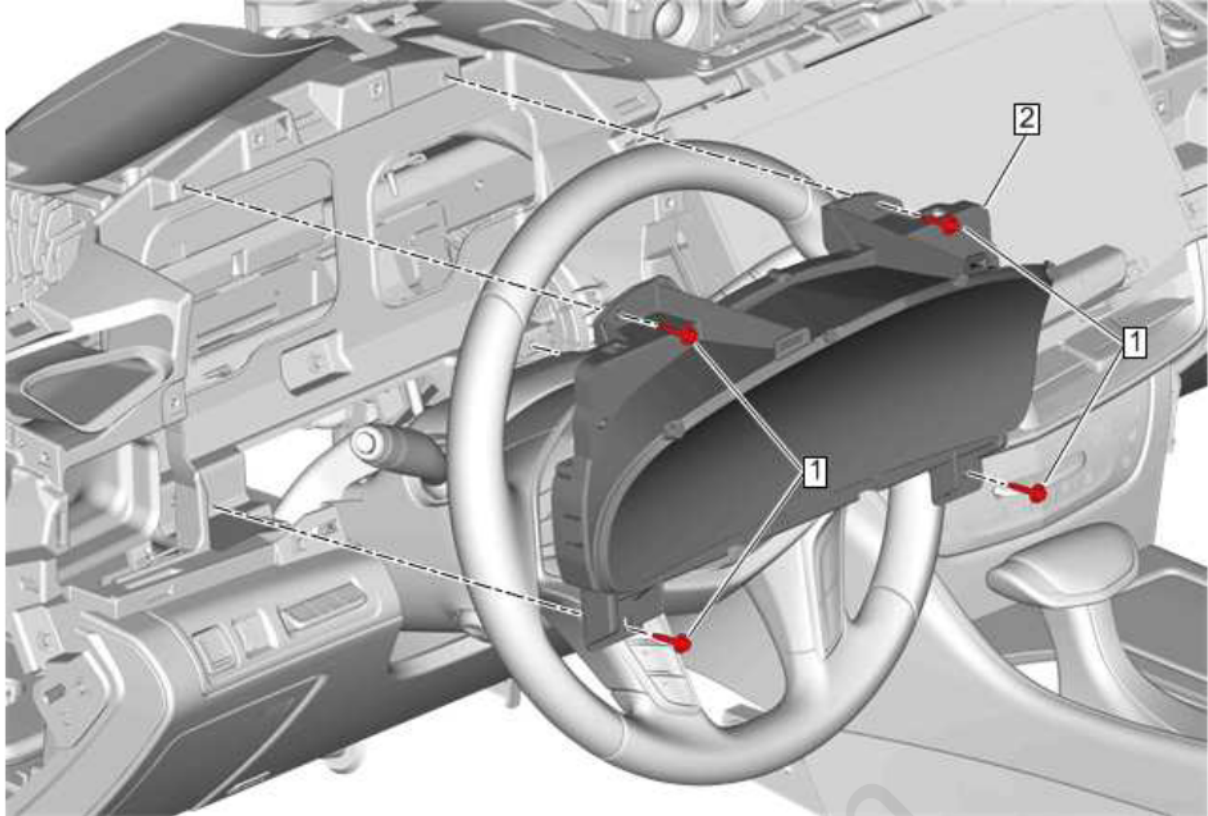


Fig. 113: Instrument Cluster

Courtesy of GENERAL MOTORS COMPANY

10. Heater and Air Conditioning User Interface Control (1)» Install - **Heater and Air Conditioning User Interface Control Replacement**

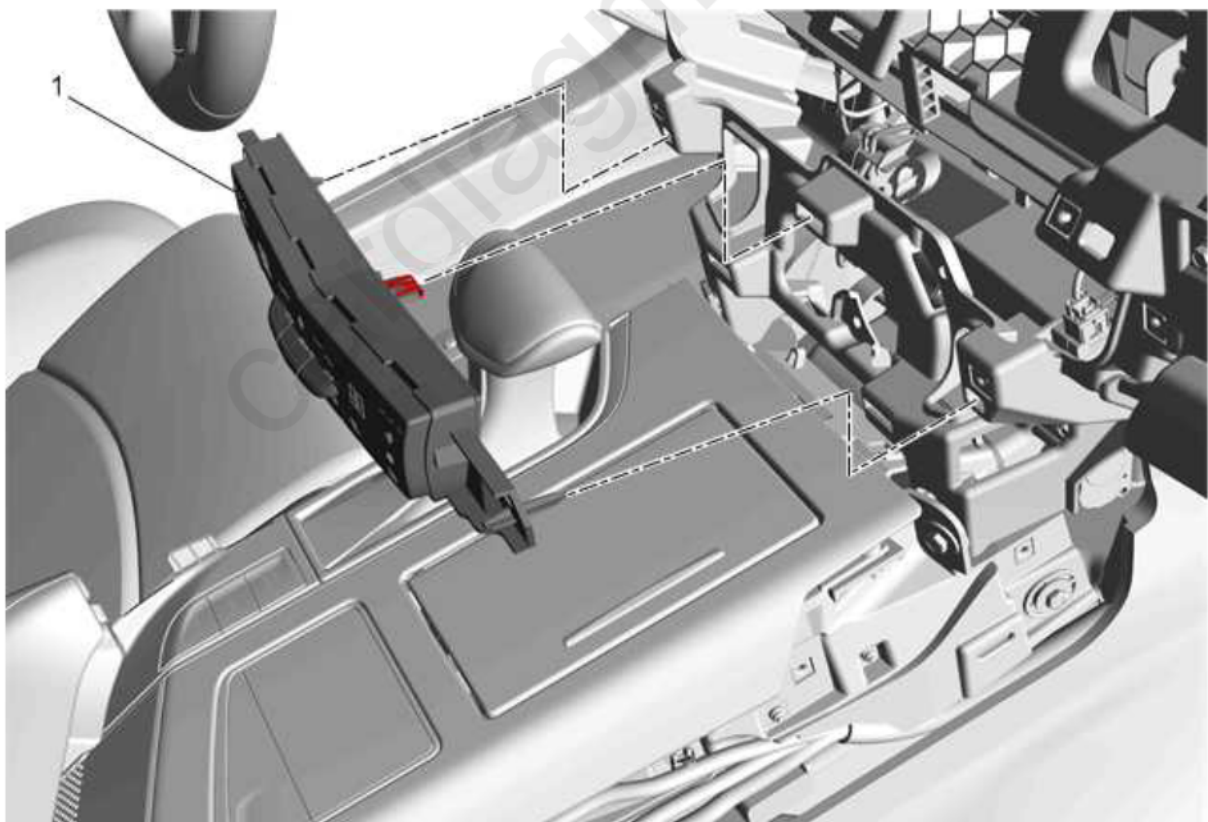


Fig. 114: Heater and Air Conditioning User Interface Control

Courtesy of GENERAL MOTORS COMPANY

11. Instrument Panel Trim Plate (2)» Install - **Instrument Panel Trim Plate Replacement**

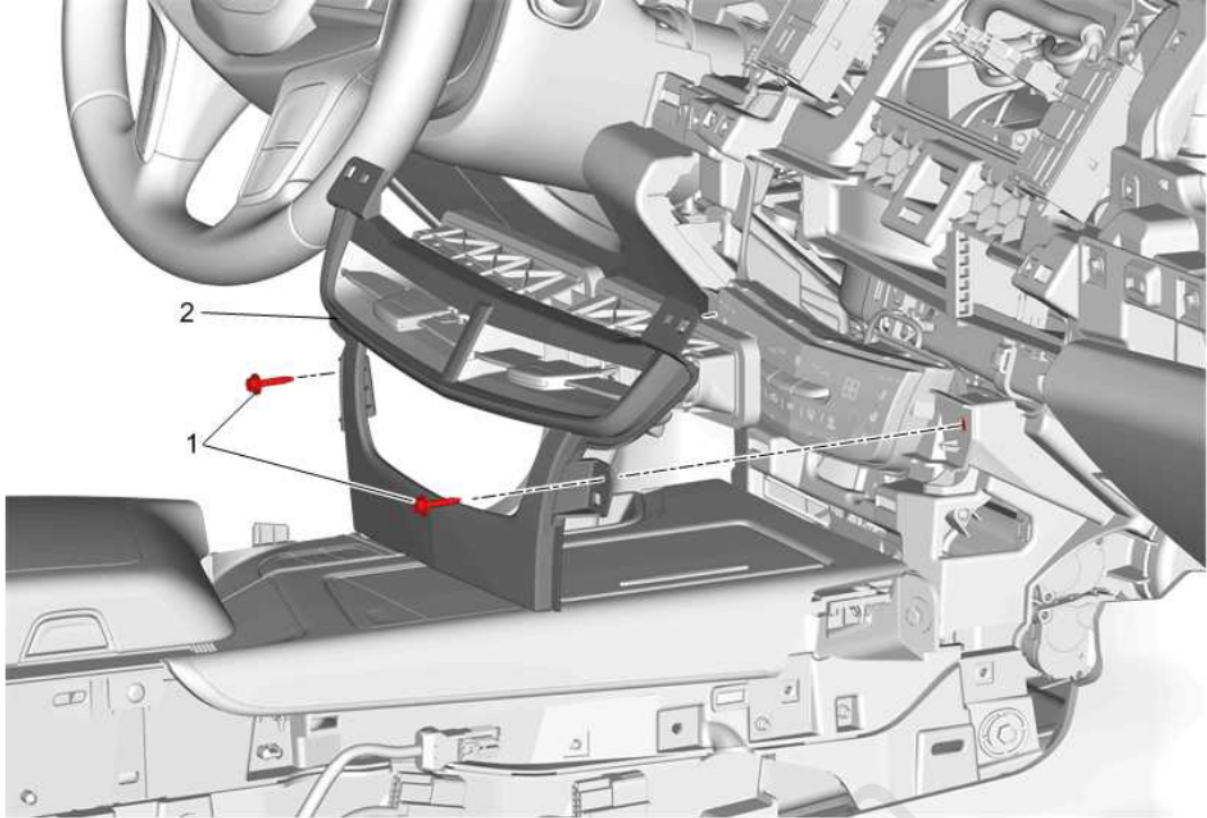


Fig. 115: Instrument Panel Trim Plate
 Courtesy of GENERAL MOTORS COMPANY

12. Instrument Panel Knee Bolster (2)» Install - [Instrument Panel Knee Bolster Replacement](#)

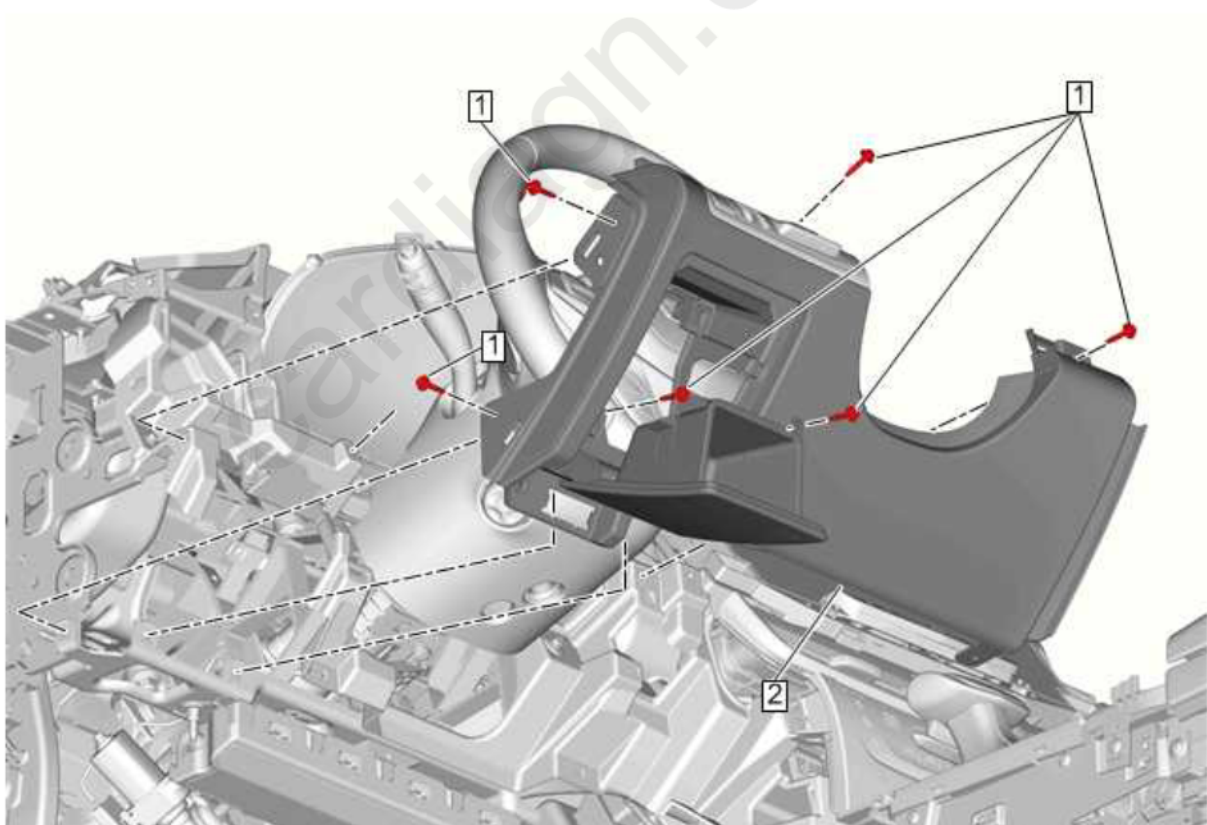


Fig. 116: Instrument Panel Knee Bolster
 Courtesy of GENERAL MOTORS COMPANY

13. Steering Column Lower Trim Cover (2)» Install - [Steering Column Lower Trim Cover Replacement](#)

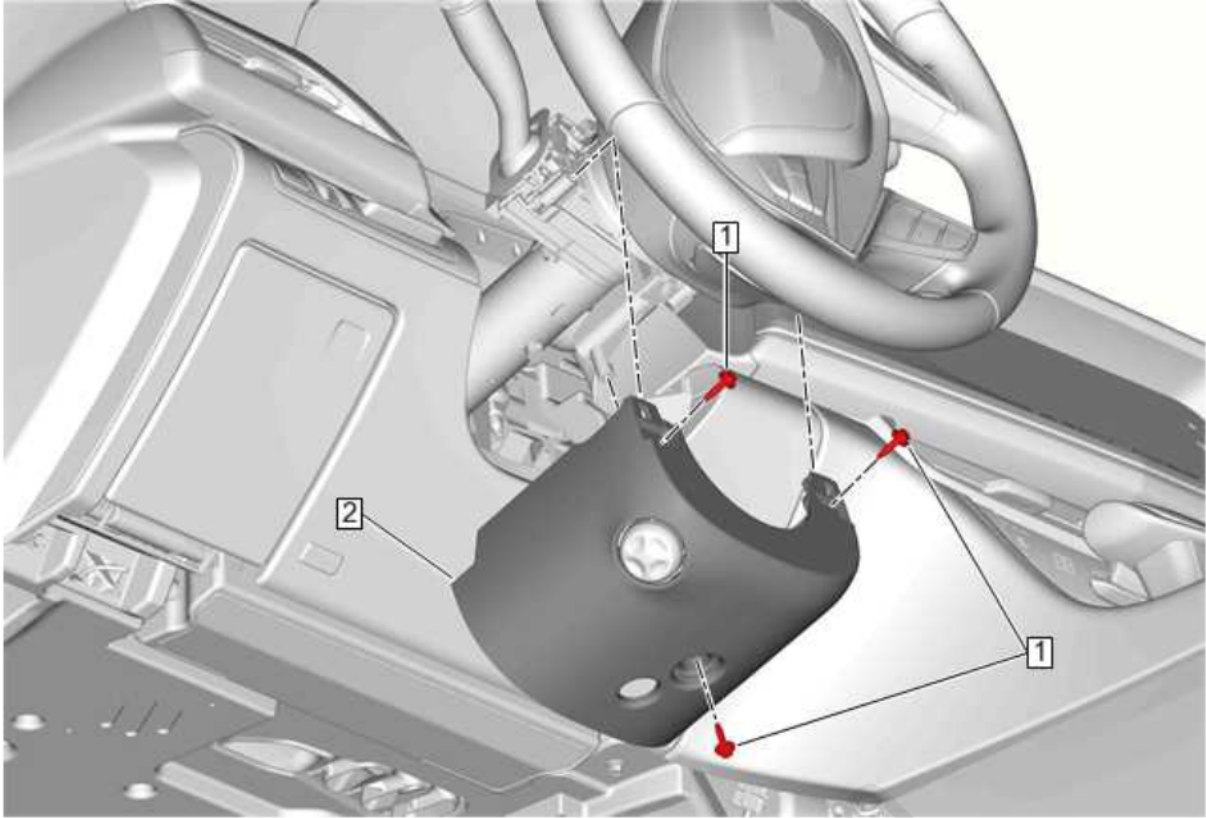


Fig. 117: Steering Column Lower Trim Cover
 Courtesy of GENERAL MOTORS COMPANY

14. Enable the SIR System. Refer to [SIR Disabling and Enabling](#)

INSTRUMENT PANEL TIE BAR REPLACEMENT

Removal Procedure

1. Recover the refrigerant. Refer to [Refrigerant Recovery and Recharging \(R-134a\)](#) and/or [Refrigerant Recovery and Recharging \(R-1234yf\)](#)
2. Drain the cooling system. Refer to [Cooling System Draining and Filling \(Static without HP9\)](#) , [Cooling System Draining and Filling \(GE 47716 without HP9\)](#) , [Cooling System Draining and Filling \(Static LTG with HP9\)](#) and/or [Cooling System Draining and Filling \(GE 47716 LTG with HP9\)](#)
3. Windshield Wiper Transmission (2) » Remove - [Windshield Wiper Transmission Replacement](#)

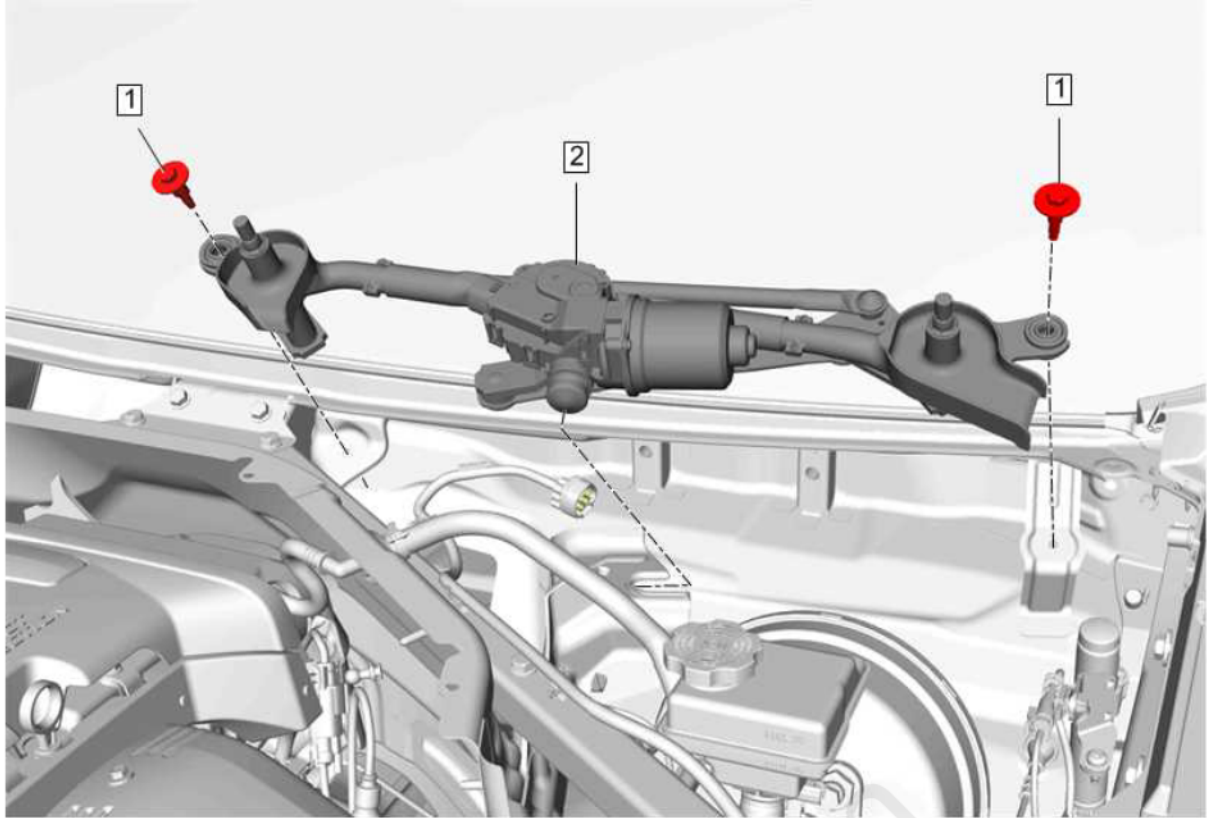


Fig. 118: Windshield Wiper Transmission
 Courtesy of GENERAL MOTORS COMPANY

4. Air Conditioning Refrigerant Heat Exchanger (2) @ Air Conditioning Evaporator Thermal Expansion Valve» Remove - **Air Conditioning Refrigerant Heat Exchanger Replacement (LTG)** , **Air Conditioning Refrigerant Heat Exchanger Replacement (LGW, LGX)** and/or **Air Conditioning Refrigerant Heat Exchanger Replacement (HP9)**

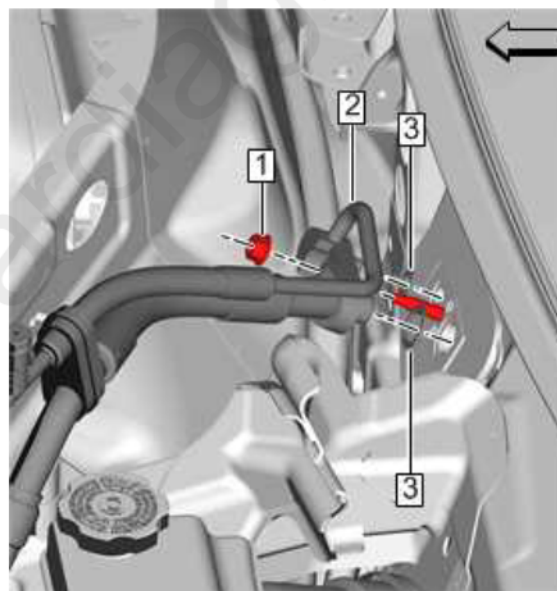


Fig. 119: Air Conditioning Refrigerant Heat Exchanger
 Courtesy of GENERAL MOTORS COMPANY

5. From within the engine compartment, remove the heater and air conditioning evaporator and blower module bolt (1), securing the heater and air conditioning evaporator and blower module to the cowl panel.

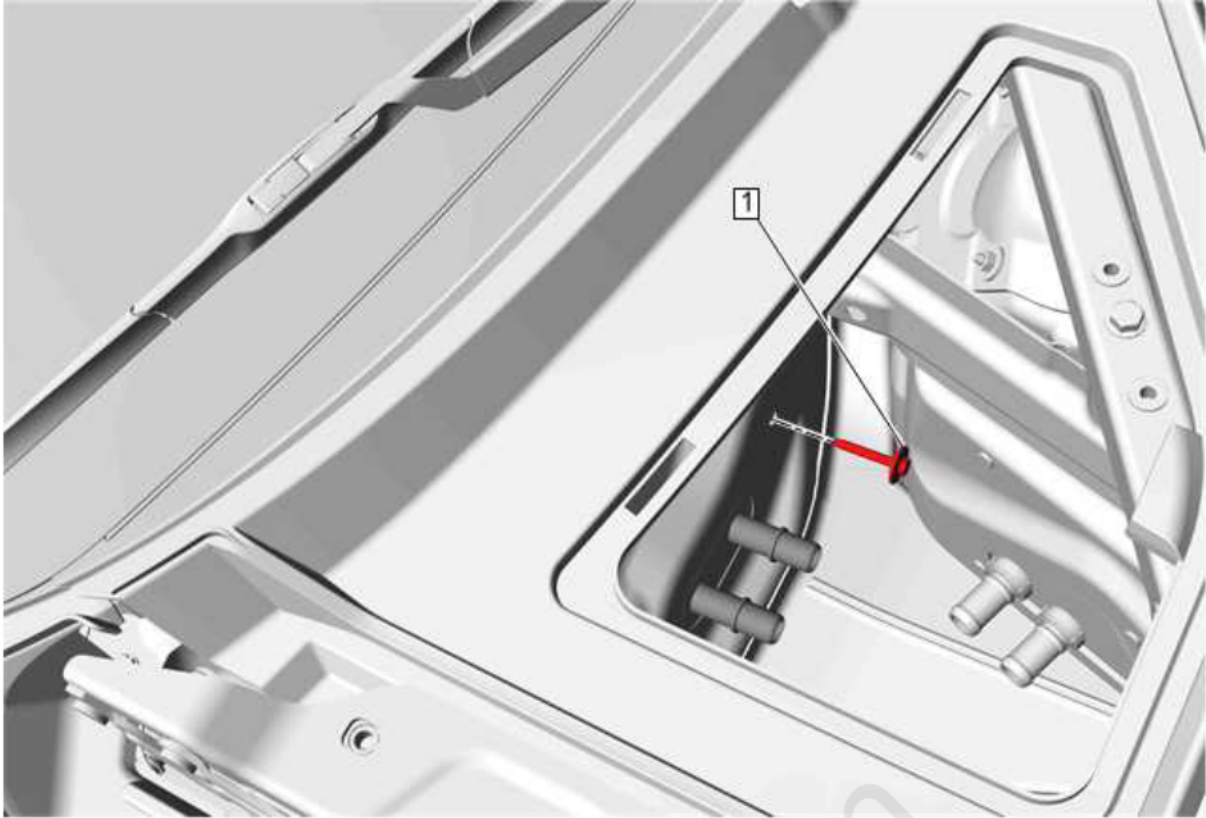


Fig. 120: Blower Module Bolt

Courtesy of GENERAL MOTORS COMPANY

6. Heater Inlet Hose (3) @ Heater Core Tube » Remove - **Heater Inlet Hose Replacement (At Heater Core Inlet Tube LGW LTG without HP9)** , **Heater Inlet Hose Replacement (Auxiliary Heater Inlet and Outlet Pipe to Auxiliary Air Conditioning Evaporator Intermediate Tube LGW LGX)** , **Heater Inlet Hose Replacement (At Heater Core Inlet Tube LGX)** and/or **Heater Inlet Hose Replacement (LTG with HP9)**

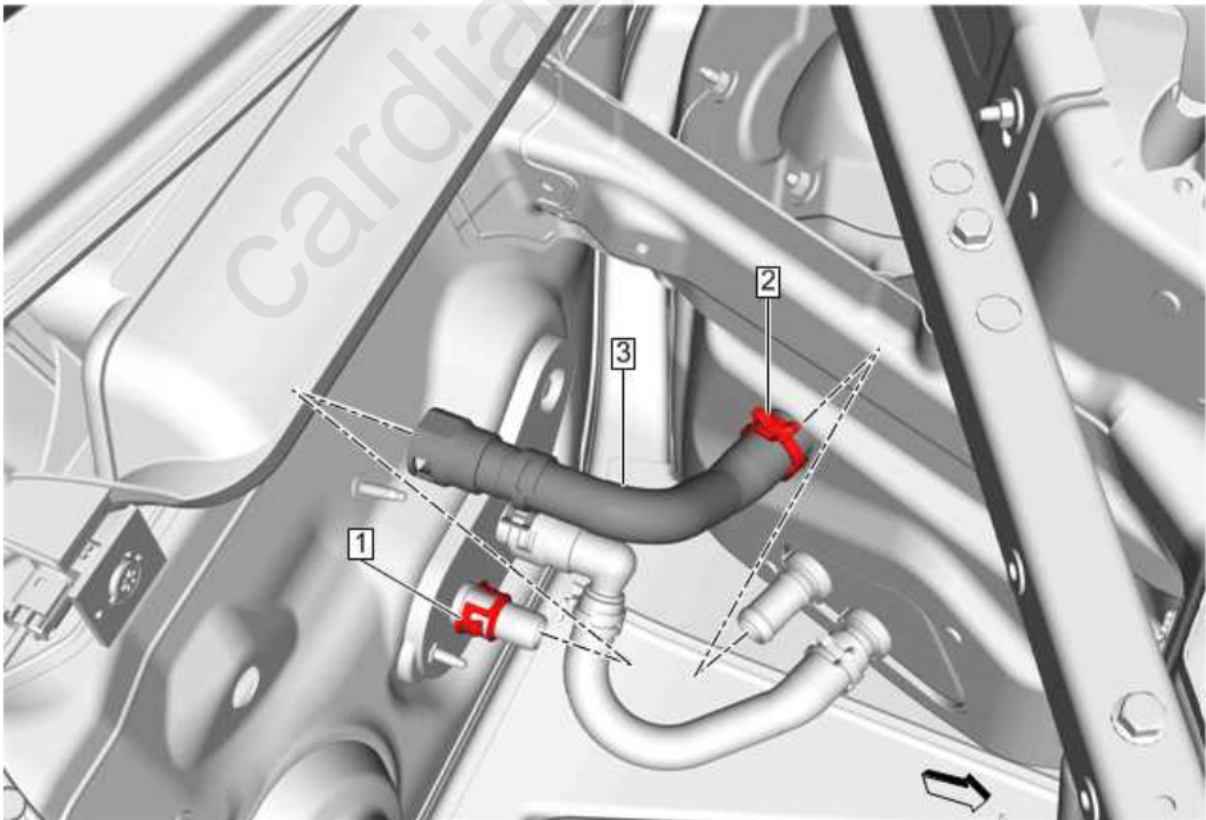


Fig. 121: Heater Inlet Hose

Courtesy of GENERAL MOTORS COMPANY

7. Heater Outlet Hose (3) @ Heater Core Tube » Remove - **Heater Outlet Hose Replacement (At Heater Core Tube LGW LTG without HP9)** , **Heater Outlet Hose Replacement (Auxiliary Heater Inlet and Outlet Pipe to Auxiliary Air Conditioning Evaporator Intermediate Tube**

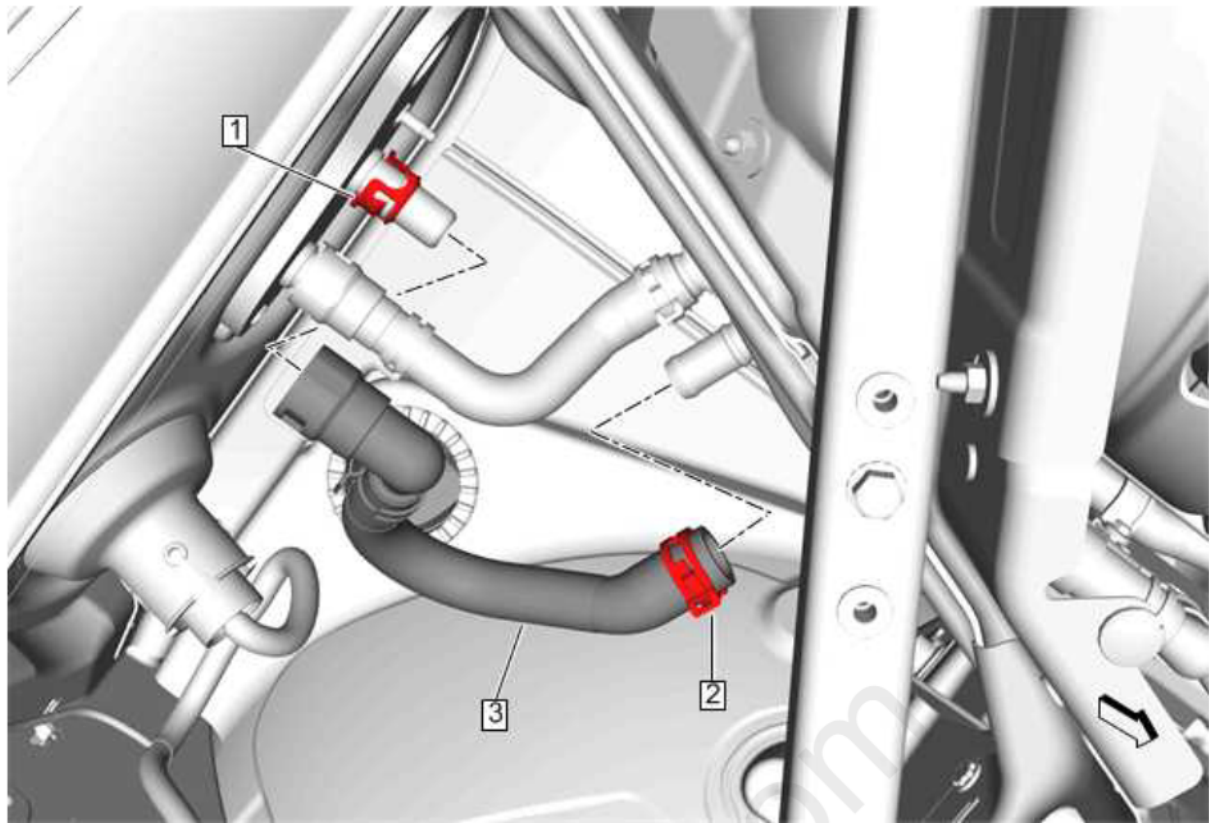


Fig. 122: Heater Outlet Hose

Courtesy of GENERAL MOTORS COMPANY

8. Windshield Garnish Molding (1)» Remove - Windshield Garnish Molding Replacement [2x]

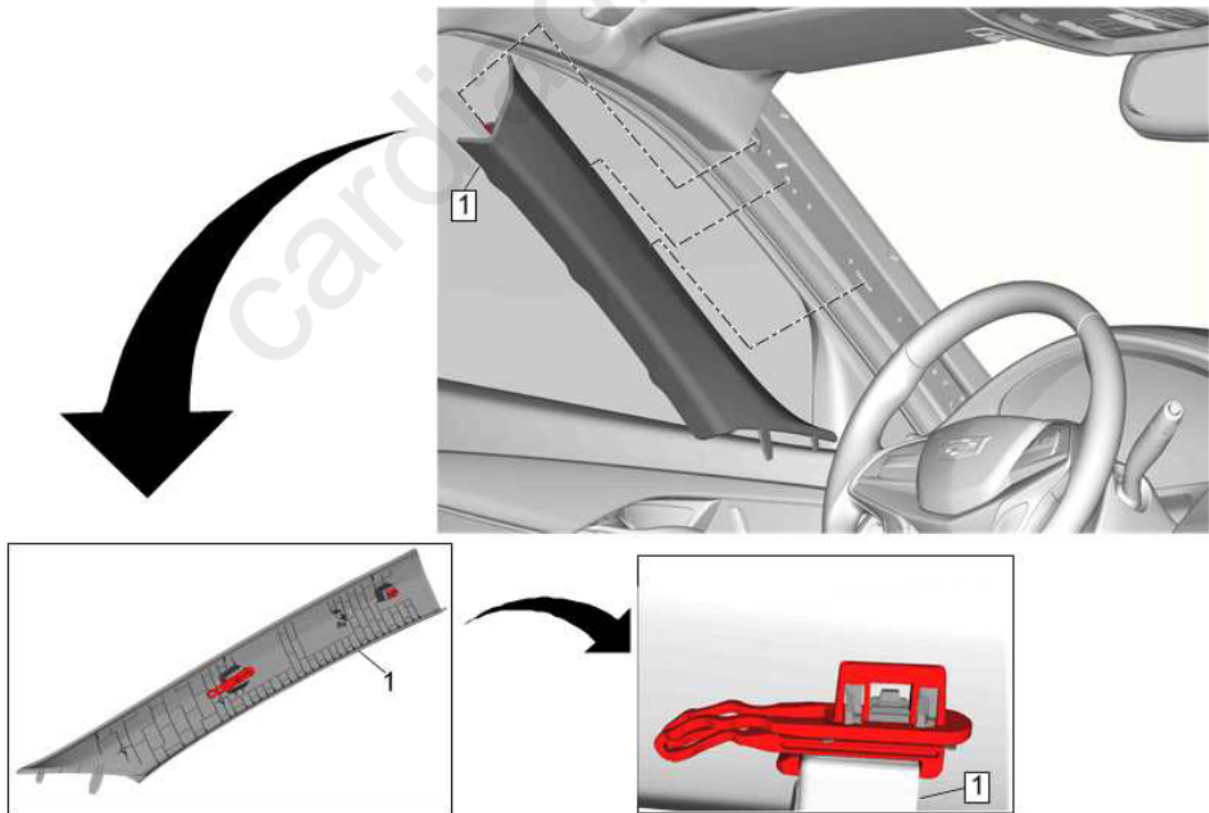


Fig. 123: Windshield Garnish Molding

Courtesy of GENERAL MOTORS COMPANY

9. Front Floor Panel Carpet - Left Side (1)» Remove - Front Floor Panel Carpet Replacement - Left Side

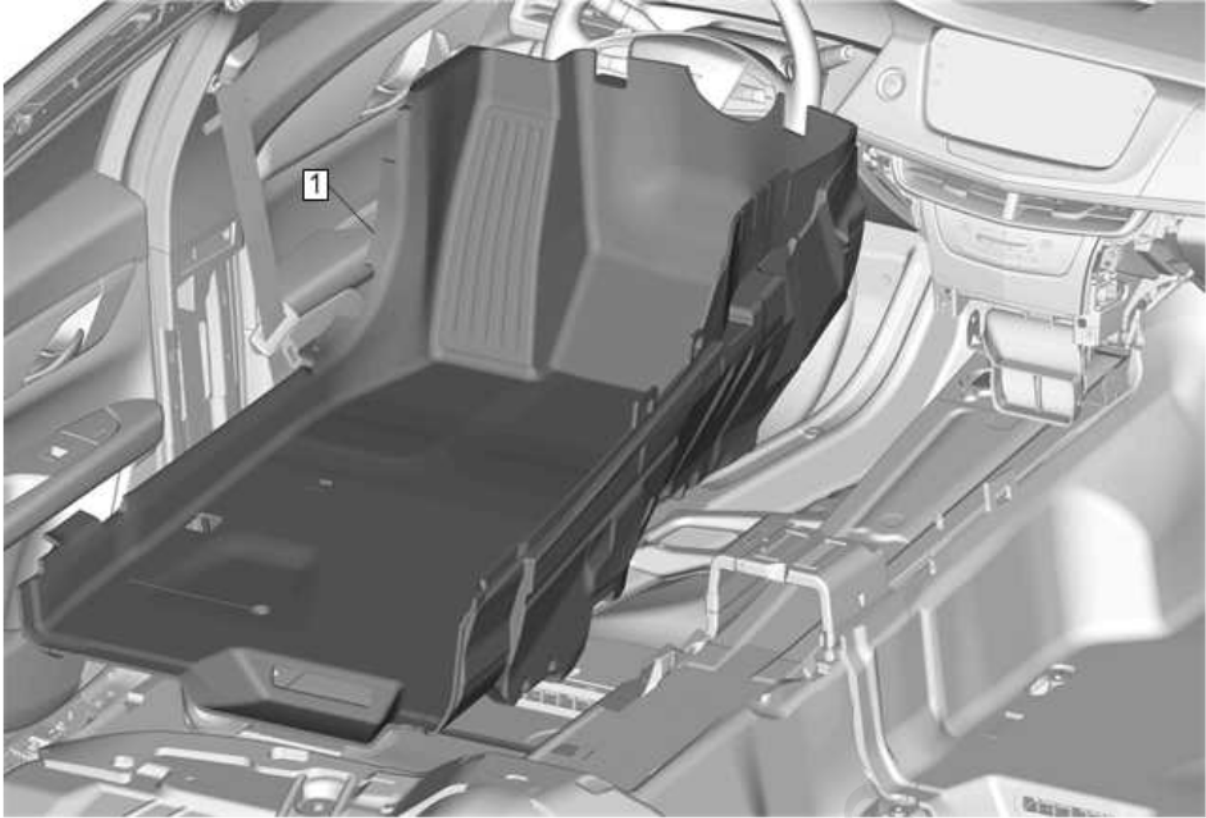


Fig. 124: Front Floor Panel Carpet

Courtesy of GENERAL MOTORS COMPANY

10. Front Floor Panel Carpet - Right Side (1) » Remove - [Front Floor Panel Carpet Replacement - Right Side](#)

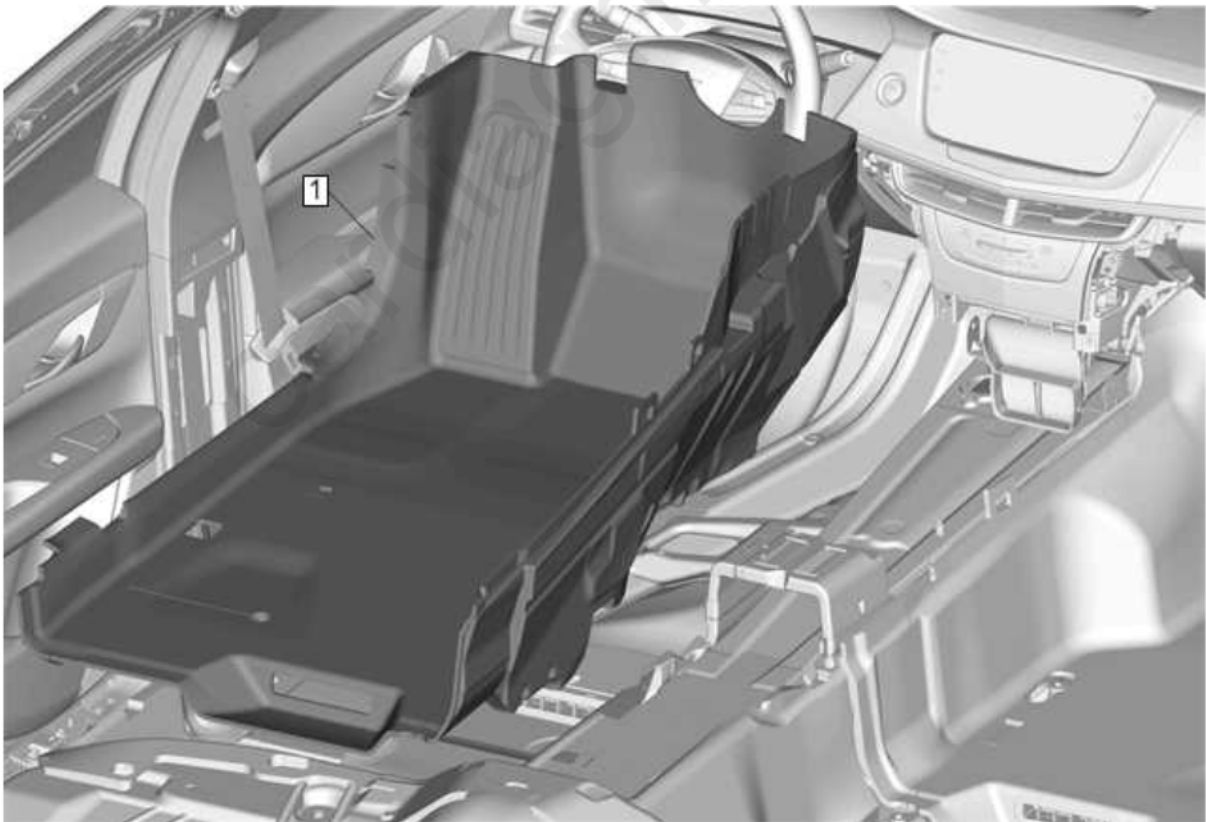


Fig. 125: Front Floor Panel Carpet

Courtesy of GENERAL MOTORS COMPANY

11. Body Control Module (1) » Remove - [Body Control Module Replacement](#)

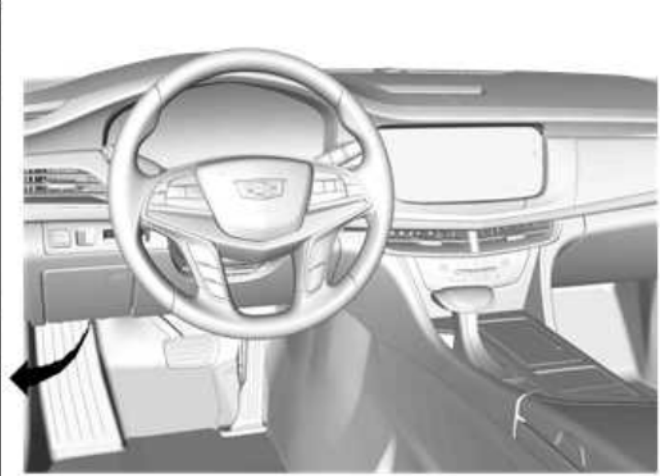
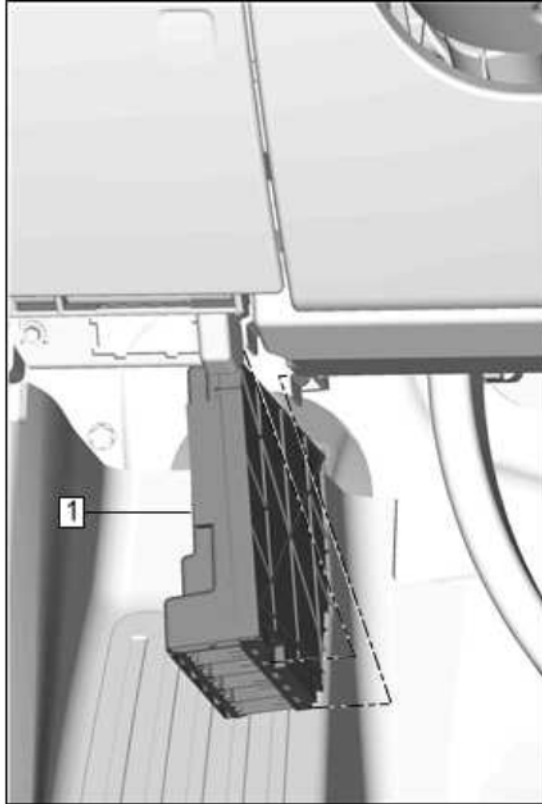


Fig. 126: Body Control Module

Courtesy of GENERAL MOTORS COMPANY

12. Air Conditioning Evaporator and Blower Module Drain Hose - Right Side (1) » Remove - **Air Conditioning Evaporator and Blower Module Drain Hose Replacement (Right Side)**



Fig. 127: Air Conditioning Evaporator and Blower Module Drain Hose

Courtesy of GENERAL MOTORS COMPANY

13. Air Conditioning Evaporator and Blower Module Drain Hose - Left Side (1) » Remove - **Air Conditioning Evaporator and Blower Module Drain Hose Replacement (Left Side)**



Fig. 128: Air Conditioning Evaporator And Blower Module Drain Hose

Courtesy of GENERAL MOTORS COMPANY

14. Instrument Panel Carrier (1) » Remove - **Instrument Panel Carrier Replacement (UQH)** and/or **Instrument Panel Carrier Replacement (UQA)**

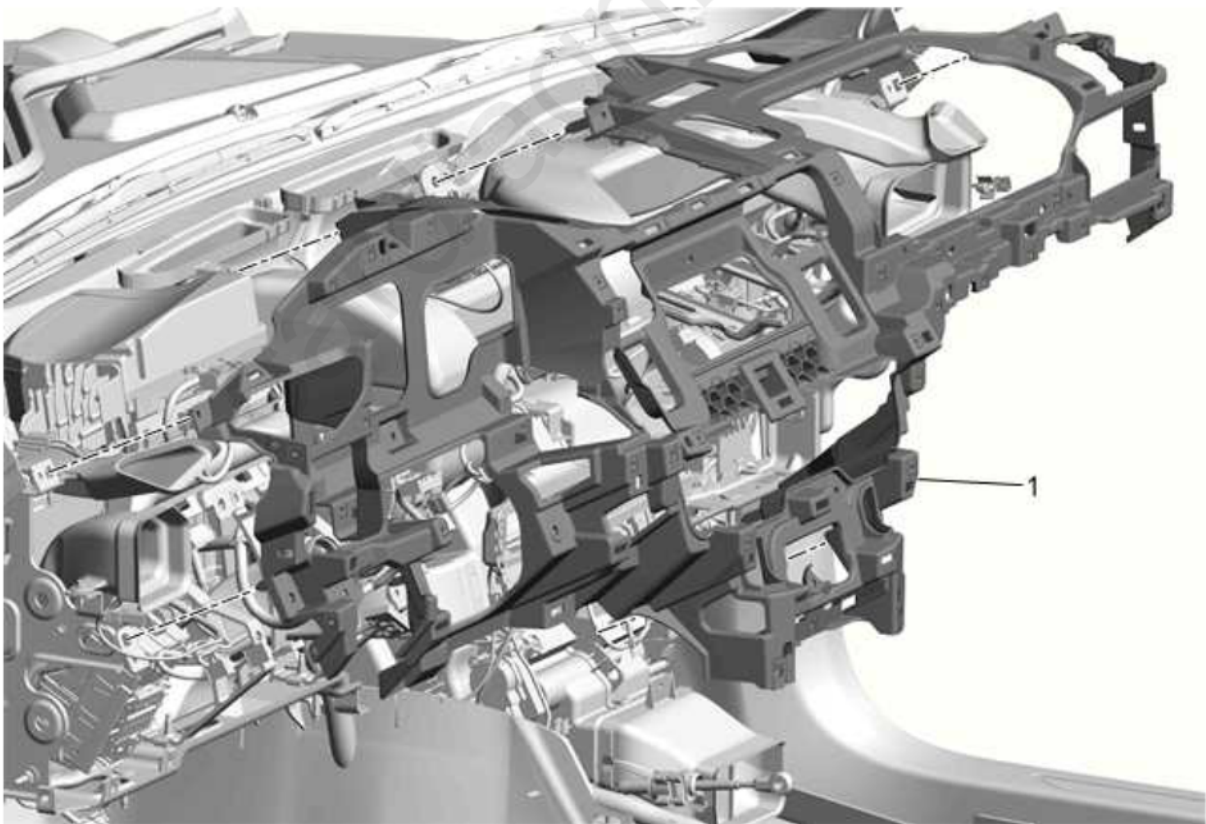


Fig. 129: Instrument Panel Carrier Assembly

Courtesy of GENERAL MOTORS COMPANY

15. Disconnect all electrical connectors.

NOTE:

- Carefully disconnect the instrument panel wiring harness and both connectors on the right side windshield pillar.

- The instrument panel wiring harness fuse block is removed with the instrument panel tie bar as an assembly.

16. Note the location and routing of the wiring harness to ensure proper reinstallation.

17. Instrument Panel Tie Bar Bolt (1) » Remove [3x]

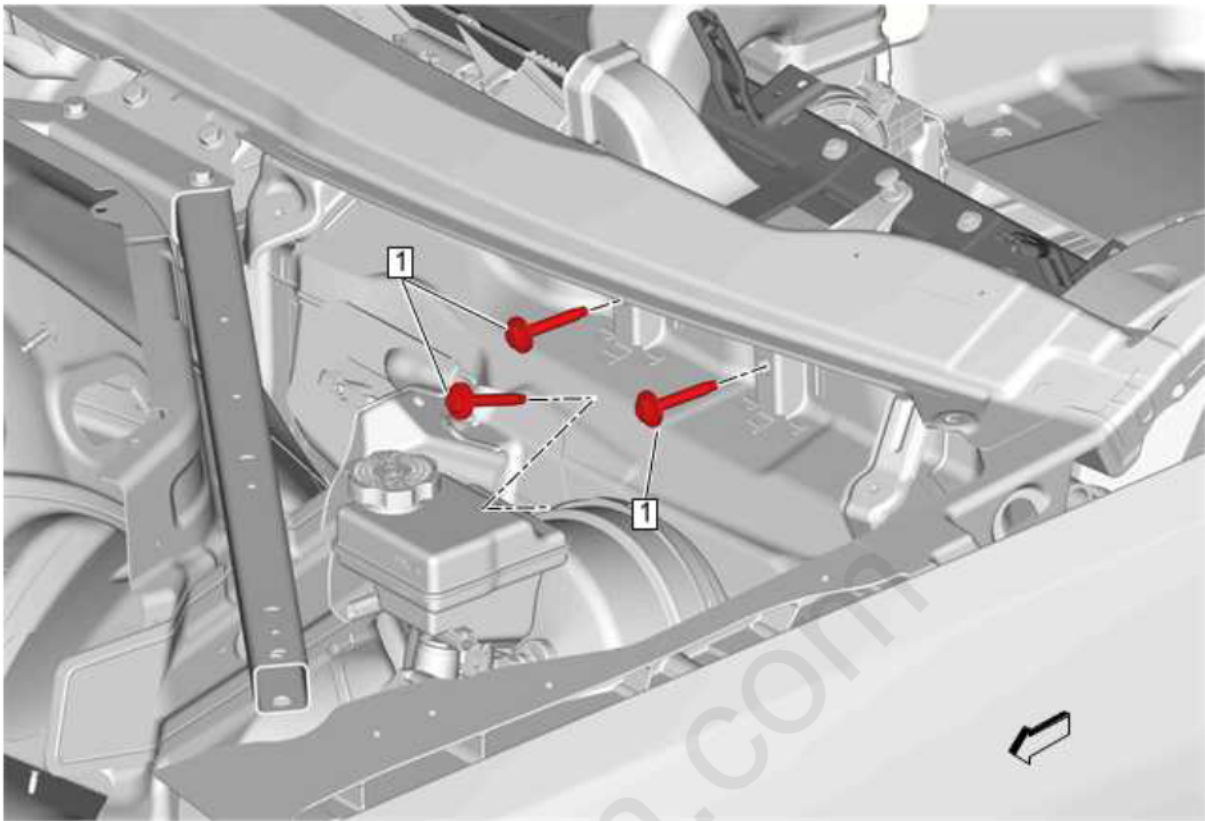


Fig. 130: Instrument Panel Tie Bar Bolt

Courtesy of GENERAL MOTORS COMPANY

18. Brake Pedal Assembly (1) » Remove - [Brake Pedal Assembly Replacement \(Without HP9\)](#) and/or [Brake Pedal Assembly Replacement \(With HP9\)](#)

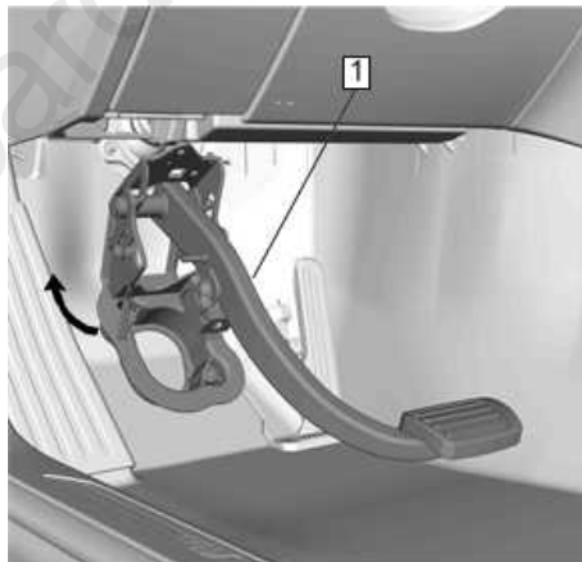


Fig. 131: Brake Pedal Assembly

Courtesy of GENERAL MOTORS COMPANY

19. Instrument Panel Tie Bar Bolt (1) » Remove [3x]

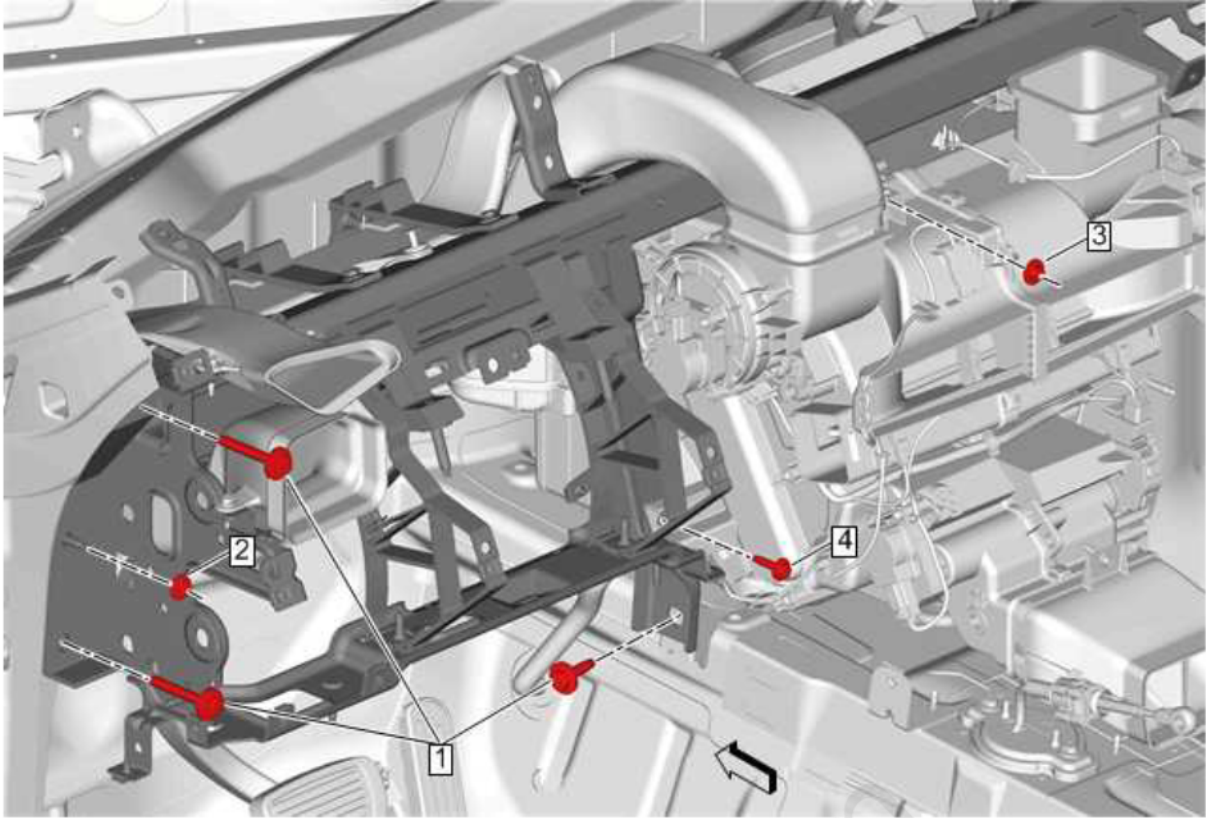


Fig. 132: Instrument Panel Tie Bar Bolt
Courtesy of GENERAL MOTORS COMPANY

- 20. Instrument Panel Tie Bar Nut (2)» Remove
- 21. Air Distributor Nut (3)» Remove
- 22. Instrument Panel Tie Bar Nut (2)» Remove

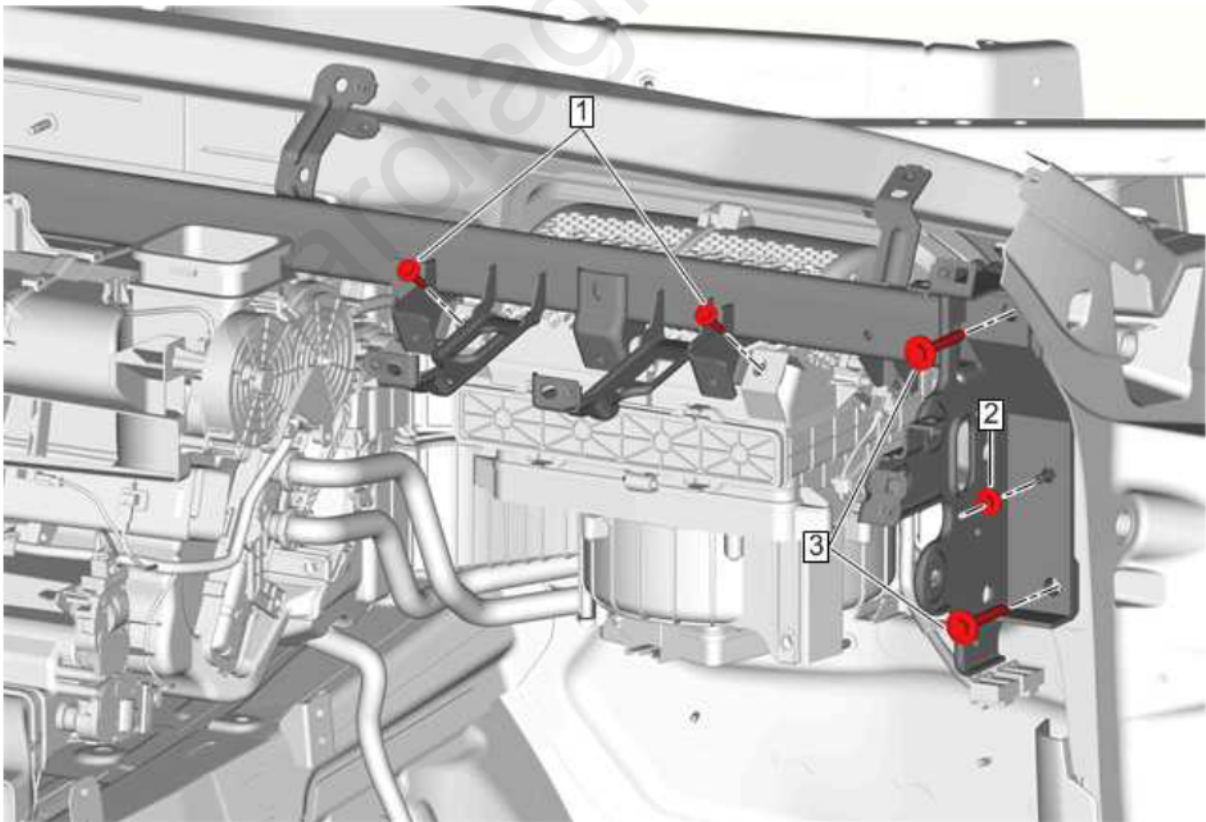


Fig. 133: Instrument Panel Tie Bar Nut
Courtesy of GENERAL MOTORS COMPANY

- 23. Instrument Panel Tie Bar Bolt (3)» Remove [2x]
- 24. Note the location of the guide pins. (1)

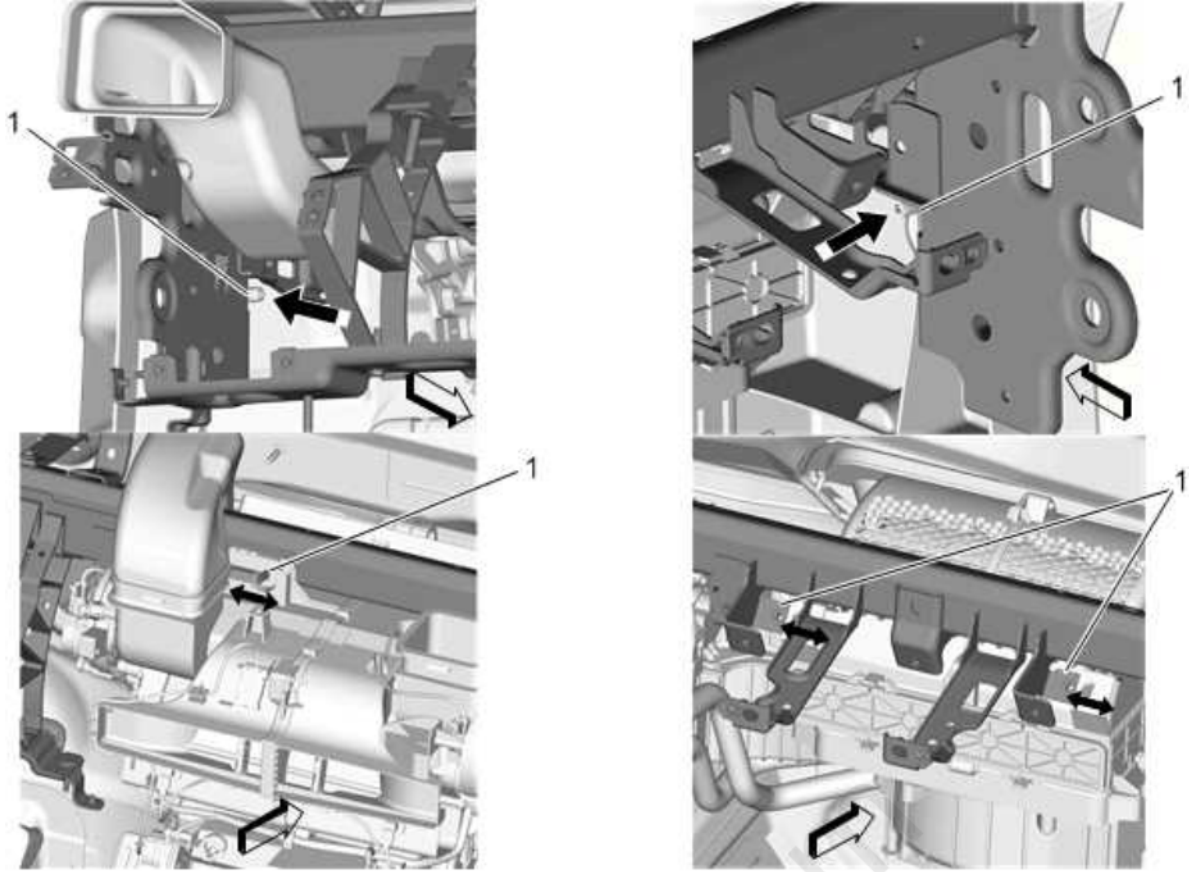


Fig. 134: Guide Pins

Courtesy of GENERAL MOTORS COMPANY

25. With the aid of an assistant, remove the instrument panel tie bar assembly from the vehicle. (1)

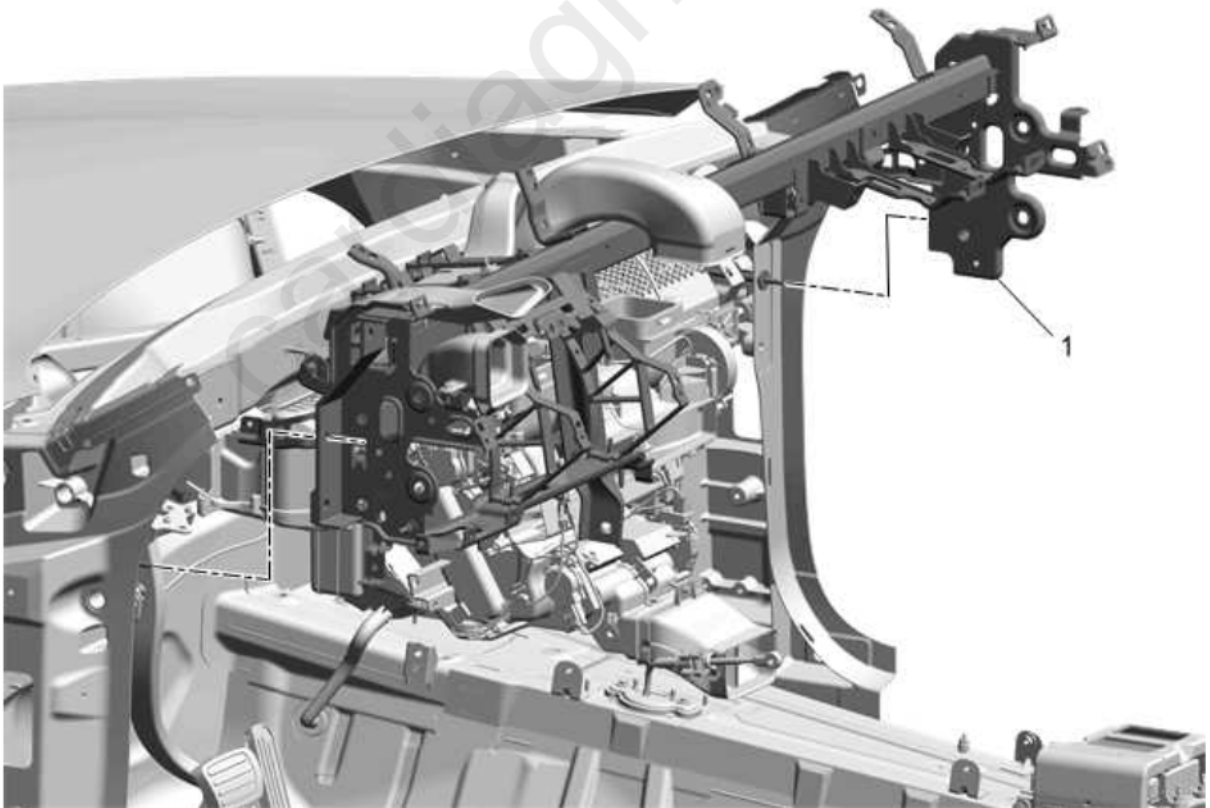


Fig. 135: Instrument Panel Tie Bar Assembly

Courtesy of GENERAL MOTORS COMPANY

NOTE: The heater and air conditioning evaporator and blower module is removed with the instrument panel tie bar as an assembly.

26. Transfer components as necessary.

1. With the aid of an assistant, position the instrument panel tie bar assembly into the vehicle. (1)

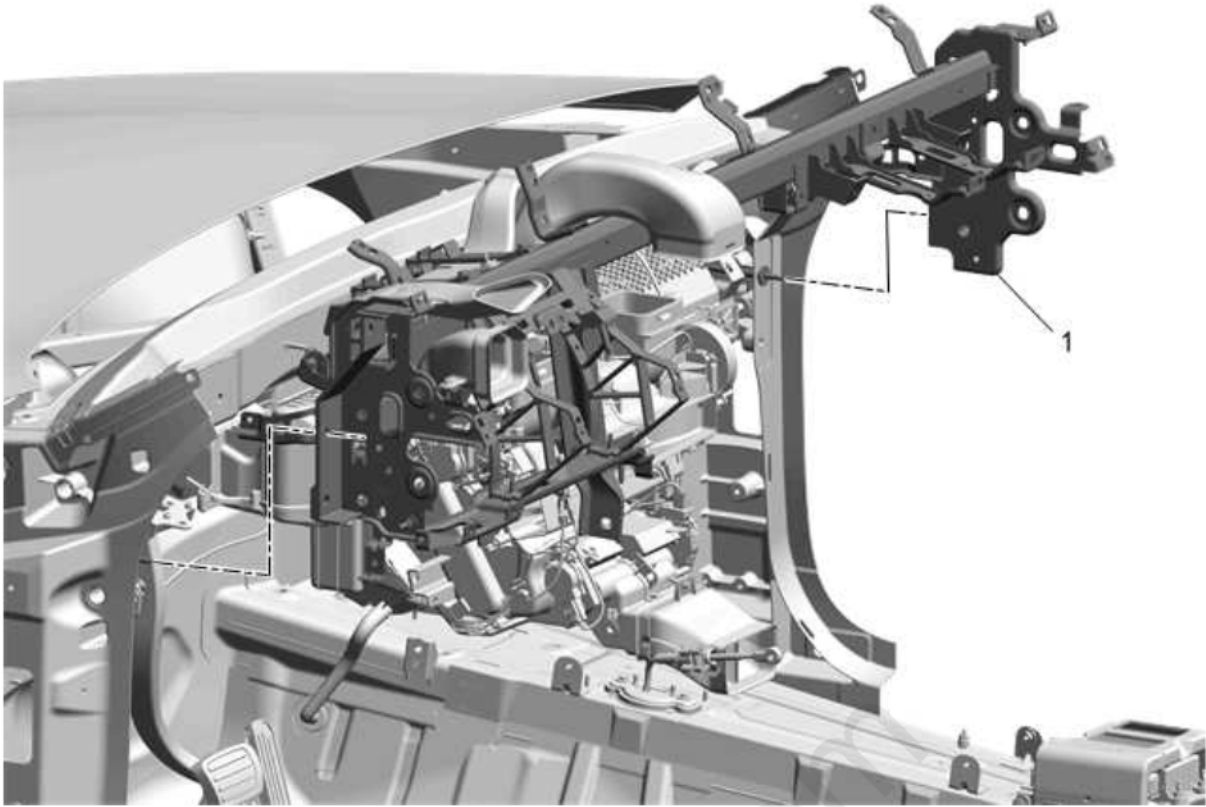


Fig. 136: Instrument Panel Tie Bar Assembly
Courtesy of GENERAL MOTORS COMPANY

2. Install the instrument panel wiring harness assembly to the position noted in the removal procedure.
3. Instrument Panel Tie Bar Bolt (3)» Install and tighten [2x] 22 N.m (16 lb ft)

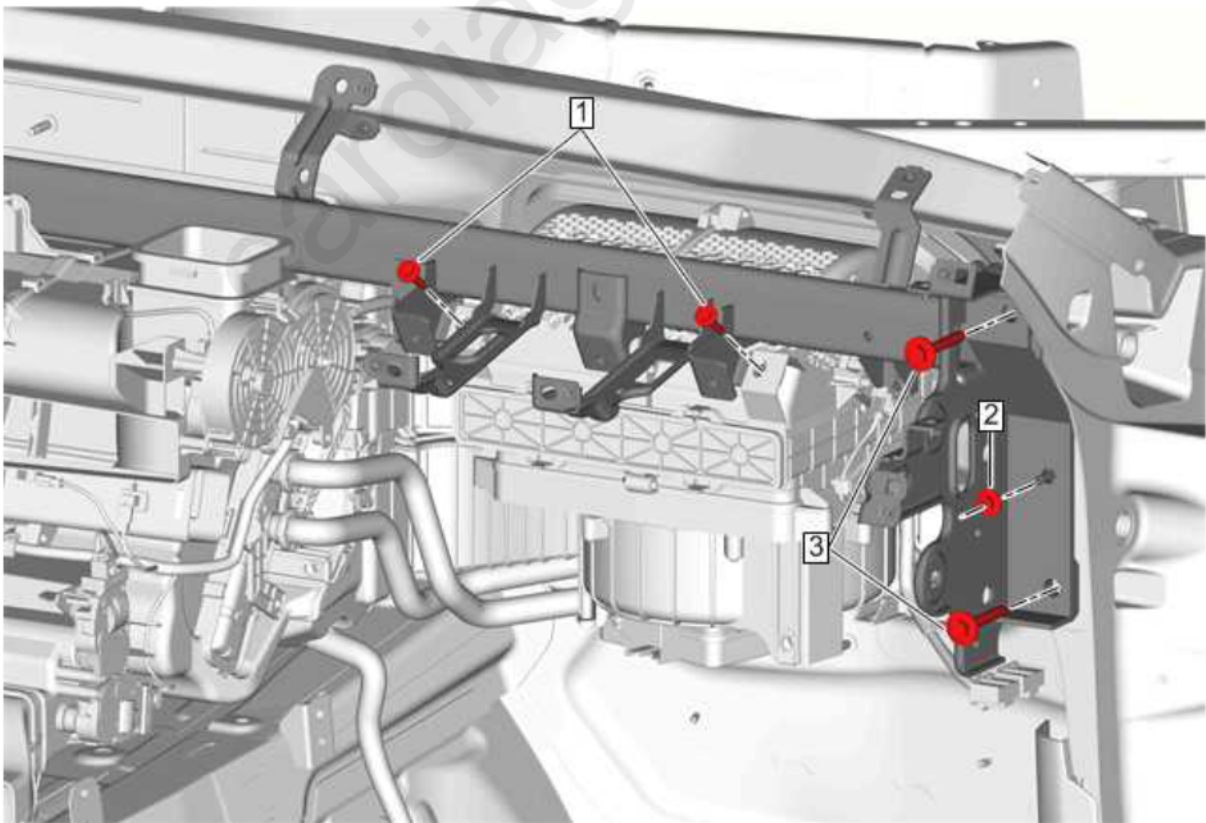


Fig. 137: Instrument Panel Tie Bar Nut
Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to [Fastener Caution](#) .

4. Instrument Panel Tie Bar Nut (2)» Install and tighten 22 N.m (16 lb ft)

5. Instrument Panel Tie Bar Bolt (1)» Install and tighten [3x] 22 N.m (16 lb ft)

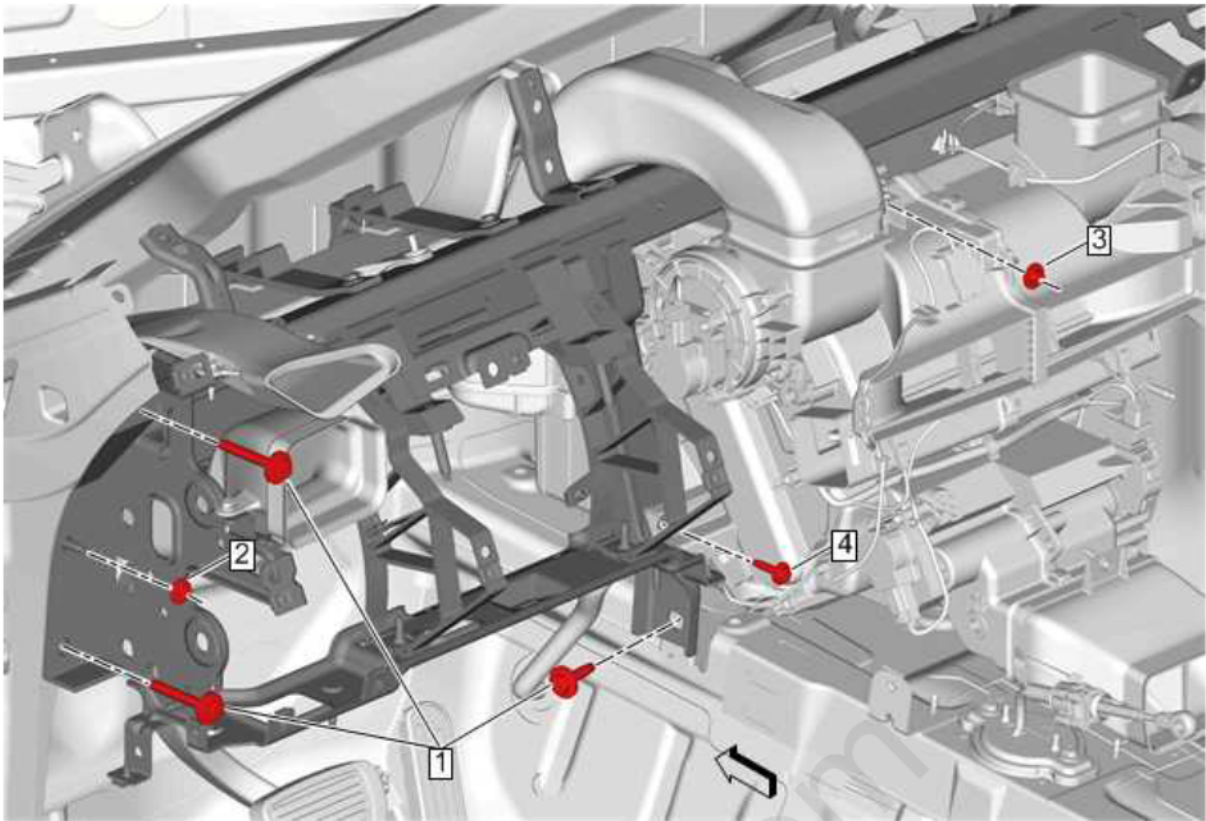


Fig. 138: Instrument Panel Tie Bar Bolt
Courtesy of GENERAL MOTORS COMPANY

6. Instrument Panel Tie Bar Nut (2)» Install and tighten 22 N.m (16 lb ft)
7. Air Distributor Nut (3)» Install and tighten 9 N.m (80 lb in)
8. Instrument Panel Tie Bar Bolt (1)» Install and tighten [3x] 22 N.m (16 lb ft)

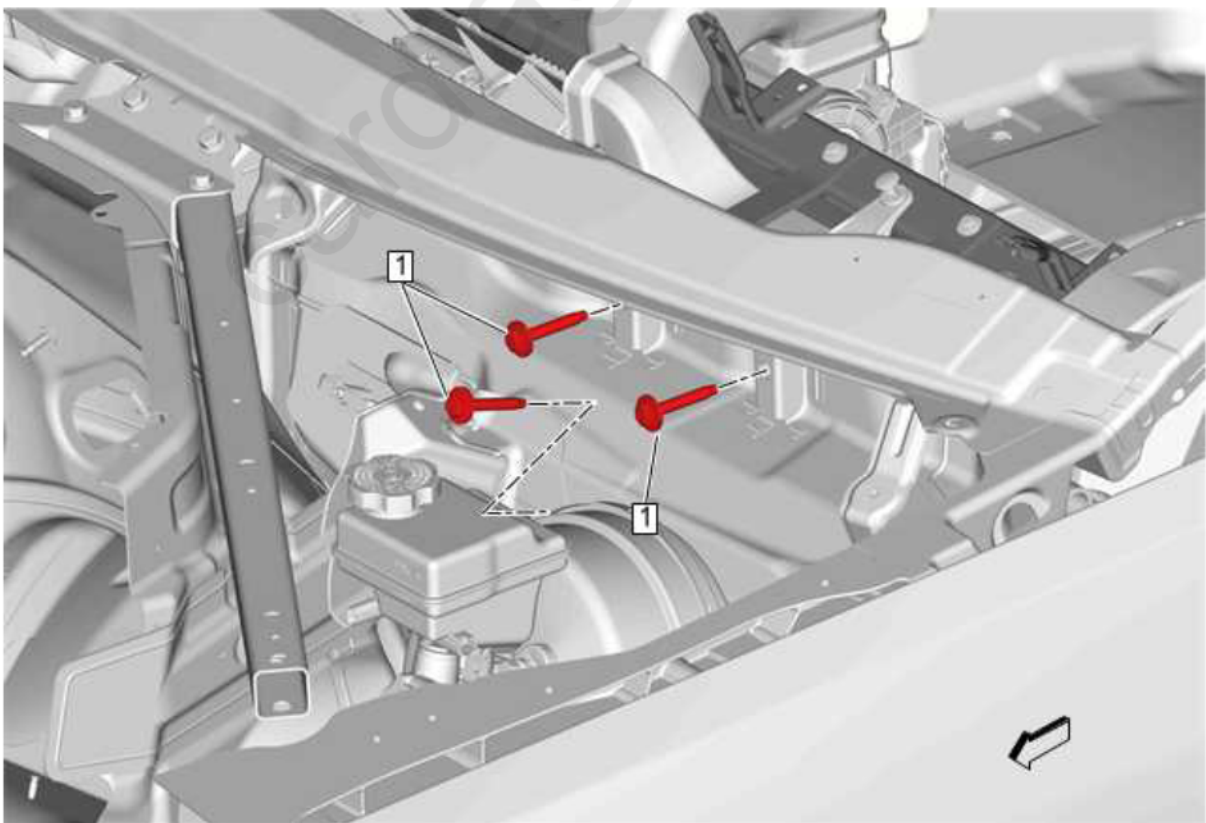


Fig. 139: Instrument Panel Tie Bar Bolt
Courtesy of GENERAL MOTORS COMPANY

9. Instrument Panel Carrier (1)» Install - **Instrument Panel Carrier Replacement (UQH)** and/or **Instrument Panel Carrier Replacement (UQA)**

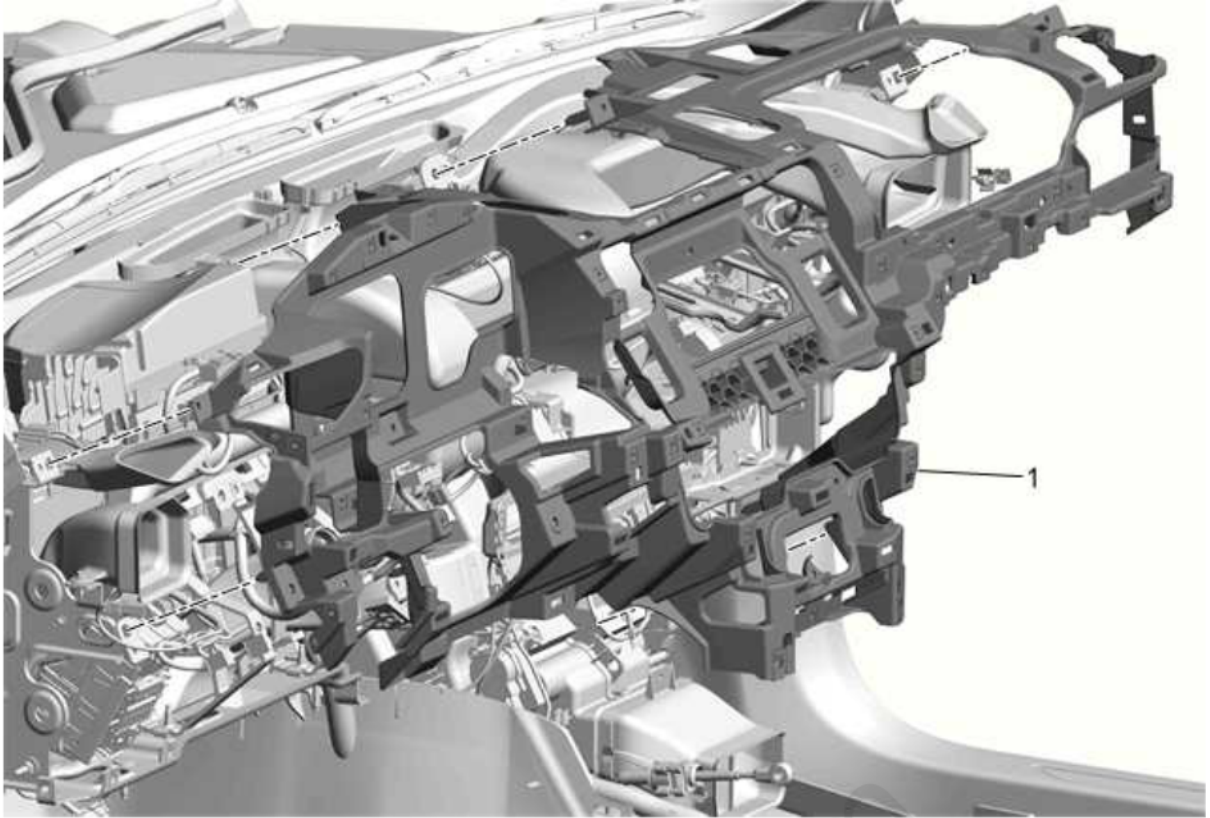


Fig. 140: Instrument Panel Carrier Assembly
 Courtesy of GENERAL MOTORS COMPANY

10. Brake Pedal Assembly (1) » Install - **Brake Pedal Assembly Replacement (Without HP9)**
 and/or **Brake Pedal Assembly Replacement (With HP9)**

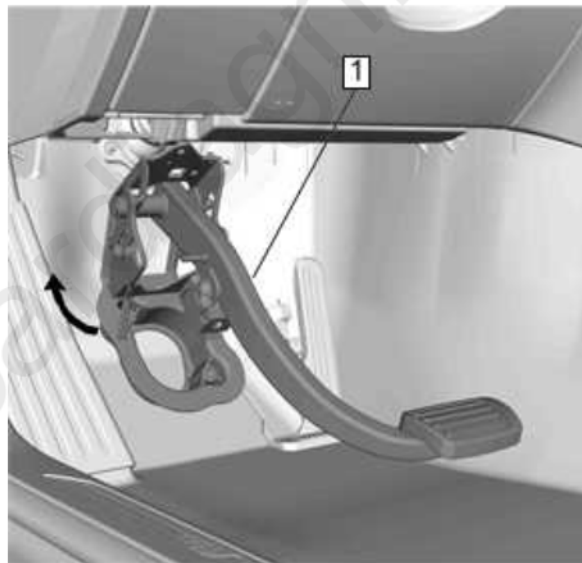


Fig. 141: Brake Pedal Assembly
 Courtesy of GENERAL MOTORS COMPANY

11. Body Control Module (1) » Install - **Body Control Module Replacement**

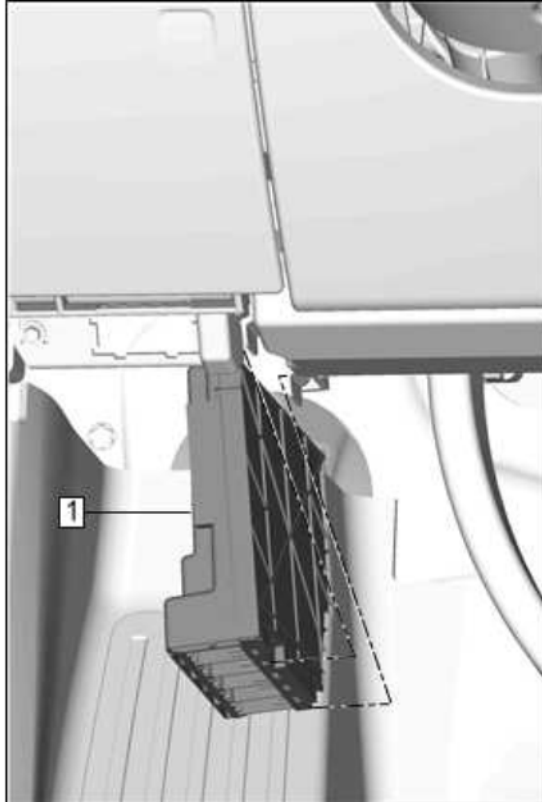


Fig. 142: Body Control Module

Courtesy of GENERAL MOTORS COMPANY

12. Connect all electrical connectors.
13. Air Conditioning Evaporator and Blower Module Drain Hose - Right Side (1)» Install - [**Air Conditioning Evaporator and Blower Module Drain Hose Replacement \(Right Side\)**](#) and/or

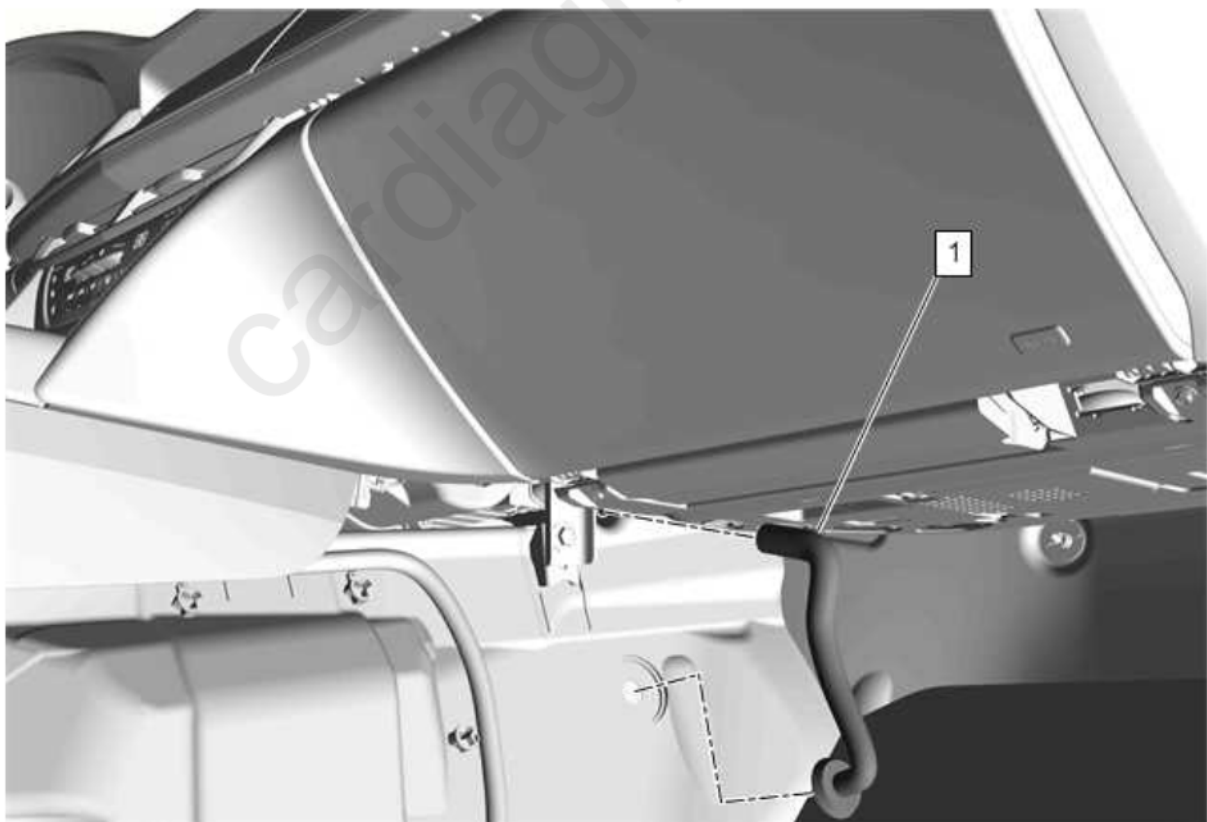


Fig. 143: Air Conditioning Evaporator and Blower Module Drain Hose

Courtesy of GENERAL MOTORS COMPANY

14. Air Conditioning Evaporator and Blower Module Drain Hose - Left Side (1)» Install - [**Air Conditioning Evaporator and Blower Module Drain Hose Replacement \(Right Side\)**](#)

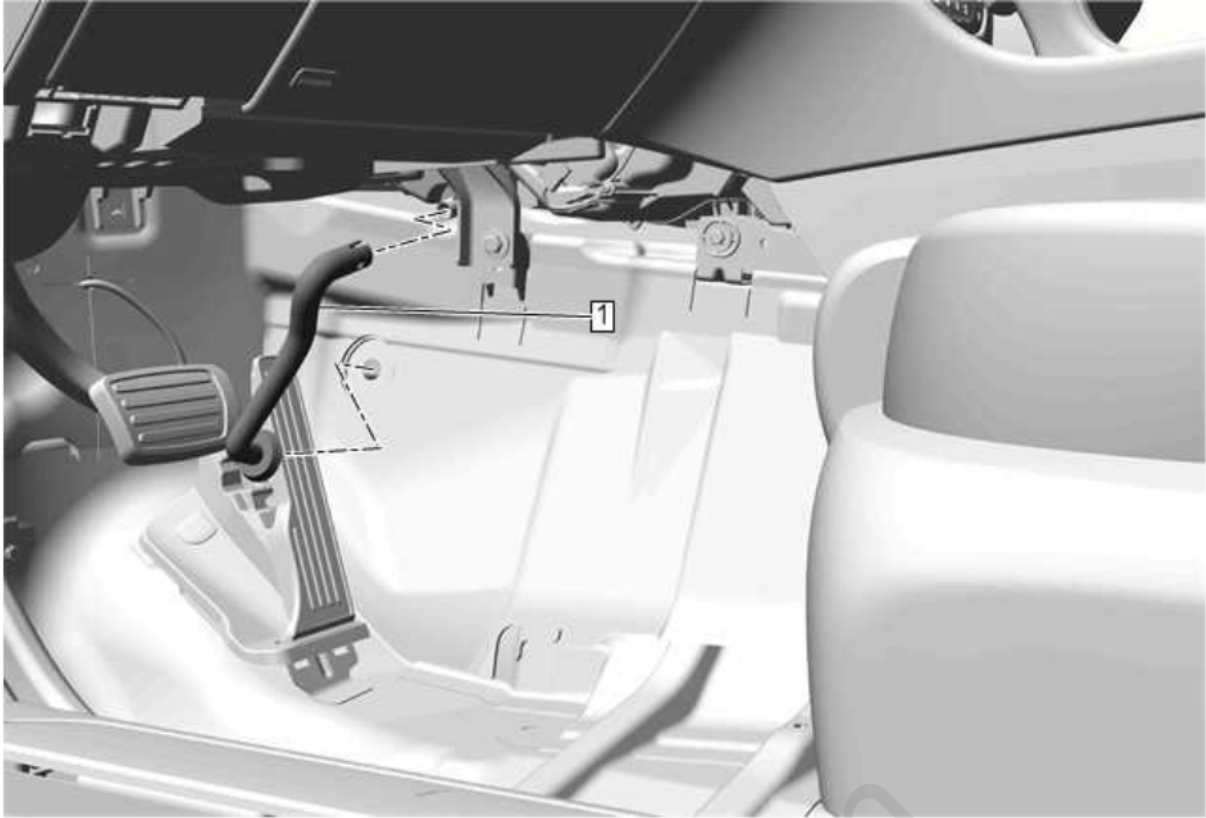


Fig. 144: Air Conditioning Evaporator And Blower Module Drain Hose

Courtesy of GENERAL MOTORS COMPANY

15. Front Floor Panel Carpet - Right Side (1)» Install - **Front Floor Panel Carpet Replacement - Right Side**

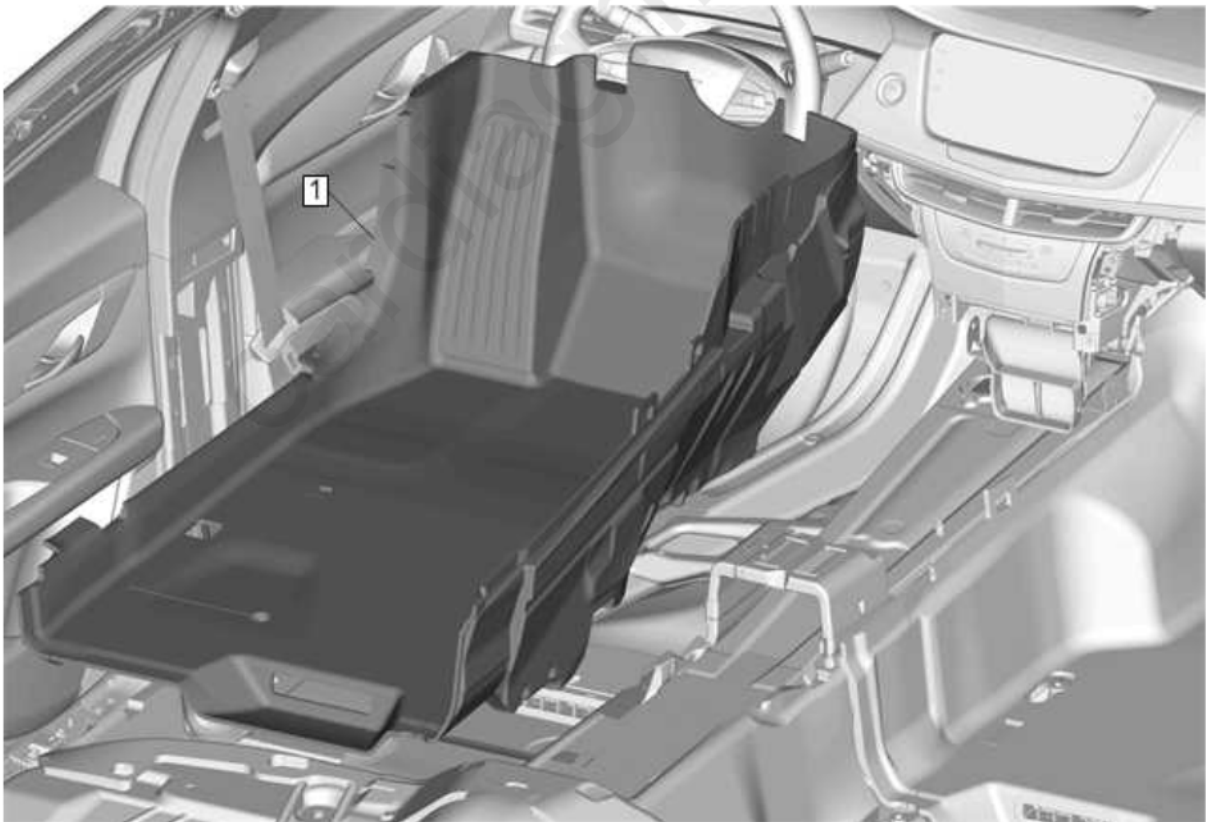


Fig. 145: Front Floor Panel Carpet

Courtesy of GENERAL MOTORS COMPANY

16. Front Floor Panel Carpet - Left Side (1)» Install - **Front Floor Panel Carpet Replacement - Left Side**

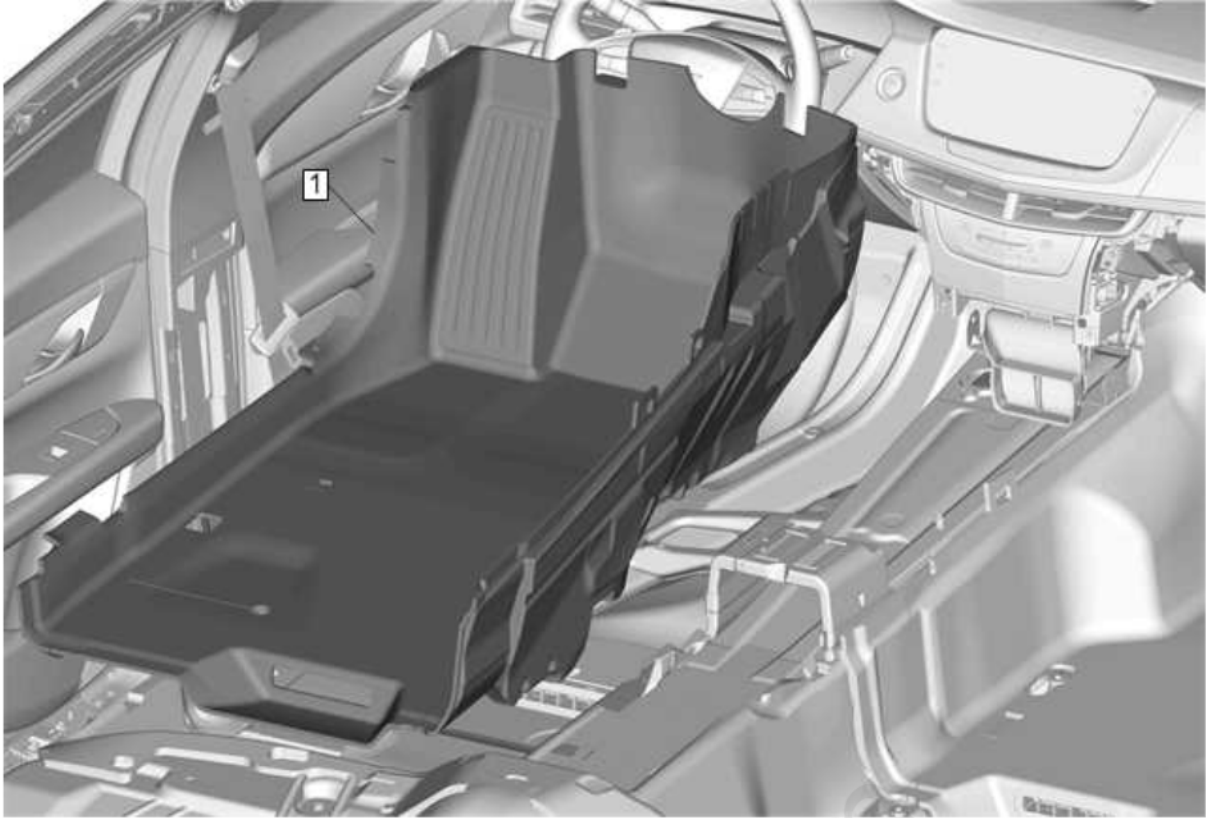


Fig. 146: Front Floor Panel Carpet

Courtesy of GENERAL MOTORS COMPANY

17. Windshield Garnish Molding (1) » Install - [Windshield Garnish Molding Replacement](#) [2x]

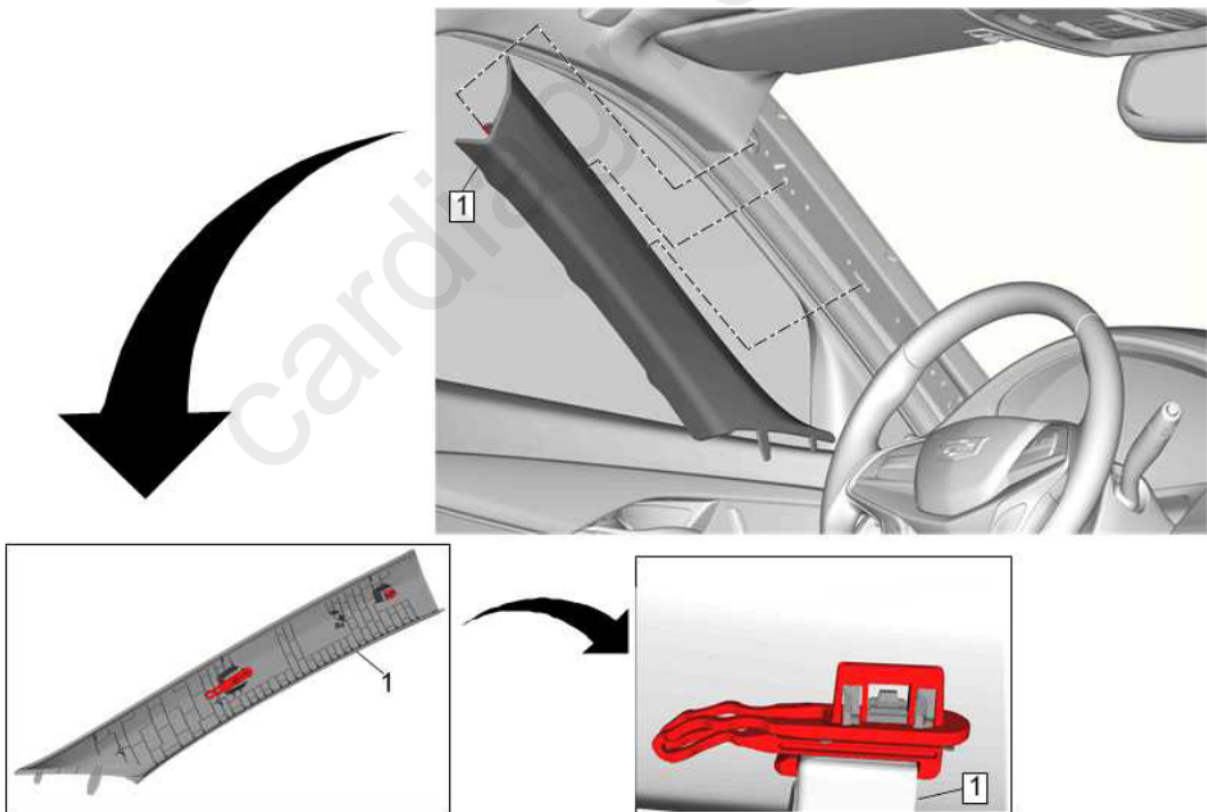


Fig. 147: Windshield Garnish Molding

Courtesy of GENERAL MOTORS COMPANY

18. Heater Outlet Hose (3) @ Heater Core Tube » Install - [Heater Outlet Hose Replacement \(At Heater Core Tube LGW LTG without HP9\)](#) , [Heater Outlet Hose Replacement \(Auxiliary Heater Inlet and Outlet Pipe to Auxiliary Air Conditioning Evaporator Intermediate Tube LGW LGX\)](#) , [Heater Outlet Hose Replacement \(At Heater Core Tube LGX\)](#) and/or [Heater Outlet Hose Replacement \(LTG with HP9\)](#)

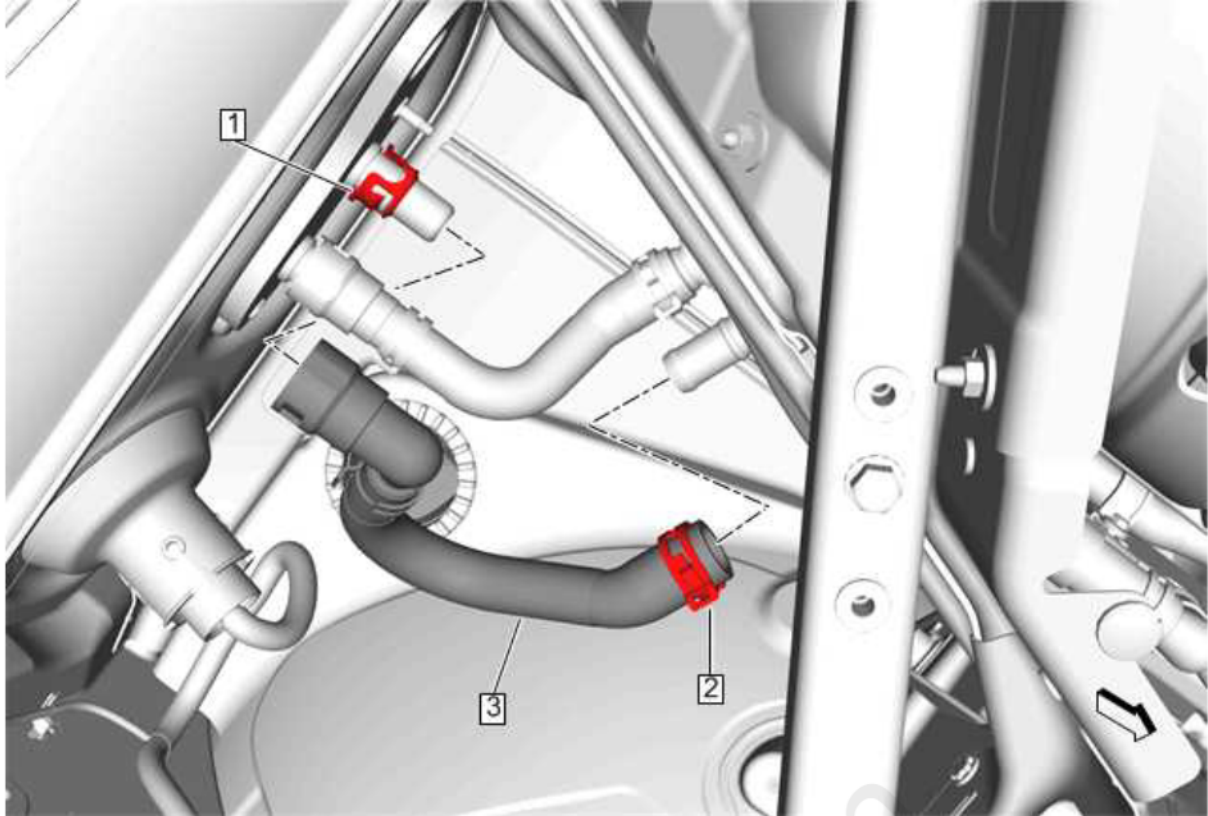


Fig. 148: Heater Outlet Hose

Courtesy of GENERAL MOTORS COMPANY

19. Heater Inlet Hose (3) @ Heater Core Tube » Install - [Heater Inlet Hose Replacement \(At Heater Core Inlet Tube LGW LTG without HP9\)](#) , [Heater Inlet Hose Replacement \(Auxiliary Heater Inlet and Outlet Pipe to Auxiliary Air Conditioning Evaporator Intermediate Tube LGW LGX\)](#) , [Heater Inlet Hose Replacement \(At Heater Core Inlet Tube LGX\)](#) and/or [Heater Inlet Hose Replacement \(LTG with HP9\)](#)

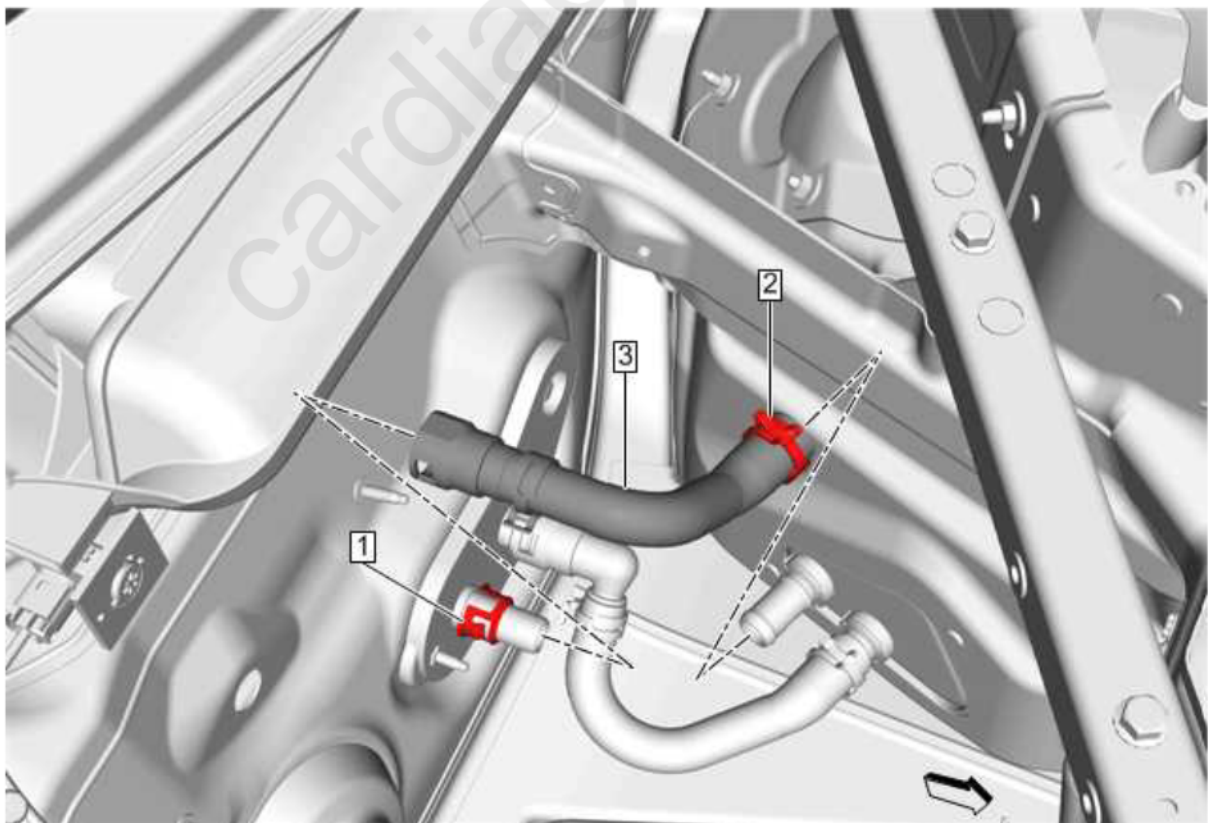


Fig. 149: Heater Inlet Hose

Courtesy of GENERAL MOTORS COMPANY

20. From within the engine compartment, install the heater and air conditioning evaporator and blower module bolt (1), securing the heater and air conditioning evaporator and blower module to the cowl panel.

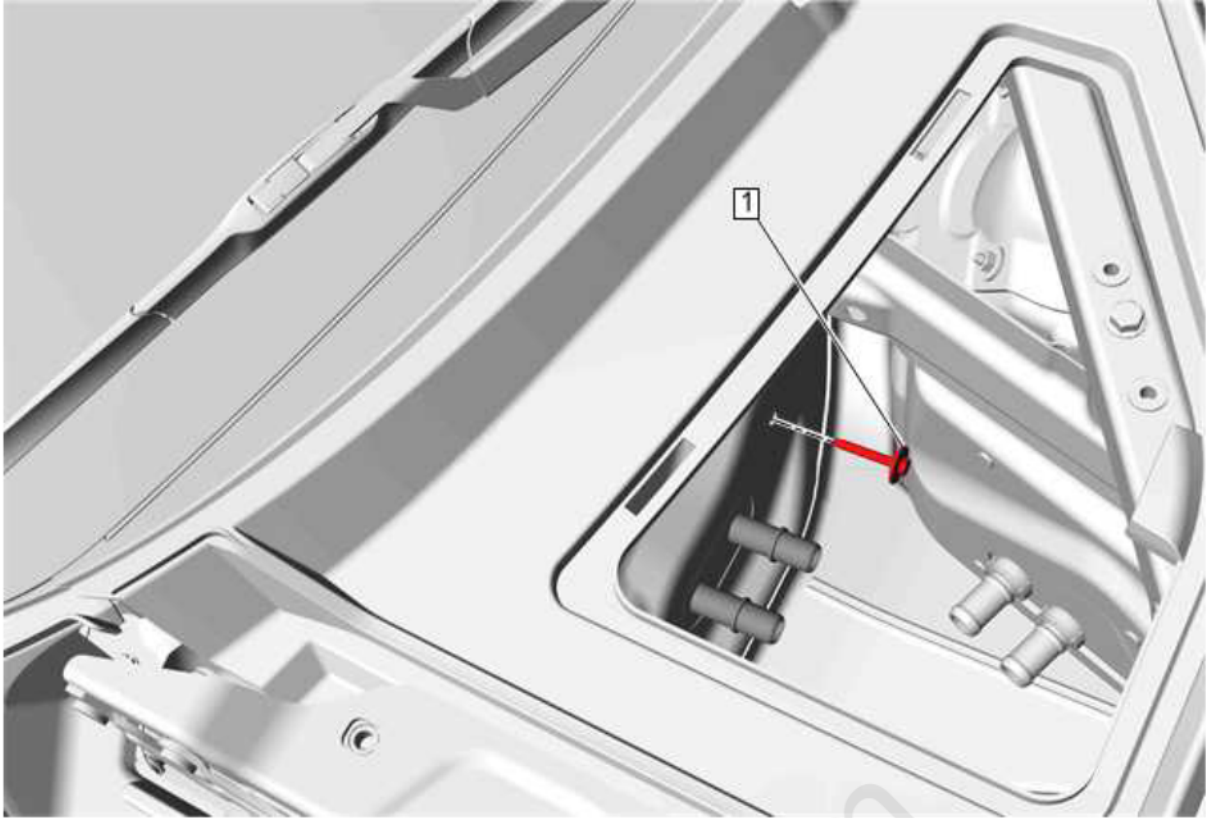


Fig. 150: Blower Module Bolt

Courtesy of GENERAL MOTORS COMPANY

21. Air Conditioning Refrigerant Heat Exchanger (2) @ Air Conditioning Evaporator Thermal Expansion Valve» Install - [Air Conditioning Refrigerant Heat Exchanger Replacement \(LTG\)](#) , [Air Conditioning Refrigerant Heat Exchanger Replacement \(LGW, LGX\)](#) and/or [Air Conditioning Refrigerant Heat Exchanger Replacement \(HP9\)](#)

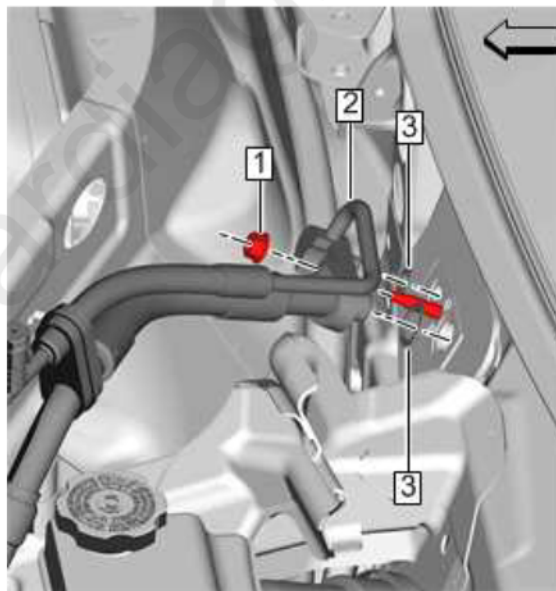


Fig. 151: Air Conditioning Refrigerant Heat Exchanger

Courtesy of GENERAL MOTORS COMPANY

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

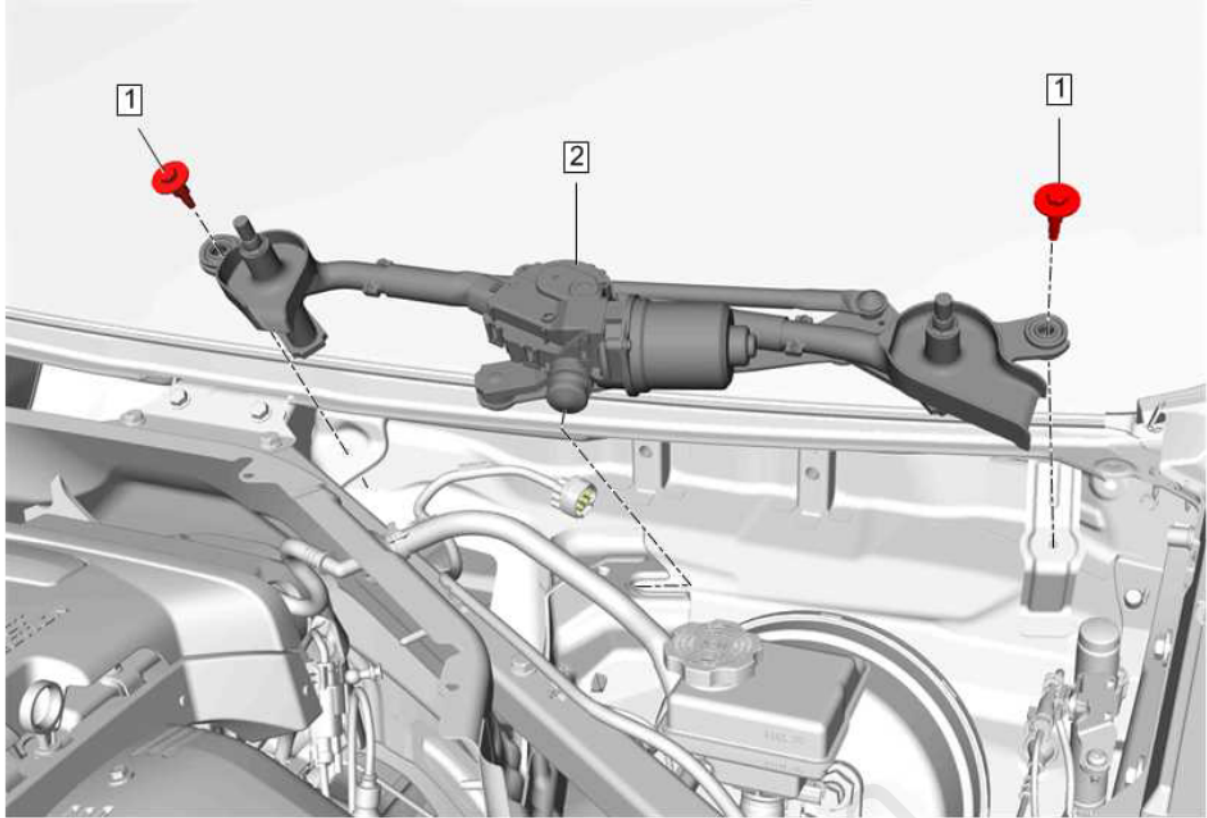


Fig. 152: Windshield Wiper Transmission
Courtesy of GENERAL MOTORS COMPANY

23. Fill the cooling system to the proper level. Refer to [Cooling System Draining and Filling \(Static without HP9\)](#) , [Cooling System Draining and Filling \(GE 47716 without HP9\)](#) , [Cooling System Draining and Filling \(Static LTG with HP9\)](#) and/or [Cooling System Draining and Filling \(GE 47716 LTG with HP9\)](#).
24. Evacuate and charge the refrigerant system. Refer to [Refrigerant Recovery and Recharging \(R-134a\)](#) and/or [Refrigerant Recovery and Recharging \(R-1234yf\)](#).
25. Inspect for coolant leaks.
26. Inspect for refrigerant leaks.

INSTRUMENT PANEL TIE BAR BRACKET REPLACEMENT

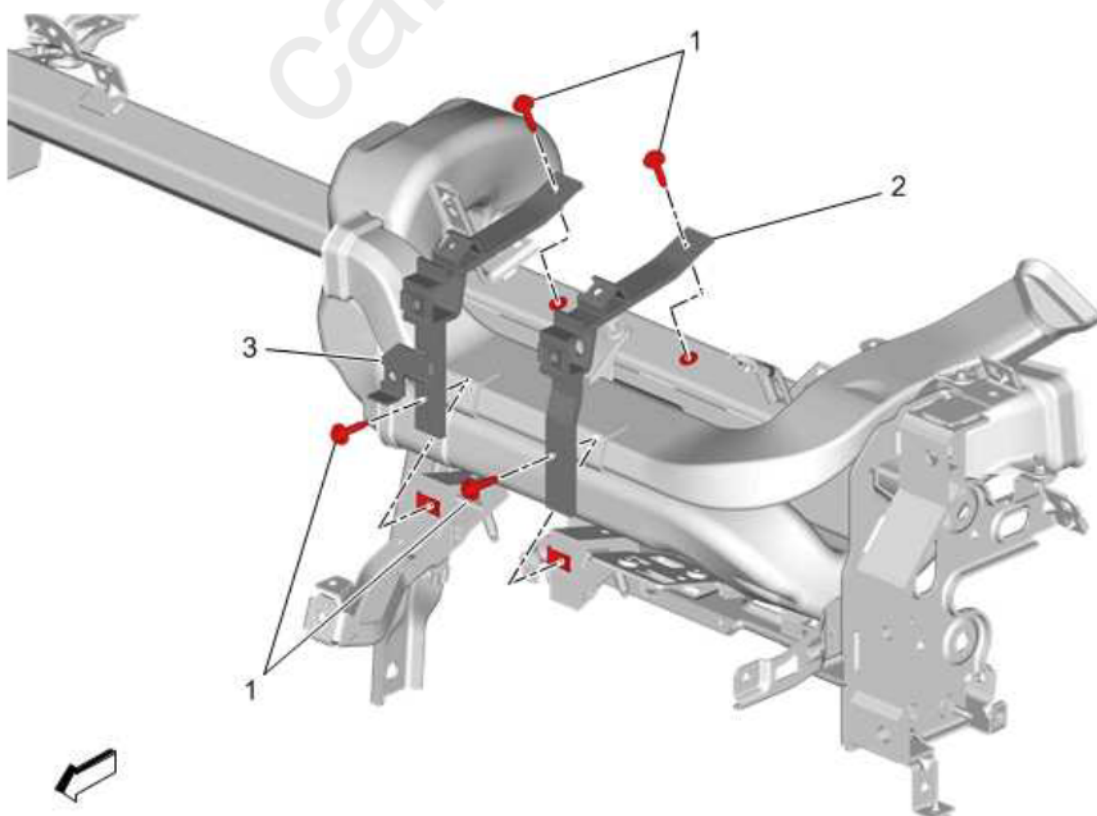


Fig. 153: Instrument Panel Tie Bar Bracket
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Instrument Panel Tie Bar Replacement	
1	Instrument Panel Tie Bar Brace Bolt [4x] CAUTION: Refer to Fastener Caution . Tighten 9 N.m (7 lb ft)
2	Instrument Panel Tie Bar Bracket - Left Side
3	Instrument Panel Tie Bar Bracket - Right Side

WIRE TO WIRE REPAIR - INSTRUMENT PANEL AND CONSOLE

Special Tools

- EL-38125-10 Splice Sleeve Crimping Tool (non GMNA)
- J-38125-5A Ultra Torch Special Tool
- J-38125-8 Splice Sleeve Crimping Tool (GMNA)

For equivalent regional tools, refer to **Special Tools** .

WARNING: In order to reduce the risk of personal injury, loss of high voltage isolation to ground and higher system impedance, do not attempt to repair any HV wiring, connector or terminal that is damaged. High voltage coaxial type cables are not repairable. Never attempt to repair a coaxial type cable. The entire cable/harness or component must be replaced. In order to maintain system integrity and personal safety, never attempt to repair any high voltage wiring, cables or terminals. Performing this procedure on high voltage circuits may result in serious injury or death.

NOTE: If the wiring harness internal to the transmission is damaged, the wiring harness must be replaced. The use of splice sleeves in an attempt to repair the internal transmission wires, connectors or terminals could result in performance issues.

NOTE: Do not splice wires in Door Harness Grommets.

NOTE: The DuraSeal splice sleeves have the following 2 critical features:

- A special heat shrink sleeve environmentally seals the splice. The heat shrink sleeve contains a sealing adhesive inside.
- A cross hatched (knurled) core crimp provides the necessary low resistance contact integrity for these sensitive, low energy circuits.

Use only DuraSeal splice sleeves to form a one-to-one splice on all types of insulation except high voltage and specialty cables. Use DuraSeal splice sleeves where there are special requirements such as moisture sealing. Follow the instructions below in order to splice copper wire using DuraSeal splice sleeves.

Splice Sleeve Selection

Splice Sleeve Color	Crimp Tool Nest Color		Wire Gauge mm ² / (AWG)
	3 Crimp Nests	4 Crimp Nests	

Splice Sleeve Color	Crimp Tool Nest Color		Wire Gauge mm ² / (AWG)
	3 Crimp Nests	4 Crimp Nests	
Salmon (Yellow-Pink) 19300089	Red (1) or Red/Green (1)	Red (2)	0.22-0.8/(18-26)
Blue 19168447	Blue (2)	Blue (3)	1.0-2.0/(14-16)
Yellow 19168448	Yellow (3)	Yellow (4)	3.0-5.0/(10-12)

1. Open the harness by removing any tape:

NOTE: You must perform the following procedures in the listed order. Repeat the procedure if any wire strands are damaged. You must obtain a clean strip with all of the wire strands intact.

- Use a sewing seam ripper, available from sewing supply stores, in order to cut open the harness in order to avoid wire insulation damage.
 - Use the DuraSeal splice sleeves on all types of insulation except Tefzel and coaxial.
 - Do not use the crimp and DuraSeal splice sleeve to form a splice with more than 2 wires coming together.
2. Cut as little wire off the harness as possible. You may need the extra length of wire in order to change the location of a splice.

Adjust splice locations so that each splice is at least 40 mm (1.5 in) away from the other splices, harness branches or connectors.
 3. Strip the insulation:
 - When adding a length of wire to the existing harness, use the same size wire as the original wire.
 - Perform one of the following items in order to find the correct wire size:
 - Find the wire on the schematic and convert to regional wiring gauge size.
 - If you are unsure of the wire size, begin with the largest opening in the wire stripper and work down until achieving a clean strip of the insulation.
 - Strip approximately 5.0 mm (0.20 in) of insulation from each wire to be spliced.
 - Do not nick or cut any of the strands. Inspect the stripped wire for nicks or cut strands.
 - If the wire is damaged, repeat this procedure after removing the damaged section.
 4. For high temperature wiring, slide a section of high temperature SCT1 shrink tubing down the length of wire to be spliced. Ensure that the shrink tubing will not interfere with the splice procedure.
 5. Select the proper DuraSeal splice sleeve according to the wire size. Refer to the above table at the beginning of the repair procedure for the color coding of the DuraSeal splice sleeves and the crimp tool nests.
 6. The **EL-38125-10** splice sleeve crimping tool has four crimp nests. The largest crimp nest (4) is used for crimping 10 and 12 gauge wires. The second largest crimp nest (3) is used for crimping 14 and 16 gauge wires. The third largest crimp nest (2) is used for crimping 18 and 20 gauge wires. The smallest crimp nest (1) is used for crimping 22 to 26 gauge wires. The crimp nests are referenced in the table (farther above) under the crimp tool nest color.

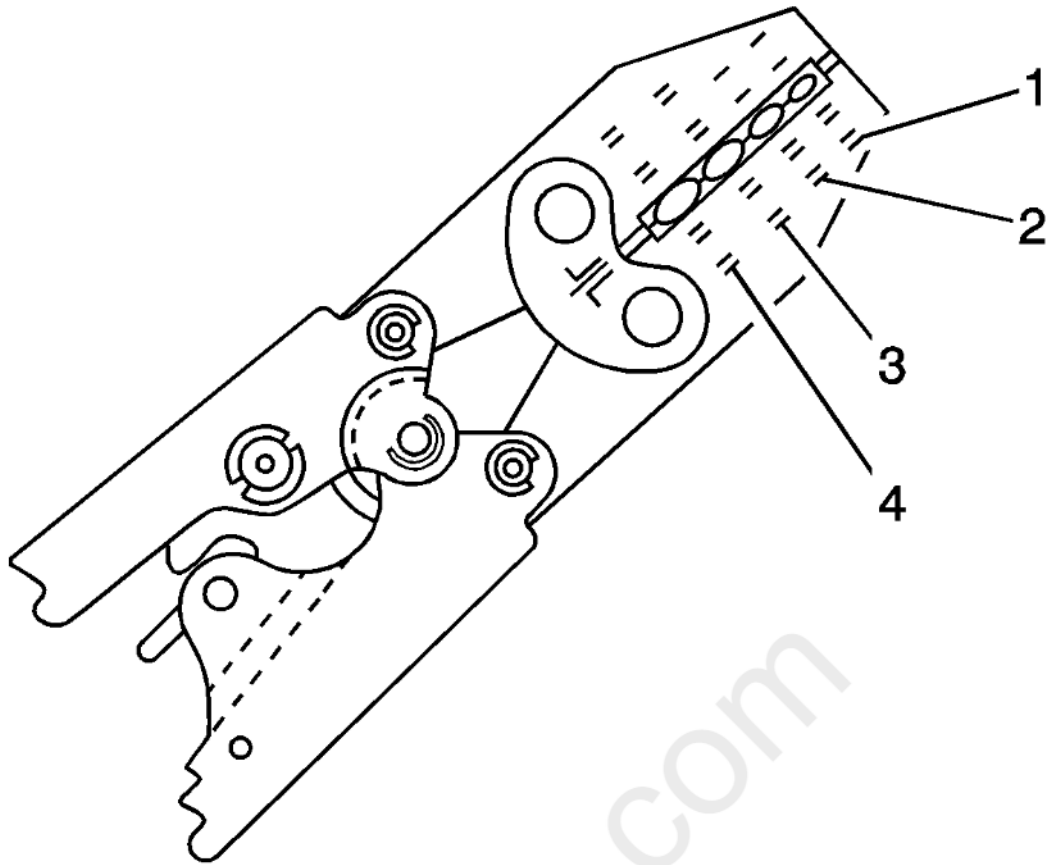


Fig. 154: Crimping Tool

Courtesy of GENERAL MOTORS COMPANY

7. The **J-38125-8** splice sleeve crimping tool has three crimp nests. The largest crimp nest (3) is used for crimping 10 and 12 gauge wires. The second largest crimp nest (2) is used for crimping 14 and 16 gauge wires. The smallest crimp nest (1) is used for crimping 18 to 20 gauge wires. The crimp nests are referenced in the table (farther above) under the crimp tool nest color.

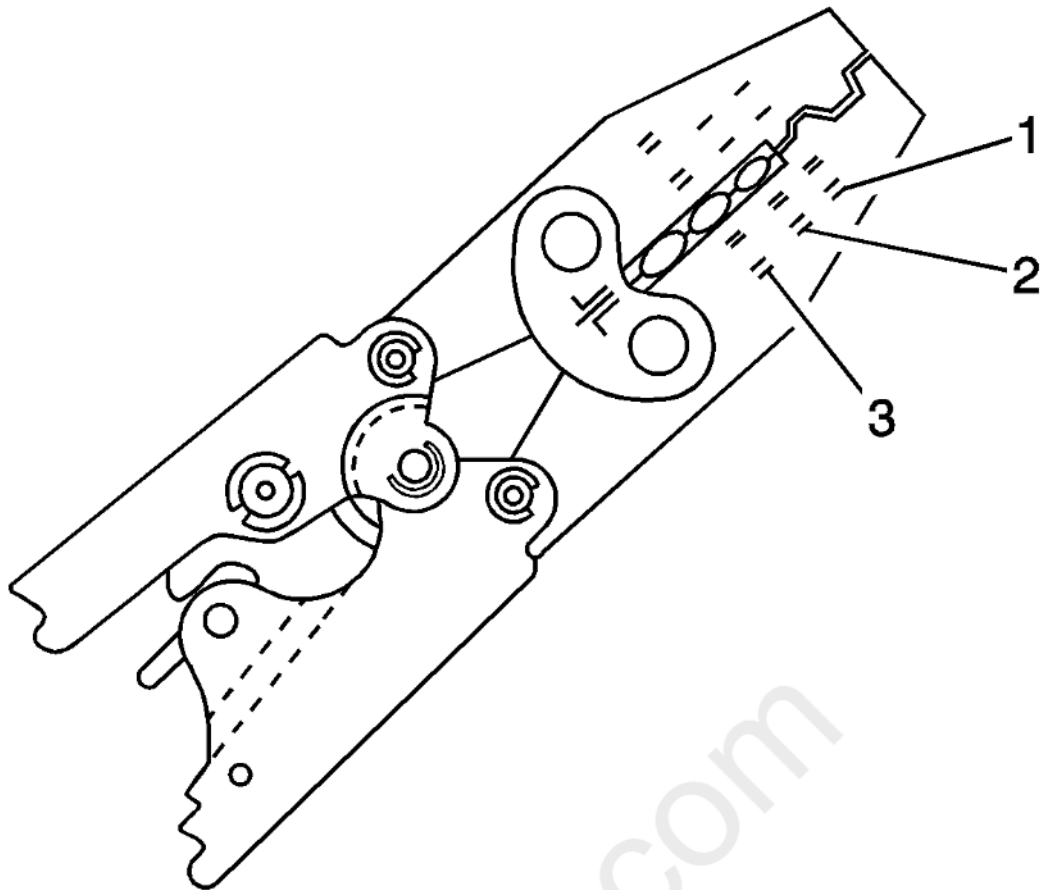


Fig. 155: Identifying Splice Crimp Tool Nests Terminal Identification

Courtesy of GENERAL MOTORS COMPANY

8. Use the splice sleeve crimp tool in order to position the DuraSeal splice sleeve in the proper color nest of the splice sleeve crimp tool. For the four crimp nest tool, use the three largest crimp nests to crimp the splice sleeves. For the three crimp nest tool, use all three crimp nests to crimp the splice sleeves. Use the four and three crimp tool diagrams (above) and the table (farther above) to match the splice sleeve with the correct crimp nest. The crimp tool diagram callout numbers match the numbers in the table (under crimp tool nest color).
9. Place the DuraSeal splice sleeve in the nest. Ensure that the crimp falls midway between the end of the barrel and the stop. The sleeve has a stop (3) in the middle of the barrel (2) in order to prevent the wire (1) from going further. Close the hand crimper handles slightly in order to firmly hold the DuraSeal splice sleeve in the proper nest.

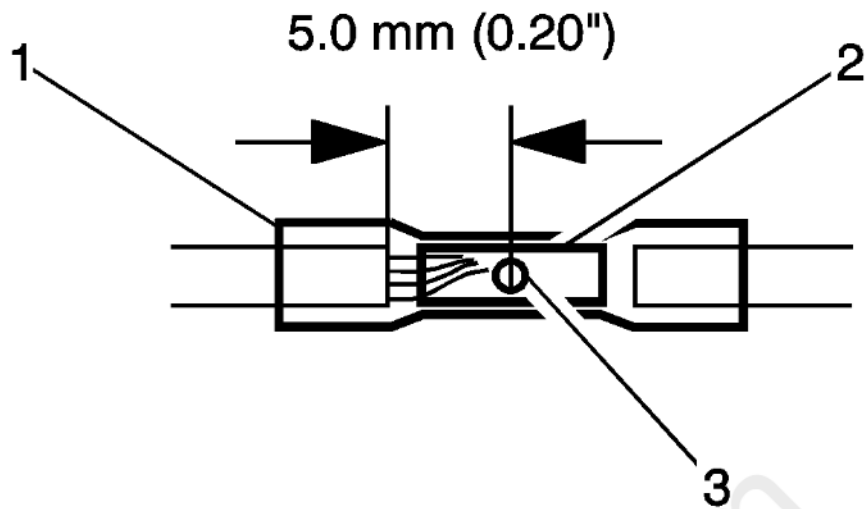


Fig. 156: Identifying Duraseal Splice Sleeve

Courtesy of GENERAL MOTORS COMPANY

10. Insert the wire into the splice sleeve barrel until the wire hits the barrel stop. Refer to **Folded-Over Wire Repair** for splicing wires of 0.35 mm or less (22, 24, 26 gauge sizes) and for splicing wires of different gauges.



Fig. 157: Crimped Duraseal Splice Sleeve
Courtesy of GENERAL MOTORS COMPANY

11. Tightly close the handles of the crimp tool until the crimper handles open when released.

The crimper handles will not open until you apply the proper amount of pressure to the DuraSeal splice sleeve. Repeat steps 4 and 6 for the opposite end of the splice.

12. Using the heat torch, apply heat to the crimped area of the barrel.



Fig. 158: Crimped Duraseal Splice Sleeve
Courtesy of GENERAL MOTORS COMPANY

13. Start in the middle and gradually move the heat barrel to the open ends of the tubing:
 - The tubing will shrink completely as the heat is moved along the insulation.
 - A small amount of sealant will come out of the end of the tubing when sufficient shrinkage is achieved.

Weatherpack™ Wiring Repair

NOTE: Some replacement pigtail connectors may be delivered without the terminated leads installed into the connector. For Weatherpack™ connectors, all terminated leads included in the package should to be installed into the connector. If the connector end view shows that a terminal is not occupied, the extra terminated lead(s) need to be installed and the end(s) sealed using a DuraSeal splice sleeve and taped back into the harness.

1. Insert the wire into the splice sleeve barrel until the wire hits the barrel stop. Refer to **Folded-Over Wire Repair** for splicing wires of 0.35 mm or less (22, 24, 26 gauge sizes) and for splicing wires of different gauges.

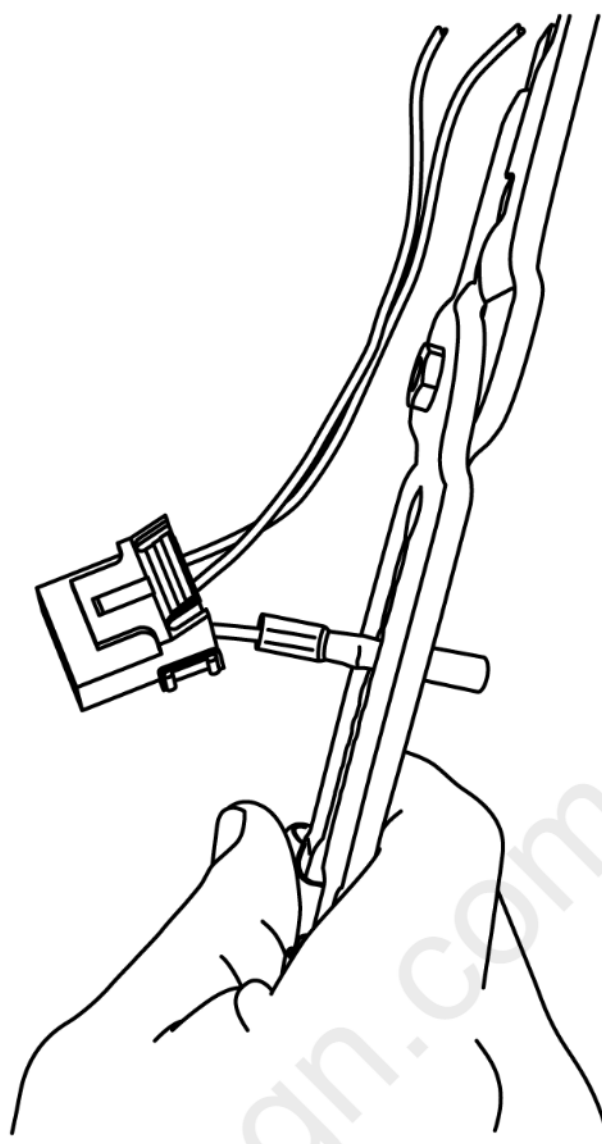


Fig. 159: Tightly Close Handles Of Crimp Tool
Courtesy of GENERAL MOTORS COMPANY

2. Tightly close the handles of the crimp tool until the crimper handles open when released.

The crimper handles will not open until you apply the proper amount of pressure to the DuraSeal splice sleeve. Holding the DuraSEAL with one hand gently tug on the wire to ensure it is crimped in the DuraSeal.

3. Using the heat torch, apply heat to the crimped area of the barrel.
4. Start in the middle and gradually move the heat barrel to the open ends of the tubing:

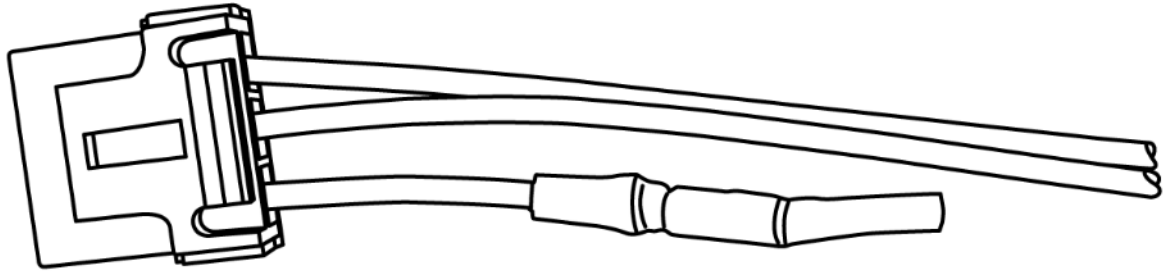


Fig. 160: Heat To Crimped Area Of Barrel

Courtesy of GENERAL MOTORS COMPANY

- The tubing will shrink completely as the heat is moved along the insulation.
- A small amount of sealant will come out of the end of the tubing when sufficient shrinkage is achieved.

5. Tape the extra terminated lead(s) back into the harness.



Fig. 161: Taping Extra Terminated Leads Back Into Harness
Courtesy of GENERAL MOTORS COMPANY

High Temperature Wiring Repairs

Use the following procedures to perform high temperature wiring repairs:

1. Center the high temperature SCT1 shrink tube over the DuraSeal splice sleeve.
2. Using the heat torch, apply heat to the high temperature heat shrink tubing.
3. Gradually move the heat from the center to the open end of the tubing:
 - The tubing will shrink completely as the heat is moved along the insulation.
 - A small amount of sealant will come out of the end of the tubing when sufficient shrinkage is achieved.
4. Replace any reflective tape and clips that may have been removed during the repair.

CONNECTOR RECONNECTION - INSTRUMENT PANEL AND CONSOLE

Special Tools

EL-35616 Terminal Test Probe Kit

For equivalent regional tools, refer to [Special Tools](#) .

When the condition is not currently present, but is indicated in DTC history, the cause may be intermittent. An intermittent may also be the cause when there is a customer complaint, but the symptom cannot be duplicated. Refer to the Symptom Table of the system that is suspect of causing the condition before trying to locate an intermittent condition.

Most intermittent conditions are caused by faulty electrical connections or wiring. Inspect for the following items:

- Loose, corroded or painted terminal stud/fastener
- Wiring broken inside the insulation
- Poor connection between the male and female terminal at a connector
- A terminal not seated all the way into the connector body
- Poor terminal to wire connection - Some conditions which fall under this description are poor crimps, poor solder joints, crimping over the wire insulation rather than the wire itself and corrosion in the wire to terminal contact area, etc.
- Pierced or damaged insulation can allow moisture to enter the wiring causing corrosion. The conductor can corrode inside the insulation, with little visible evidence. Look for swollen and stiff sections of wire in the suspect circuits.
- Wiring which has been pinched, cut or its insulation rubbed through may cause an intermittent open or short as the bare area touches other wiring or parts of the vehicle.
- Wiring that comes in contact with hot or exhaust components
- Refer to [**Inducing Intermittent Fault Conditions**](#) in order to duplicate the conditions required, in order to verify the customer concern.
- Refer to [**Testing for Electrical Intermittents**](#) for test procedures to detect intermittent open, high resistance, short to ground and short to voltage conditions.
- Refer to [**Scan Tool Snapshot Procedure**](#) for advanced intermittent diagnosis and Vehicle Data Recorder operation.

Testing for Terminal Fretting

Some intermittent conditions can be caused by wire terminal fretting corrosion. Fretting corrosion is a build-up of insulating, oxidized wear debris that can form when there is a small motion between electrical contacts. The oxidized wear debris can pile up enough at the electrical contact spots that the electrical resistance across the connection increases. Movement between the contacting surfaces as small as 10 to 100 microns can cause fretting. To put this in perspective, a sheet of paper is about 100 microns thick, so fretting motion is small and hard to see. Vibration and thermal expansion/contraction are the main sources that create fretting motion. Since vehicles vibrate and can experience large temperature swings, they are a good source for fretting motion. Tin, copper, nickel and iron surfaces are all susceptible to fretting corrosion. Fretting corrosion can be difficult to see but it looks like small, dark smudges on the terminals contact surface.

To correct a fretting condition disconnect the suspect connector and add dielectric grease/lubricant (Nyogel 760G or equivalent, meeting GM specification 9986087) to both sides of the connector terminals. Then reconnect the connector and wipe away any excess lubricant. This will correct the additional terminal contact resistance due to the terminal fretting corrosion.

Testing for Proper Terminal Contact

It is important to test terminal contact at the component and any inline connectors before replacing a suspect component. Mating terminals must be inspected to ensure good terminal contact. A poor connection between the male and female terminal at a connector may be the result of contamination or deformation.

Contamination may be caused by the connector halves being improperly connected. A missing or damaged connector seal, damage to the connector itself or exposing the terminals to moisture and dirt can also cause contamination. Contamination, usually in the underhood or underbody connectors, leads to terminal corrosion, causing an open circuit or intermittently open circuit.

Deformation is caused by probing the mating side of a connector terminal without the proper adapter. Always use the **EL-35616** kit when probing connectors. Other causes of terminal deformation are improperly joining the connector halves or repeatedly separating and joining the connector halves. Deformation, usually to the female terminal contact tang, can result in poor terminal contact causing an open or intermittently open circuit.

Testing for Proper Terminal Contact in Bussed Electrical Centers

It is very important to use the correct test adapter when testing for proper terminal contact of fuses and relays in a bussed electrical center. Use the **EL-35616** kit to test for proper terminal contact. Failure to use the **EL-35616** kit can result in improper diagnosis of the bussed electrical center.

Follow the procedure below in order to test terminal contact:

1. Separate the connector halves.
2. Visually inspect the connector halves for contamination. Contamination may result in a white or green build-up within the connector body or between terminals. This causes high terminal resistance, intermittent contact or an open circuit. An underhood or underbody connector that shows signs of contamination should be replaced in its entirety: terminals, seals and connector body.
3. Using an equivalent male terminal/terminated lead, verify that the retention force is significantly different between a known good terminal and the suspect terminal. Replace the female terminal in question.

Flat Wire Connectors

There are no serviceable parts for flat wire connectors on the harness side or the component side.

Follow the procedure below in order to test terminal contact:

1. Remove the component in question.
2. Visually inspect each side of the connector for signs of contamination. Avoid touching either side of the connector as oil from your skin may be a source of contamination as well.
3. Visually inspect the terminal bearing surfaces of the flat wire circuits for splits, cracks or other imperfections that could cause poor terminal contact. Visually inspect the component side connector to ensure that all of the terminals are uniform and free of damage or deformation.
4. Insert the appropriate adapter into the flat wire harness connector in order to test the circuit in question.

Control Module/Component Voltage and Grounds

Poor voltage or ground connections can cause widely varying symptoms.

- Test all control module voltage supply circuits. Many vehicles have multiple circuits supplying voltage to a control module. Other components in the system may have separate voltage supply circuits that may also need to be tested. Inspect connections at the module/component connectors, fuses and any intermediate connections between the voltage source and the module/component. A test lamp or a DMM may indicate that voltage is present, but neither tests the ability of the circuit to carry sufficient current. Operate the component to test the ability of the circuit to carry sufficient current. Refer to [Circuit Testing](#) and [Power Distribution Schematics](#).
- Test all control module ground and system ground circuits. The control module may have multiple ground circuits. Other components in the system may have separate grounds that may also need to be tested. Inspect grounds for clean and tight connections at the grounding point (screw or stud). Inspect the connections at the component and in splice packs, where applicable. Operate the component to test the ability of the circuit to carry sufficient current. Refer to [Circuit Testing](#) and [Ground Distribution Schematics](#).

Temperature Sensitivity

- An intermittent condition may occur when a component/connection reaches normal operating temperature. The condition may occur only when the component/connection is cold or only when the component/connection is hot.
- Freeze Frame, Failure Records, Snapshot or Vehicle Data Recorder data may help with this type of intermittent condition, where applicable.
- If the intermittent is related to heat, review the data for a relationship with the following:
 - High ambient temperatures
 - Underhood/engine generated heat
 - Circuit generated heat due to a poor connection or high electrical load

- Higher than normal load conditions, towing, etc.
- If the intermittent is related to cold, review the data for the following:
 - Low ambient temperatures - In extremely low temperatures, ice may form in a connection or component. Inspect for water intrusion.
 - The condition only occurs on a cold start.
 - The condition goes away when the vehicle warms up.
- Information from the customer may help to determine if the trouble follows a pattern that is temperature related.
- If temperature is suspected of causing an intermittent fault condition, attempt to duplicate the condition. Refer to [Inducing Intermittent Fault Conditions](#) in order to duplicate the conditions required.

Electromagnetic Interference and Electrical Noise

Some electrical components/circuits are sensitive to electromagnetic interference or other types of electrical noise. Inspect for the following conditions:

- A mis-routed harness that is too close to high voltage/high current devices such as secondary ignition components, motors, generator etc. - These components may induce electrical noise on a circuit that could interfere with normal circuit operation.
- Electrical system interference caused by a malfunctioning relay or a control module driven solenoid or switch - These conditions can cause a sharp electrical surge. Normally, the condition will occur when the malfunctioning component is operating.
- Installation of non-factory or aftermarket add on accessories such as lights, 2-way radios, amplifiers, electric motors, remote starters, alarm systems, cell phones, etc. - These accessories may create interference in other circuits while operating and the interference would disappear when the accessory is not operating. Refer to [Checking Aftermarket Accessories](#).
- Test for an open diode across the A/C compressor clutch and for other open diodes. Some relays may contain a clamping diode.
- The generator may be allowing AC noise into the electrical system.

Incorrect Control Module

- There are only a few situations where reprogramming a control module is appropriate:
 - A new service control module is installed.
 - A control module from another vehicle is installed.
 - Revised software/calibration files have been released for this vehicle.
- Verify that the control module contains the correct software/calibration. If incorrect programming is found, reprogram the control module with the most current software/calibration. Refer to [Control Module References](#) for replacement, setup and programming.

NOTE: DO NOT re-program the control module with the SAME software/calibration files that are already present in the control module. This is not an effective repair for any type of concern.

FRONT FLOOR CONSOLE REAR STOWAGE TRAY REPLACEMENT (MIDDLE WITHOUT RADIO FRONT FLOOR CONSOLE SPEAKER)

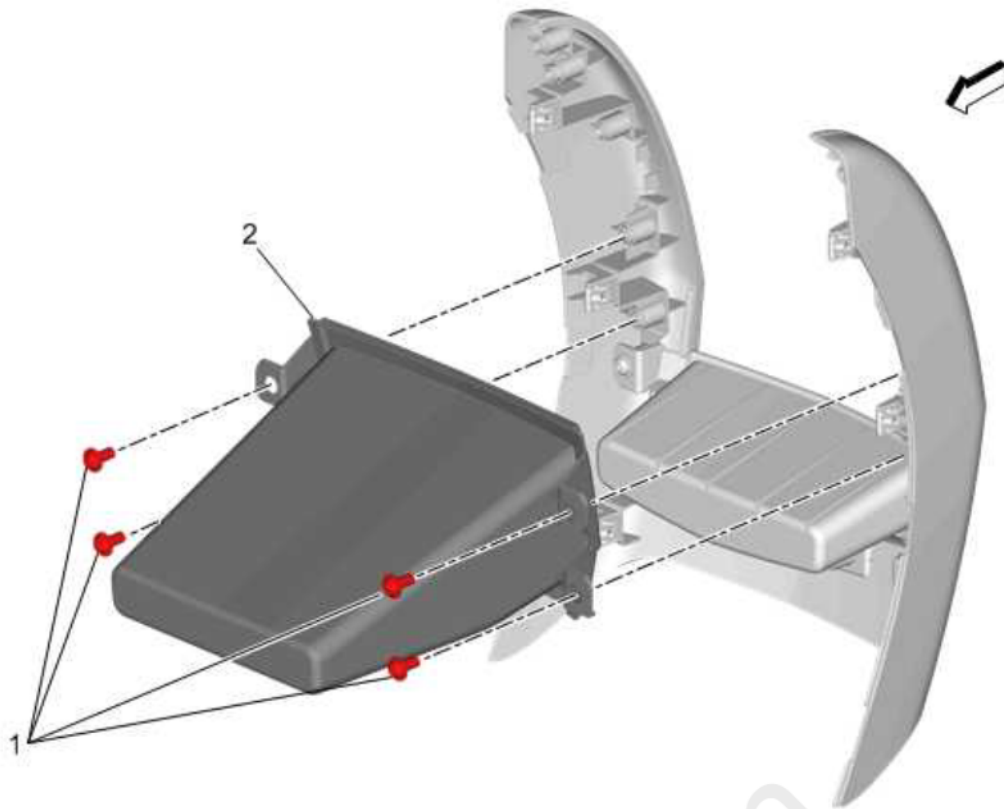


Fig. 162: Front Floor Console Rear Stowage Tray (Middle Without Radio Front Floor Console Speaker)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure <u>Front Floor Console Rear Trim Plate Replacement (Rear HVAC Vent Cover)</u> <u>Front Floor Console Rear Trim Plate Replacement (Rear Upper Blank Plate)</u>	
1	Front Floor Console Bolt [4x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Rear Stowage Tray

FRONT FLOOR CONSOLE REAR STOWAGE TRAY REPLACEMENT (LOWER WITHOUT RADIO FRONT FLOOR CONSOLE SPEAKER)

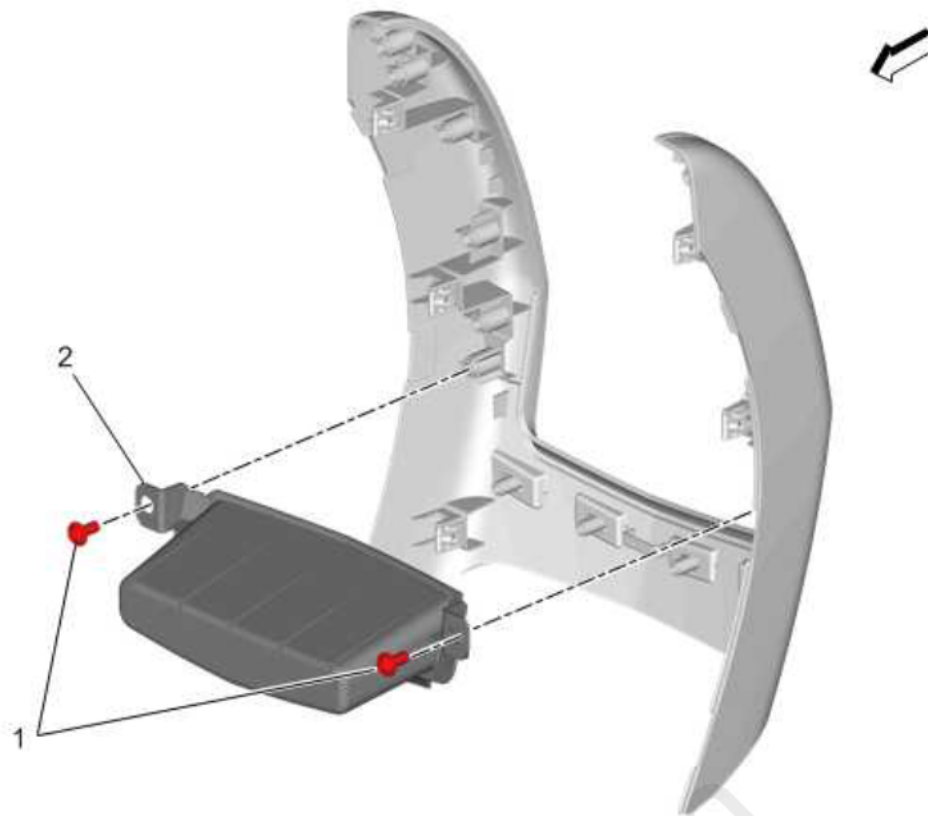


Fig. 163: Front Floor Console Rear Stowage Tray (Lower Without Radio Front Floor Console Speaker)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Front Floor Console Rear Stowage Tray - Middle. Refer to <u>Front Floor Console Rear Stowage Tray Replacement (Middle Without Radio Front Floor Console Speaker)</u>	
1	Front Floor Console Bolt [2x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Rear Stowage Tray

FRONT FLOOR CONSOLE REAR STOWAGE TRAY REPLACEMENT (LOWER WITH RADIO FRONT FLOOR CONSOLE SPEAKER)

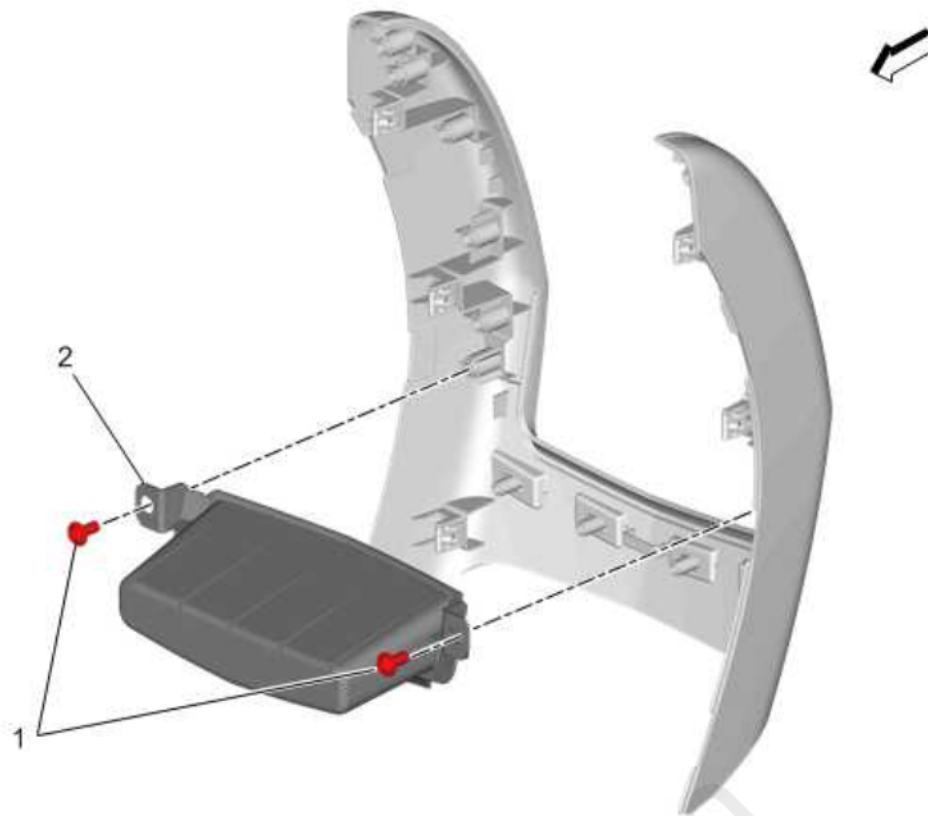


Fig. 164: Front Floor Console Rear Stowage Tray (Lower With Radio Front Floor Console Speaker)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure <u>Radio Rear Speaker Grille Replacement</u>	
1	Front Floor Console Bolt [2x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Rear Stowage Tray

FRONT FLOOR CONSOLE CUP HOLDER REPLACEMENT

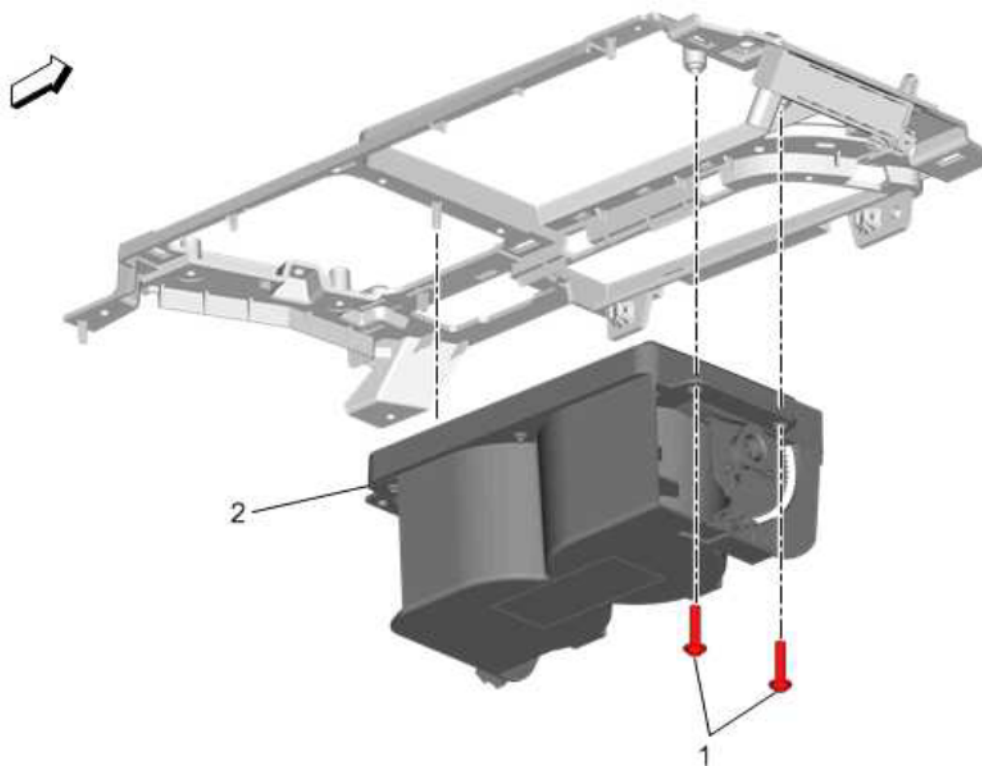


Fig. 165: Front Floor Console Cup Holder

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Infotainment Control Switch Replacement	
1	Front Floor Console Bolt [2x] CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Cup Holder

FRONT FLOOR CONSOLE CUP HOLDER DOOR REPLACEMENT

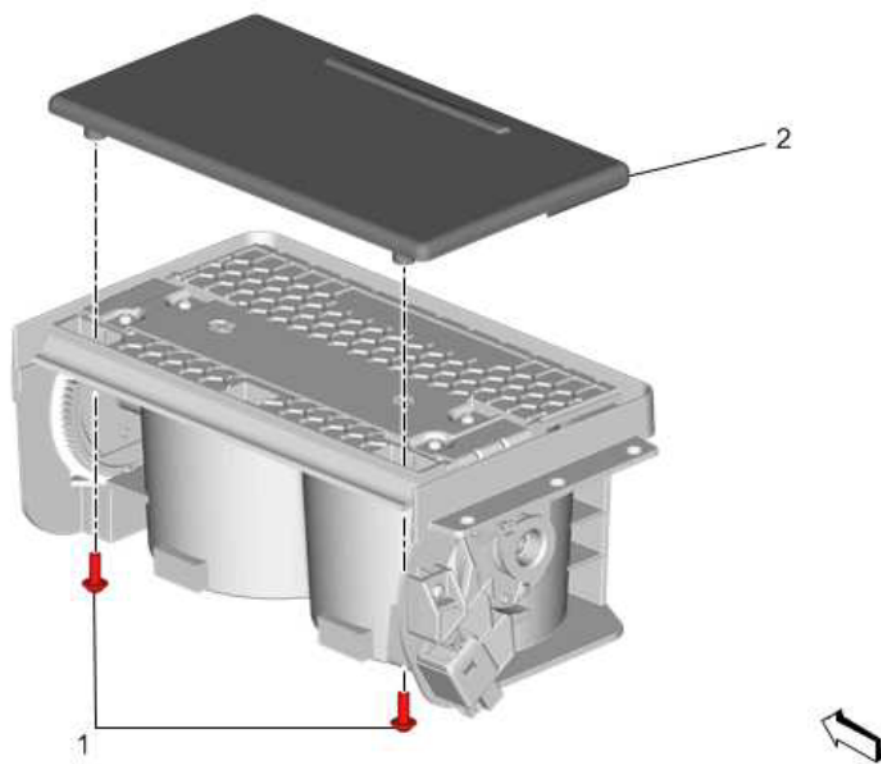


Fig. 166: Front Floor Console Cup Holder Door
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
Front Floor Console Cup Holder Replacement	
1	Front Floor Console Cup Holder Bolt [2x] CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Cup Holder Door

FRONT FLOOR CONSOLE HOLDER REPLACEMENT

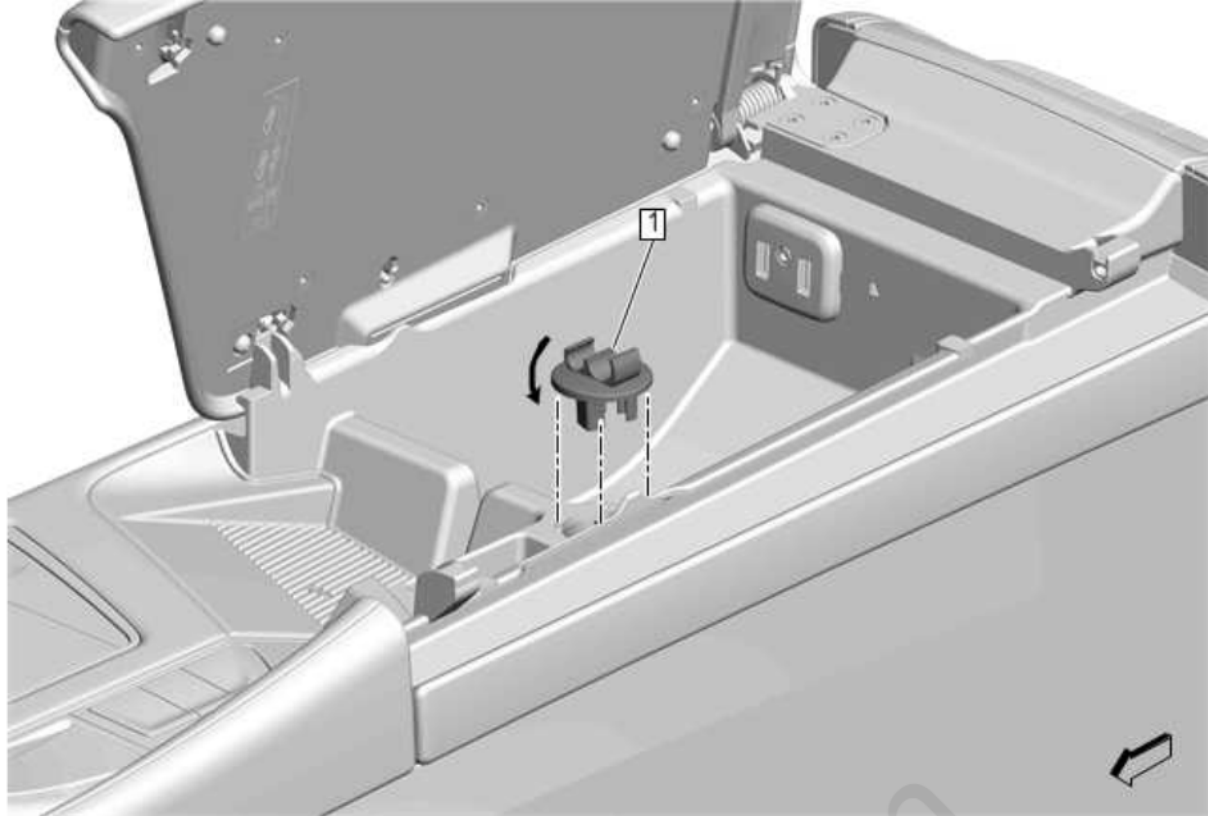


Fig. 167: Front Floor Console Holder
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Front Floor Console Holder
Procedure 1. Push down and rotate counterclockwise to remove. 2. Disconnect the electrical connector.	

FRONT FLOOR CONSOLE ACCESSORY SWITCH MOUNT PLATE REPLACEMENT

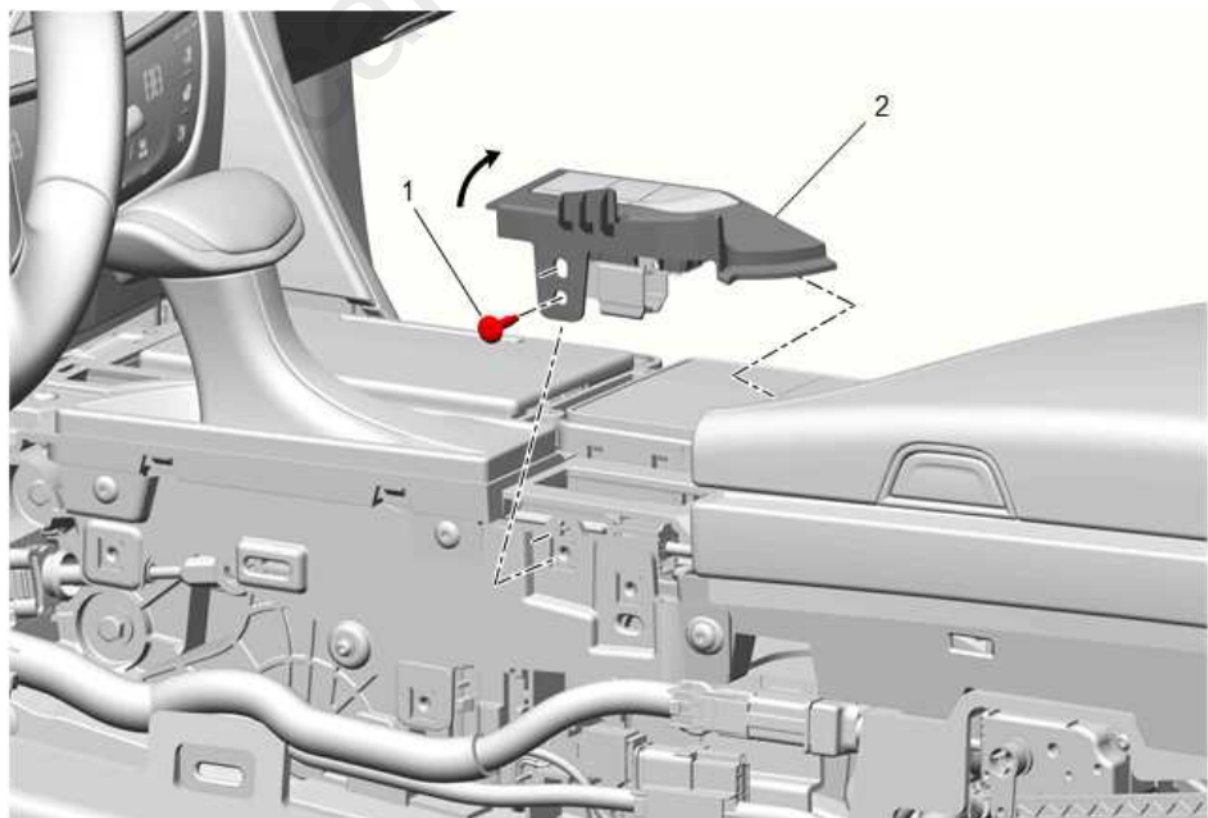


Fig. 168: Front Floor Console Accessory Switch Mount Plate
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure <u>Front Floor Console Extension Panel Replacement - Left Side</u>	
1	Front Floor Console Bolt CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Accessory Switch Mount Plate Procedure 1. Disconnect the electrical connector. 2. Rotate clockwise up and out to release the retaining tabs. 3. Transfer components as necessary.

FRONT FLOOR CONSOLE COMPARTMENT REPLACEMENT

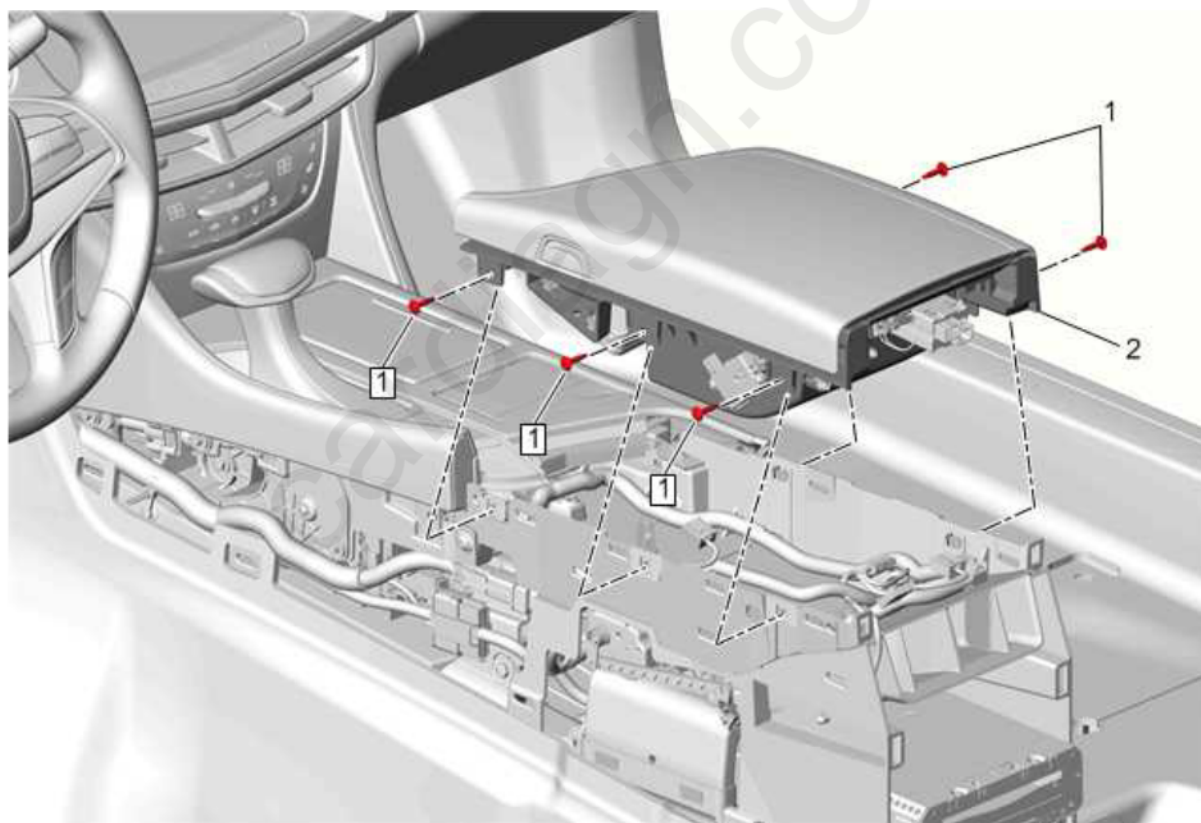


Fig. 169: Front Floor Console Compartment
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
1. <u>Front Floor Console Applique Replacement - Left Side</u> 2. <u>Front Floor Lower Console Replacement (Left Side)</u><u>Front Floor Lower Console Replacement (Right Side)</u>	

Callout	Component Name
1	Front Floor Console Bolt [5x] CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Compartment Procedure 1. Disconnect the electrical connectors. 2. Transfer components as necessary.

FRONT FLOOR CONSOLE REAR TRIM PANEL REPLACEMENT

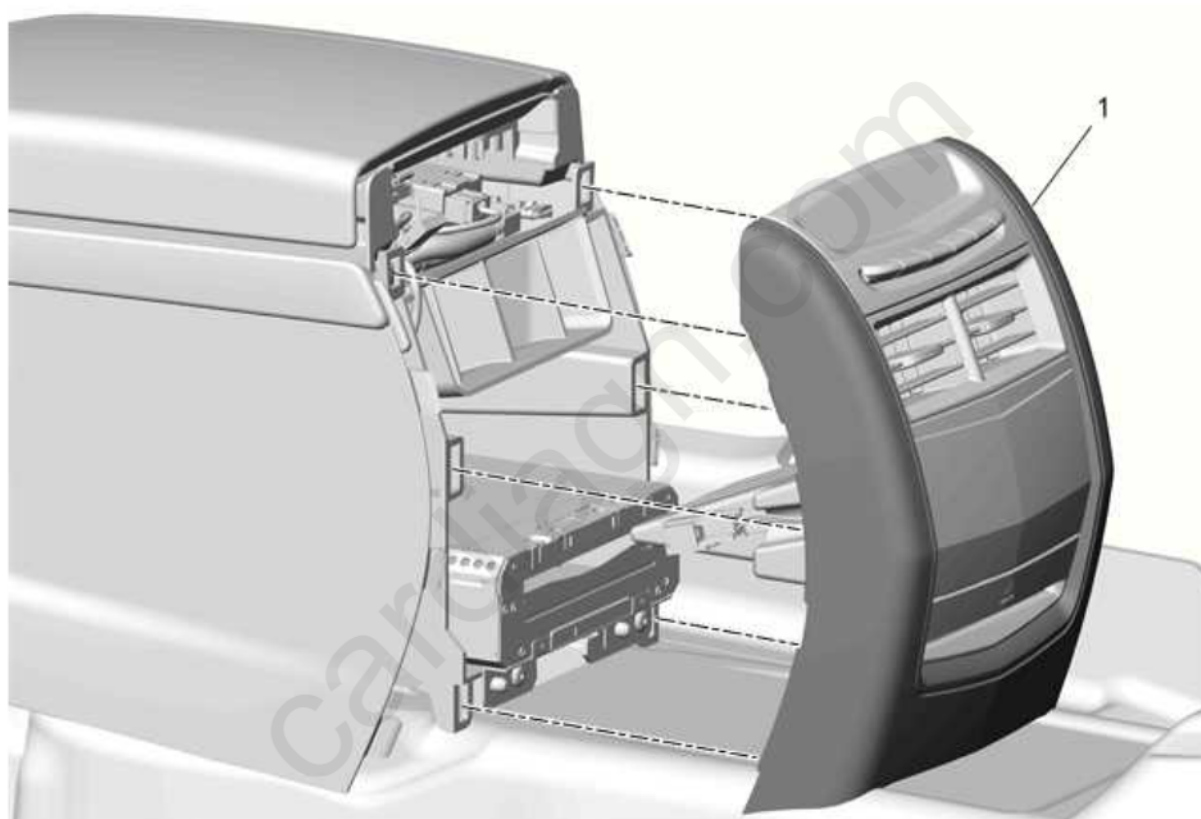


Fig. 170: Front Floor Console Rear Trim Panel
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Front Floor Console Rear Trim Panel Procedure 1. Use a flat bladed plastic trim tool. 2. Disconnect the electrical connector. 3. Transfer components as necessary.

FRONT FLOOR CONSOLE EXTENSION PANEL REPLACEMENT - RIGHT SIDE

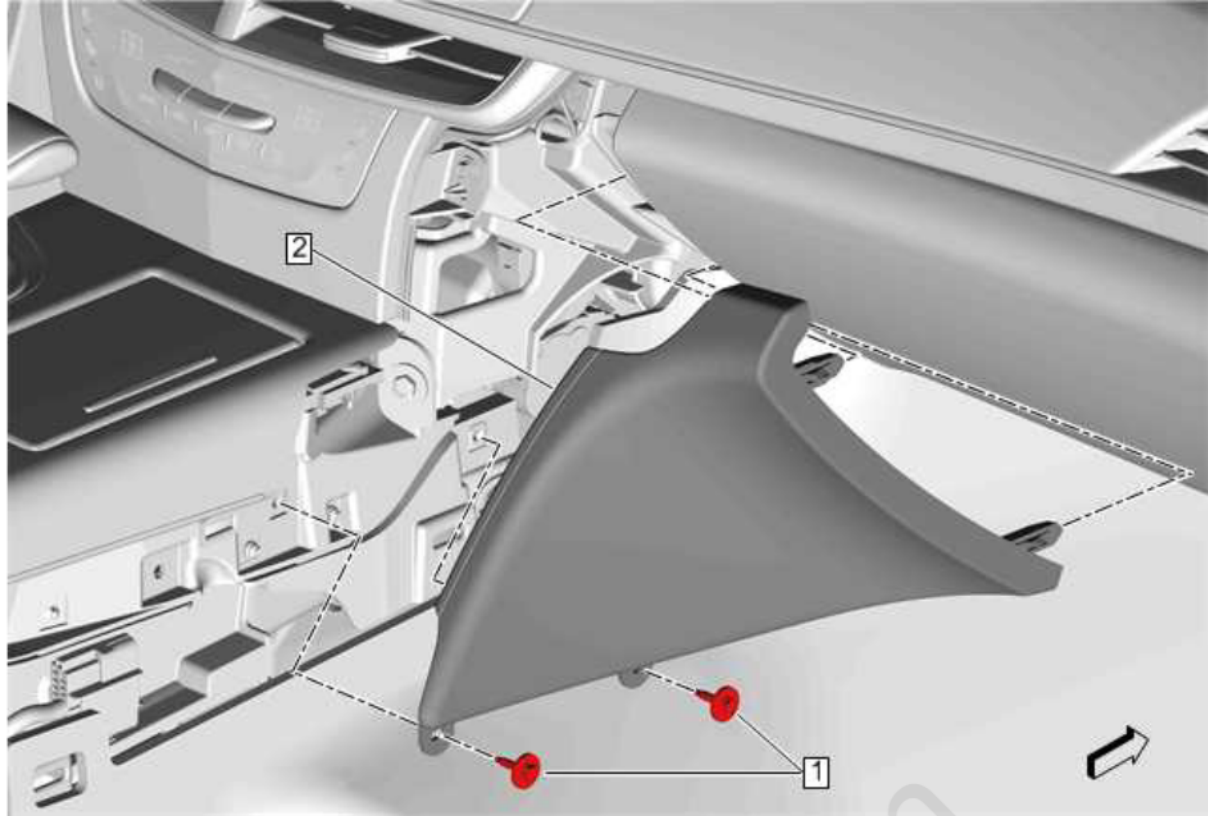


Fig. 171: Front Floor Console Extension Panel - Right Side
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure <u>Front Floor Lower Console Replacement (Right Side)</u>	
1	Front Floor Console Bolt [2x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Extension Panel - Right Procedure Use a flat bladed plastic trim tool.

FRONT FLOOR CONSOLE EXTENSION PANEL REPLACEMENT - LEFT SIDE

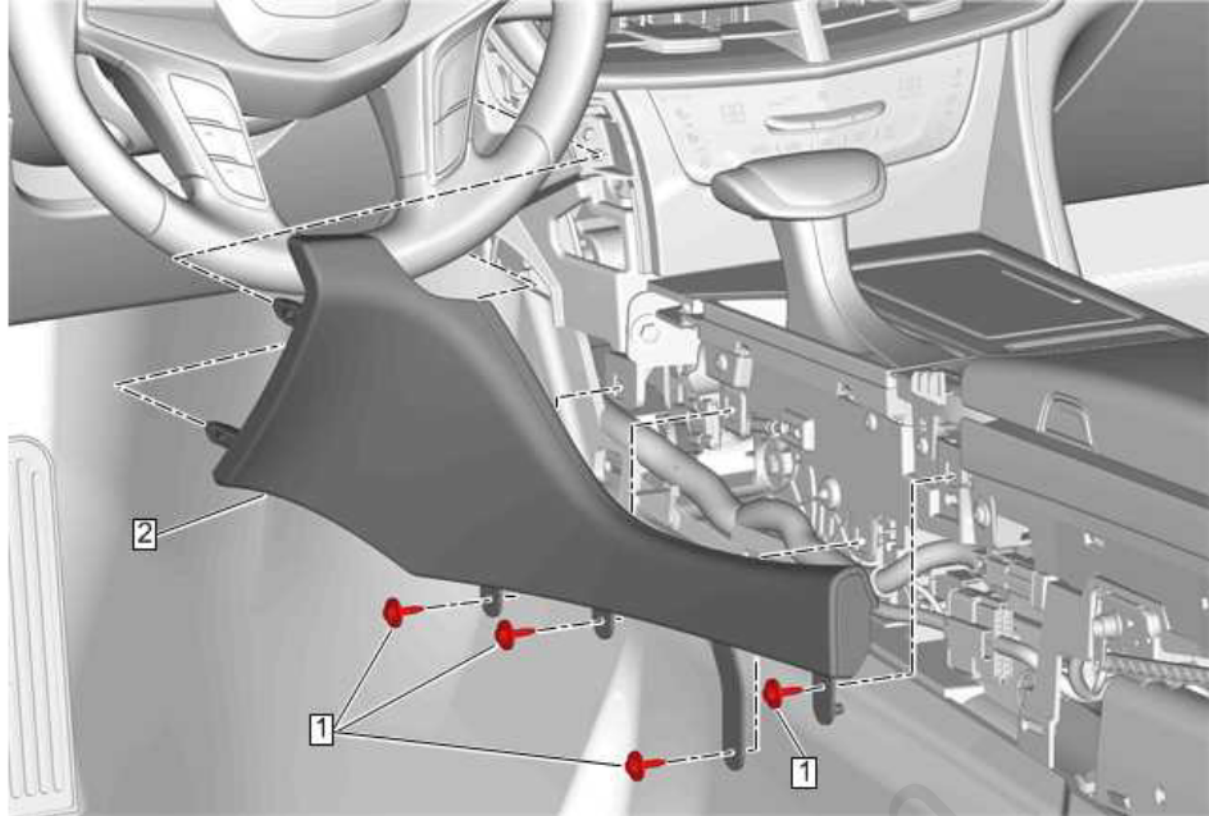


Fig. 172: Front Floor Console Extension Panel - Left Side

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
<u>Front Floor Lower Console Replacement (Left Side)</u>	
1	Front Floor Console Bolt [4x] CAUTION: Refer to <u>Fastener Caution</u> . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Extension Panel - Left Procedure Use a flat bladed plastic trim tool.

FRONT FLOOR CONSOLE REPLACEMENT

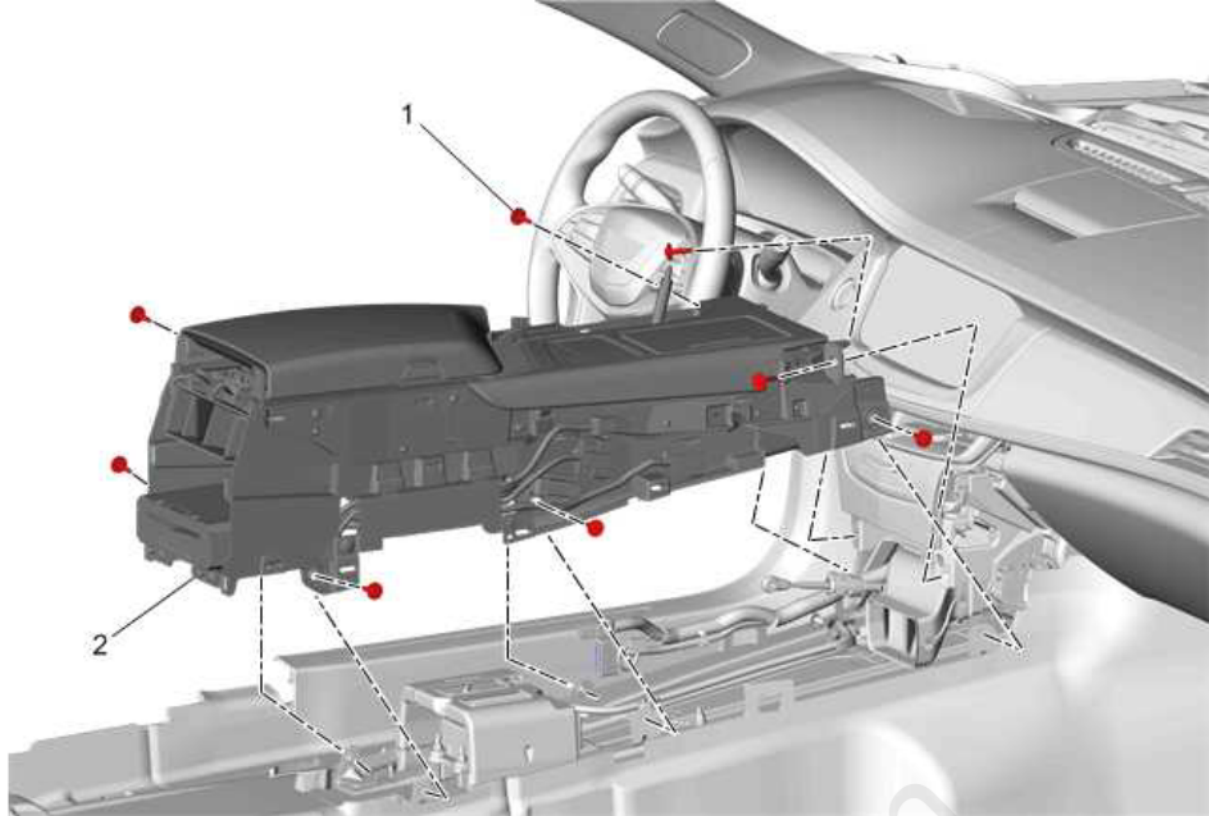


Fig. 173: Front Floor Console

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Front Floor Console Extension Panel Replacement - Left Side 2. Front Floor Console Extension Panel Replacement - Right Side 3. Transmission Control Replacement	
1	Front Floor Console Bolt to Floor Panel Tunnel Panel [8x] CAUTION: Refer to Fastener Caution . Tighten 9 N.m (80 lb in)
2	Front Floor Console Assembly Procedure 1. Disconnect all electrical connectors. 2. With the aid of an assistant, remove the console from the vehicle. 3. Transfer components as necessary.

FRONT FLOOR LOWER CONSOLE REPLACEMENT (LEFT SIDE)

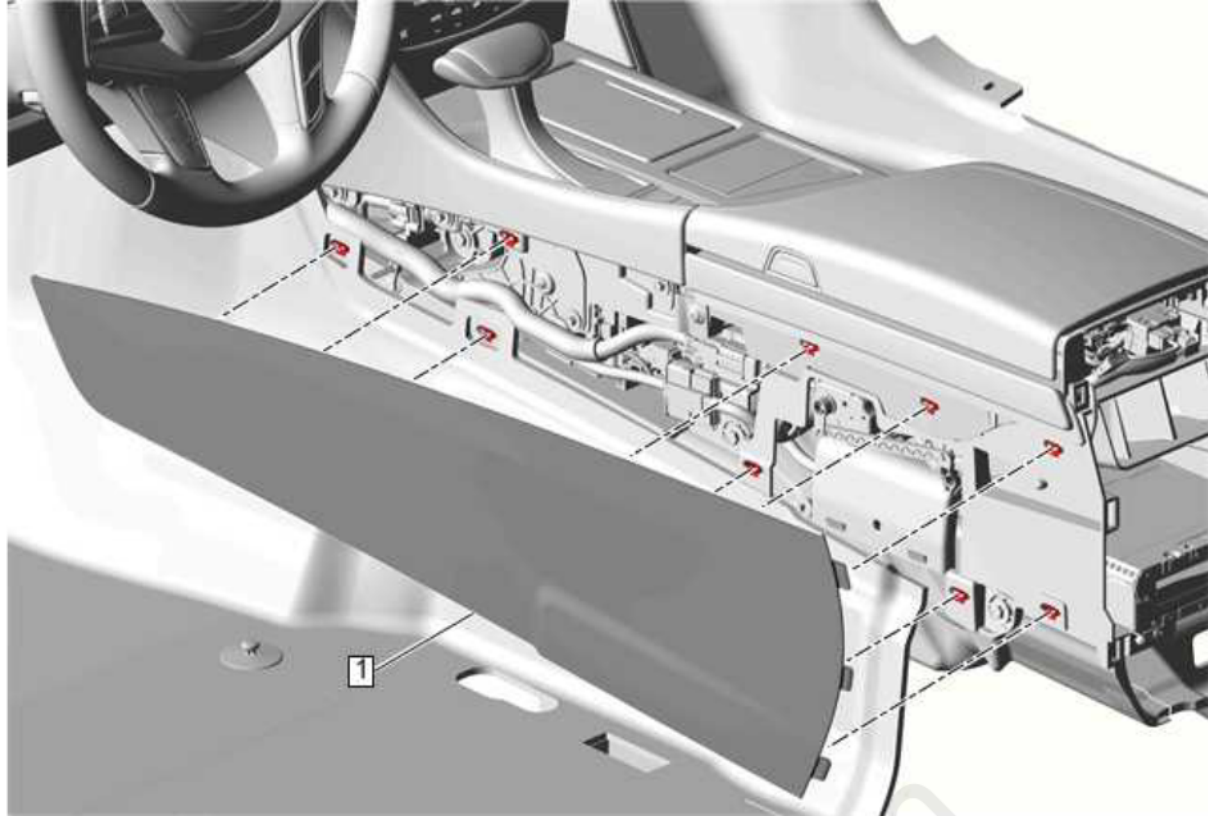


Fig. 174: Front Floor Lower Console (Left Side)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
<u>Front Floor Console Rear Trim Panel Replacement</u>	
1	Front Floor Lower Console - Left Side
	Procedure 1. Reposition the seat as necessary to access the fasteners. 2. Use a plastic trim tool if necessary.

FRONT FLOOR LOWER CONSOLE REPLACEMENT (RIGHT SIDE)

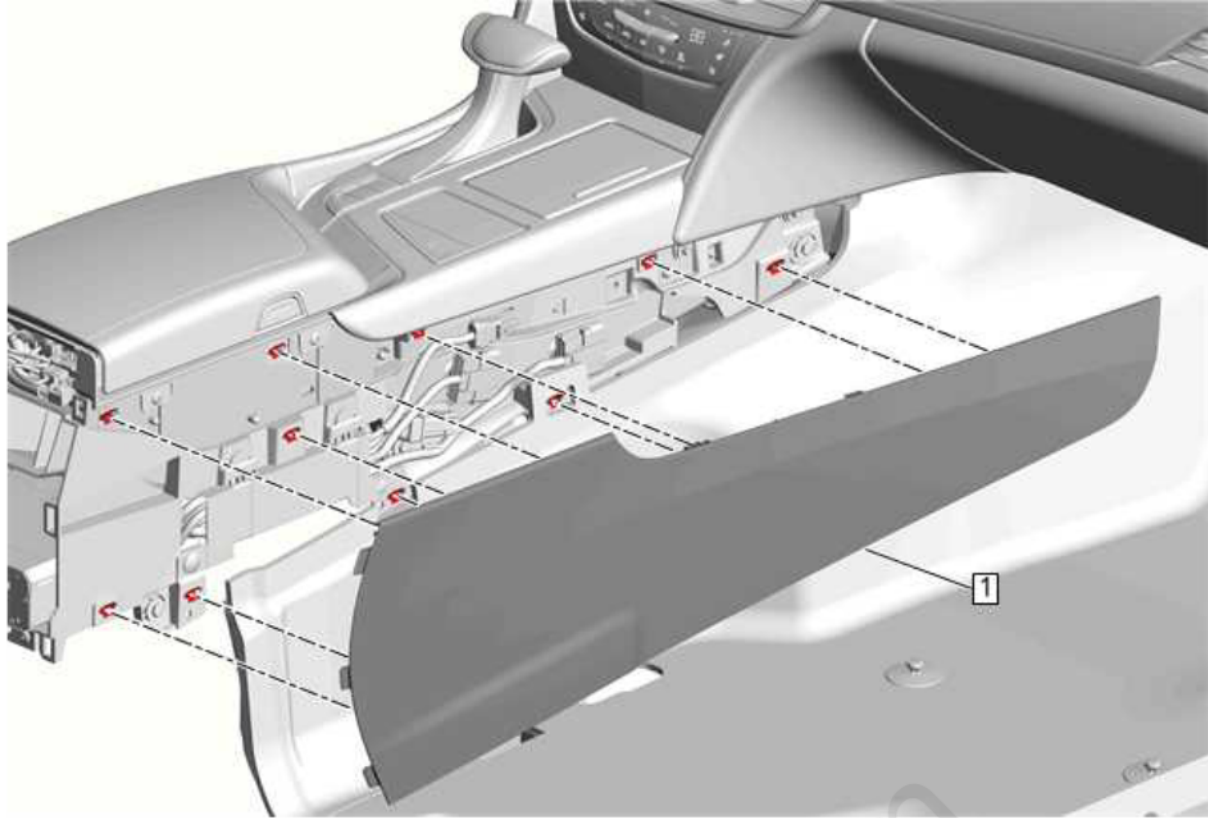


Fig. 175: Front Floor Lower Console (Right Side)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
<u>Front Floor Console Rear Trim Panel Replacement</u>	
1	Front Floor Lower Console - Right Side Procedure 1. Reposition the seat as necessary to access the fasteners. 2. Use a plastic trim tool if necessary.

FRONT FLOOR CONSOLE ARMREST REPLACEMENT

Removal Procedure

1. Front Floor Console Compartment» Remove - **Front Floor Console Compartment Replacement**
2. Audio Disc Player and USB Receptacle» Remove - **Audio Disc Player and USB Receptacle Replacement**
3. Front Floor Console Bolt (1)» Remove [4x]

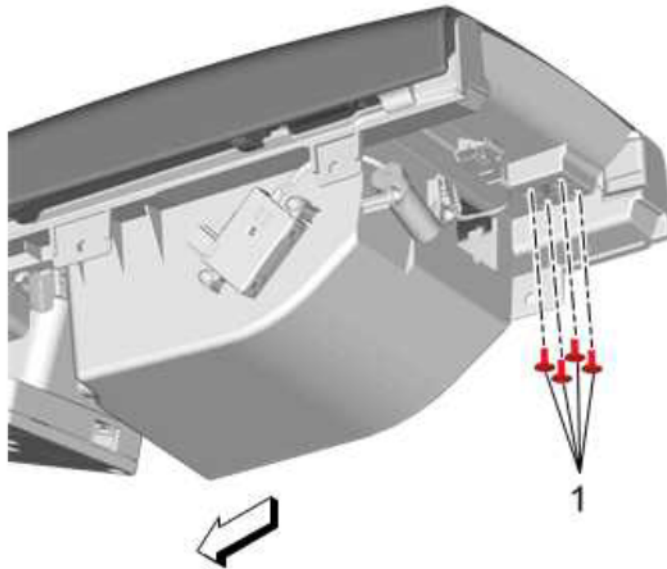


Fig. 176: Front Floor Console Bolt

Courtesy of GENERAL MOTORS COMPANY

4. Push the armrest buttons to release the armrest. (1)

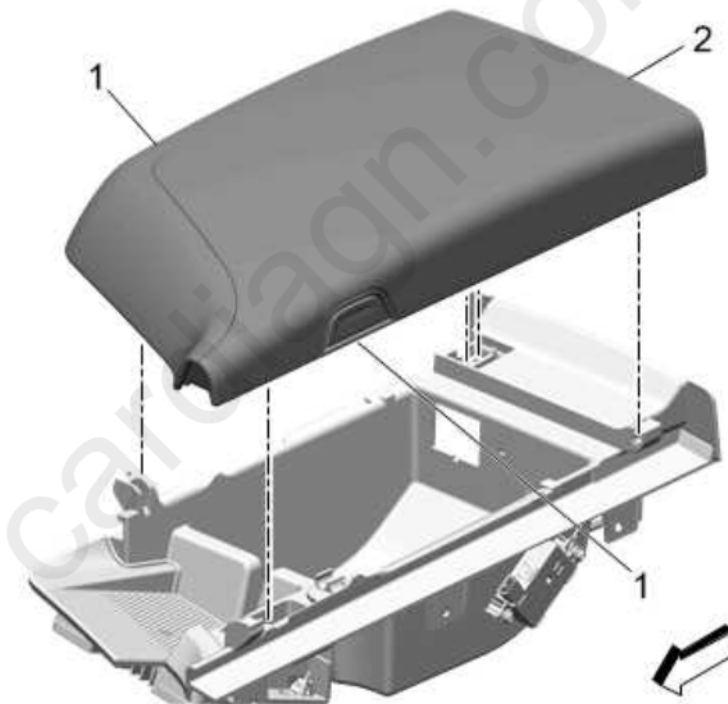


Fig. 177: Armrest And Armrest Buttons

Courtesy of GENERAL MOTORS COMPANY

5. Front Floor Console Armrest (2)» Remove
6. Transfer components as necessary.

Installation Procedure

1. Front Floor Console Armrest (2)» Install

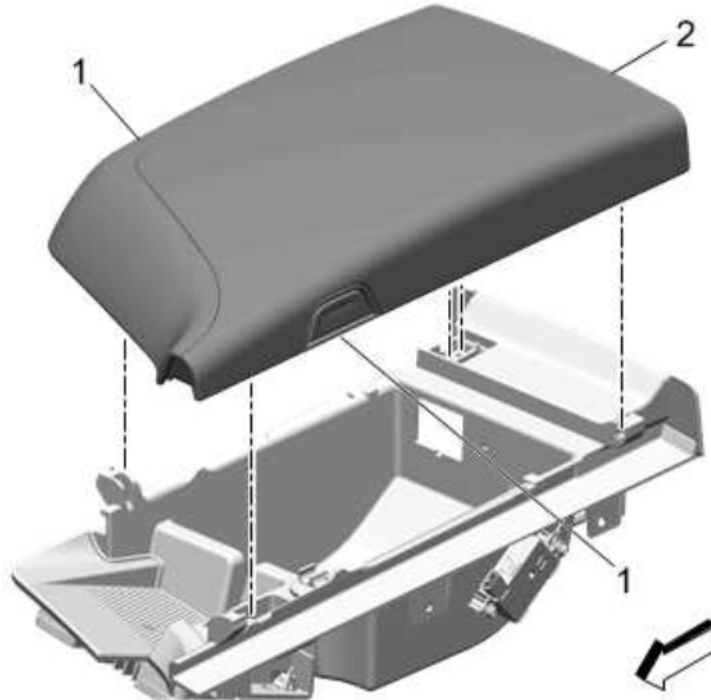


Fig. 178: Armrest And Armrest Buttons

Courtesy of GENERAL MOTORS COMPANY

2. Front Floor Console Bolt (1)» Install and tighten [4x] 2.5 N.m (22 lb in)

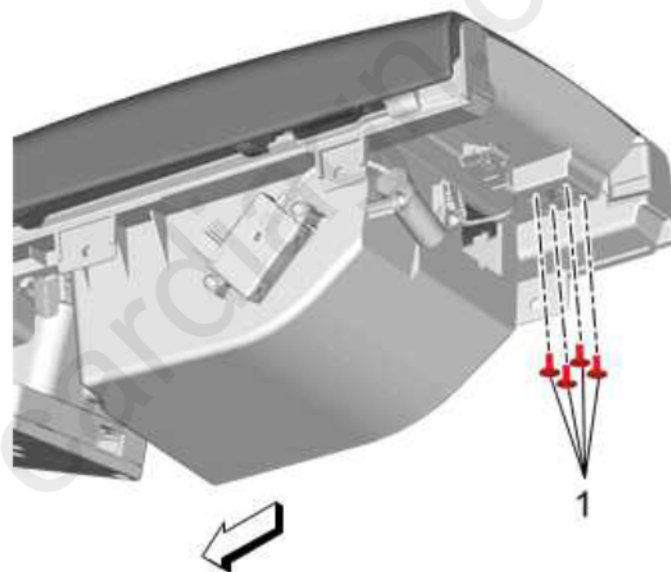


Fig. 179: Front Floor Console Bolt

Courtesy of GENERAL MOTORS COMPANY

3. Audio Disc Player and USB Receptacle» Install - [Audio Disc Player and USB Receptacle Replacement](#)
4. Front Floor Console Compartment» Install - [Front Floor Console Compartment Replacement](#)

FRONT FLOOR CONSOLE TRIM PLATE REPLACEMENT

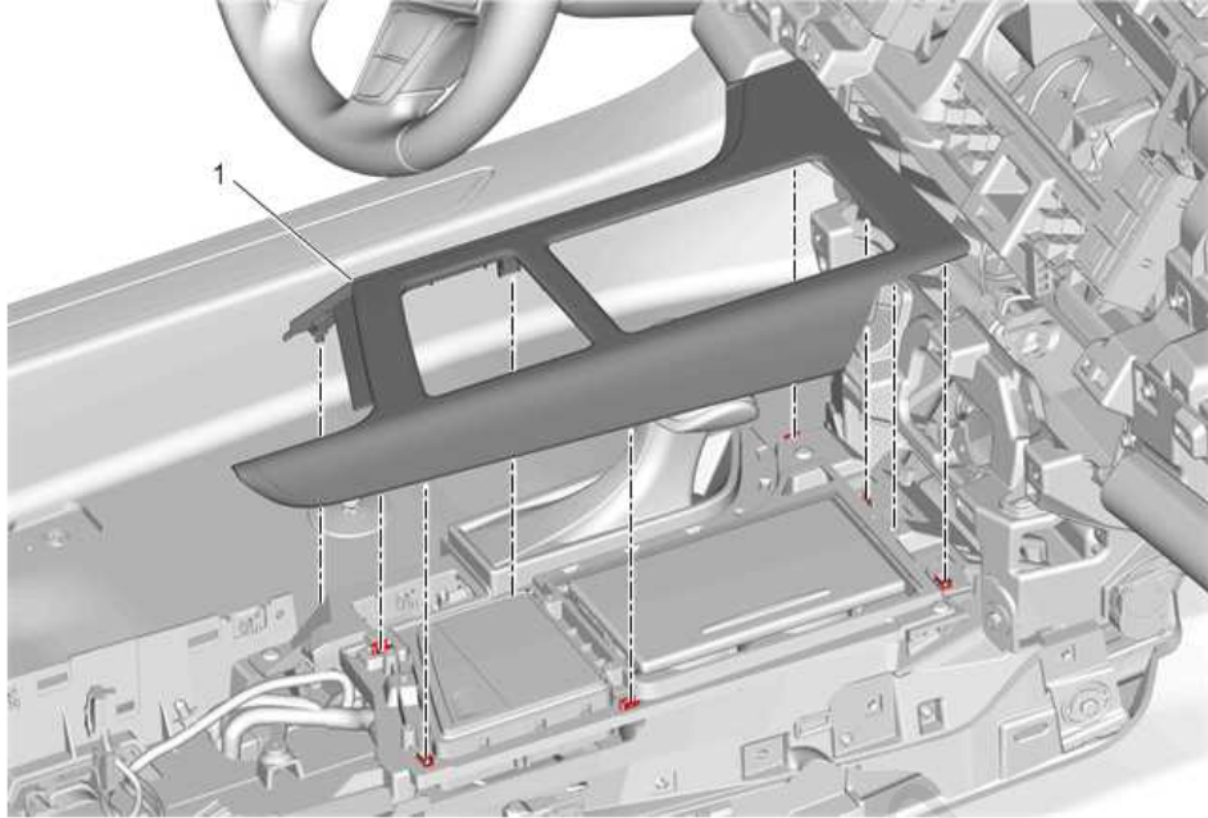


Fig. 180: Front Floor Console Trim Plate
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure <u>Front Floor Console Compartment Replacement</u> <u>Front Floor Console Accessory Switch Mount Plate Replacement</u> <u>Instrument Panel Trim Plate Replacement</u>	
1	Front Floor Console Trim Plate Procedure Use a flat bladed plastic trim tool.

FRONT FLOOR CONSOLE REAR TRIM PLATE REPLACEMENT (REAR HVAC VENT COVER)

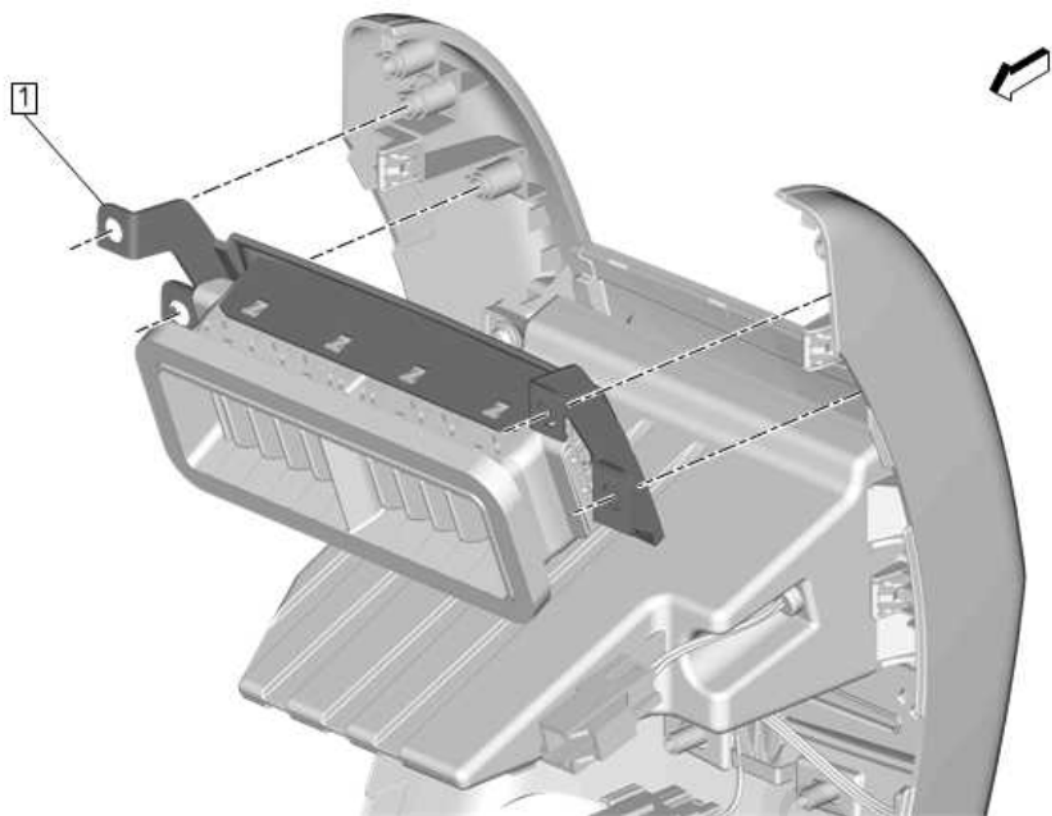


Fig. 181: Front Floor Console Rear Trim Plate (Rear HVAC Vent Cover)

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Auxiliary Heater and Air Conditioning Control Replacement 2. Radio Front Floor Console Speaker Replacement	
1	Front Floor Console Rear Trim Plate Procedure Transfer components as necessary.

FRONT FLOOR CONSOLE REAR TRIM PLATE REPLACEMENT (REAR UPPER BLANK PLATE)

Removal Procedure

- Front Floor Console Rear Trim Panel (1)» Remove - [Front Floor Console Rear Trim Panel Replacement](#)

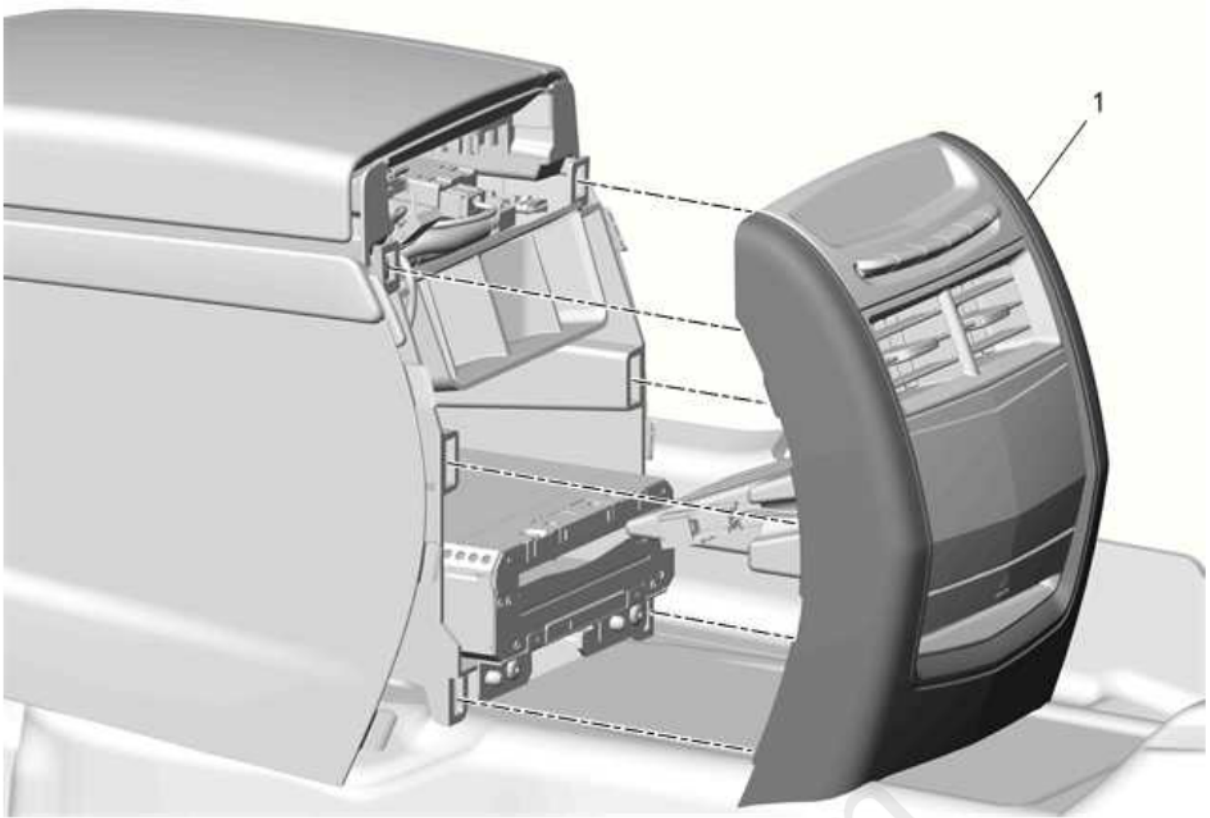


Fig. 182: Front Floor Console Rear Trim Panel
 Courtesy of GENERAL MOTORS COMPANY

2. Front Floor Console Bolt (1) » Remove [4x]

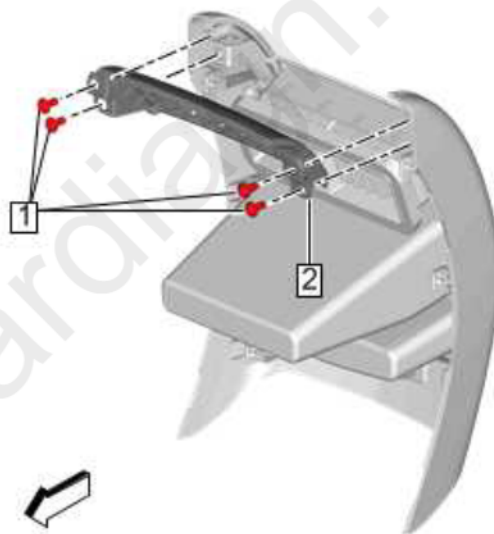


Fig. 183: Front Floor Console Bolts
 Courtesy of GENERAL MOTORS COMPANY

3. Front Floor Console Rear Trim Plate - Upper (2) » Remove

4. Front Floor Console Bolt (1) » Remove [2x]

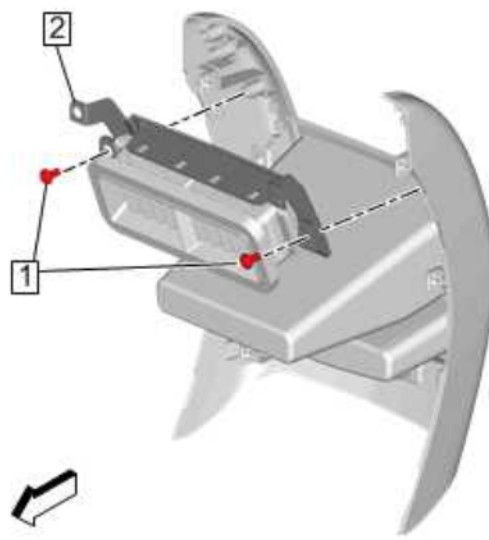


Fig. 184: Front Floor Rear Trim Plate And Console Bolts
Courtesy of GENERAL MOTORS COMPANY

5. Front Floor Console Rear Trim Plate - Lower (2)» Remove
6. Transfer components as necessary.

Installation Procedure

1. Front Floor Console Rear Trim Plate - Lower (2)» Install

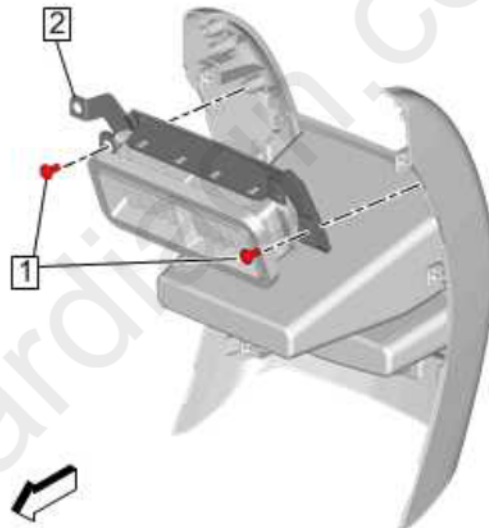


Fig. 185: Front Floor Rear Trim Plate And Console Bolts
Courtesy of GENERAL MOTORS COMPANY

2. Front Floor Console Bolt (1)» Install and tighten [2x] 2.5 N.m (22 lb in)
3. Front Floor Console Rear Trim Plate - Upper (2)» Install

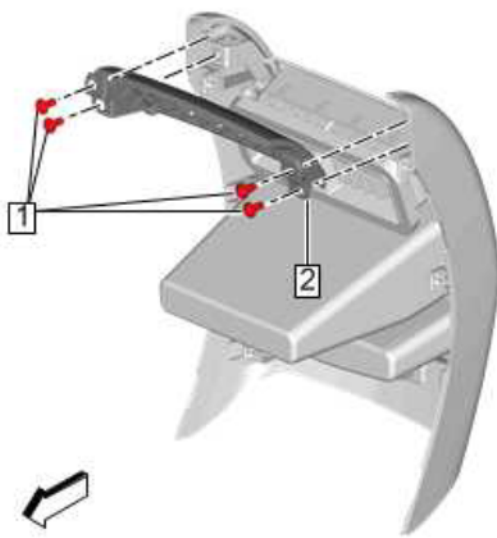


Fig. 186: Front Floor Console Bolts

Courtesy of GENERAL MOTORS COMPANY

4. Front Floor Console Bolt (1)» Install and tighten [4x] 2.5 N.m (22 lb in)
5. Front Floor Console Rear Trim Panel (1)» Install - [**Front Floor Console Rear Trim Panel Replacement**](#)

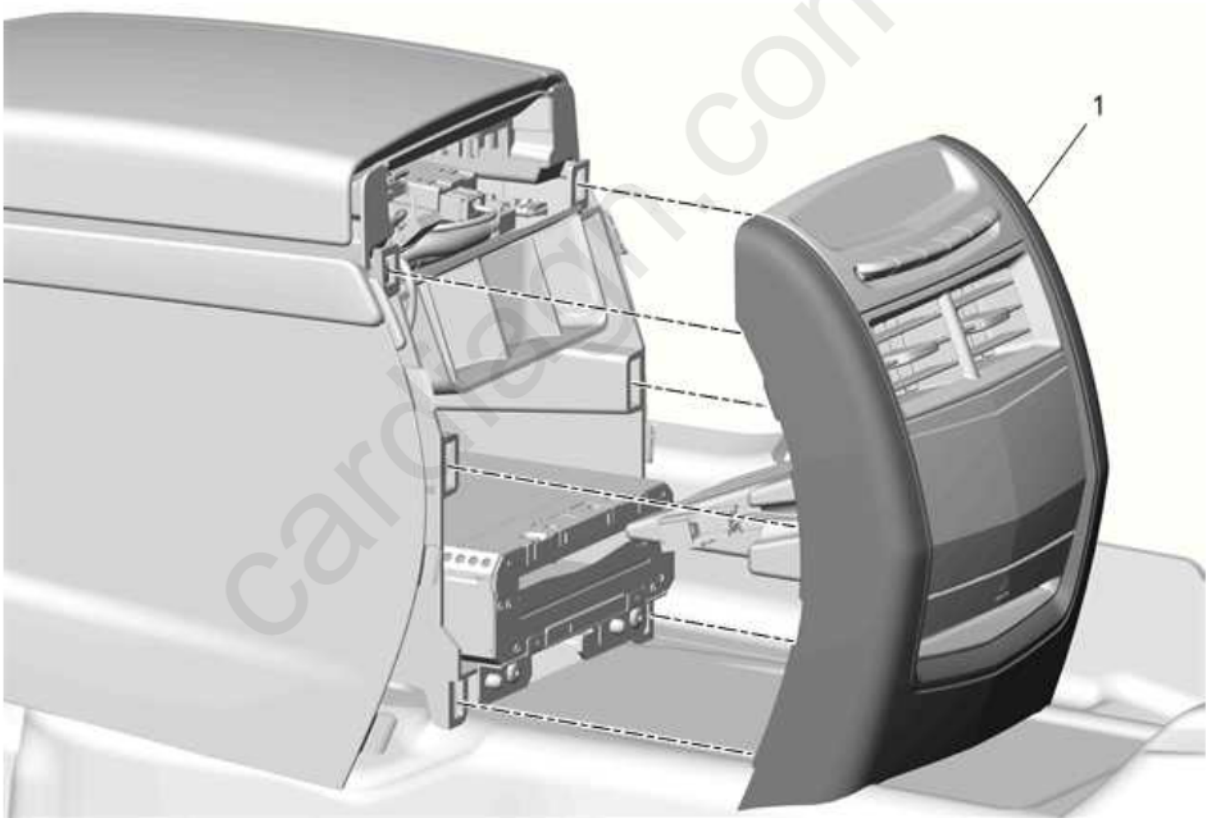


Fig. 187: Front Floor Console Rear Trim Panel

Courtesy of GENERAL MOTORS COMPANY

FRONT FLOOR CONSOLE APPLIQUE REPLACEMENT

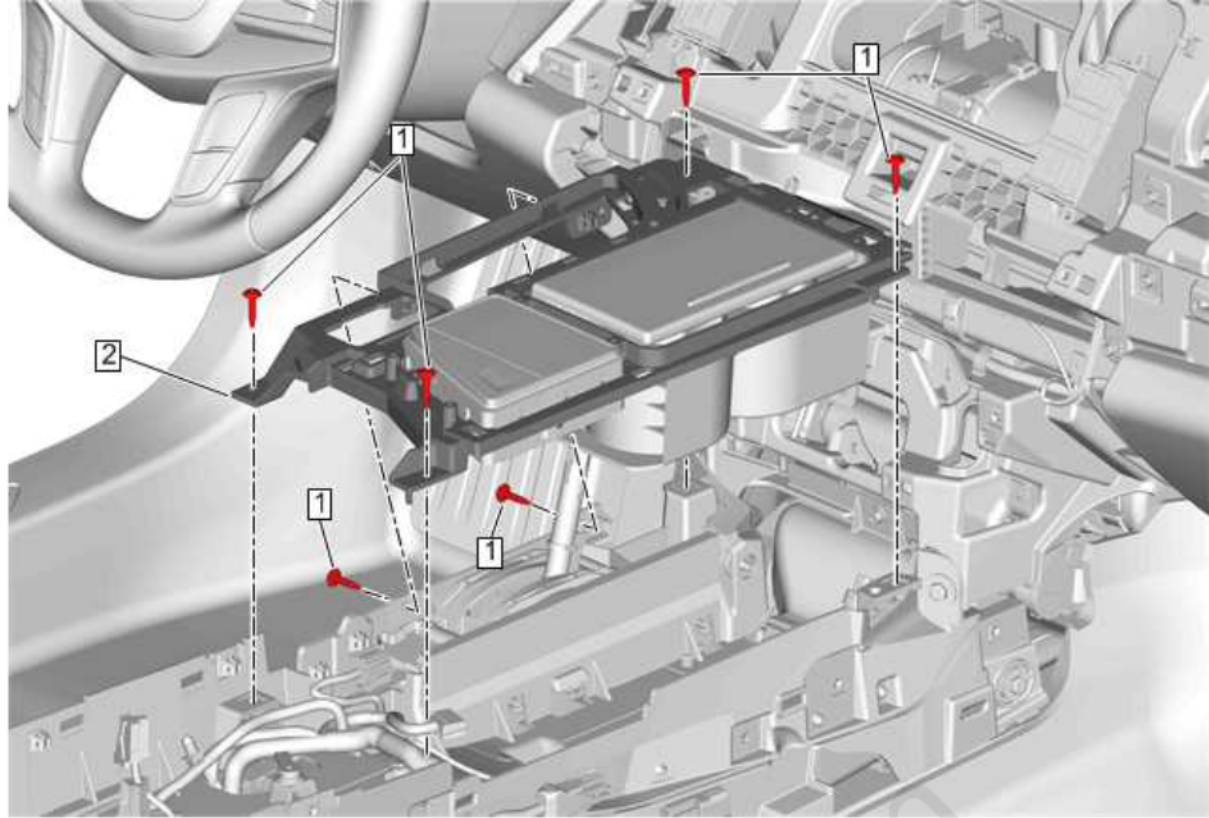


Fig. 188: Front Floor Console Applique
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Front Floor Console Trim Plate Replacement Transmission Control Lever Knob Replacement	
1	Front Floor Console Bolt [6x] CAUTION: Refer to Fastener Caution . Tighten 2.5 N.m (22 lb in)
2	Front Floor Console Applique Procedure - Disconnect the electrical connectors. - Transfer components as necessary.

FRONT FLOOR CONSOLE APPLIQUE REPLACEMENT - LEFT SIDE

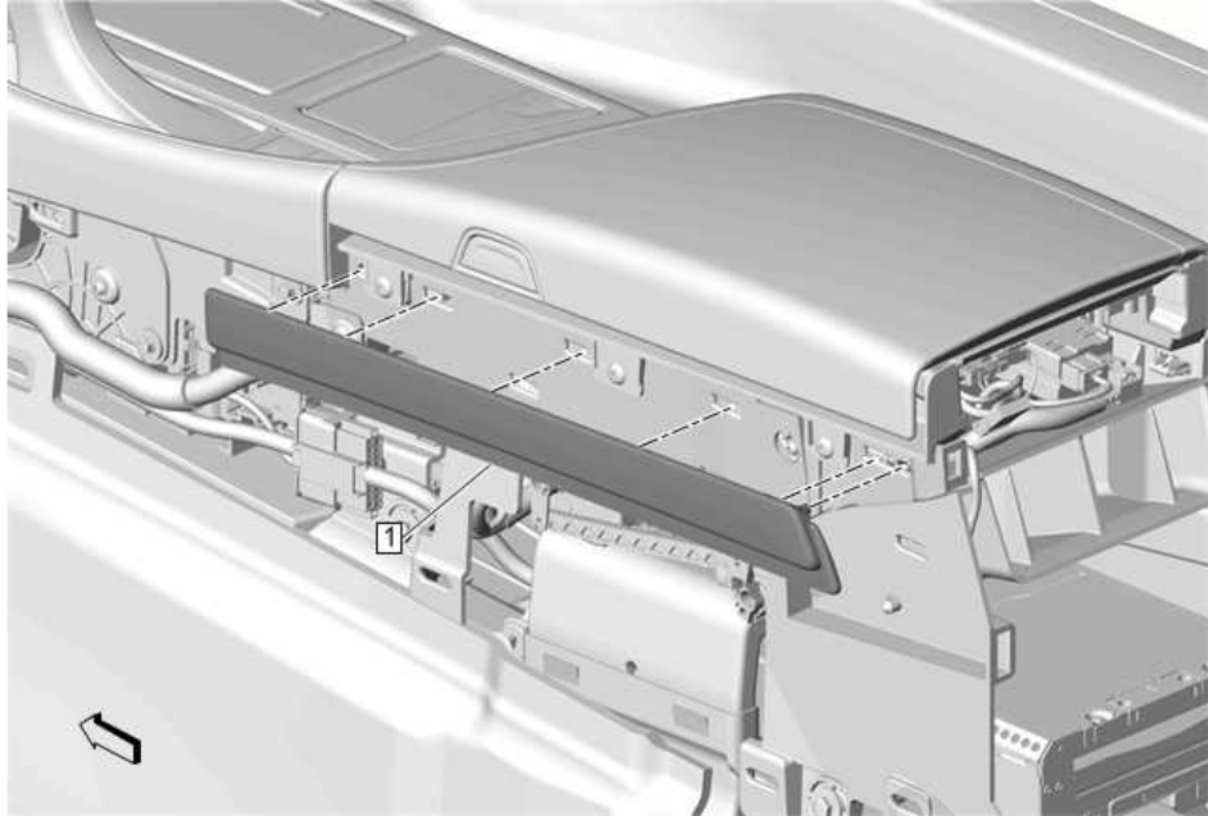


Fig. 189: Front Floor Console Applique - Left Side

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
<u>Front Floor Lower Console Replacement (Left Side)</u>	
1	Front Floor Console Applique - Left Side Procedure Use a plastic trim tool if necessary.

ROOF CONSOLE REPLACEMENT

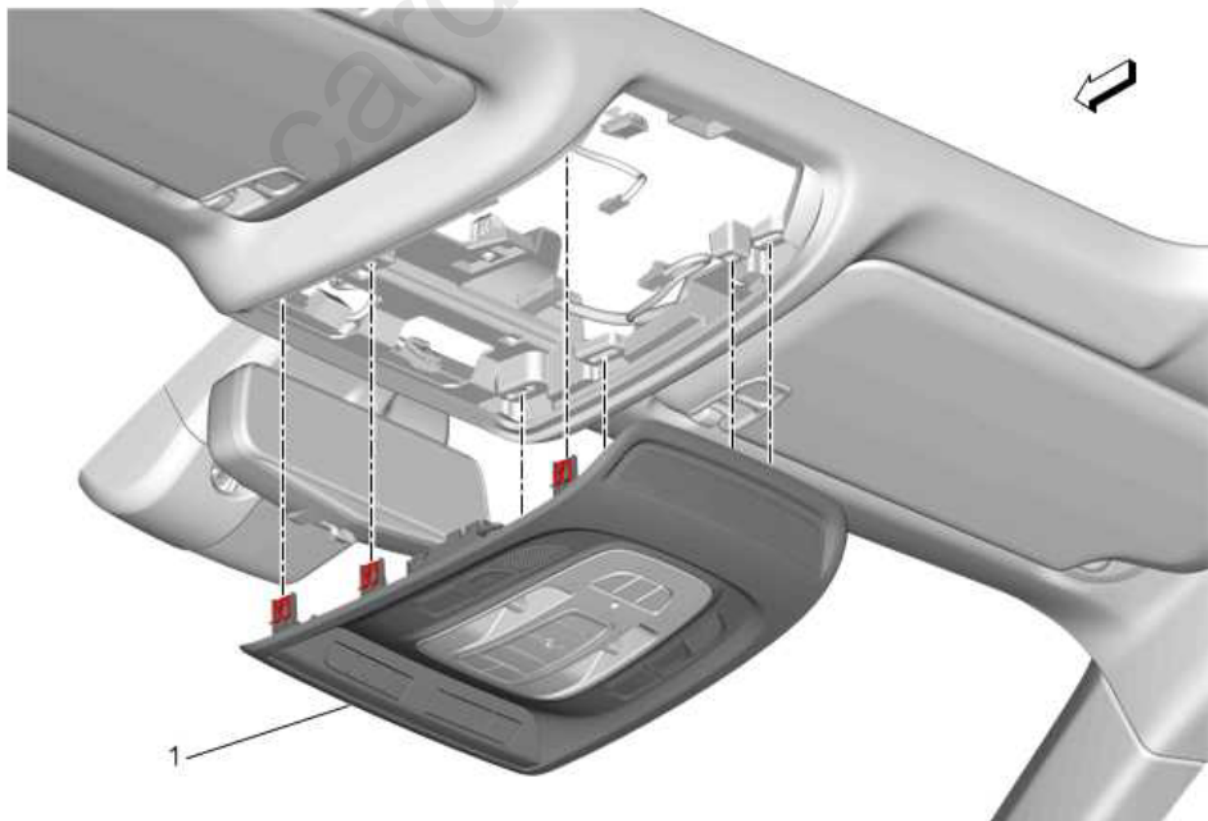


Fig. 190: Roof Console

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Roof Console Procedure 1. Grasp the roof console on both sides and pull down to disengage the clips. 2. Disconnect all electrical connectors. 3. Transfer components as necessary.

DESCRIPTION AND OPERATION

INSTRUMENT PANEL COMPARTMENT DESCRIPTION AND OPERATION

Instrument Panel Compartment Door Release System Components

- Body control module (BCM)
- Glove compartment release switch
- Instrument panel compartment door unlatch actuator
- Instrument panel compartment door unlatch actuator relay

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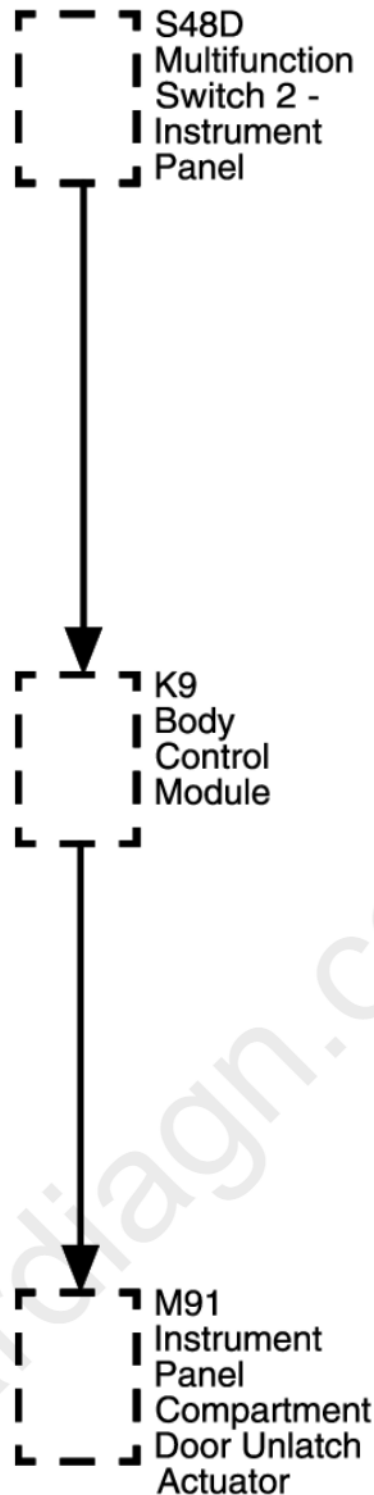


Fig. 191: Instrument Panel Compartment Door Unlatch Actuator Wiring Schematic
Courtesy of GENERAL MOTORS COMPANY

Instrument Panel Compartment Door Release Operation

When the glove compartment release switch is pressed, the instrument panel compartment release switch signal circuit is switched to ground. The BCM responds by applying battery voltage to the relay control circuit which energizes the relay. The relay is supplied with battery voltage at all times from a 10A fuse. With the relay coil energized, the relay switch contacts close allowing battery voltage to be supplied to the instrument panel compartment door unlatch actuator causing the actuator to release. The glove compartment release switch ground is part of instrument panel multifunction switch 2.
