ACCESSORIES & EQUIPMENT

Bolted Exterior Body Panels and Closures - Escalade, Suburban, Tahoe, Yukon

SPECIFICATIONS

FASTENER SPECIFICATIONS

Application	Specification	
	Metric	English
Back Body Opening Side Gutter Bolts	2.5 N.m	22 lb in
Battery Tray Nut	9 N.m	80 lb in
Front End Sheet Metal Diagonal Brace Bolts	9 N.m	80 lb in
Front End Upper Tie Bar Support Bolts	9 N.m	80 lb in
Front Fender Bolts	25 N.m	18 lb ft
Front Fender Inner Panel Bolts	25 N.m	18 lb ft
Front Fender Nuts	25 N.m	18 lb ft
Front Fender Rear Upper Brace Bolts	25 N.m	18 lb ft
Front Side Door Check Link Bolts	22 N.m	16 lb ft
Front Side Door Check Link Nuts	10 N.m	89 lb in
Front Side Door Lower Hinge Bolts	25 N.m	18 lb ft
Front Side Door Lower Hinge to Body Bolts	32 N.m	24 lb ft
Front Side Door Upper Hinge Bolts	25 N.m	18 lb ft
Front Side Door Upper Hinge to Body Bolts	32 N.m	24 lb ft
Headlamp and Front End Panel Mount Panel Brace Bolts	6 N.m	53 lb in
Headlamp and Radiator Grille Mount Panel Bolts	25 N.m	18 lb ft
Hood Hinge Bolts	25 N.m	18 lb ft
Hood Hinge Pivot Bolts	25 N.m	18 lb ft
Hood Primary and Secondary Latch Bolts	22 N.m	16 lb ft
Hood Open Assist Spring Bolts	22 N.m	16 lb ft
Hood Upper Hinge Bolts	30 N.m	22 lb ft
Liftgate Hinge Bolts	25 N.m	18 lb ft

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Application	Specification	
	Metric	English
Liftgate Strut Ball Stud	30 N.m	22 lb ft
Liftgate Strut Bracket Bolts	22 N.m	16 lb ft
Rear Side Door Check Link Bolts	22 N.m	16 lb ft
Rear Side Door Check Link Nuts	10 N.m	89 lb in
Rear Side Door Lower Hinge Bolts	25 N.m	18 lb ft
Rear Side Door Lower Hinge to Body Bolt	32 N.m	24 lb ft
Rear Side Door Upper Hinge Bolts	25 N.m	18 lb ft
Rear Side Door Upper Hinge to Body Bolts	32 N.m	24 lb ft
Surge Tank Nut	9 N.m	80 lb in

SCHEMATIC WIRING DIAGRAMS

HOOD LATCH WIRING SCHEMATICS

Hood Ajar Switch

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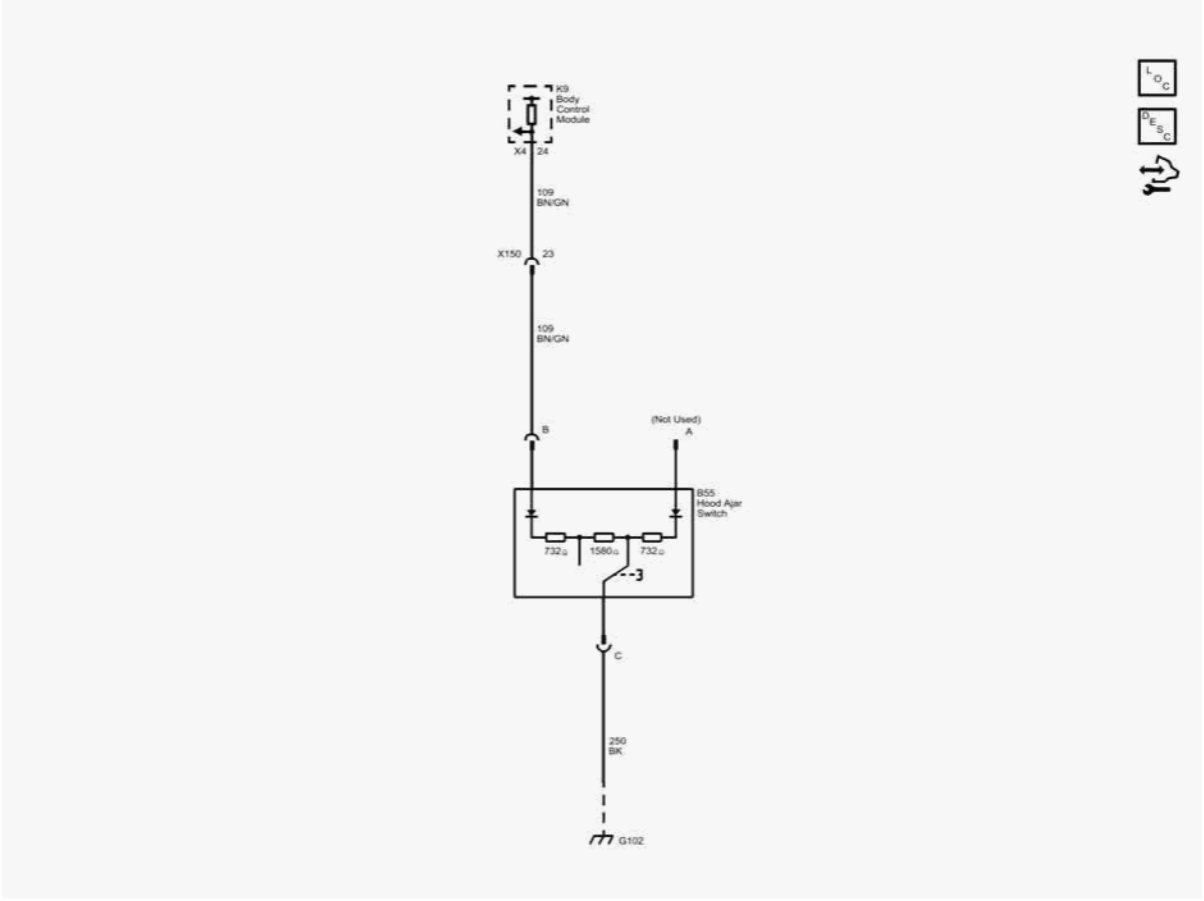


Fig. 1: Hood Ajar Switch
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DIAGNOSTIC INFORMATION AND PROCEDURES

DTC B3006: HOOD AJAR CIRCUIT PLAUSIBILITY FAILURE

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.

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DTC Descriptor

DTC B3006 5A

Hood Ajar Circuit Plausibility Failure

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Hood Ajar Switch Signal	B3006 5A	B3006 5A	B3006 5A	-
Hood Closed Switch Signal	B3006 5A	B3006 5A	B3006 5A	-
Ground	B3006 5A	B3006 5A	-	-

Circuit/System Description

The body control module (BCM) monitors the voltage input of the hood open switch signal circuit and the hood open closed switch signal circuit. With the hood open, the hood ajar portion of the switch is closed, grounding the hood ajar switch signal circuit from the BCM, and the hood closed portion of the switch is open. With the hood closed, the hood closed portion of the switch is closed, grounding the hood closed switch signal circuit from the BCM, and the hood ajar portion of the switch is open. During proper operation, the two separate voltage signals at the BCM should never be at the same voltage.

Conditions for Running the DTC

The BCM continuously monitors for this DTC

Conditions for Setting the DTC

Both the hood open switch signal circuit and the hood closed switch signal circuit are simultaneously in an active or inactive state.

Action Taken When the DTC Sets

- Remote start functions will be disabled.
- The hood ajar switch inputs will be ignored by content theft deterrent (CTD).

Conditions for Clearing the DTC

- A current DTC will clear when the conditions for setting are no longer present.
- A history DTC will clear after 40 malfunction free ignition cycles.

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Reference Information

Schematic Reference

- **Hood Latch Schematics**

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Keyless Entry System Description and Operation (Without ATH) **Keyless Entry System Description and Operation (With ATH)**

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

Ignition ON, observe the scan tool BCM Hood Open Switch and Hood Closed Switch parameters. With the hood open, the Hood Open Switch parameter should read Active and the Hood Closed Switch parameter should read Inactive. With the hood closed, the Hood Open Switch parameter should read Inactive and the Hood Closed Switch parameter should read Active.

Circuit/System Testing

1. Ignition OFF, disconnect the harness connector at the hood ajar switch.
2. Ignition OFF, test for less than 5 ohms between the ground circuit terminal C and ground.
    - If greater than the specified range, test the ground circuit for an open/high resistance.
3. Ignition ON, test for 11.5-12.0 volts between the signal circuit terminal A and ground.

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- If greater than the specified range, test the signal circuit for a short to voltage. If the circuit tests normal, replace the BCM.
- If less than the specified range, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.

4. Ignition ON, test for 11.5-12.0 volts between the signal circuit terminal B and ground.
    - If greater than the specified range, test the signal circuit for a short to voltage. If the circuit tests normal, replace the BCM.
    - If less than the specified range, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
5. If all circuits test normal, test or replace the hood ajar switch.

Component Testing

Hood Ajar Switch

1. Ignition OFF, disconnect the harness connector at the hood ajar switch.
2. With the switch in the hood closed position, test for infinite resistance between the ground terminal C and the signal terminal A.
    - If not infinite, replace the hood ajar switch.
3. Test for less than 2.0 ohms between the ground terminal C and the signal terminal B.
    - If greater than the specified range, replace the hood ajar switch.
4. With the switch in the hood open position, test for infinite resistance between the ground terminal C and the signal terminal B.
    - If not infinite, replace the hood ajar switch.
5. Test for less than 2.0 ohms between the ground terminal C and the signal terminal A.
    - If greater than the specified range, replace the hood ajar switch.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the diagnostic procedure.

- **Hood Primary and Secondary Latch Replacement**
- **Control Module References** for BCM replacement, programming and setup

DTC P254F: ENGINE HOOD SWITCH CIRCUIT

Diagnostic Instructions

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

DTC Descriptor

DTC P254F

Engine Hood Switch Circuit

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Hood Ajar Switch Signal	P254F	P254F	P254F	-
Hood Closed Switch Signal	P254F	P254F	P254F	-
Ground	-	P254F	-	-

Circuit/System Description

The body control module (BCM) monitors the voltage input of the hood open switch signal circuit and the hood open closed switch signal circuit. With the hood open, the hood ajar portion of the switch is closed, grounding the hood ajar switch signal circuit from the BCM, and the hood closed portion of the switch is open. With the hood closed, the hood closed portion of the switch is closed, grounding the hood closed switch signal circuit from the BCM, and the hood ajar portion of the switch is open. During proper operation, the two separate voltage signals at the BCM should never be at the same voltage.

Conditions for Running the DTC

The BCM continuously monitors for this DTC

Conditions for Setting the DTC

Both the hood open switch signal circuit and the hood closed switch signal circuit are simultaneously in an active or inactive state.

Action Taken When the DTC Sets

Engine starting will be disabled.

Conditions for Clearing the DTC

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- A current DTC will clear when the conditions for setting are no longer present.
- A history DTC will clear after 40 malfunction free ignition cycles.

Reference Information

Schematic Reference

Immobilizer Schematics

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

Description and Operation

Keyless Entry System Description and Operation (Without ATH) **Keyless Entry System Description and Operation (With ATH)**

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

Ignition ON, observe the scan tool BCM Hood Position parameter. With the hood open, the Hood Position parameter should read Open. With the hood closed, the Hood Position parameter should read Closed.

Circuit/System Testing

1. Ignition OFF, disconnect the harness connector at the hood ajar switch.
2. Ignition OFF, test for less than 10 ohms between the ground circuit terminal C and ground.
    - If greater than the specified range, test the ground circuit for an open/high resistance.

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3. Ignition ON, test for 10.0-12.5 volts between the signal circuit terminal A and ground.
    - If greater than the specified range, test the signal circuit for a short to voltage. If the circuit tests normal, replace the BCM.
    - If less than the specified range, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
4. Ignition ON, test for 10.0-12.5 volts between the signal circuit terminal B and ground.
    - If greater than the specified range, test the signal circuit for a short to voltage. If the circuit tests normal, replace the BCM.
    - If less than the specified range, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
5. If all circuits test normal, test or replace the hood ajar switch.

Component Testing

Hood Ajar Switch

1. Ignition OFF, disconnect the harness connector at the hood ajar switch.
2. With the switch in the hood closed position, test for infinite resistance between the ground terminal C and the signal terminal A.
    - If not infinite, replace the hood ajar switch.
3. Test for less than 2.0 ohms between the ground terminal C and the signal terminal B.
    - If greater than the specified range, replace the hood ajar switch.
4. With the switch in the hood open position, test for infinite resistance between the ground terminal C and the signal terminal B.
    - If not infinite, replace the hood ajar switch.
5. Test for less than 2.0 ohms between the ground terminal C and the signal terminal A.
    - If greater than the specified range, replace the hood ajar switch.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the diagnostic procedure.

- **Hood Primary and Secondary Latch Replacement**
- **Control Module References** for BCM replacement, programming and setup

SYMPTOMS - BOLTED EXTERIOR BODY PANELS AND CLOSURES

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IMPORTANT: 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 links.
2. Review the system operation in order to familiarize yourself with the system functions. Refer to **Hood Ajar Indicator Description and Operation**.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the systems. 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 **Hood Ajar Indicator/Message Malfunction** in order to diagnose the symptom.

HOOD AJAR INDICATOR/MESSAGE 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
Hood Ajar Switch Signal	1	1	1	-
Hood Closed Switch Signal	1	1	1	-
Ground	-	1	-	-

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Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
1. Hood ajar switch malfunction				

Circuit/System Description

The body control module (BCM) monitors the voltage input of the hood open switch signal circuit and the hood open closed switch signal circuit. With the hood open, the hood ajar portion of the switch is closed, grounding the hood ajar switch signal circuit from the BCM, and the hood closed portion of the switch is open. With the hood closed, the hood closed portion of the switch is closed, grounding the hood closed switch signal circuit from the BCM, and the hood ajar portion of the switch is open. During proper operation, the two separate voltage signals at the BCM should never be at the same voltage.

Reference Information

Schematic Reference

- **Immobilizer Schematics**
- **Remote Function Schematics**

Connector End View Reference

COMPONENT CONNECTOR END VIEWS - INDEX

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- **Testing for Intermittent Conditions and Poor Connections**
- **Wiring Repairs**

Scan Tool Reference

Control Module References for scan tool information

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Circuit/System Verification

Ignition ON, observe the scan tool BCM Hood Open Switch and Hood Closed Switch parameters. With the hood open, the Hood Open Switch parameter should read Active and the Hood Closed Switch parameter should read Inactive. With the hood closed, the Hood Open Switch parameter should read Inactive and the Hood Closed Switch parameter should read Active.

Circuit/System Testing

1. Ignition OFF, disconnect the harness connector at the hood ajar switch.
2. Ignition OFF, test for less than 5 ohms between the ground circuit terminal C and ground.
    - If greater than the specified range, test the ground circuit for an open/high resistance.
3. Ignition ON, test for 11.5-12.0 volts between the signal circuit terminal A and ground.
    - If greater than the specified range, test the signal circuit for a short to voltage. If the circuit tests normal, replace the BCM.
    - If less than the specified range, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
4. Ignition ON, test for 11.5-12.0 volts between the signal circuit terminal B and ground.
    - If greater than the specified range, test the signal circuit for a short to voltage. If the circuit tests normal, replace the BCM.
    - If less than the specified range, test the signal circuit for a short to ground or an open/high resistance. If the circuit tests normal, replace the BCM.
5. If all circuits test normal, test or replace the hood ajar switch.

Component Testing

Hood Ajar Switch

1. Ignition OFF, disconnect the harness connector at the hood ajar switch.
2. With the switch in the hood closed position, test for infinite resistance between the ground terminal C and the signal terminal A.
    - If not infinite, replace the hood ajar switch.
3. Test for less than 2 ohms between the ground terminal C and the signal terminal B.
    - If greater than the specified range, replace the hood ajar switch.
4. With the switch in the hood open position, test for infinite resistance between the ground terminal C and the signal terminal B.
    - If not infinite, replace the hood ajar switch.
5. Test for less than 2 ohms between the ground terminal C and the signal terminal A.

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- If greater than the specified range, replace the hood ajar switch.

Repair Instructions

Perform the **Diagnostic Repair Verification** after completing the diagnostic procedure.

- **Hood Primary and Secondary Latch Replacement**
- **Control Module References** for BCM or instrument cluster replacement, programming and setup

REPAIR INSTRUCTIONS

FRONT END UPPER TIE BAR SUPPORT REPLACEMENT

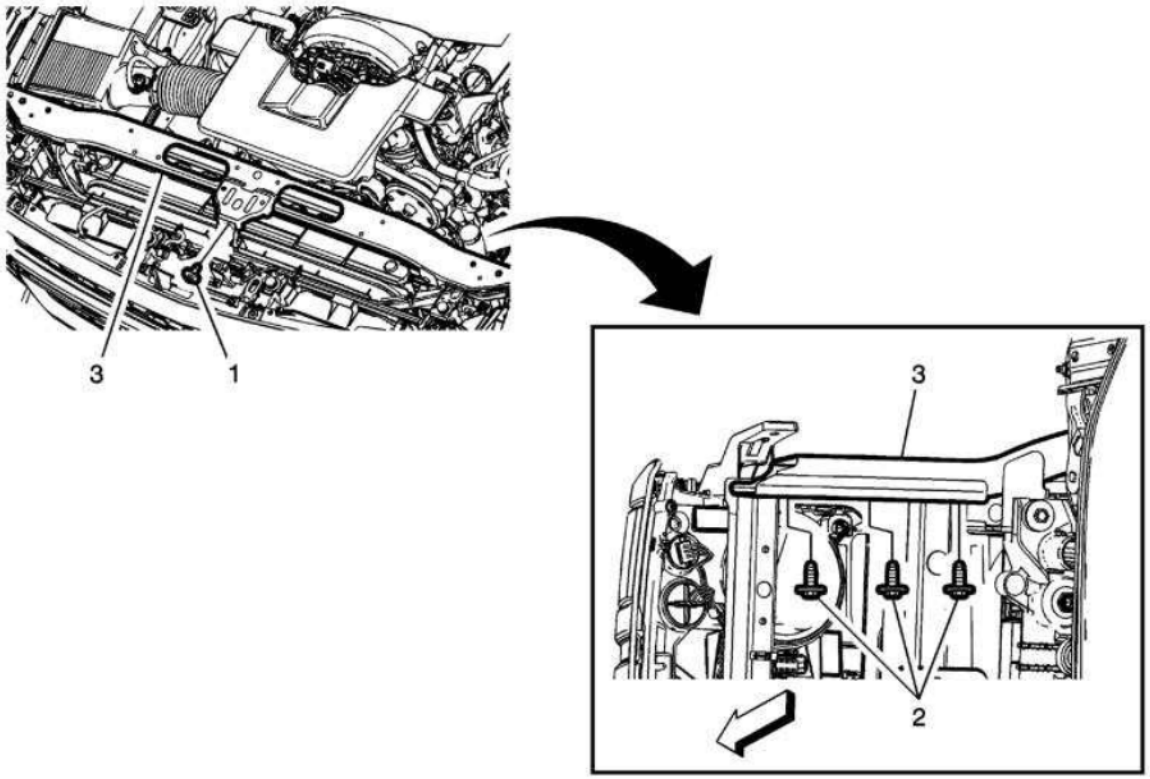


Fig. 2: Front End Upper Tie Bar Support
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Callout	Component Name
Preliminary Procedure 1. Remove the front compartment front sight shield. Refer to **Front Compartment Front Sight Shield Replacement (GMC)Front Compartment Front Sight Shield Replacement (Chevrolet)Front Compartment Front Sight Shield Replacement (Cadillac)** 2. Remove the air cleaner assembly. Refer to **Air Cleaner Assembly Replacement** 3. Remove front end sheet metal diagonal brace. Refer to **Front End Sheet Metal Diagonal Brace Replacement** 4. Remove the windshield washer solvent container. Refer to **Windshield Washer Solvent Container Replacement (Chevrolet/GMC) Windshield Washer Solvent Container Replacement (Cadillac)** 5. Remove on Chevrolet, and GMC the headlamps. Refer to **Headlamp Replacement (GMC)** **Headlamp Replacement (Chevrolet) Headlamp Replacement (Cadillac)** 6. Remove the radiator upper bolts. Tighten 25 N.m (18 lb ft) 7. Disconnect the electrical harness from the front end upper tie upper bar support. 8. Remove the right side radiator baffle retainers at the upper tie bar.	
1	Headlamp and Radiator Grille Mount Panel Bolt **CAUTION:** **Refer to Fastener Caution .** **Tighten** 25 N.m (18 lb ft)
2	Front End Upper Tie Bar Support Bolt (Qty: 6) **Tighten** 9 N.m (80 lb in)
3	Front End Upper Tie Bar Support

FRONT END SHEET METAL DIAGONAL BRACE REPLACEMENT

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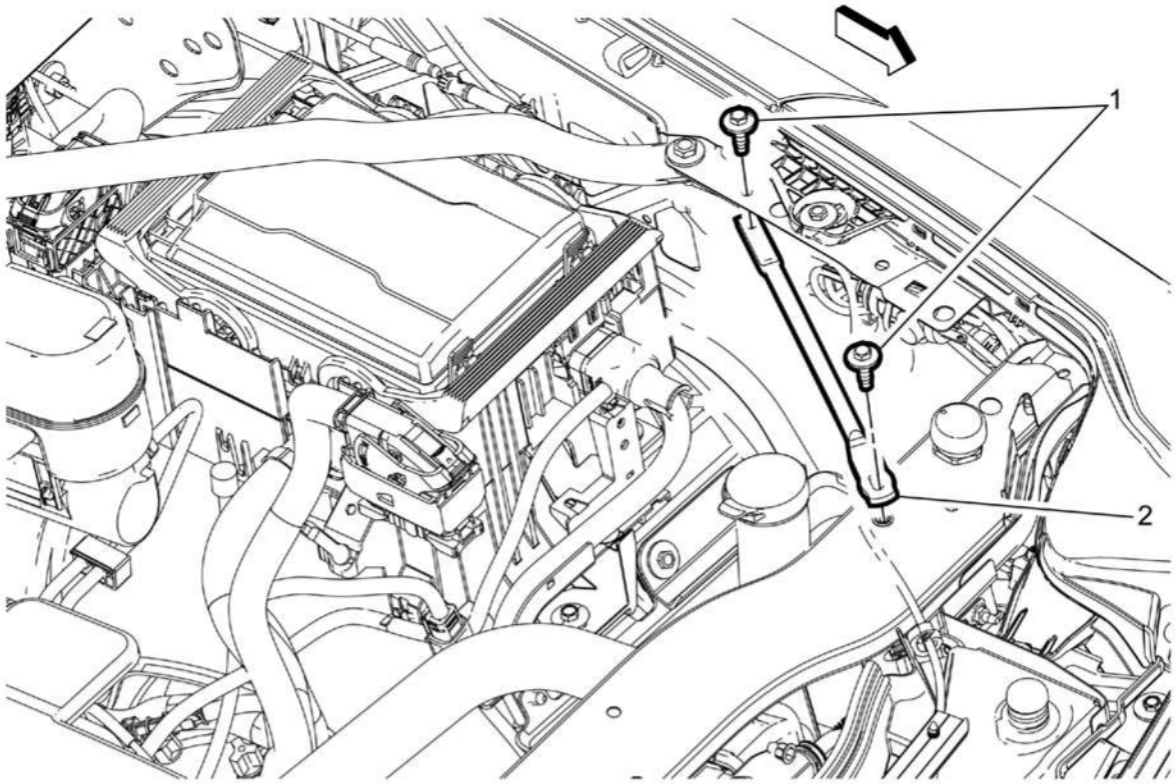


Fig. 3: Front End Sheet Metal Diagonal Brace
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the front compartment front sight shield. Refer to **Front Compartment Front Sight Shield Replacement (GMC)Front Compartment Front Sight Shield Replacement (Chevrolet)Front Compartment Front Sight Shield Replacement (Cadillac)**	
1	Front End Sheet Metal Diagonal Brace Bolt (Qty: 2) **CAUTION:** **Refer to Fastener Caution .**

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Callout	Component Name
	Tighten 9 N.m (80 lb in)
2	Front End Sheet Metal Diagonal Brace

FRONT FENDER UPPER BRACKET REPLACEMENT (U73)

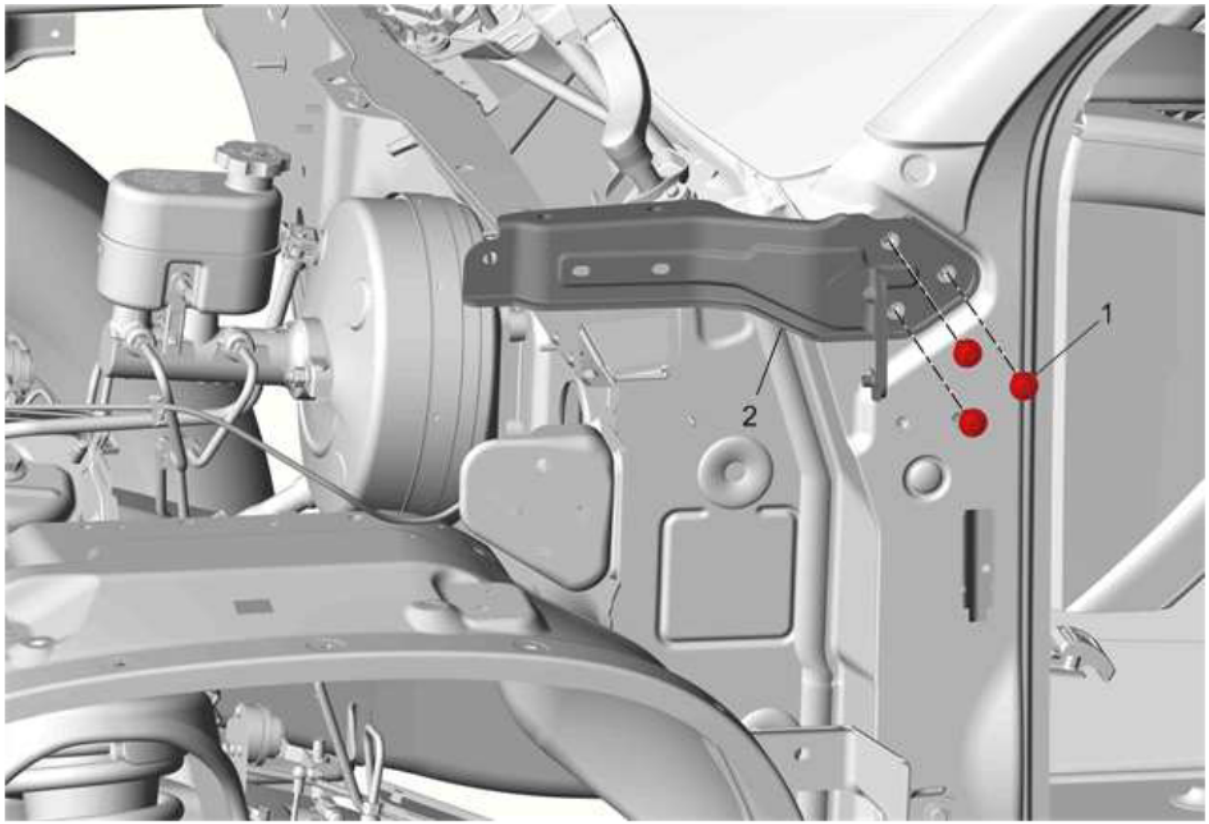


Fig. 4: Front Fender Upper Bracket
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	

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Callout	Component Name
1. Remove the front fender. Refer to **Front Fender Replacement - Left Side (GMC)Front Fender Replacement - Left Side (Chevrolet)Front Fender Replacement - Left Side (Cadillac)**, or **Front Fender Replacement - Right Side (GMC)Front Fender Replacement - Right Side (Chevrolet)Front Fender Replacement - Right Side (Cadillac)**. 2. Remove the Air Inlet Grille Panel Extension Refer to **Air Inlet Grille Panel Extension Replacement**	
1	Front Fender Upper Bracket Bolt (Qty: 3) **CAUTION:** **Refer to Fastener Caution .** **NOTE:** **The bolts are also used to adjust the hood and fender by accessing them through the open side door. For Right hand side bolts they have a special conductive coating and are not to be painted..** **Tighten**

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Callout	Component Name
	25 N.m (18 lb ft)
2	Front Fender Upper Bracket **NOTE:** **The Right Hand Upper Fender Bracket is a ground for the antenna and has a special conductive coating. This bracket should not be painted and also uses special bolts that have a similar conductive coating.**

FRONT FENDER UPPER BRACKET REPLACEMENT (U77, US3)

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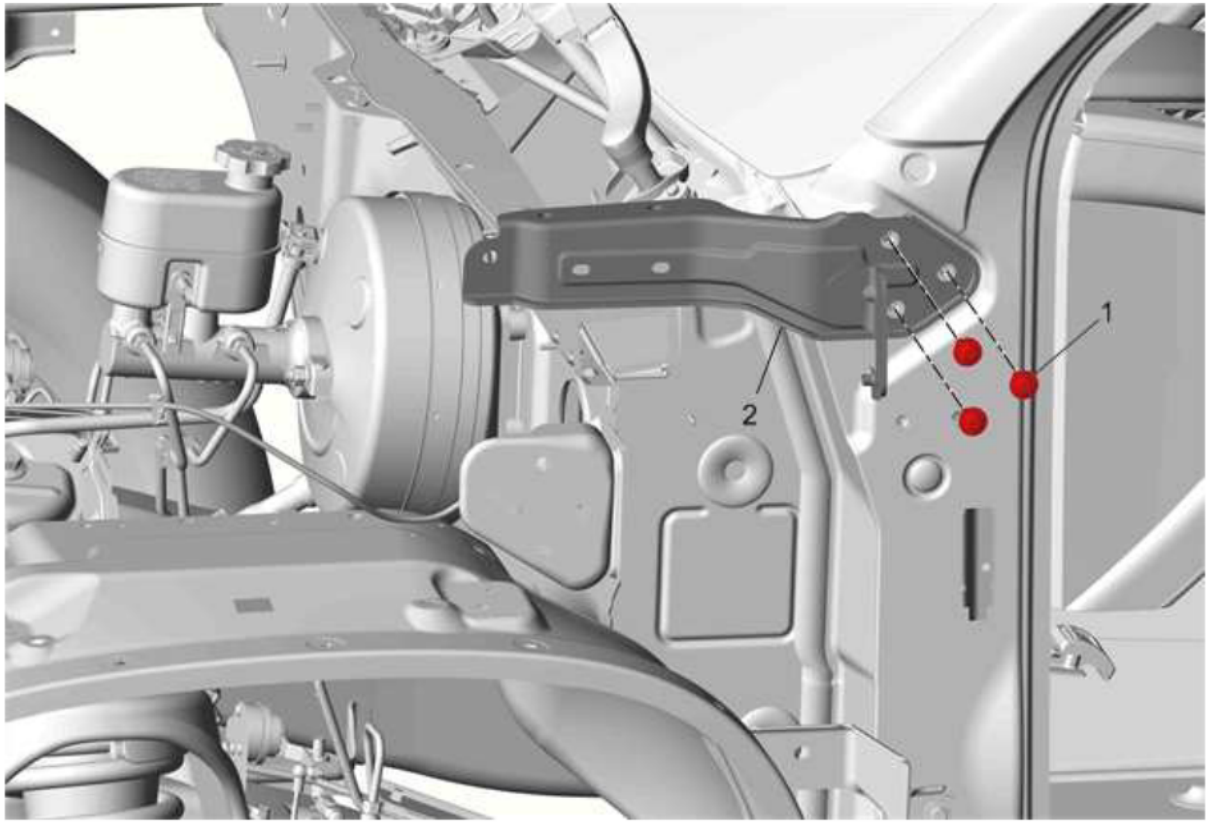


Fig. 5: Front Fender Upper Bracket
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Remove the front fender. Refer to **Front Fender Replacement - Left Side (GMC)Front Fender Replacement - Left Side (Chevrolet)Front Fender Replacement - Left Side (Cadillac)**, or **Front Fender Replacement - Right Side (GMC)Front Fender Replacement - Right Side (Chevrolet)Front Fender Replacement - Right Side (Cadillac)**. 2. Remove the Air Inlet Grille Panel Extension Refer to **Air Inlet Grille Panel Extension Replacement**	
1	Front Fender Upper Bracket Bolt (Qty: 3) **CAUTION:**

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Callout	Component Name
	Refer to Fastener Caution . **NOTE:** The bolts are also used to adjust the hood and fender by accessing them through the open side door and loosened. **Tighten** 25 N.m (18 lb ft)
2	Front Fender Upper Bracket

FRONT FENDER REAR UPPER BRACE REPLACEMENT

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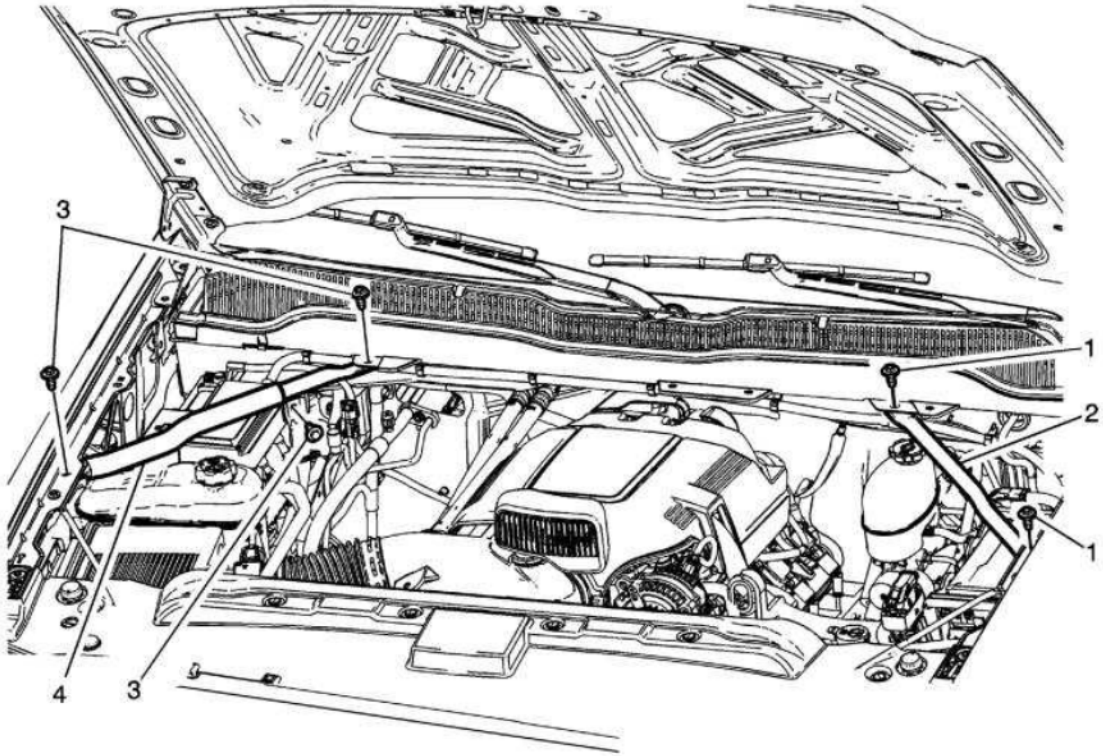


Fig. 6: Front Fender Rear Upper Brace
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Front Fender Rear Upper Brace Bolt (Qty: 2) **CAUTION:** **Refer to** **Fastener Caution** . **Tighten** 25 N.m (18 lb ft)

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Callout	Component Name
2	Front Fender Rear Upper Brace Left Hand **NOTE:** **Each brace is removed independently from each other.**
3	Front Fender Rear Upper Brace Bolt (Qty: 3) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 25 N.m (18 lb ft)
4	Front Fender Rear Upper Brace Right Hand **NOTE:** **Each brace is removed independently from each other.**

HOOD PRIMARY LATCH RELEASE CABLE REPLACEMENT

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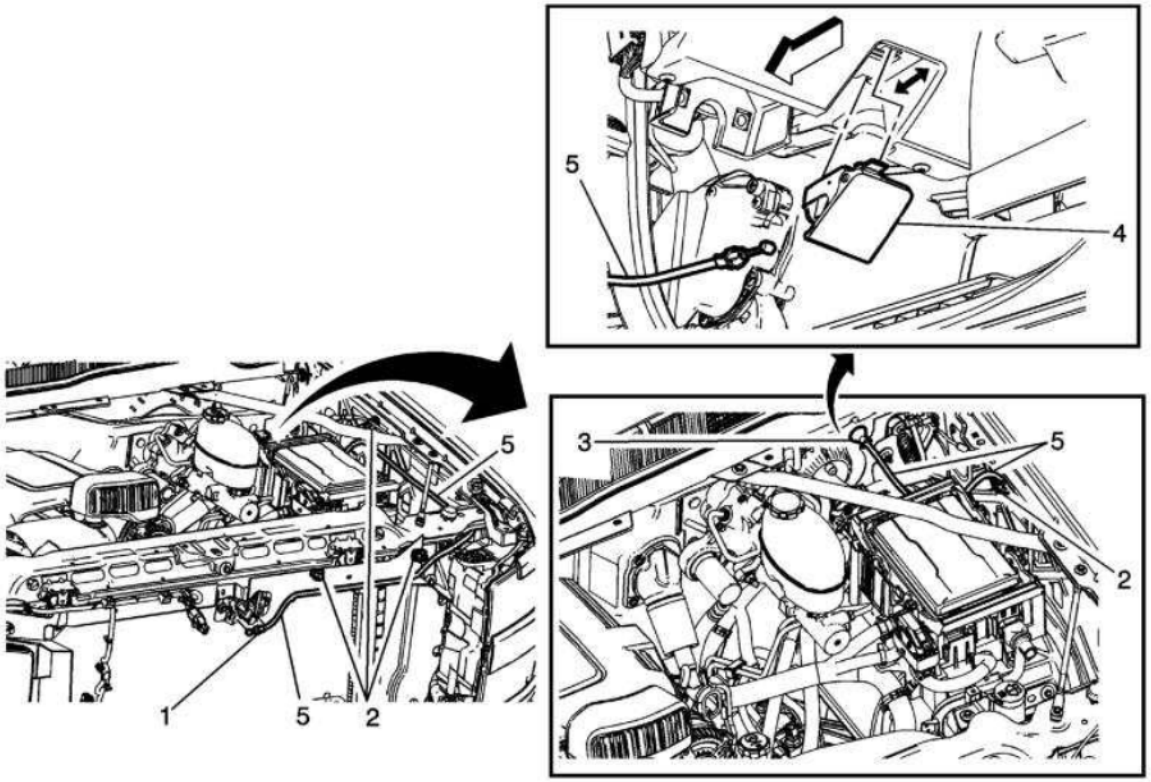


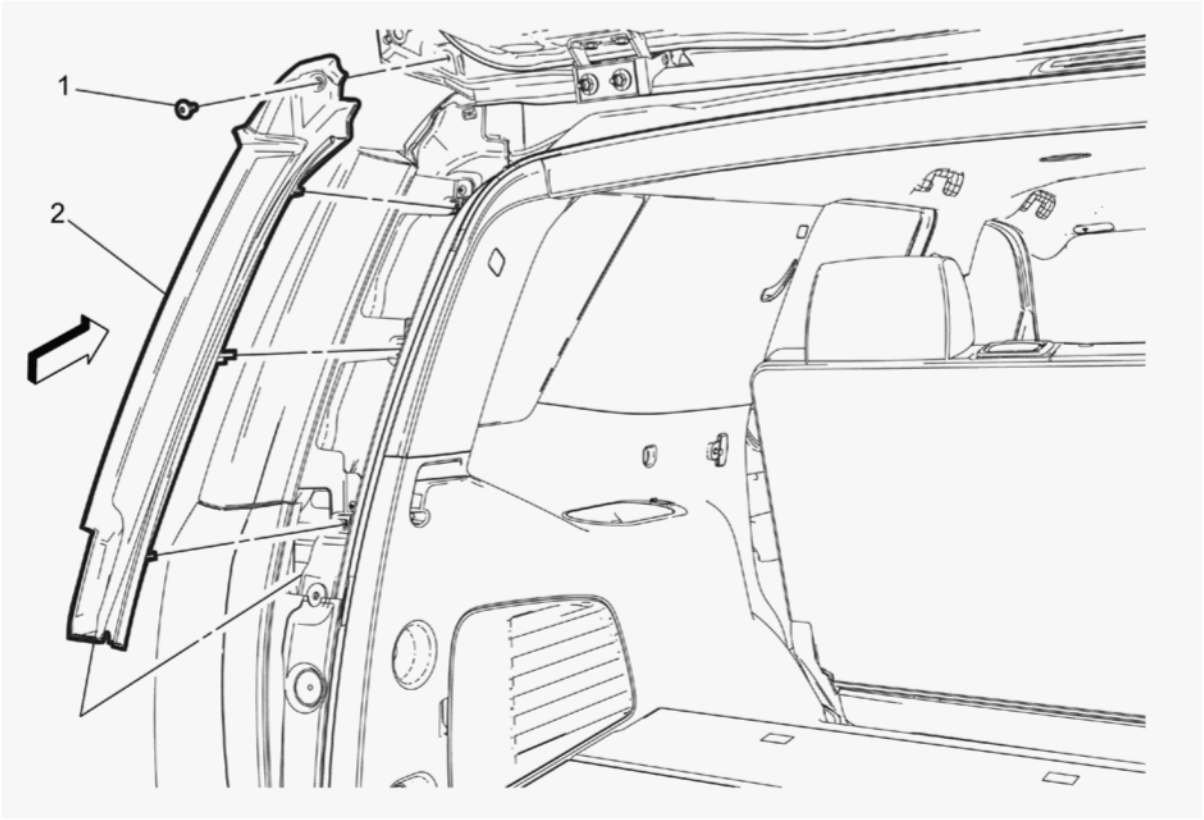
Fig. 7: Hood Primary Latch Release Cable
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the front compartment front sight shield. Refer to **Front Compartment Front Sight Shield Replacement (GMC)Front Compartment Front Sight Shield Replacement (Chevrolet)Front Compartment Front Sight Shield Replacement (Cadillac)**.	
1	Hood Primary Latch Cable **Procedure** Disconnect the hood primary latch release cable from the primary hood latch.
2	Hood Primary Latch Release Cable Retainer (Qty: 2) **Procedure** Disconnect the hood release cable retainers from the hood release cable.
3	Hood Primary Latch Release Cable Grommet

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Callout	Component Name
4	Hood Primary Latch Release Cable Handle **Procedure** Disconnect the hood primary latch release cable handle from the hood latch cable.
5	Hood Primary Latch Release Cable **Procedure** 1. Attach mechanics wire to the cable and pull the cable out. 2. Attach mechanics wire to the new cable and guide in.

BACK BODY OPENING SIDE GUTTER REPLACEMENT - UPPER (CHEVROLET, GMC)



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Fig. 8: Back Body Opening Side Gutter - Upper (Chevrolet, GMC)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: **When a lift gate hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury.** **Preliminary Procedures** 1. Reposition the liftgate power assist actuator if equipped. Refer to Liftgate Power Assist Actuator Replacement (Chevrolet, GMC) Liftgate Power Assist Actuator Replacement (Cadillac) . 2. Reposition the liftgate strut. Refer to Liftgate Strut Replacement (Manual)Liftgate Strut Replacement (Power Assist)	
1	Back Body Opening Side Gutter Bolt **CAUTION:** **Refer to Fastener Caution .** **Tighten**

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Callout	Component Name
	2.5 N.m (22 lb in)
2	Back Body Opening Side Gutter **Procedure** Using a trim type tool release the 3 integral retainers.

BACK BODY OPENING SIDE GUTTER REPLACEMENT - UPPER (CADILLAC)

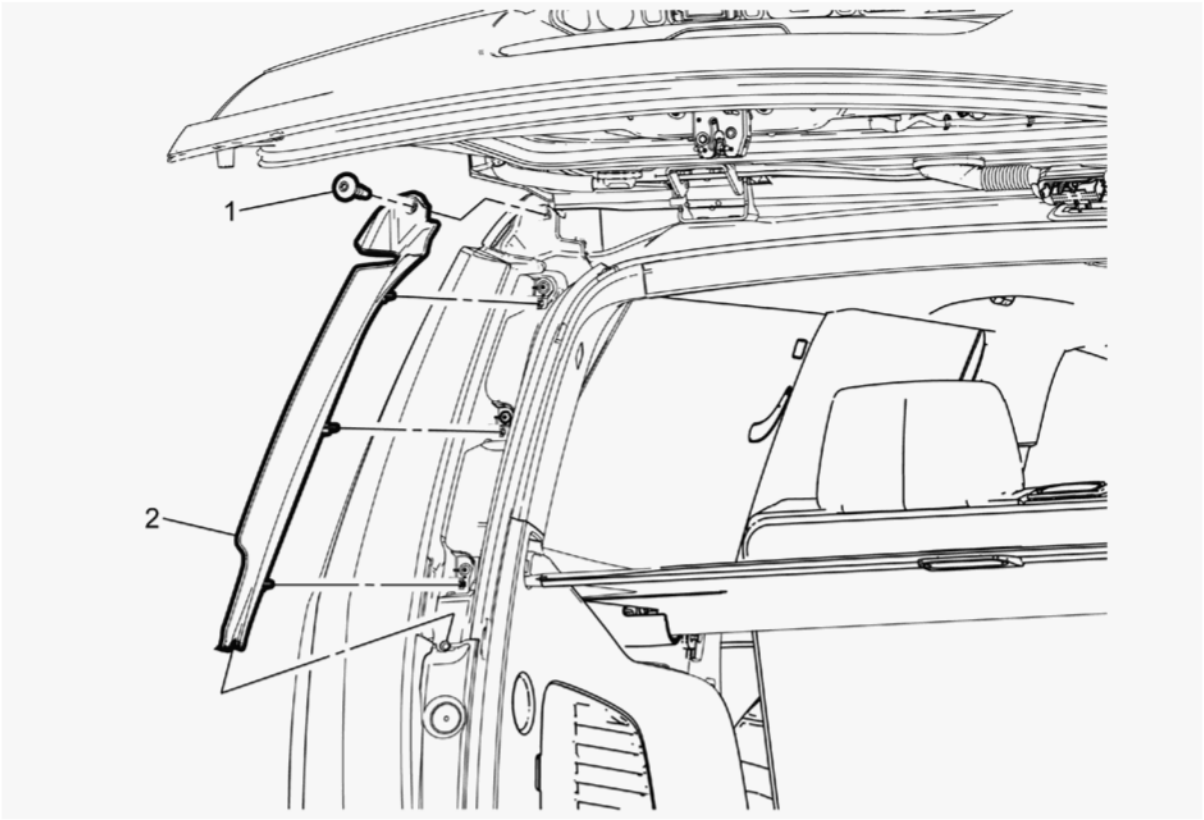


Fig. 9: Back Body Opening Side Gutter - Upper (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING:	

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Callout	Component Name
When a lift gate hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury. **Preliminary Procedures** 1. Reposition the liftgate power assist actuator if equipped. Refer to **Liftgate Power Assist Actuator Replacement (Chevrolet, GMC)** **Liftgate Power Assist Actuator Replacement (Cadillac)** . 2. Reposition the liftgate strut if equiped. Refer to **Liftgate Strut Replacement (Manual)****Liftgate Strut Replacement (Power Assist)**	
1	Back Body Opening Side Gutter Bolt **CAUTION:** **Refer to** **Fastener Caution** . **Tighten** 2.5 N.m (22 lb in)
2	Back Body Opening Side Gutter **Procedure**

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Callout	Component Name
	Using a trim type tool release the 3 integral retainers.

BACK BODY OPENING SIDE GUTTER REPLACEMENT - LOWER (CHEVROLET, GMC)

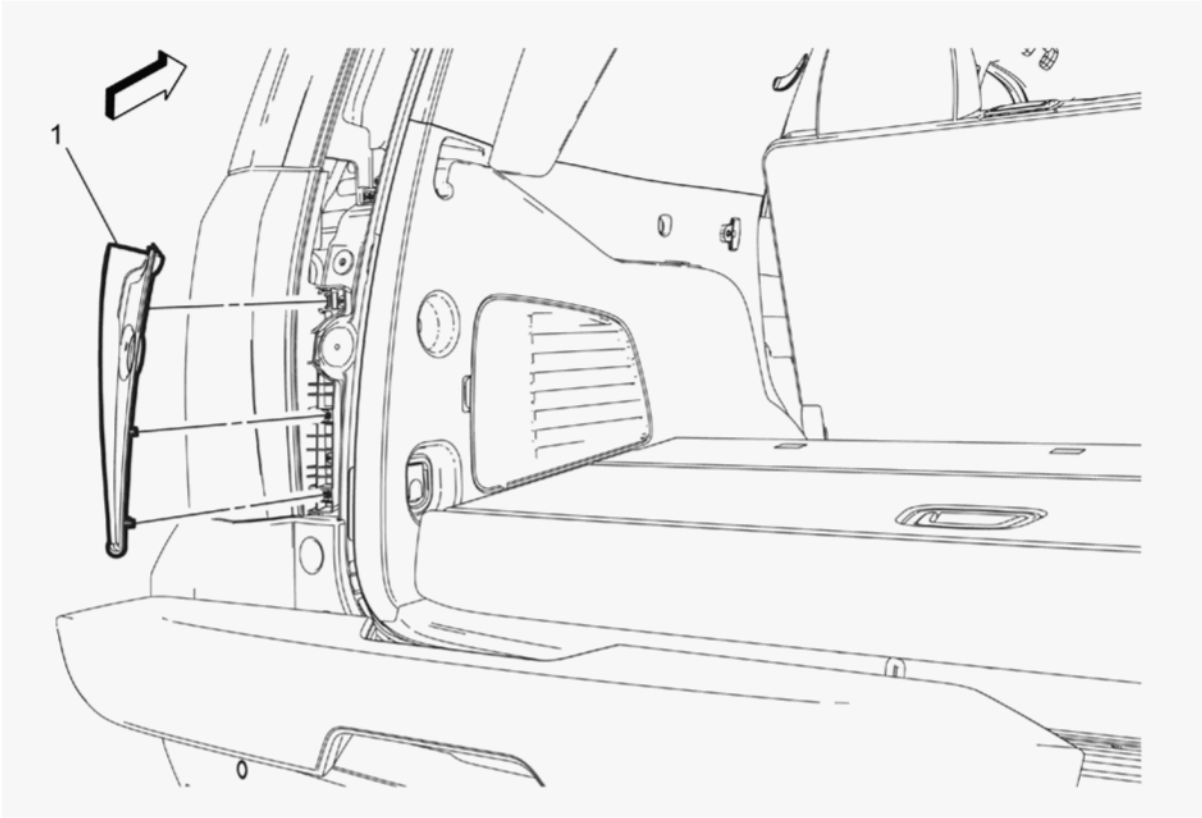


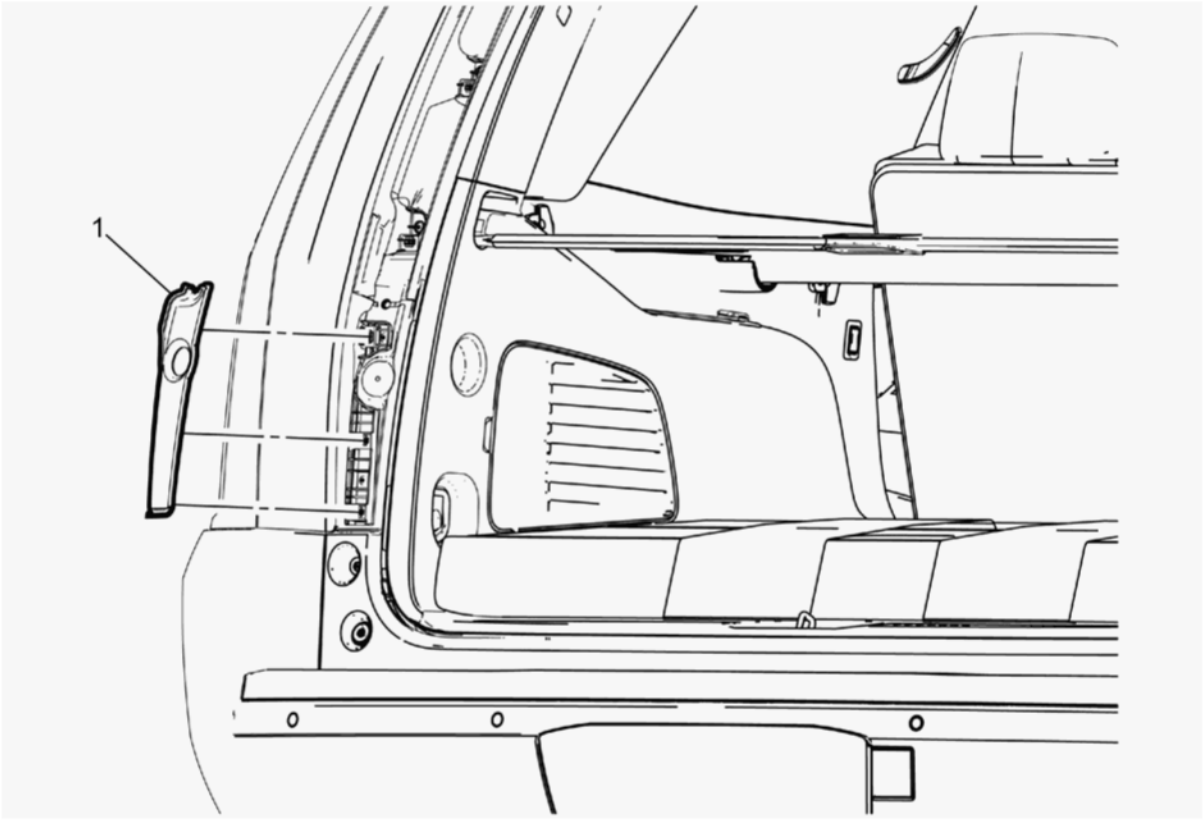
Fig. 10: Back Body Opening Side Gutter - Lower (Chevrolet, GMC)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Back Body Opening Side Gutter **Procedure** 1. The liftgate adjust bumper pad can be worked through the side gutter using an appropriate pick type tool.

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Callout	Component Name
	2. Using a trim type tool release the 3 integral retainers. 3. **NOTE:** **The pad will require replacement if damaged upon removal.**

BACK BODY OPENING SIDE GUTTER REPLACEMENT - LOWER (CADILLAC)



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Fig. 11: Back Body Opening Side Gutter - Lower (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Back Body Opening Side Gutter **Procedure** 1. The liftgate adjust bumper pad can be worked through the side gutter using an appropriate pick type tool. 2. Using a trim type tool release the 3 integral retainers. **NOTE:** **The pad will require replacement if damaged upon removal.**

FRONT SIDE DOOR ADJUSTMENT

Removal Procedure

Up/Down or In/Out Adjustment

1. Open the door.

NOTE: **The door side upper and lower hinge bolts must remain tight enough to retain door adjusted position.**

2. Apply masking tape to the fender and the door edges.

   Loosen the door side hinge bolts.

   Do not remove the bolts from the door.

3. Adjust the door up or down by repositioning the door as needed.

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NOTE: **If proper door adjustment cannot be made with original equipment door side bolts, refer to catalog for non-shouldered service bolts that will allow additional adjustment.**

4. Adjust the door in or out by repositioning the door as needed.

Installation Procedure

CAUTION: **Refer to Fastener Caution .**

1. Install the door side hinge bolts.

   Tighten

   Tighten the bolts to 25 N.m (18 lb ft).

2. Inspect the door for proper operation and alignment.
3. Remove the masking tape.

Removal Procedure

Fore/Aft Adjustment

NOTE: **The door side upper and lower hinge bolts must remain tight enough to retain door adjusted position.**

1. Apply masking tape to the fender and door edges.
2. Remove the front fender. Refer to **Front Fender Replacement - Left Side (GMC)Front Fender Replacement - Left Side (Chevrolet)Front Fender Replacement - Left Side (Cadillac)**, or **Front Fender Replacement - Right Side (GMC)Front Fender Replacement - Right Side (Chevrolet)Front Fender Replacement - Right Side (Cadillac)**.
3. Loosen the bodyside hinge bolts, but do not remove the bolts from the door.
4. Adjust the door fore and aft by repositioning the door as needed.

Installation Procedure

CAUTION: **Refer to Fastener Caution .**

1. Install the bodyside hinges bolts.

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Tighten

Tighten the bolts to 32 N.m (24 lb ft).

2. Adjust the front side door lock striker, if needed. Refer to **Front Side Door Lock Striker Adjustment** .
3. Inspect the door for proper operation and alignment.
4. Remove the masking tape.

FRONT SIDE DOOR REPLACEMENT

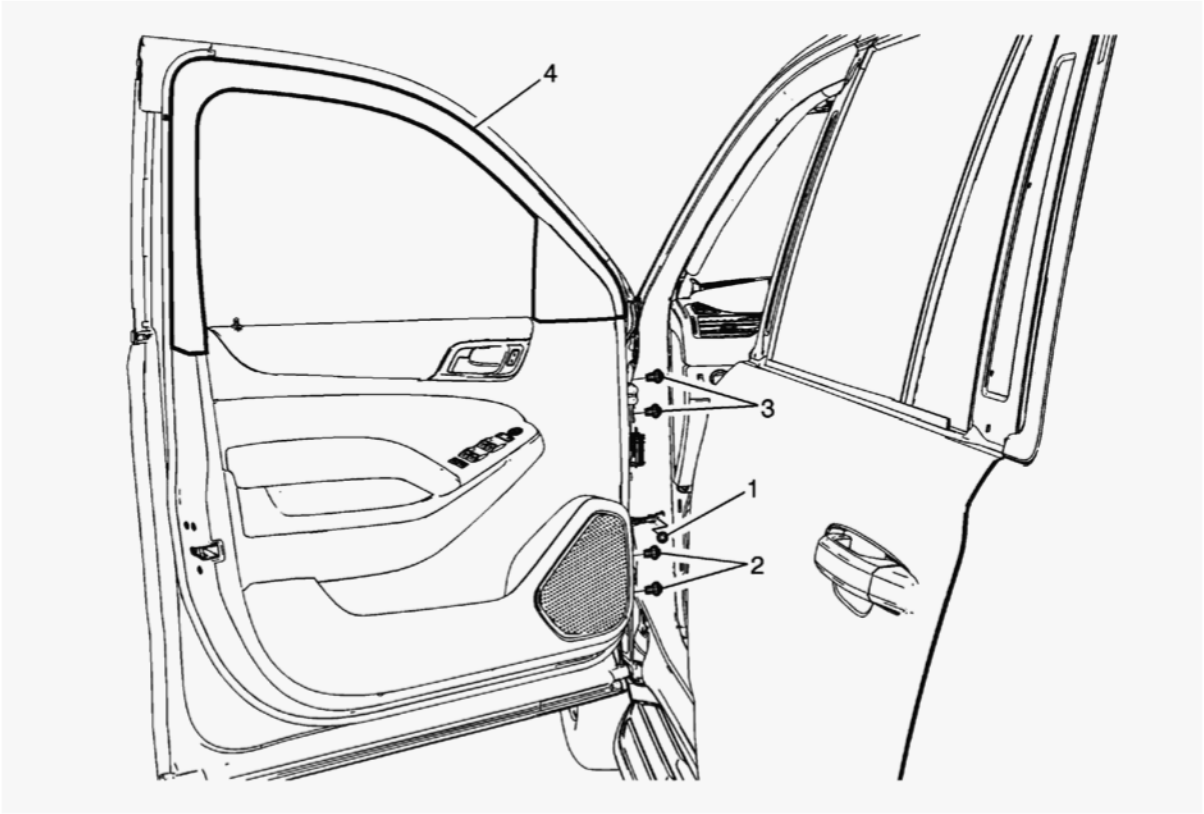


Fig. 12: Front Side Door
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name

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Callout	Component Name
WARNING: **Refer to SIR Warning.** **Preliminary Procedures** 1. Open the door to the full open position. 2. Disable the supplementary inflatable restraint (SIR) system. Refer to **SIR Disabling and Enabling** . 3. Mark the location of the hinge before removing the bolts with a grease pencil. 4. Remove the front side door pull handle bracket. Refer to **Front Side Door Pull Handle Bracket Replacement** . 5. Remove the water deflector.	
1	Front Side Door Check Link Bolt **CAUTION:** **Refer to Fastener Caution .** **Procedure** 1. Disconnect the electrical connector. 2. Slide the front side door check link cover rearward to gain access to the bolt, if required. 3. Support the door before removing the hinge bolts. 4. With an assistant, remove the door. **Tighten** 22 N.m (16 lb ft)
2	Front Side Door Lower Hinge Bolt (Qty: 2) **Tighten** 25 N.m (18 lb ft)
3	Front Side Door Upper Hinge Bolt (Qty: 2) **Tighten** 25 N.m (18 lb ft)

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Callout	Component Name
4	Front Side Door **Procedure** 1. Transfer all necessary components. 2. Adjust the front side door, if needed. Refer to **Front Side Door Adjustment**. **NOTE:** **Inspect the door for proper operation before installing the door trim.**

REAR SIDE DOOR ADJUSTMENT

Removal Procedure

Up/Down or In/Out Adjustment

1. Open the door.

NOTE: **The door side upper and lower hinge bolts must remain tight enough to retain door adjusted position.**

2. Apply masking tape to the quarter panel edge and the door edges.

   Loosen the door side hinge bolts.

   Do not remove the bolts from the door.

3. Adjust the door up or down by repositioning the door as needed.

NOTE: **If proper door adjustment cannot be made with original equipment door side bolts, refer to catalog for non-shouldered service bolts that will allow additional adjustment.**

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4. Adjust the door in or out by repositioning the door as needed.

Installation Procedure

CAUTION: Refer to Fastener Caution .

1. Install the door side hinge bolts.

   Tighten

   Tighten the bolts to 25 N.m (18 lb ft).

2. Inspect the door for proper operation and alignment.
3. Remove the masking tape.

Removal Procedure

Fore/Aft Adjustment

NOTE: The door side upper and lower hinge bolts must remain tight enough to retain door adjusted position.

1. Apply masking tape to the quarter panel edge and door edges.

   Loosen the bodyside hinge bolts.

   Do not remove the bolts from the door.

2. Adjust the door fore and aft by repositioning the door as needed.

Installation Procedure

CAUTION: Refer to Fastener Caution .

1. Install the bodyside hinges bolts.

   Tighten

   Tighten the bolts to 32 N.m (24 lb ft).

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2. Adjust the rear side door lock striker, if needed. Refer to **Rear Side Door Lock Striker Adjustment** .
3. Inspect the door for proper operation and alignment.
4. Remove the masking tape.

REAR SIDE DOOR REPLACEMENT

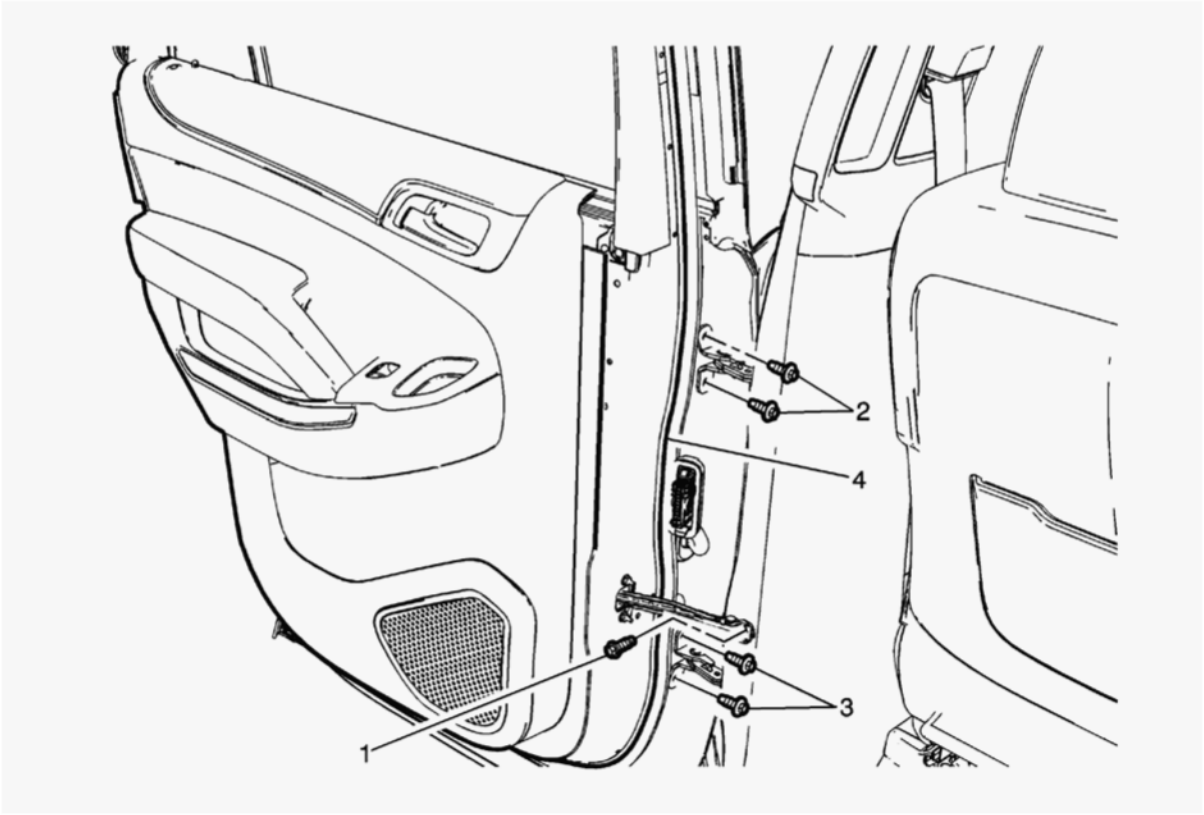


Fig. 13: Rear Side Door
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: **Refer to SIR Warning .**	

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Callout	Component Name
Preliminary Procedures 1. Open the door to the full open position. 2. Disable the supplementary inflatable restraint (SIR) system. Refer to **SIR Disabling and Enabling** . 3. Mark the location of the hinge before removing the bolts with a grease pencil. 4. Remove the rear side door pull handle bracket. Refer to **Rear Side Door Pull Handle Bracket Replacement** . 5. Remove the rear side door water deflector.	
1	Rear Side Door Check Link Bolt **CAUTION:** **Refer to Fastener Caution .** **Procedure** 1. Disconnect the electrical connector. 2. Slide the rear side door check link cover rearward to gain access to the bolt, if required. 3. Support the door before removing the hinge bolts. 4. With an assistant, remove the door. **Tighten** 22 N.m (16 lb ft)
2	Rear Side Door Upper Hinge Bolt (Qty: 2) **Tighten** 25 N.m (18 lb ft)
3	Rear Side Door Lower Hinge Bolt (Qty: 2) **Tighten** 25 N.m (18 lb ft)
4	Rear Side Door

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Callout	Component Name
	Procedure 1. Transfer all necessary components. 2. Adjust the rear side door, if needed. Refer to **Rear Side Door Adjustment**. **NOTE:** **Inspect the door for proper operation before installing the door trim.**

FRONT FENDER REPLACEMENT - LEFT SIDE (GMC)

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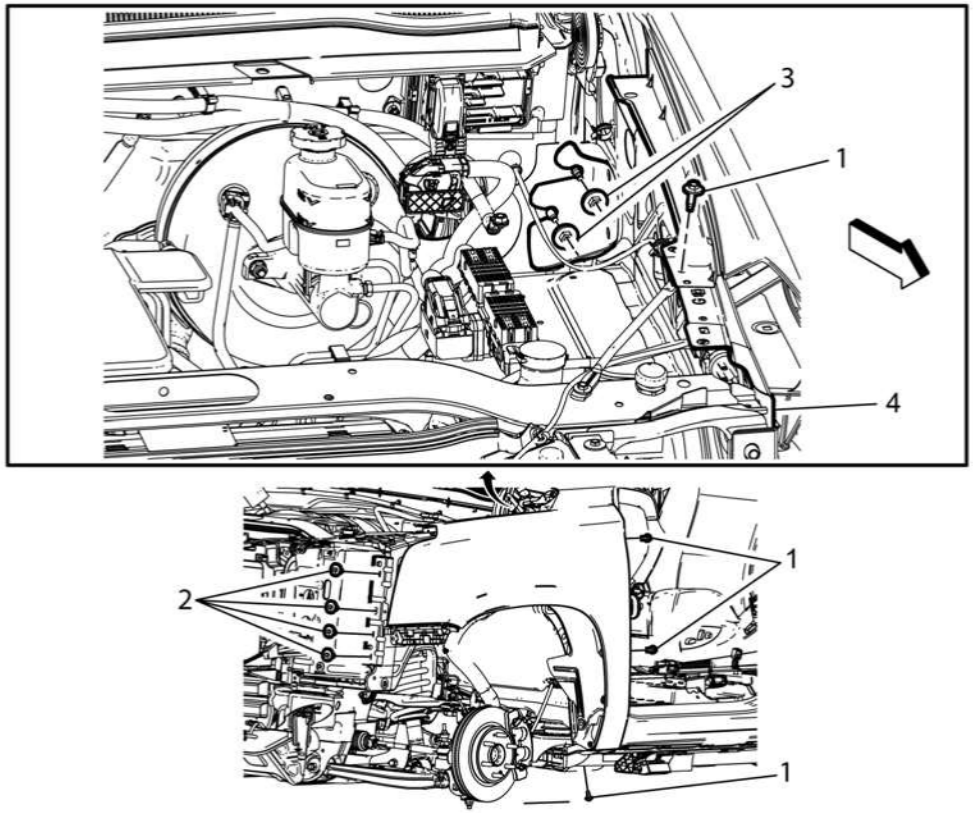


Fig. 14: Front Fender - Left Side (GMC)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	

1. Remove the headlamp. Refer to **Headlamp Replacement (GMC)** .
2. Remove the front fender rear upper brace. Refer to **Front Fender Rear Upper Brace Replacement**.
3. Remove the auxiliary battery and battery tray. Refer to **Auxiliary Battery Tray Replacement (9C1)**
4. Remove the hood hinge. Refer to **Hood Hinge Replacement**.
5. Remove the underhood electrical center junction block. Refer to **Underhood Electrical Center or Junction Block Bracket Replacement** .
6. Remove the left wheelhouse liner. Refer to **Front Wheelhouse Liner Replacement - Left Side (GMC)** .

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Callout	Component Name
7. Remove the assist step. Refer to **Assist Step Replacement (Step Pad - BRS)** **Assist Step Replacement (Assembly - BRS)** **Assist Step Replacement (BVE-Short Wheel Base)** **Assist Step Replacement (BVE-Long Wheel Base)**	
1	Left Front Fender Bolt (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 25 N.m (18 lb ft) **NOTE:** **Apply threadlock compound to the bolts.**
2	Left Front Fender Inner Panel Bolts (Qty: 4) **Tighten** 25 N.m (18 lb ft)
3	Left Front Fender Nuts **Tighten** 25 N.m (18 lb ft)
4	Left Front Fender 1. Reposition the hood cable. 2. Reposition the windshield washer hose. 3. Transfer any necessary additional parts as needed.

FRONT FENDER REPLACEMENT - LEFT SIDE (CHEVROLET)

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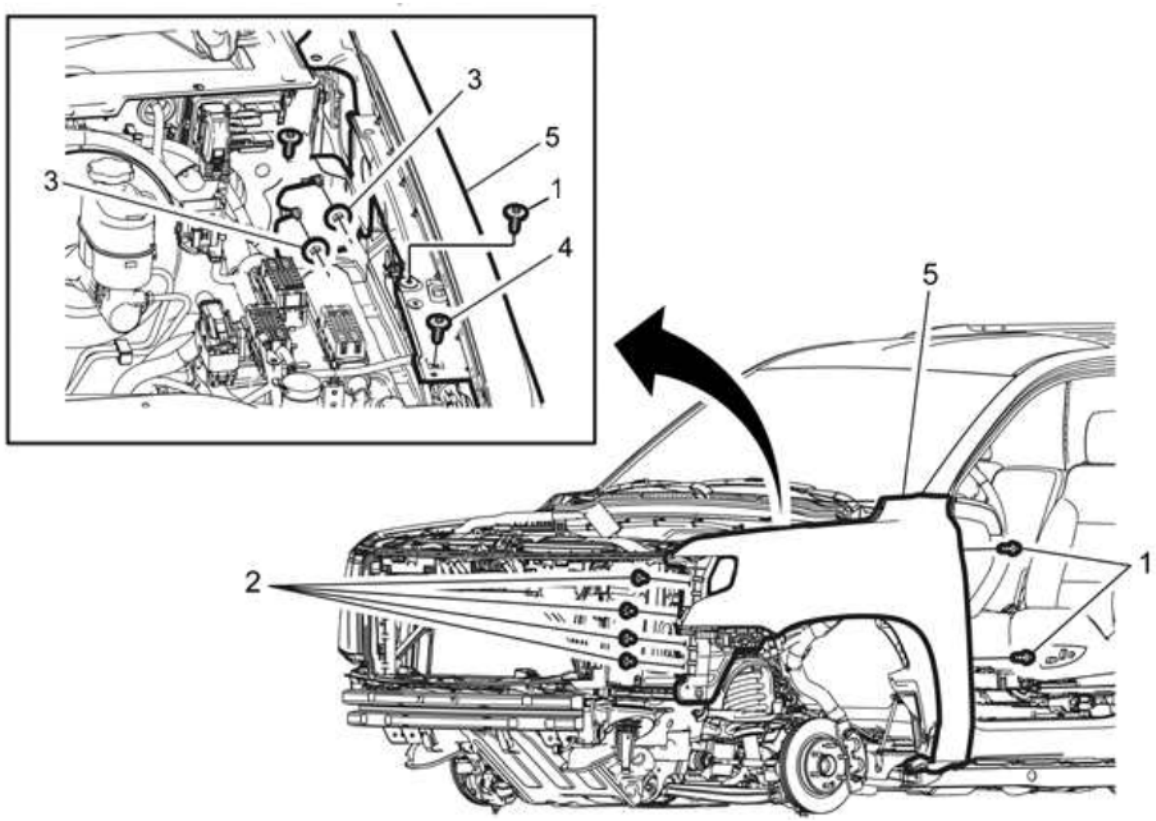


Fig. 15: Front Fender - Left Side (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	

1. Remove the headlamp. Refer to **Headlamp Replacement (Chevrolet)** .
2. Remove the front fender rear upper brace. Refer to **Front Fender Rear Upper Brace Replacement**.
3. Remove the auxiliary battery and battery tray. Refer to **Auxiliary Battery Tray Replacement (9C1)**
4. Remove the hood hinge. Refer to **Hood Hinge Replacement**.
5. Remove the underhood electrical center junction block. Refer to. **Underhood Electrical Center or Junction Block Bracket Replacement**
6. Remove the left wheelhouse liner. Refer to **Front Wheelhouse Liner Replacement - Left Side (Chevrolet)** .

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Callout	Component Name
7. Remove the assist step. Refer to **Assist Step Replacement (Step Pad - BRS)** **Assist Step Replacement (Assembly - BRS)** **Assist Step Replacement (BVE-Short Wheel Base)** **Assist Step Replacement (BVE-Long Wheel Base)**	
1	Left Front Fender Bolt (Qty: 3) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 25 (18 lb ft) **NOTE:** **Apply threadlock compound to the bolts.**
2	Left Front Fender Inner Panel Bolt (Qty: 4) **Tighten** 25 N.m (18 lb ft)
3	Left Front Fender Nut (Qty: 2) **Tighten** 25 N.m (18 lb ft)
4	Left Front Fender Upper Bolt **Tighten** 25 N.m (18 lb ft)
5	Left Front Fender 1. Reposition the hood cable. 2. Reposition the windshield washer hose. 3. Transfer any necessary additional parts as needed.

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FRONT FENDER REPLACEMENT - LEFT SIDE (CADILLAC)

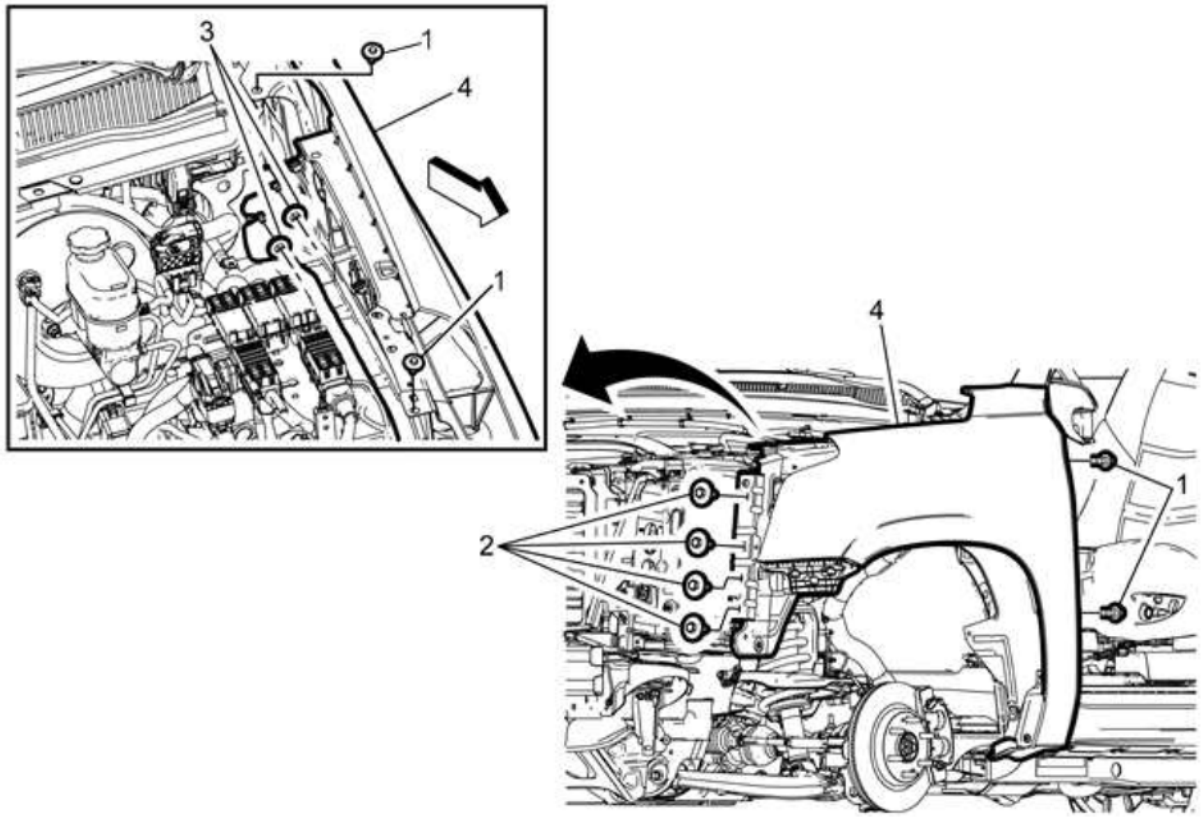


Fig. 16: Front Fender - Left Side (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	
1. Remove the headlamp. Refer to **Headlamp Replacement (Cadillac)** .	
2. Remove the front fender rear upper brace. Refer to **Front Fender Rear Upper Brace Replacement**.	
3. Remove the auxiliary battery and battery tray. Refer to **Auxiliary Battery Tray Replacement (9C1)**	
4. Remove the hood hinge. Refer to **Hood Hinge Replacement**.	
5. Remove the underhood electrical center junction block. Refer to **Underhood Electrical Center or Junction Block Bracket**	

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Callout	Component Name
	Replacement 6. Remove the left wheelhouse liner. Refer to Front Wheelhouse Liner Replacement - Left Side (Cadillac) . 7. Remove the assist step. Refer to Assist Step Replacement (Step Pad - BRS) Assist Step Replacement (Assembly - BRS) Assist Step Replacement (BVE-Short Wheel Base) Assist Step Replacement (BVE-Long Wheel Base)
1	Left Front Fender Bolt (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 25 N.m (18 lb ft) **NOTE:** **Apply threadlock compound to the bolts.**
2	Left Front Fender Inner Panel Bolt (Qty: 4) **Tighten** 25 N.m (18 lb ft)
3	Left Front Fender Nut (Qty: 2) **Tighten** 25 N.m (18 lb ft)
4	Left Front Fender 1. Reposition the hood cable. 2. Reposition the windshield washer hose. 3. Transfer any necessary additional parts as needed.

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FRONT FENDER REPLACEMENT - RIGHT SIDE (GMC)

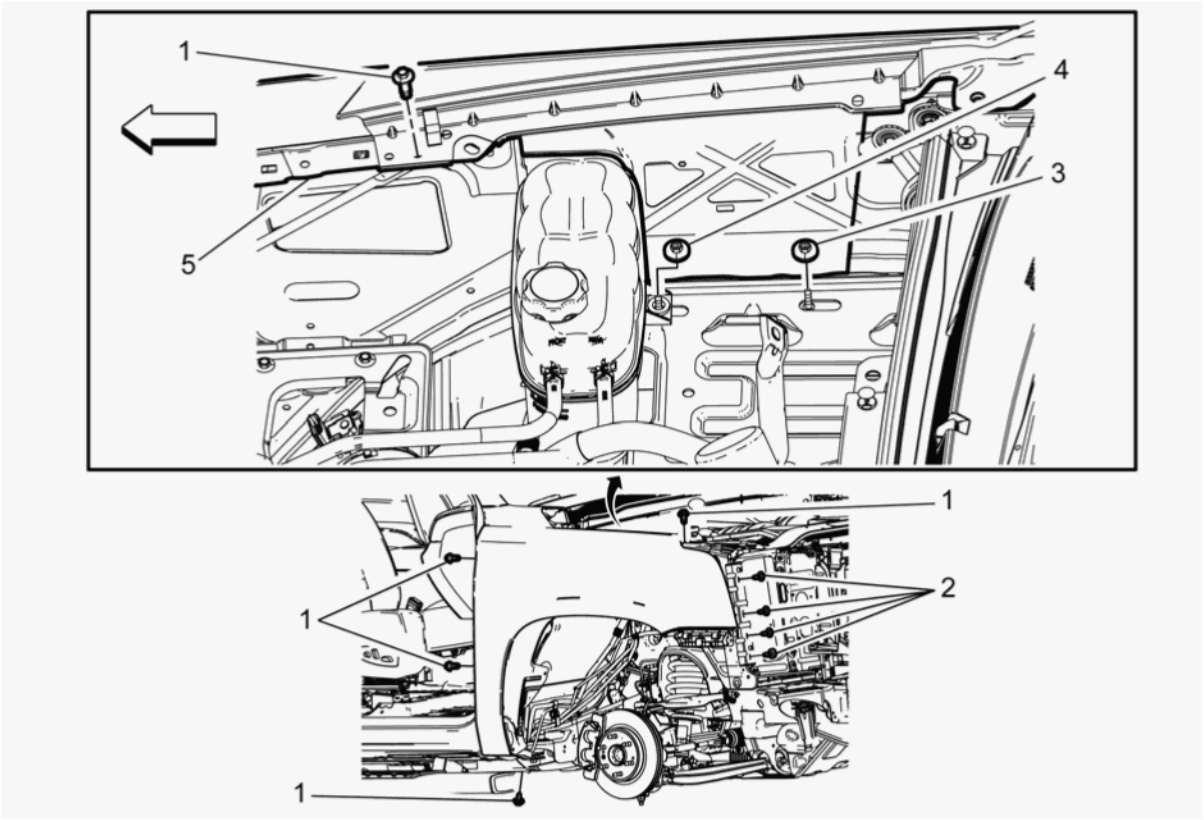


Fig. 17: Front Fender - Right Side (GMC)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	
1. Remove the headlamp. Refer to **Headlamp Replacement (GMC)**	
2. Remove the front fender rear upper brace. Refer to **Front Fender Rear Upper Brace Replacement**.	
3. Remove the air cleaner bracket. Refer to **Air Cleaner Bracket Replacement** .	
4. Remove the coolant reservoir bottle from the right fender and set it aside. Do not open the cooling system. Refer to **Radiator Surge Tank Replacement (L83 L86)** **Radiator Surge Tank Replacement (L96)** .	

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Callout	Component Name
5. Remove the battery tray. Refer to **Battery Tray Replacement** . 6. Remove the right hood hinge. Refer to **Hood Hinge Replacement**. 7. Remove the right wheelhouse liner. Refer to **Front Wheelhouse Liner Replacement - Right Side (GMC)** . 8. Remove the right hand side assist step. Refer to **Assist Step Replacement (Step Pad - BRS)** **Assist Step Replacement (Assembly - BRS)** **Assist Step Replacement (BVE-Short Wheel Base)** **Assist Step Replacement (BVE-Long Wheel Base)**	
1	Right Fender Bolts (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 25 N.m (18 lb ft) **NOTE:** **Apply threadlock compound to the bolts.**
2	Right Fender Inner Panel Bolts (Qty 4) **Tighten** 25 N.m (18 lb ft)
3	Battery Tray Nut **Tighten** 9 N.m (80 lb in)
4	Surge Tank Nut **Tighten** 9 N.m (80 lb in)
5	Right Fender Assembly **Procedure**

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Callout	Component Name
	Transfer any necessary additional parts as needed.

FRONT FENDER REPLACEMENT - RIGHT SIDE (CHEVROLET)

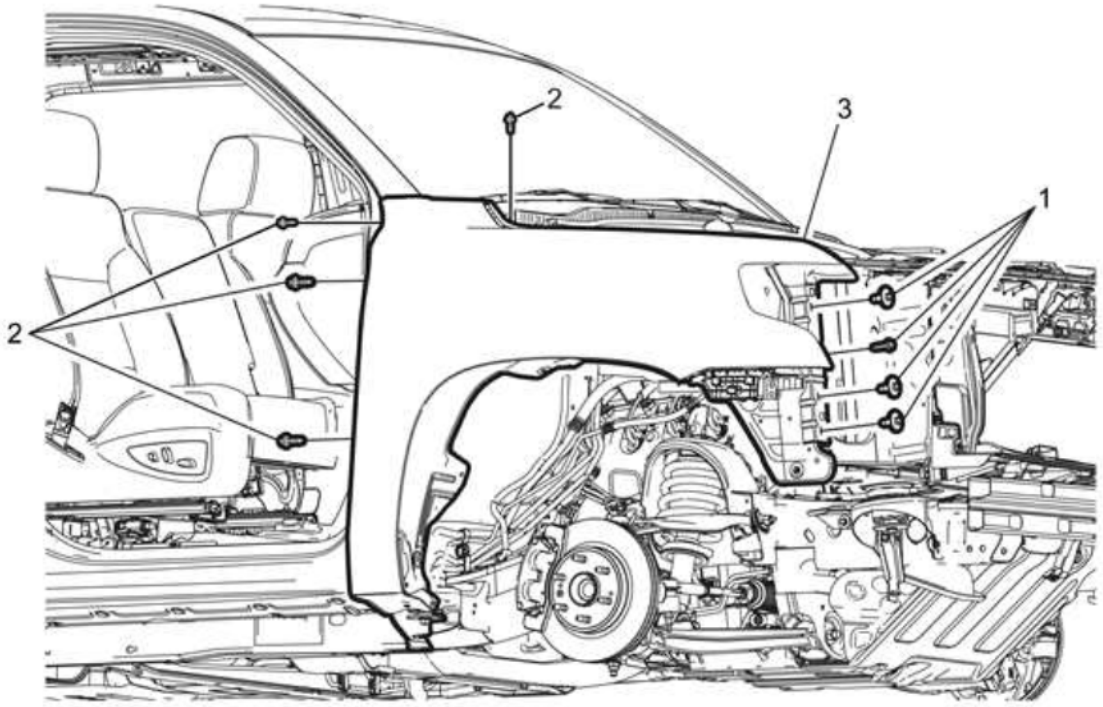


Fig. 18: Front Fender - Right Side (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Remove the headlamp. Refer to **Headlamp Replacement (Chevrolet)** 2. Remove the front fender rear upper brace. Refer to **Front Fender Rear Upper Brace Replacement**. 3. Remove the air cleaner bracket. Refer to **Air Cleaner Bracket Replacement** .	

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Callout	Component Name
4. Remove the coolant reservoir bottle from the right fender and set it aside. Do not open the cooling system. Refer to **Radiator Surge Tank Replacement (L83 L86)** **Radiator Surge Tank Replacement (L96)** . 5. Remove the battery tray. Refer to **Battery Tray Replacement** . 6. Remove the right hood hinge. Refer to **Hood Hinge Replacement**. 7. Remove the right front wheelhouse liner. Refer to **Front Wheelhouse Liner Replacement - Right Side (Chevrolet)** . 8. Remove the right hand side assist step. Refer to **Assist Step Replacement (Step Pad - BRS)** **Assist Step Replacement (Assembly - BRS)** **Assist Step Replacement (BVE-Short Wheel Base)** **Assist Step Replacement (BVE-Long Wheel Base)**	
1	Right Fender Bolts (Qty: 4) **CAUTION:** **Refer to Fastener Caution** . **Tighten** 25 N.m (18 lb ft) **NOTE:** **Apply threadlock compound to the bolts.**
2	Right Fender Inner Panel Bolts (Qty 4) **Tighten** 25 N.m (18 lb ft)
3	Right Fender Assembly **Procedure** Transfer any necessary additional parts as needed.

FRONT FENDER REPLACEMENT - RIGHT SIDE (CADILLAC)

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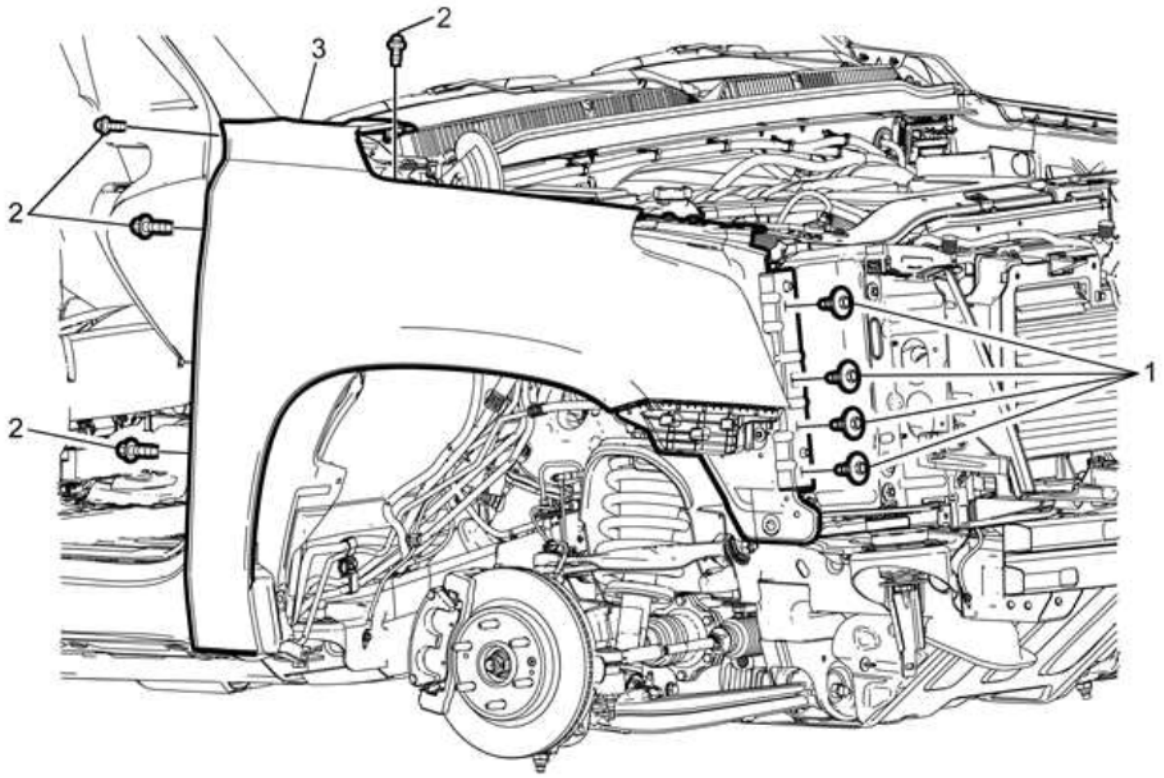


Fig. 19: Front Fender - Right Side (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	
1. Remove the headlamp. Refer to **Headlamp Replacement (Cadillac)** 2. Remove the front fender rear upper brace. Refer to **Front Fender Rear Upper Brace Replacement**. 3. Remove the air cleaner bracket. Refer to **Air Cleaner Bracket Replacement** . 4. Remove the coolant reservoir bottle from the right fender and set it aside. Do not open the cooling system. Refer to **Radiator Surge Tank Replacement (L83 L86)** **Radiator Surge Tank Replacement (L96)** . 5. Remove the battery tray. Refer to **Battery Tray Replacement** . 6. Remove the right hood hinge. Refer to **Hood Hinge Replacement**.	

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Callout	Component Name
7. Remove the right front wheelhouse liner. Refer to **Front Wheelhouse Liner Replacement - Right Side (Cadillac)** . 8. Remove the right hand side assist step. Refer to **Assist Step Replacement (Step Pad - BRS)** **Assist Step Replacement (Assembly - BRS)** **Assist Step Replacement (BVE-Short Wheel Base)** **Assist Step Replacement (BVE-Long Wheel Base)**	
1	Right Fender Bolts (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 25 N.m (18 lb ft) **NOTE:** **Apply threadlock compound to the bolts.**
2	Right Fender Inner Panel Bolts (Qty 4) **Tighten** 25 N.m (18 lb ft)
3	Right Fender Assembly **Procedure** Transfer any necessary additional parts as needed.

LIFTGATE ADJUSTMENT

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Fig. 20: Liftgate
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Liftgate **CAUTION:** **Refer to Fastener Caution .** **Procedure** 1. Loosen the liftgate hinge bolt (Qty: 4) to adjust the liftgate.

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Callout	Component Name
	2. Adjust the liftgate in order to obtain an even gap between the liftgate and the tail lamp, the rear fascia and the liftgate to D-pillar applique/tail lamp and rear fascia step so that the liftgate flush with the, the tail lamp, the rear fascia and the D-pillar applique/tail lamp and rear fascia step. 3. **Adjustment** • Liftgate to D-pillar applique/tail lamp (a) 4.0 mm Â± 1.0 mm (0.16 in Â± 0.04 in) • Liftgate to upper tail lamp (b) 4.2 mm Â± 1.5 mm (0.17 in Â± 0.06 in) • Liftgate to upper tail lamp (c) 3.6 mm Â± 1.5 mm (0.14 in Â± 0.06 in) • Liftgate to rear fascia (d) 4 mm Â± 1.5 mm (0.16 in Â± 0.06 in) • Liftgate to rear fascia step (e) 7 mm Â± 2 mm (0.28 in Â± 0.08 in) **Tighten** 25 N.m (18 lb ft)

LIFTGATE REPLACEMENT (CHEVROLET, GMC)

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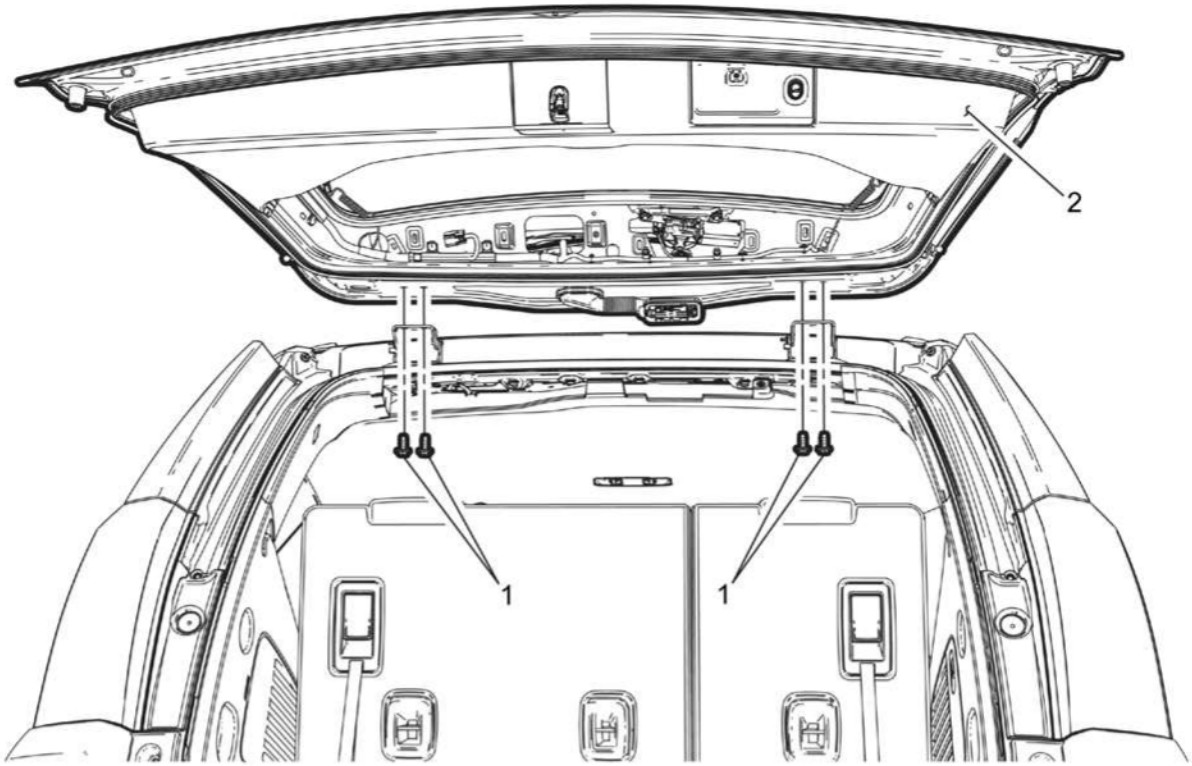


Fig. 21: Liftgate (Chevrolet, GMC)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: **When a lift gate hold open device is being removed or installed, provide alternate support to**	

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Callout	Component Name
avoid the possibility of damage to the vehicle or personal injury. **Preliminary Procedures** 1. Remove the rear compartment lift window. Refer to **Rear Compartment Lift Window Replacement (Chevrolet, GMC)** 2. Disconnect the electrical connectors, reposition the pass through boot and release the lever lock. 3. Disconnect the liftgate power assist actuator if equipped. Refer to **Liftgate Power Assist Actuator Replacement (Chevrolet, GMC)** . 4. Disconnect the Liftgate strut. Refer to **Liftgate Strut Replacement (Manual)Liftgate Strut Replacement (Power Assist)**	
1	Liftgate Body Hinge Bolt (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 25 N.m (18 lb ft)
2	Liftgate Assembly **Procedure** With the aid of an assistant remove the liftgate assembly Transfer parts as needed. **NOTE:** **Calibrate the power liftgate.**

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Callout	Component Name
	Refer to Liftgate Calibration .

LIFTGATE REPLACEMENT (CADILLAC)

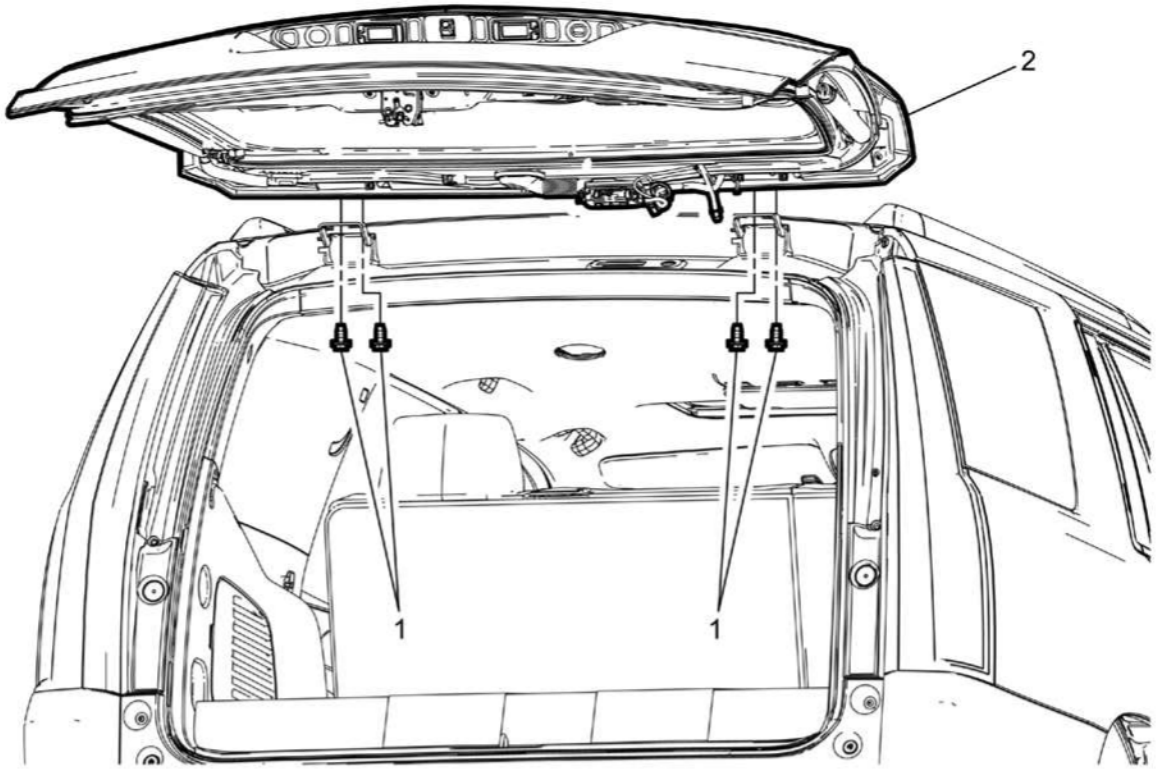


Fig. 22: Liftgate (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: When a lift	

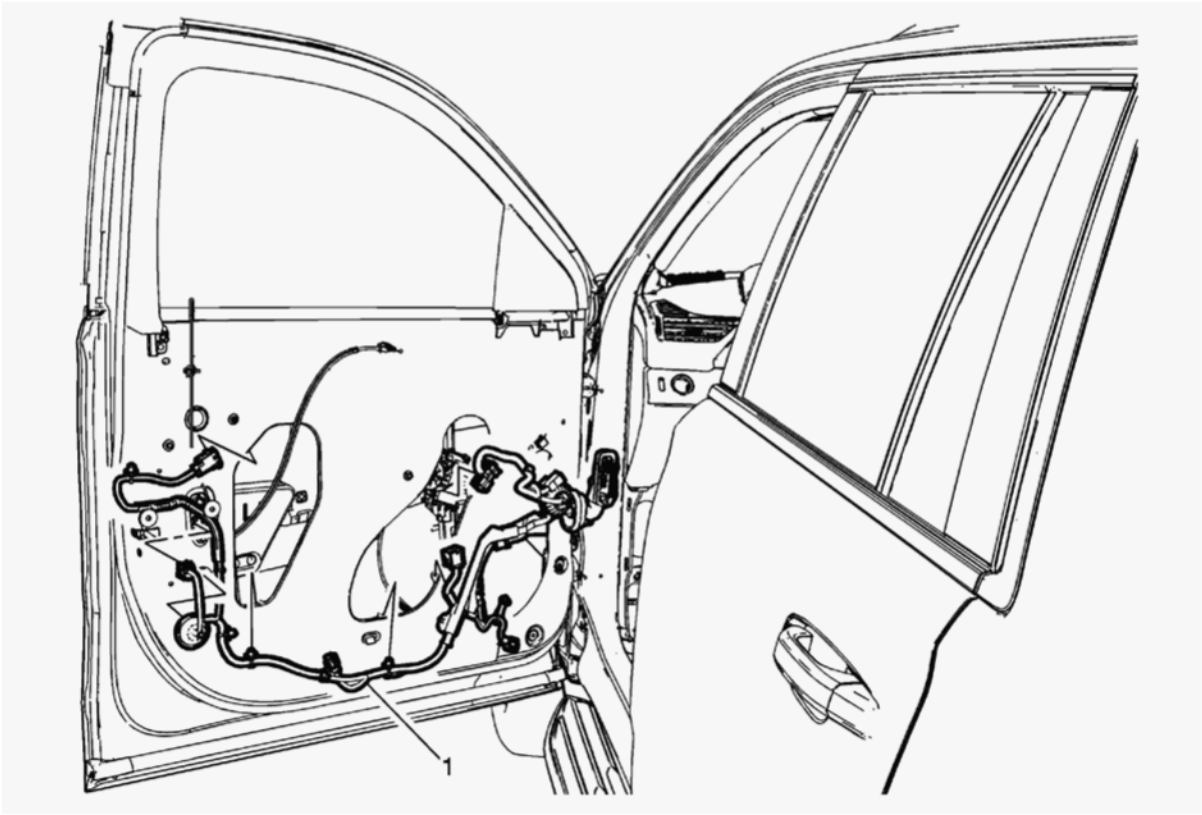
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Callout	Component Name
gate hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury. **Preliminary Procedures** 1. Remove the rear compartment lift window. Refer to **Rear Compartment Lift Window Replacement (Cadillac)** 2. Disconnect the electrical connector, reposition the pass through boot and release the lever lock. 3. Disconnect the liftgate power assist actuator. Refer to **Liftgate Power Assist Actuator Replacement (Cadillac)** . 4. Disconnect the Liftgate strut if equipped. Refer to **Liftgate Strut Replacement (Manual)Liftgate Strut Replacement (Power Assist)**	
1	Liftgate Body Hinge Bolt (Qty: 4) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 25 N.m (18 lb ft)
2	Liftgate Assembly **Procedure**

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Callout	Component Name
	With the aid of an assistant remove the liftgate assembly Transfer parts as needed. **NOTE:** **Calibrate the power liftgate. Refer to Liftgate Calibration .**

FRONT SIDE DOOR WIRING HARNESS REPLACEMENT



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Fig. 23: Front Side Door Wiring Harness
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Open the door to the full open position. 2. Remove the front side door pull handle bracket. Refer to **Front Side Door Pull Handle Bracket Replacement** . 3. Remove the radio front side door speaker. Refer to **Radio Front Side Door Speaker Replacement** . 4. Remove the front side door water deflector.	
1	Front Side Door Wiring Harness **Procedure** Disconnect electrical connectors.

LIFTGATE WIRING HARNESS REPLACEMENT

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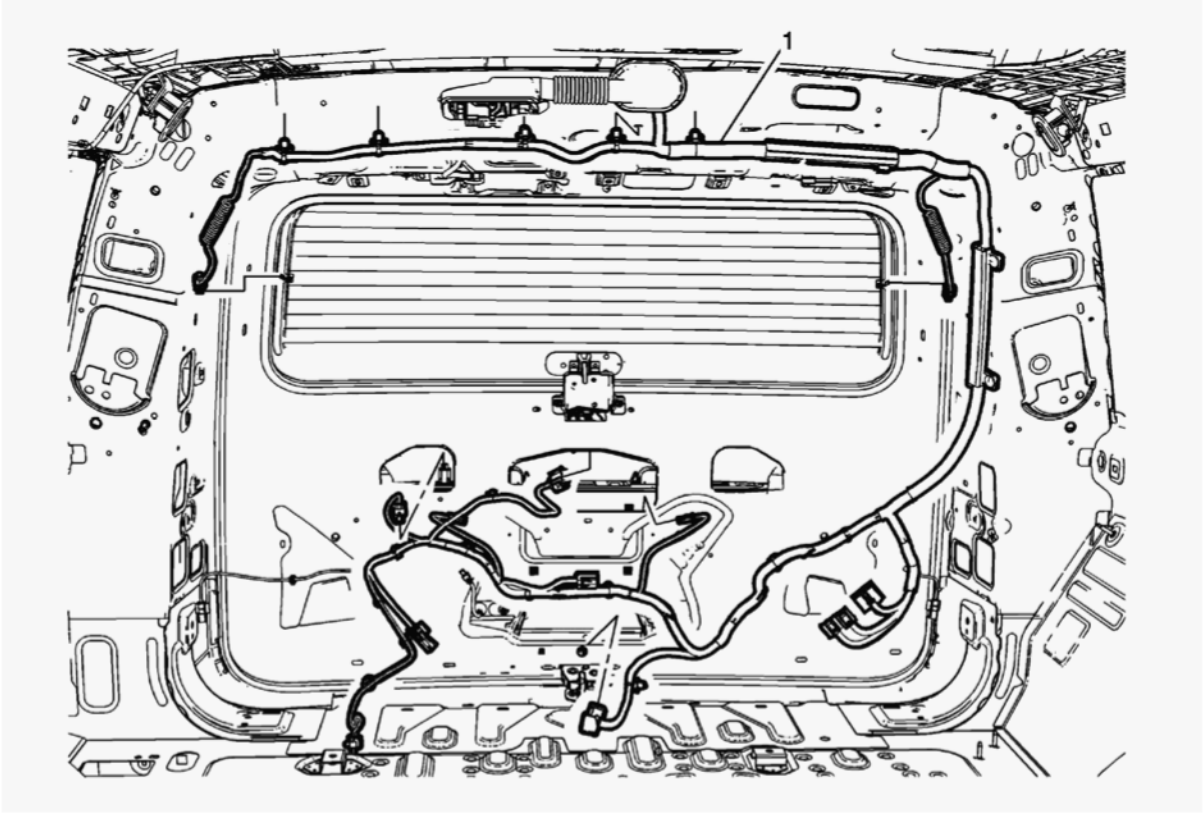


Fig. 24: Liftgate Wiring Harness
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Remove the liftgate trim panel. Refer to **Liftgate Trim Finish Panel Replacement** . 2. Remove the roof rear header garnish molding. Refer to **Roof Rear Header Garnish Molding Replacement (Standard Wheelbase)** **Roof Rear Header Garnish Molding Replacement (Extended Wheelbase)** .	
1	Liftgate Wiring Harness **Procedure** Disconnect electrical connectors. Reposition the pass through boot and disconnect the lever lock

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REAR SIDE DOOR WIRING HARNESS REPLACEMENT (SHORT WHEELBASE)

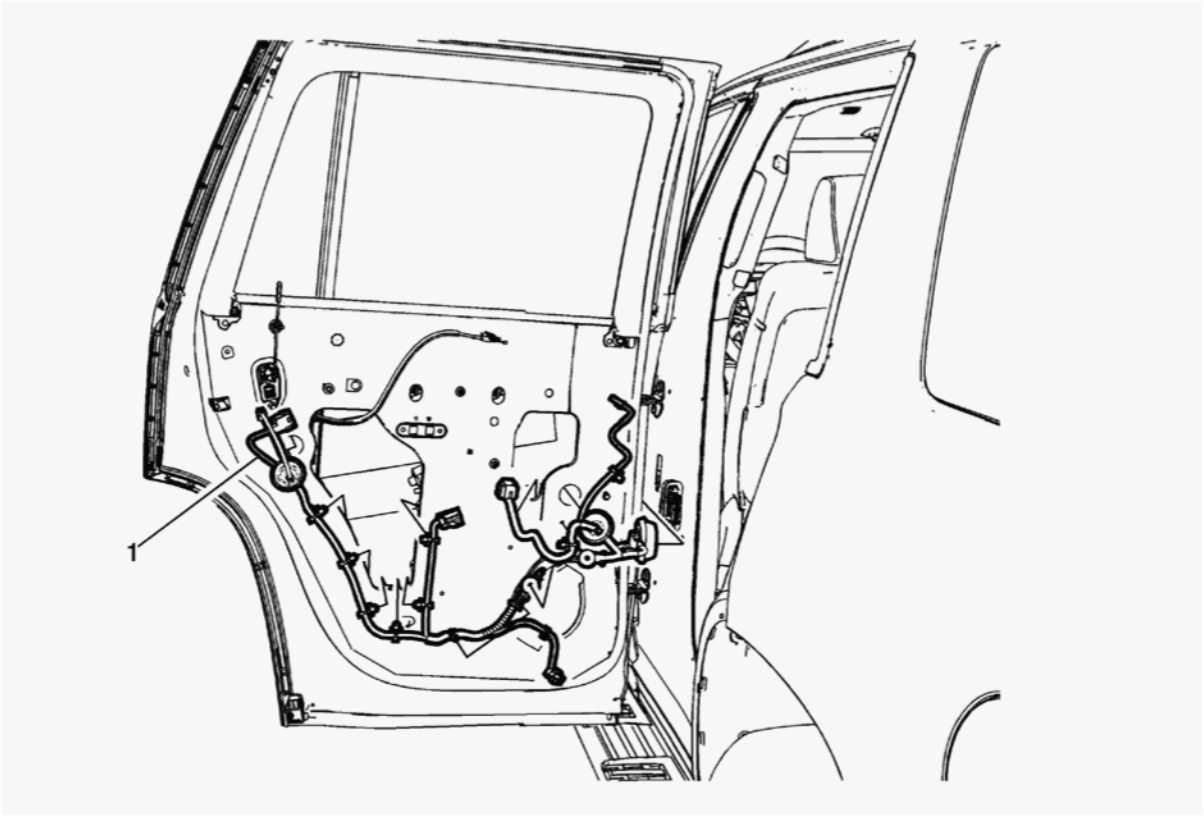


Fig. 25: Rear Side Door Wiring Harness (Short Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	
1	Remove the rear side door pull handle bracket. Refer to Rear Side Door Pull Handle Bracket Replacement .
2	Remove the radio rear side door speaker. Refer to Radio Rear Side Door Speaker Replacement .
3	Remove the water deflector.
4	Remove the rear side door window front channel. Refer to Rear Side Door Window Front Channel Replacement (Short Wheelbase) Rear Side Door Window Front Channel Replacement (Long Wheelbase) .
5	Remove the rear side door window rear channel. Refer to Rear Side Door Window Rear Channel Replacement (Short Wheelbase)

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Callout	Component Name
Rear Side Door Window Rear Channel Replacement (Long Wheelbase) .	
1	Rear Side Door Wiring Harness **Procedure** Disconnect electrical connectors.

REAR SIDE DOOR WIRING HARNESS REPLACEMENT (LONG WHEELBASE)

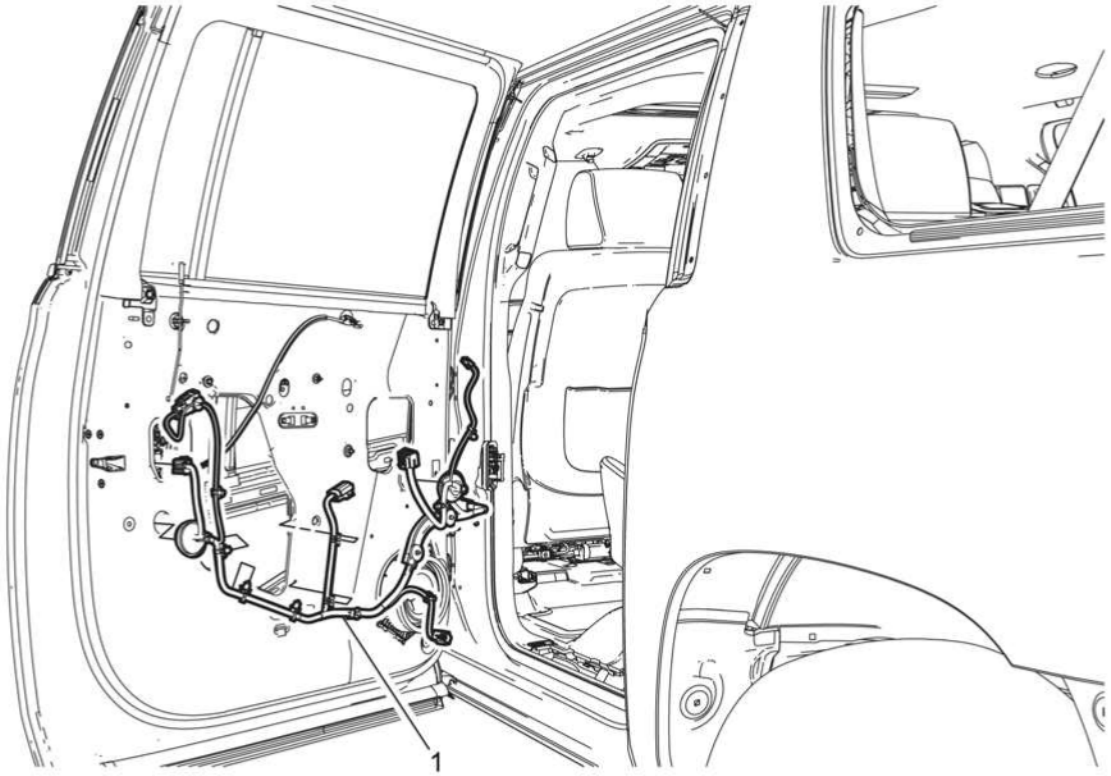


Fig. 26: Rear Side Door Wiring Harness(Long Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures	

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Callout	Component Name
1. Open the door to the full open position. 2. Remove the rear side door pull handle bracket. Refer to **Rear Side Door Pull Handle Bracket Replacement** . 3. Remove the radio rear side door speaker. Refer to **Radio Rear Side Door Speaker Replacement** . 4. Remove the water deflector. 5. Remove the rear side door window front channel. Refer to **Rear Side Door Window Front Channel Replacement (Long Wheelbase)** . 6. Remove the rear side door window rear channel. Refer to **Rear Side Door Window Rear Channel Replacement (Long Wheelbase)** .	
1	Rear Side Door Wiring Harness **Procedure** Disconnect electrical connectors.

FRONT SIDE DOOR UPPER HINGE AND LOWER HINGE REPLACEMENT

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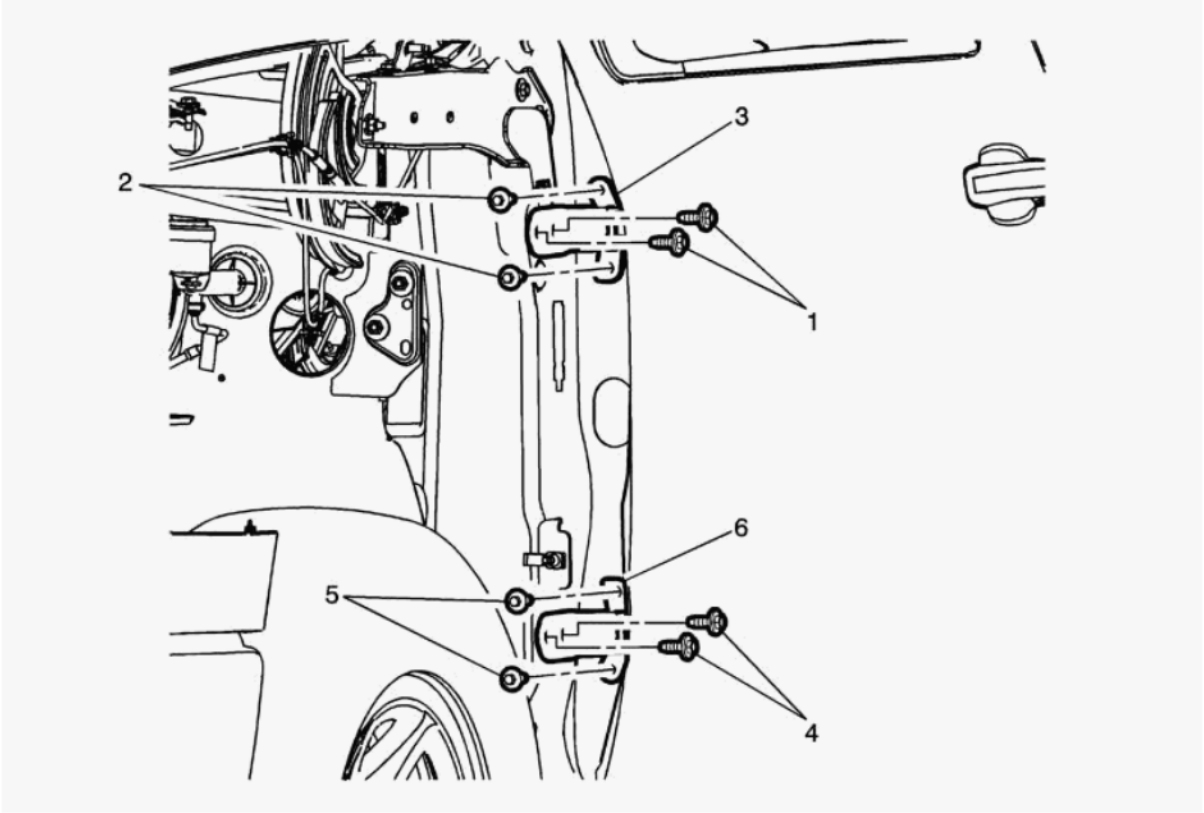


Fig. 27: Front Side Door Upper Hinge and Lower Hinge
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Apply a double layer of masking tape around the perimeter of the painted surfaces. 2. Remove the front fender. Refer to **Front Fender Replacement - Left Side (GMC)Front Fender Replacement - Left Side (Chevrolet)Front Fender Replacement - Left Side (Cadillac)**, or **Front Fender Replacement - Right Side (GMC)Front Fender Replacement - Right Side (Chevrolet)Front Fender Replacement - Right Side (Cadillac)**. 3. Mark the location of the hinge before removing the bolts with a grease pencil.	
1	Front Side Door Upper Hinge to Body Bolt (Qty: 2)

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Callout	Component Name
	CAUTION: **Refer to Fastener Procedures Caution .** 1. Keep the door in the closed position. 2. Replace one hinge at a time. **Tighten** 32 N.m (24 lb ft)
2	Front Side Door Upper Hinge to Door Bolt (Qty: 2) **Tighten** 25 N.m (18 lb ft)
3	Front Side Door Upper Hinge
4	Front Side Door Lower Hinge to Body Bolt (Qty: 2) **Tighten** 32 N.m (24 lb ft)
5	Front Side Door Lower Hinge to Door Bolt (Qty: 2) **Tighten** 25 N.m (18 lb ft)
6	Front Side Door Lower Hinge **Procedure** Adjust the front side door, if needed. Refer to **Front Side Door Adjustment**. **NOTE:** **Inspect the door for proper operation.**

HOOD HINGE REPLACEMENT

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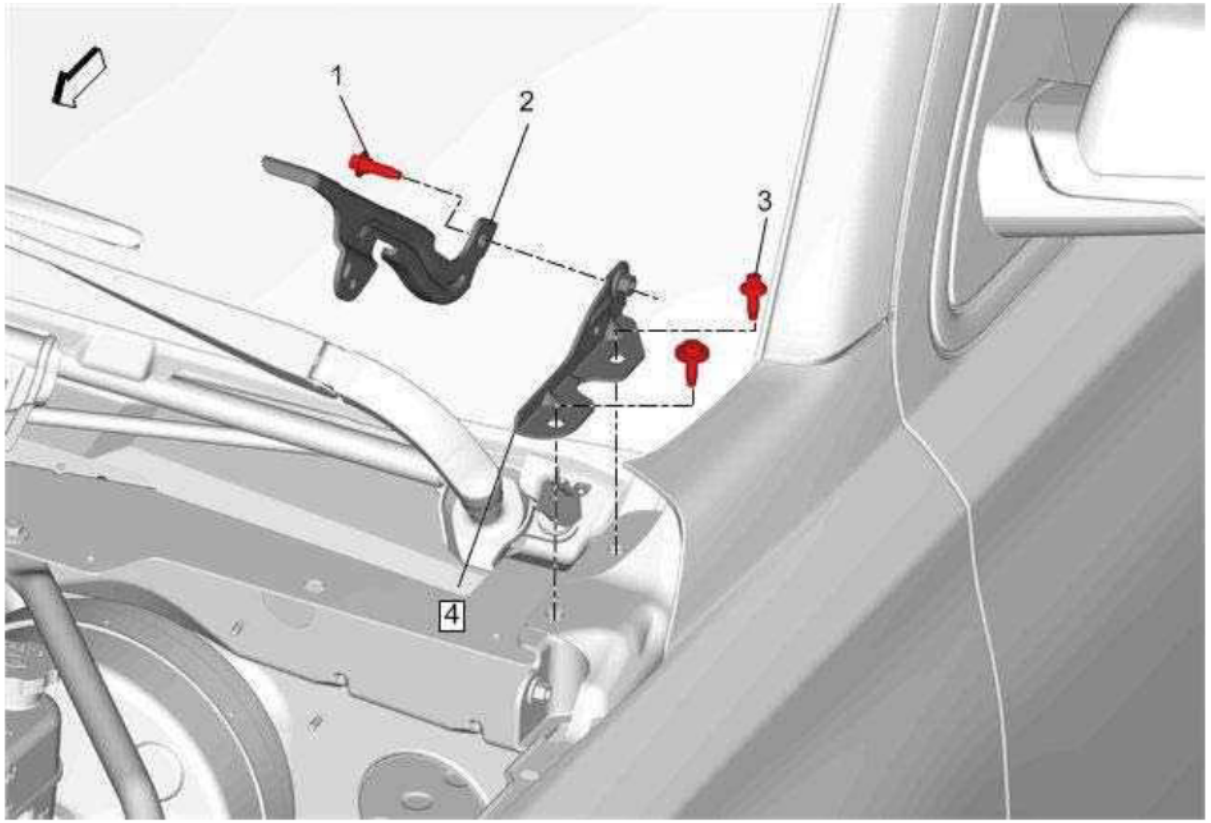


Fig. 28: Hood Hinge
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: **When a hood hold open device is being removed or installed, provide alternate support to**	

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Callout	Component Name
avoid the possibility of damage to the vehicle or personal injury. **Preliminary Procedures** 1. Remove the hood. Refer to **Hood Replacement**. 2. Remove the air inlet grille panel extension. Refer to **Air Inlet Grille Panel Extension Replacement** . 3. Remove the hood open assist spring. Refer to **Hood Open Assist Spring Replacement**.	
1	Hood Hinge Bolt **CAUTION:** **Refer to Fastener Caution** . **Tighten** 22 N.m (16 lb ft)
2	Hood Hinge to Hood Side
3	Hood Hinge Bolt to Body Side (Qty 2) **Tighten** 30 N.m (22 lb ft)
4	Hood Hinge to Body Side

HOOD OPEN ASSIST SPRING REPLACEMENT

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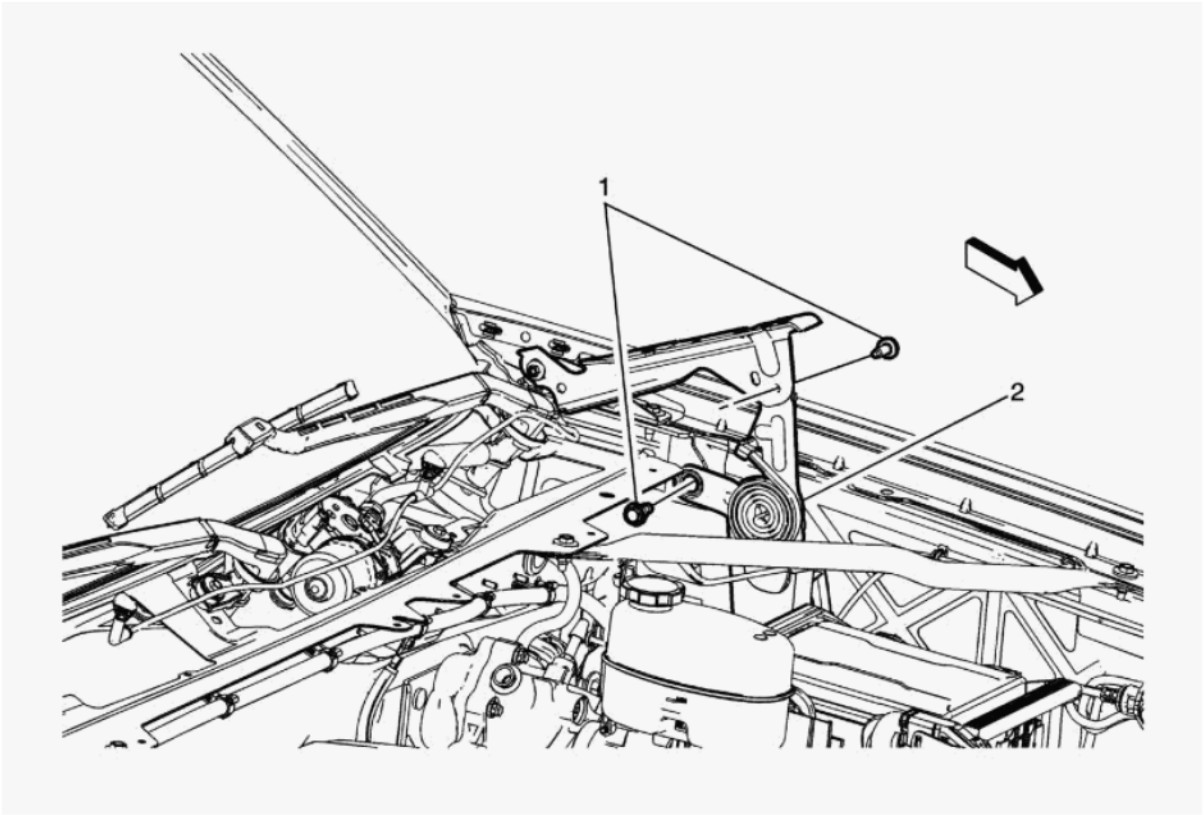


Fig. 29: Hood Open Assist Spring
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: When a hood hold open device is being removed or installed, provide alternate support to	

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Callout	Component Name
avoid the possibility of damage to the vehicle or personal injury. **Preliminary Procedures** Open the hood and support the side being serviced.	
1	Hood Open Assist Spring Bolt (Qty: 2) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 22 N.m (16 lb ft)
2	Hood Open Assist Spring

LIFTGATE HINGE PIN RETAINER REPLACEMENT

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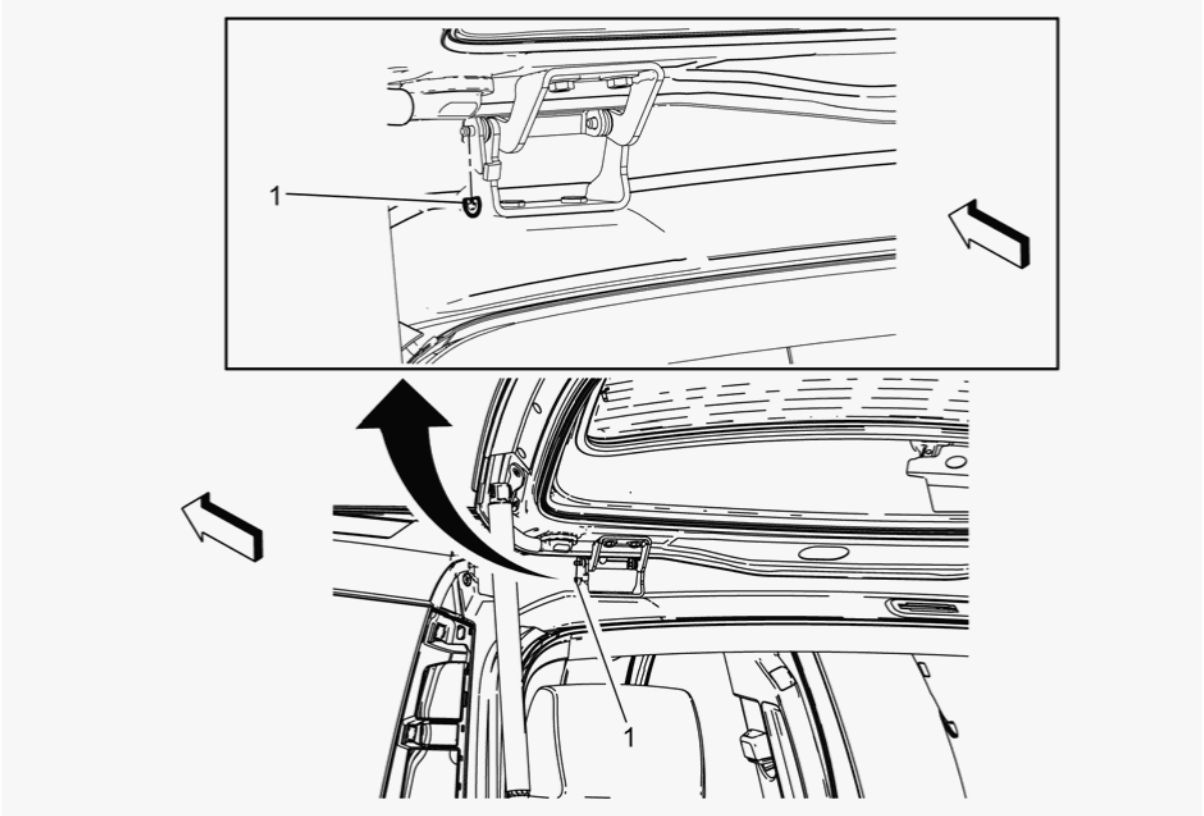


Fig. 30: Liftgate Hinge Pin Retainer
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Open the liftgate	
1	Liftgate Hinge Pin Retainer **Procedure** Remove the liftgate hinge pin retainer from the liftgate hinge pin.

REAR SIDE DOOR UPPER HINGE AND LOWER HINGE REPLACEMENT (SHORT WHEELBASE)

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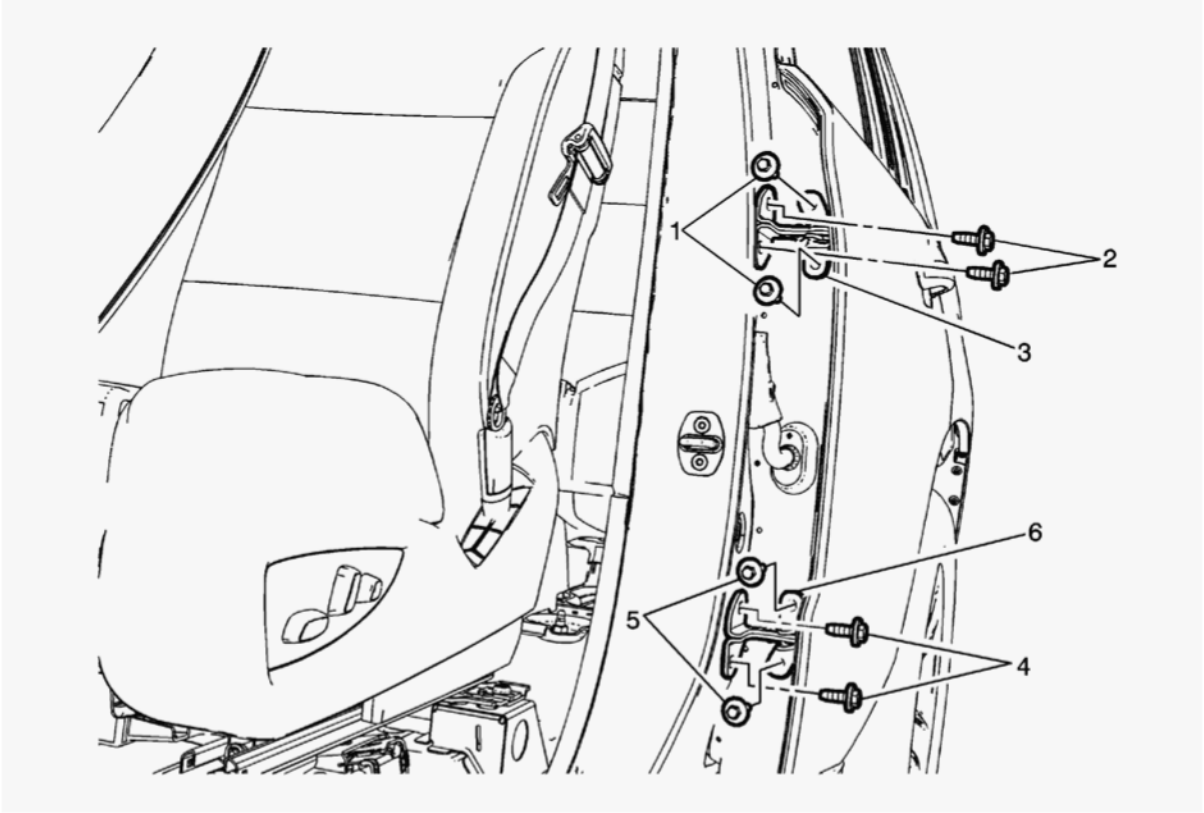


Fig. 31: Rear Side Door Upper Hinge and Lower Hinge (Short Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Apply a double layer of masking tape around the perimeter of the painted surfaces. 2. Mark the location of the hinge before removing the bolts with a grease pencil.	
1	Rear Side Door Upper Hinge to Door Bolt (Qty: 2) **CAUTION:** **Refer to** **Fastener**

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Callout	Component Name
	Caution . **Procedures** 1. Keep the door in the closed position. 2. Replace one hinge at a time. **Tighten** 25 N.m (18 lb ft)
2	Rear Side Door Upper Hinge to Body Bolt (Qty: 2) **Tighten** 32 N.m (24 lb ft)
3	Rear Side Door Upper Hinge
4	Rear Side Door Lower Hinge to Door Bolt (Qty: 2) **Tighten** 25 N.m (18 lb ft)
5	Rear Side Door Lower Hinge to Body Bolt (Qty: 2) **Tighten** 32 N.m (24 lb ft)
6	Rear Side Door Lower Hinge **Procedure** Adjust the rear side door, if needed. Refer to **Rear Side Door Adjustment**. **NOTE:** **Inspect the door for proper operation before installing the door trim.**

REAR SIDE DOOR UPPER HINGE AND LOWER HINGE REPLACEMENT (LONG WHEELBASE)

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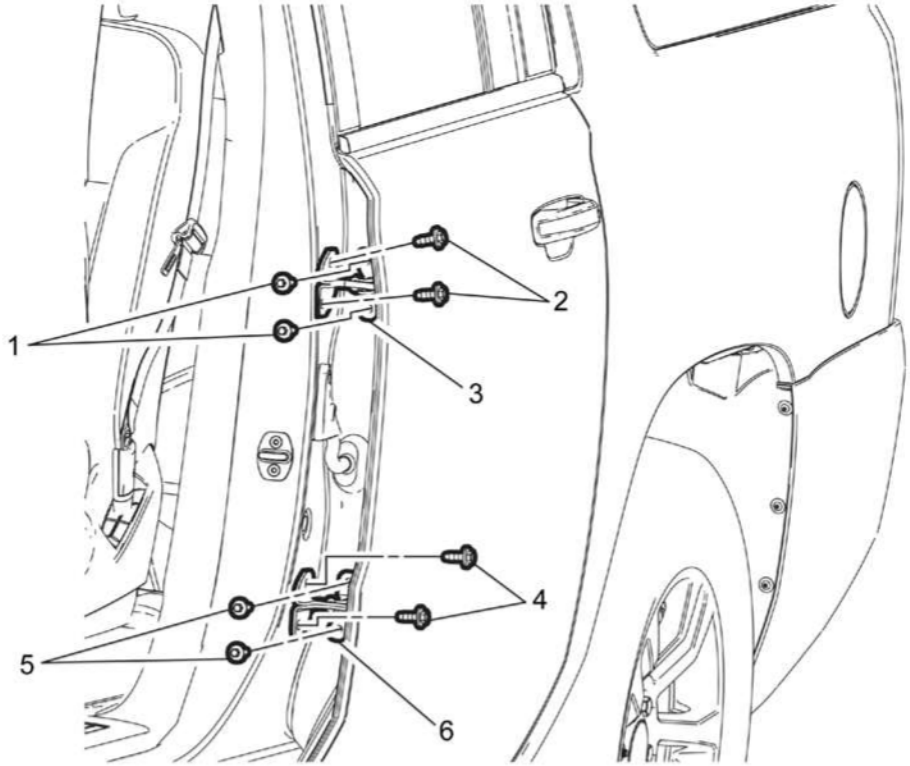


Fig. 32: Rear Side Door Upper Hinge and Lower Hinge (Long Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Open the front side door to the full open position. 2. Mark the location of the hinge before removing the bolts with a grease pencil.	
1	Rear Side Door Upper Hinge to Door Bolt (Qty: 2) **CAUTION:** **Refer to** **Fastener**

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Callout	Component Name
	Caution . **Procedures** 1. Before removing the door, apply a double layer of masking tape around the perimeter of the painted surfaces. 2. Keep the door in the closed position. 3. Replace one hinge at a time. **Tighten** 25 N.m (18 lb ft)
2	Rear Side Door Upper Hinge to Body Bolt (Qty: 2) **Tighten** 32 N.m (24 lb ft)
3	Rear Side Door Upper Hinge
4	Rear Side Door Lower Hinge to Body Bolt (Qty: 2) **Tighten** 32 N.m (24 lb ft)
5	Rear Side Door Lower Hinge to Door Bolt (Qty: 2) **Tighten** 25 N.m (18 lb ft)
6	Rear Side Door Lower Hinge **Procedure** Adjust the rear side door, if needed. Refer to **Rear Side Door Adjustment**. **NOTE:** **Inspect the door for proper operation before installing the door trim.**

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HOOD SERVICE POSITIONING

Removal Procedure

1. Open the hood.

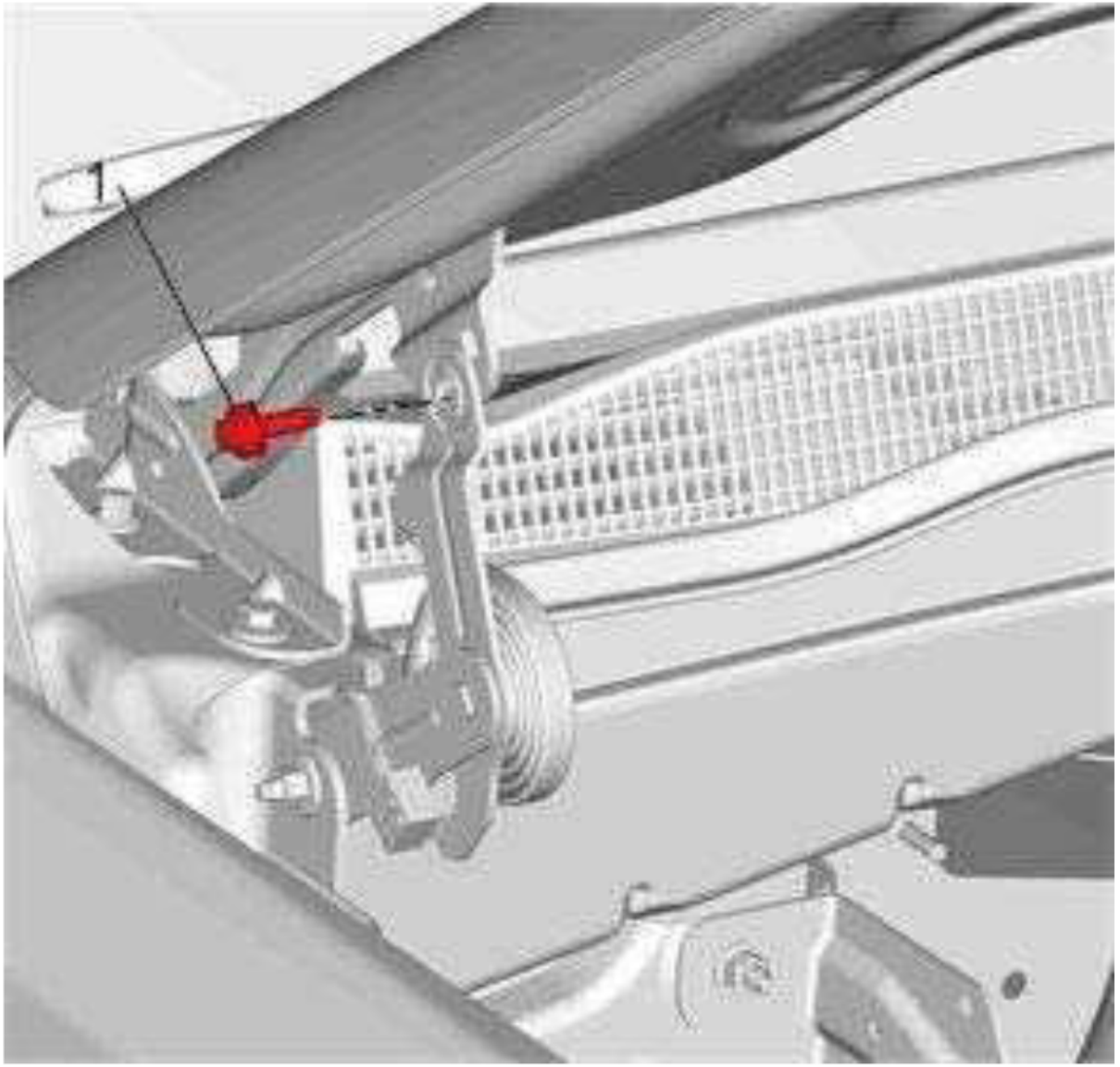


Fig. 33: Hood Open Assist Spring Bolts

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Courtesy of GENERAL MOTORS COMPANY

2. Assemble 2 sets of the following: an M8 bolt, 2 each 19.05 mm (0.75 in) flat washers and an M8 nut.
3. Remove the right and left hand air inlet grille panel extensions. Refer to **Air Inlet Grille Panel Extension Replacement** .
4. Have an assistant support the hood.
5. Remove the hood open assist spring bolts (1) and set aside.

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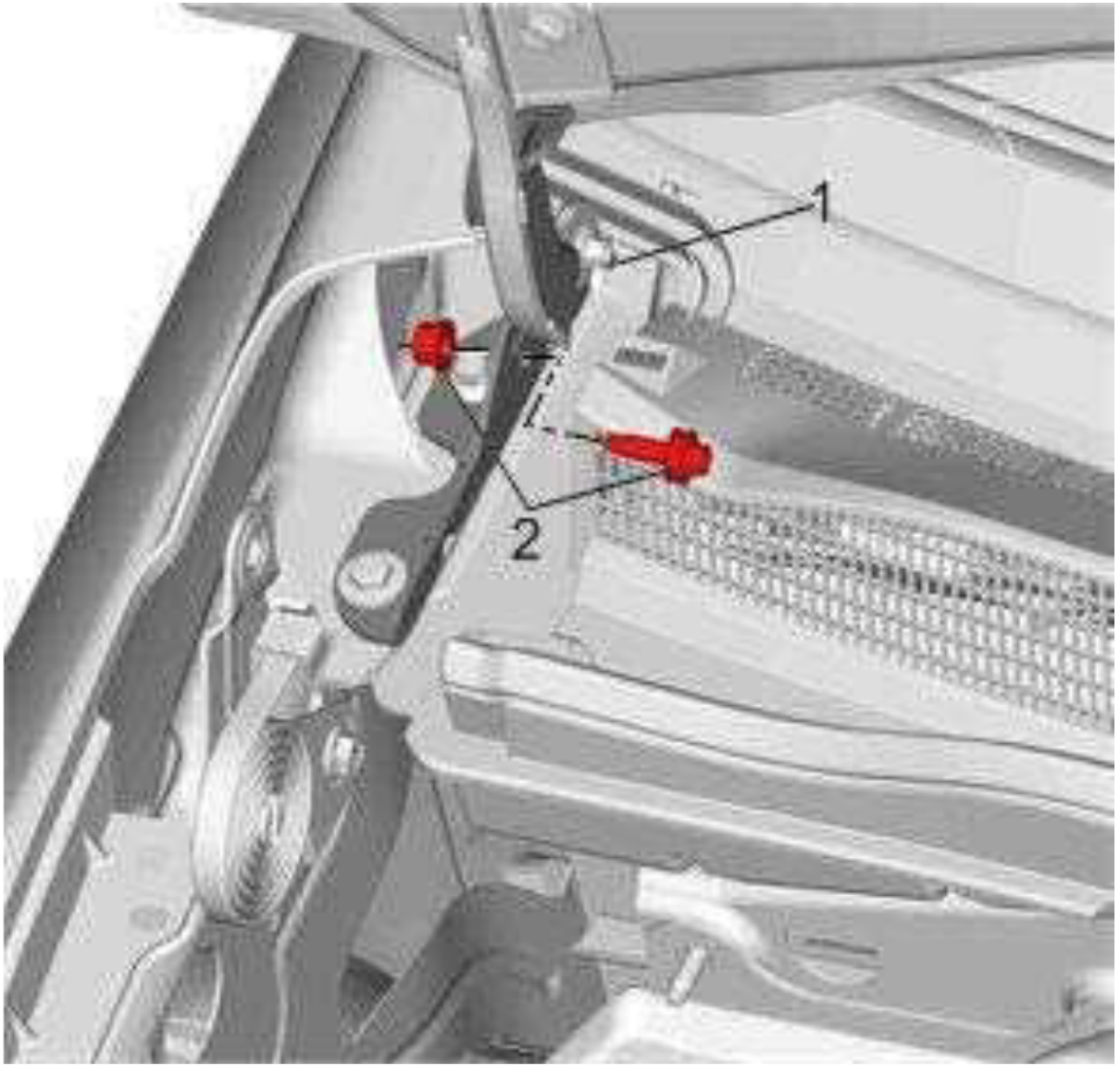


Fig. 34: Hood Position Notch
Courtesy of GENERAL MOTORS COMPANY

NOTE: **There is a positive stop which limits the hood from being opened too far.**

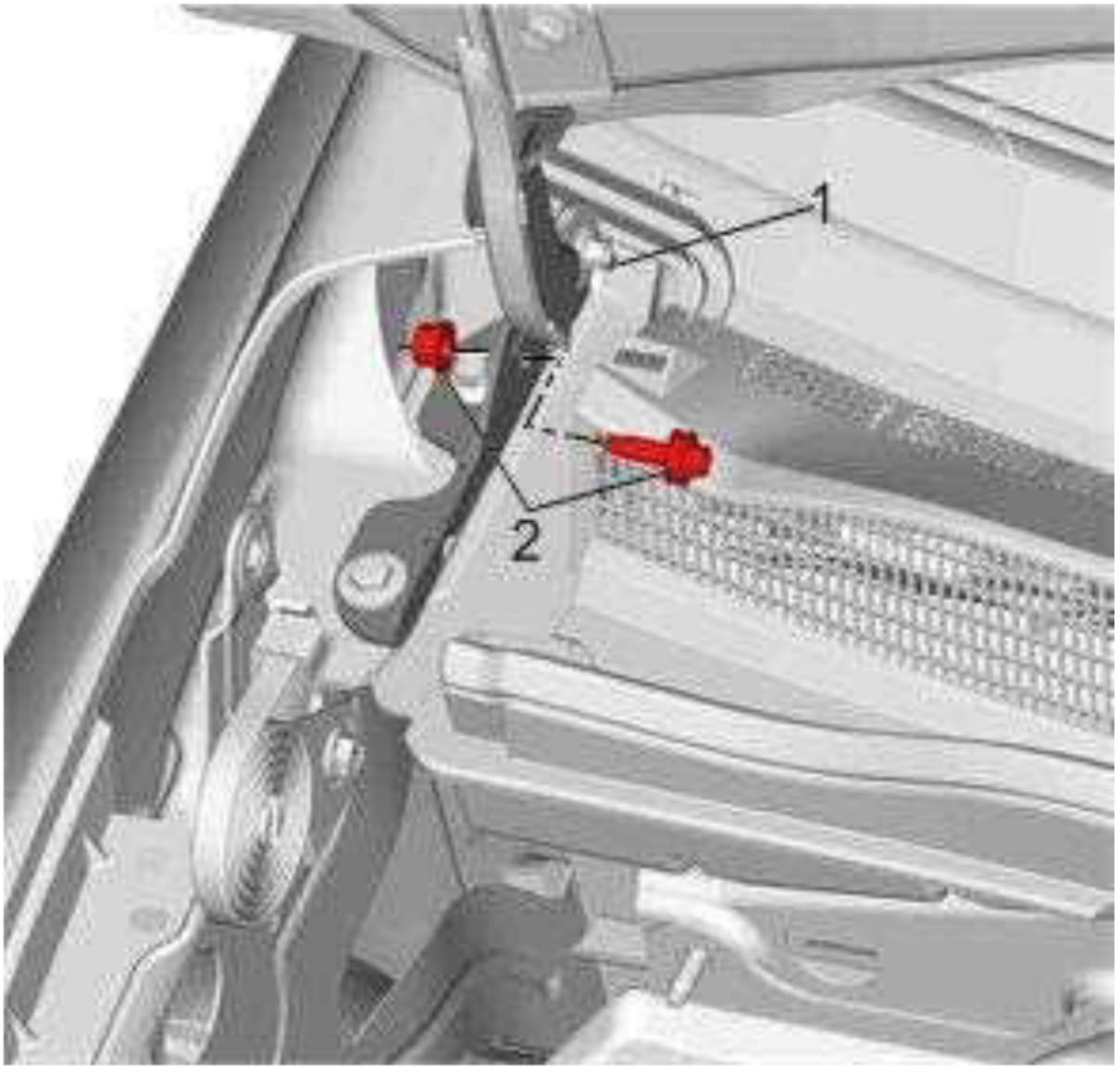
6. Raise the hood until the position notch (1) in the upper hinge is reached.

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7. Install the M8 bolts (2) into the hinge holes on the hood side of the hinge with the threaded part of the bolt toward the fenders. The threaded part will cross over the body side of the hinge. Install the washer and only snugly install the nuts.
8. The hood is now set in the service position.

Installation Procedure



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Fig. 35: Hood Position Notch
Courtesy of GENERAL MOTORS COMPANY

NOTE: **There is a positive stop which limits the hood from being opened too far.**

1. With the aid of the assistant raise the hood slightly until the hood hinge bolts can be removed from the service position notch (1).
2. Remove the M8 bolts (2) from the hinge holes on the hood side of the hinge.

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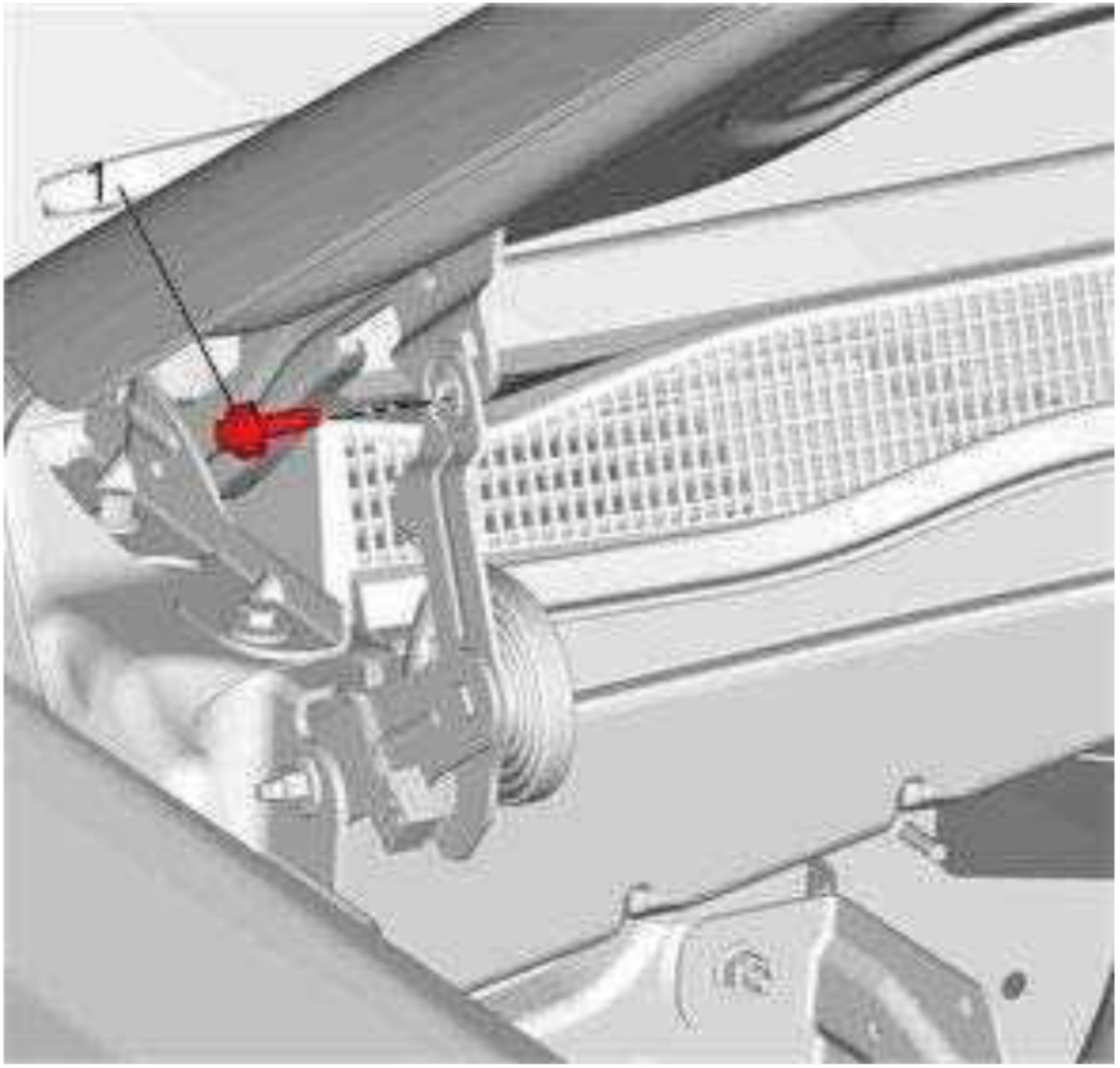


Fig. 36: Hood Open Assist Spring Bolts
Courtesy of GENERAL MOTORS COMPANY

CAUTION: **Refer to Fastener Caution .**

3. Install the hood open assist spring bolts (1) and tighten to 22 N.m (16 lb ft).

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4. Install the right and left hand air inlet grille panel extensions. Refer to **Air Inlet Grille Panel Extension Replacement** .
5. Close the hood.

HOOD ADJUSTMENT (CHEVROLET)

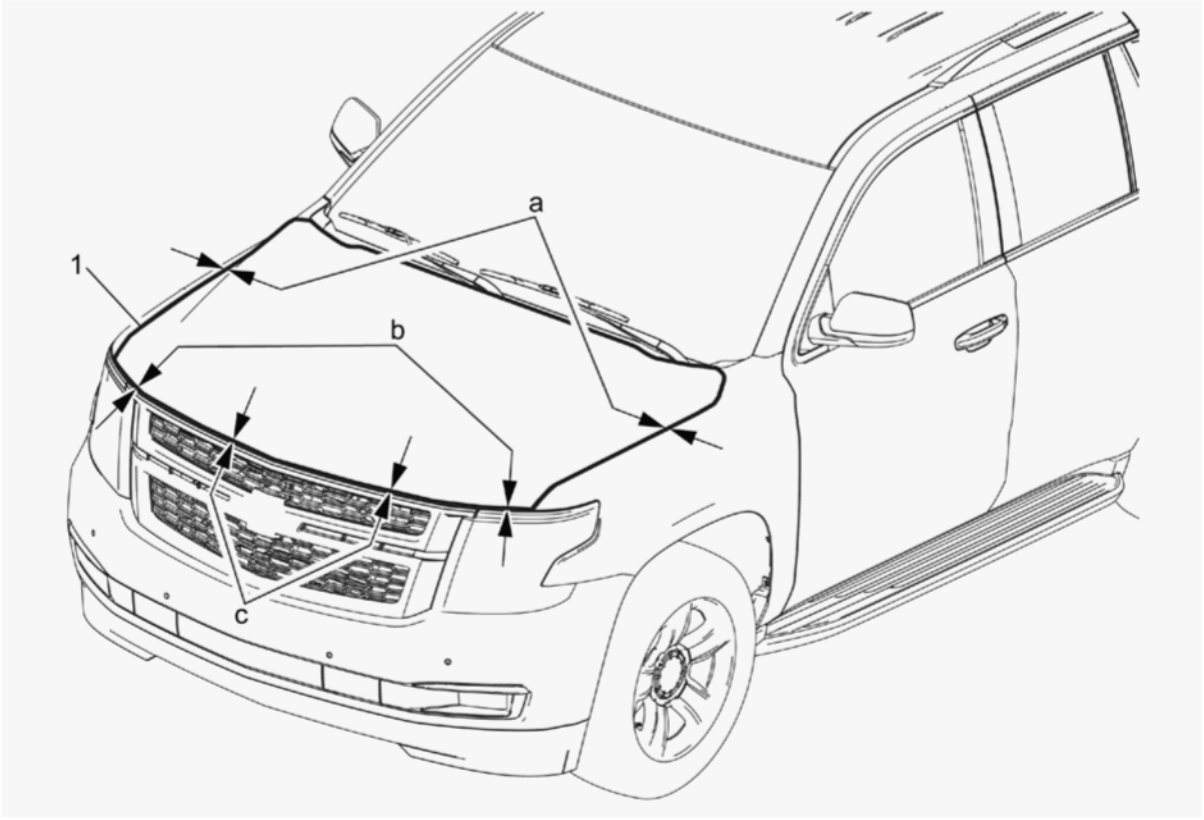


Fig. 37: Hood Adjustment (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Hood **CAUTION:** **Refer to** **Fastener**

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Callout	Component Name
	Caution . **Procedure** 1. Loosen the hood hinge bolts (Qty: 4). 2. Adjust the hood in order to obtain an even gap on both sides between the hood and the fenders, the headlamps and the grille so that the hood is flush with both fenders on the front edge, the front grille and the headlamps. 3. Loosen and adjust the hood primary and secondary latch and the hood bumpers as necessary to obtain the adjustment. **Adjustment** • Hood to front fender (a) 4.0 mm Â± 1.0 mm (0.16 in Â± 0.04 in) • Hood to headlamp (b) 5.25 mm Â± 1.0 mm (0.20 in Â± 0.04 in) • Hood to front grille (c) 5.4 mm Â± 1.0 mm (0.21 in Â± 0.04 in) **Tighten** 22 N.m (16 lb ft)

HOOD ADJUSTMENT (GMC)

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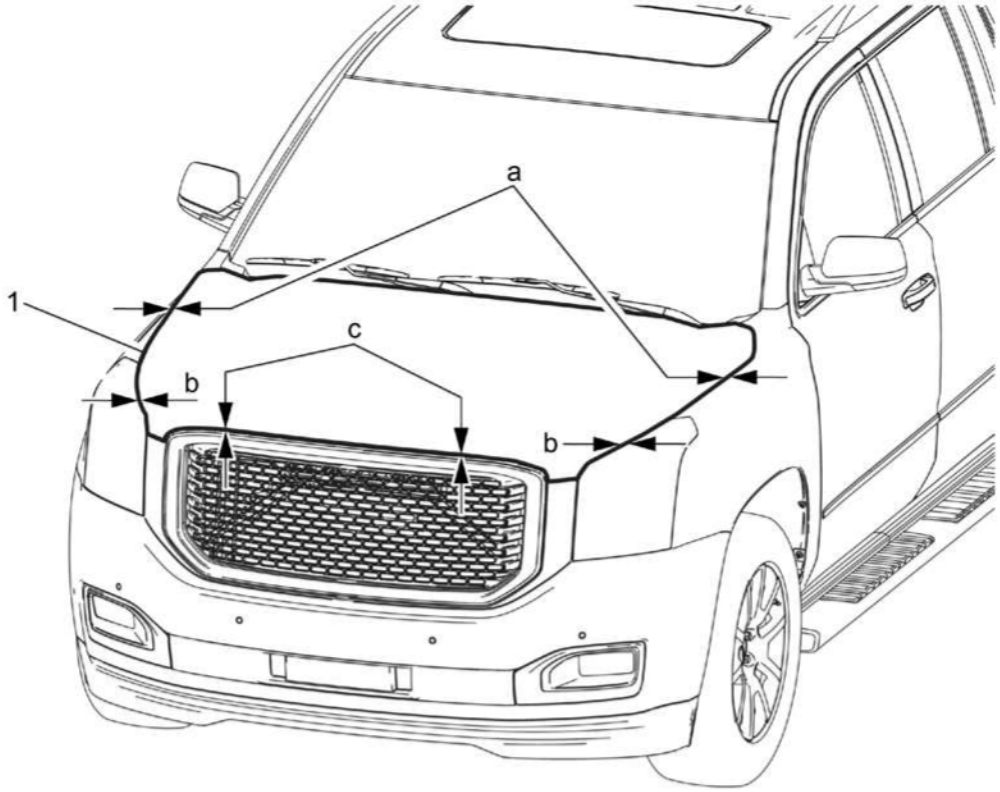


Fig. 38: Hood Adjustment (GMC)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Hood **CAUTION:** **Refer to Fastener Caution .** **Procedure** 1. Loosen the hood hinge reinforcement nuts (Qty: 4).

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Callout	Component Name
	2. Adjust the hood in order to obtain an even gap on both sides between the hood and the fenders, the headlamps and the grille so that the hood is flush with both fenders on the front edge, the front grille and the headlamps. 3. Loosen and adjust the hood primary and secondary latch and the hood bumpers as necessary to obtain the adjustment. **Adjustment** • Hood to front fender (a) 4.0 mm Â± 1.0 mm (0.16 in Â± 0.04 in) • Hood to headlamp (b) 4.0 mm Â± 1.0 mm (0.16 in Â± 0.04 in) • Hood to grille (c) 5.4 mm Â± 1.0 mm (0.21 in Â± 0.04 in) **Tighten** 25 N.m (18 lb ft)

HOOD ADJUSTMENT (CADILLAC)

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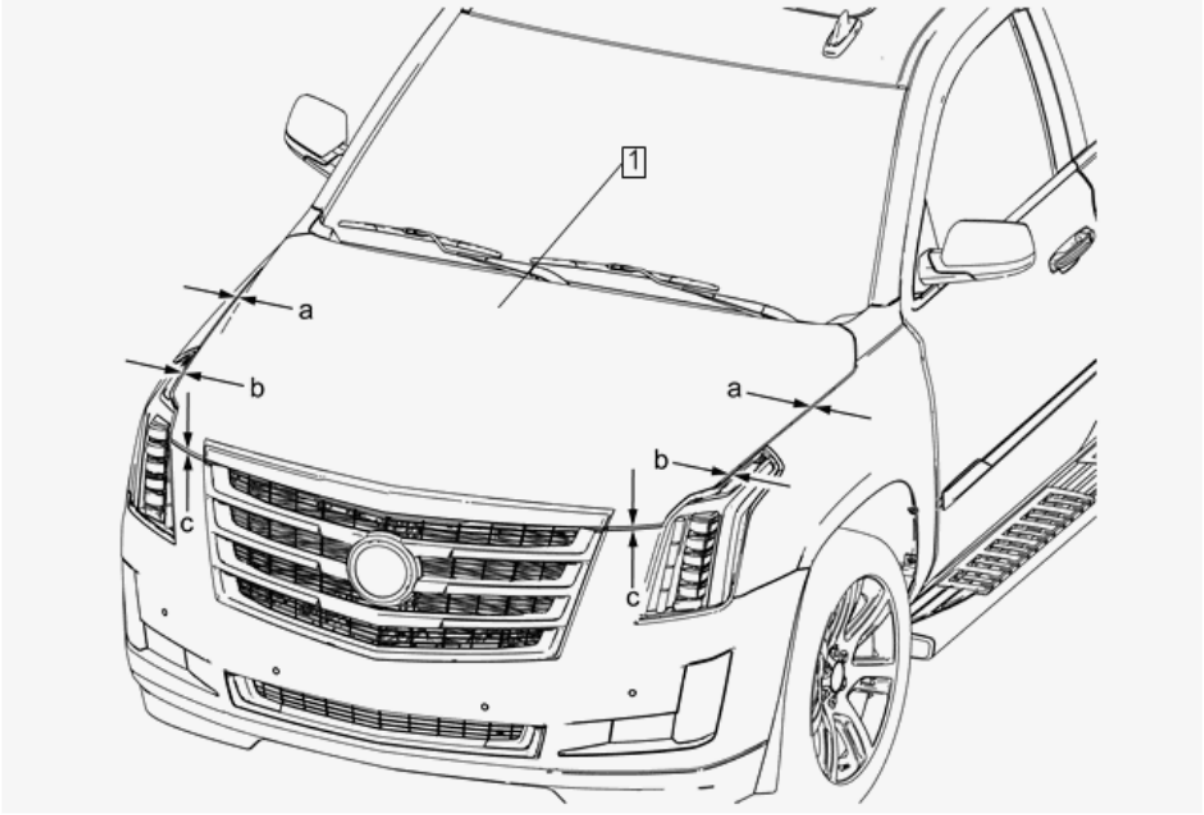


Fig. 39: Hood Adjustment (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Hood **CAUTION:** **Refer to Fastener Caution .** **Procedure** 1. Loosen the hood hinge bolts (Qty: 4).

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Callout	Component Name
	2. Adjust the hood in order to obtain an even gap on both sides between the hood and the fenders, the headlamps and the grille so that the hood is flush with both fenders on the front edge, the front grille and the headlamps. 3. Loosen and adjust the hood primary and secondary latch and the hood bumpers as necessary to obtain the adjustment. **Adjustment** • Hood to front fender (a) 4.0 mm Â± 1.0 mm (0.16 in Â± 0.04 in) • Hood to headlamp (b) 4.0 mm Â± 1.0 mm (0.16 in Â± 0.04 in) • Hood to front fascia (c) 6 mm Â± 1.5 mm (0.24 in Â± 0.06 in) **Tighten** 22 N.m (16 lb ft)

HOOD REPLACEMENT

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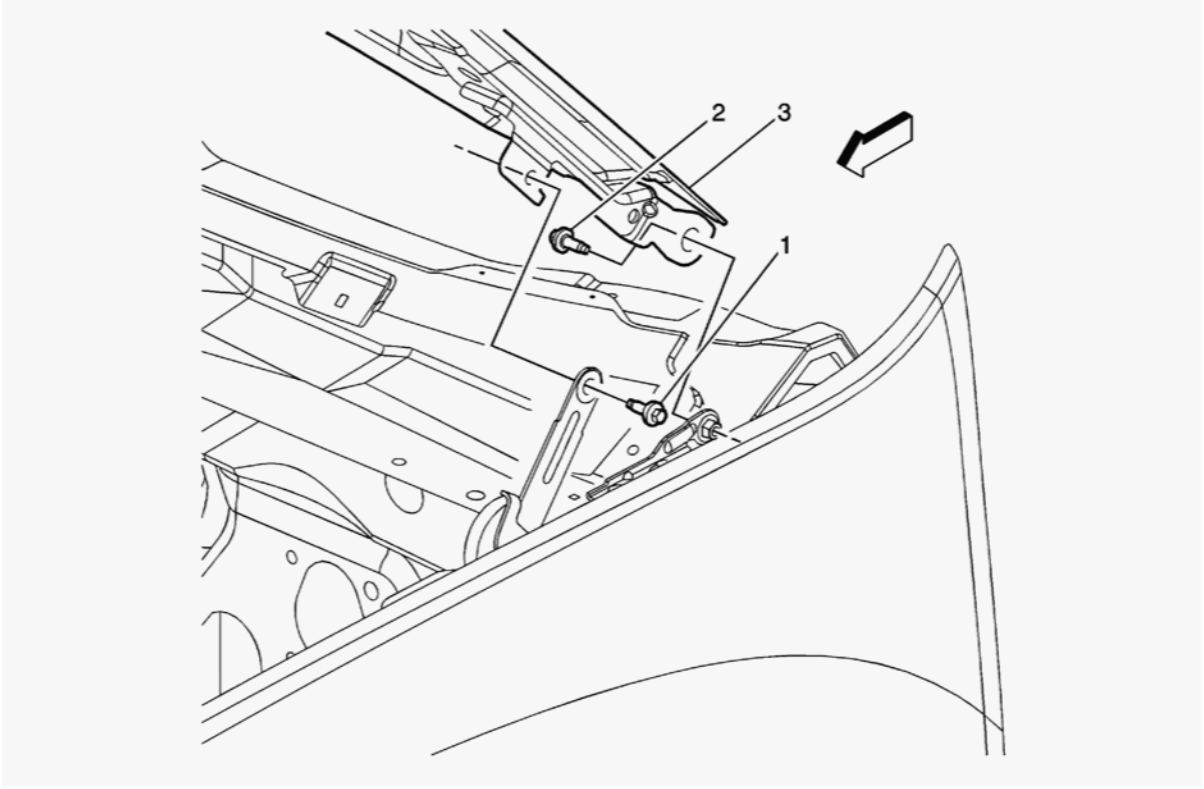


Fig. 40: View Of Hood & Bolts
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: When a hood hold open device is being removed or installed, provide alternate support to avoid the	

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Callout	Component Name
possibility of damage to the vehicle or personal injury. **Preliminary Procedure** 1. Remove the air inlet grille panel extension. Refer to **Air Inlet Grille Panel Extension Replacement** .	
1	Hood Hinge Bolt (Qty: 2) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 22 N.m (16 lb ft)
2	Hood Hinge Pivot Bolt (Qty: 2) **Tighten** 25 N.m (18 lb ft)
3	Hood **Procedure** • Disconnect any electrical connectors before removing. • With the aid of an assistant remove the hood. • Transfer any parts as needed. • Adjust the hood as needed. Refer to **Hood Adjustment (Chevrolet)Hood Adjustment (GMC)Hood Adjustment (Cadillac)**

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HEADLAMP AND FRONT END PANEL MOUNT PANEL BRACE REPLACEMENT (CADILLAC)

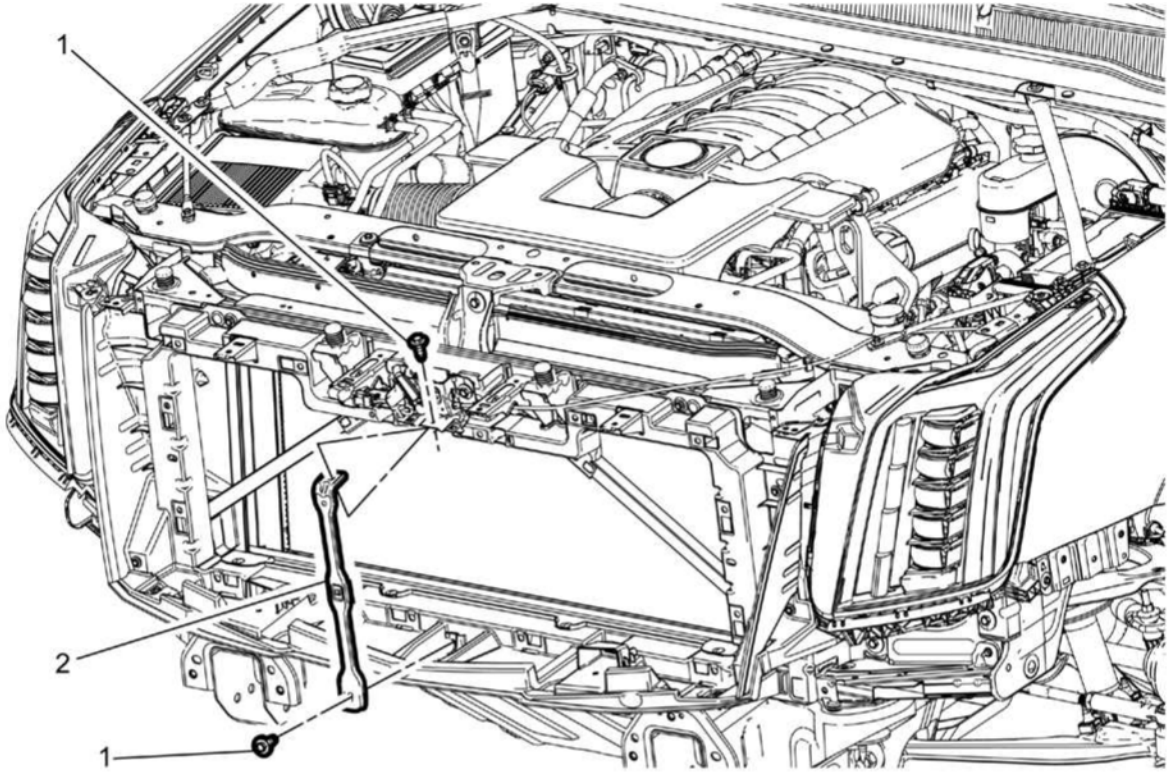


Fig. 41: Headlamp and Front End Panel Mount Panel Brace (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Remove the front bumper fascia. Refer to **Front Bumper Fascia Replacement (Cadillac)** 2. Remove the forward range radar module. Refer to **Forward Range Radar Module Replacement (Cadillac without AVF)** **Forward Range Radar Module Replacement (Cadillac with AVF)**	
1	Headlamp and Front End Panel Mount Panel Brace Bolt (Qty: 2)

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Callout	Component Name
	CAUTION: **Refer to** **Fastener** Tighten **Caution** . 6 N.m (53 lb in)
2	Headlamp and Front End Panel Mount Panel Brace

HEADLAMP AND RADIATOR GRILLE MOUNT PANEL REPLACEMENT

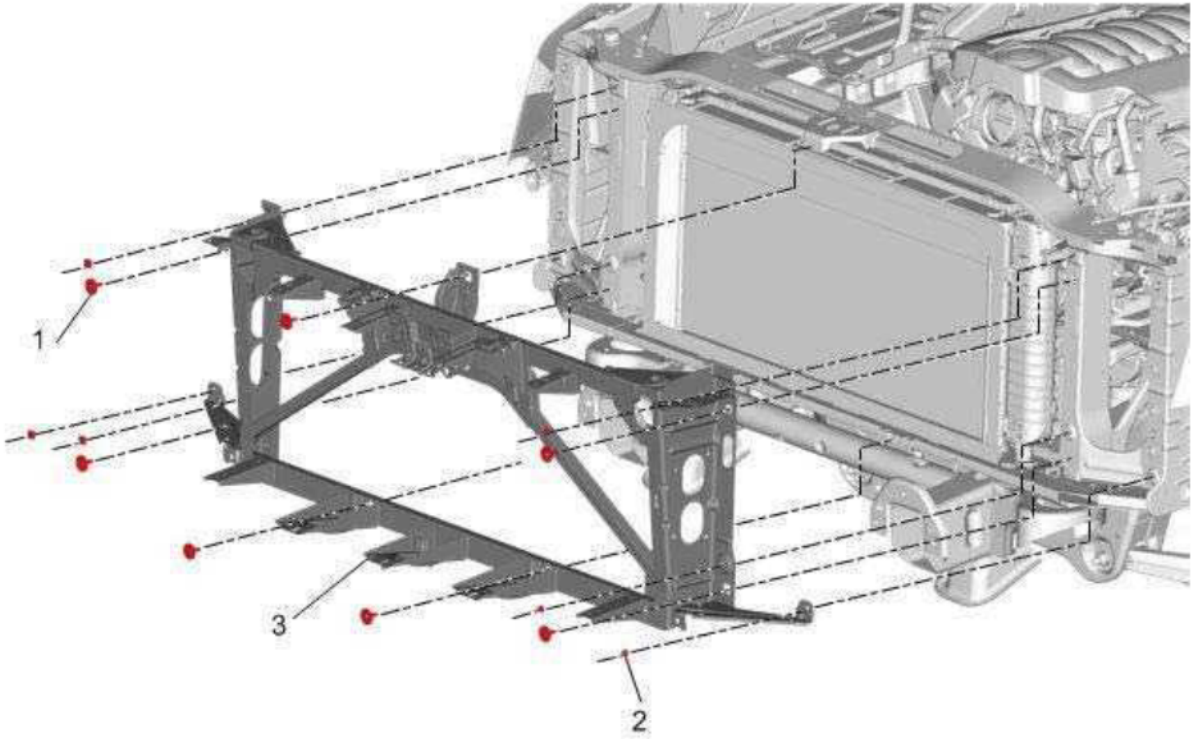


Fig. 42: Headlamp and Radiator Grille Mount Panel
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name

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Callout	Component Name
Preliminary Procedures 1. Remove the front bumper impact bar. Refer to **Front Bumper Impact Bar Replacement (GMC)** **Front Bumper Impact Bar Replacement (Chevrolet)** **Front Bumper Impact Bar Replacement (Cadillac)** . 2. Remove the headlamps. Refer to **Headlamp Replacement (GMC)** **Headlamp Replacement (Chevrolet)** **Headlamp Replacement (Cadillac)** 3. Remove the front bumper shutter. Refer to **Front Bumper Shutter Replacement (Upper,)** **Front Bumper Shutter Replacement (Lower)** **Front Bumper Shutter Replacement (Mechanical, Cadillac)** 4. Remove the front right and left hand wheelhouse panel. Refer to **Front Wheelhouse Liner Replacement - Left Side (Cadillac)** **Front Wheelhouse Liner Replacement - Left Side (GMC)** **Front Wheelhouse Liner Replacement - Left Side (Chevrolet)** , **Front Wheelhouse Liner Replacement - Right Side (Cadillac)** **Front Wheelhouse Liner Replacement - Right Side (Chevrolet)** **Front Wheelhouse Liner Replacement - Right Side (GMC)** 5. Remove the hood latch. Refer to **Hood Primary and Secondary Latch Replacement**. 6. Reposition the hood primary and secondary latch cable. 7. Disconnect ground from the frame if equipped. 8. Disconnect electrical harness as needed.	
1	Headlamp and Radiator Grille Mount Panel Bolt (Qty: 7) **CAUTION:** **Refer to** **Fastener Caution** . **Tighten** 25 N.m (18 lb ft)
2	Headlamp and Radiator Grille Mount Panel Nut (Qty: 6) **Tighten** 9 N.m (80 lb in)
3	Headlamp and Radiator Grille Mount Panel **Procedure**

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Callout	Component Name
	Transfer Components as necessary.

HOOD PRIMARY AND SECONDARY LATCH REPLACEMENT

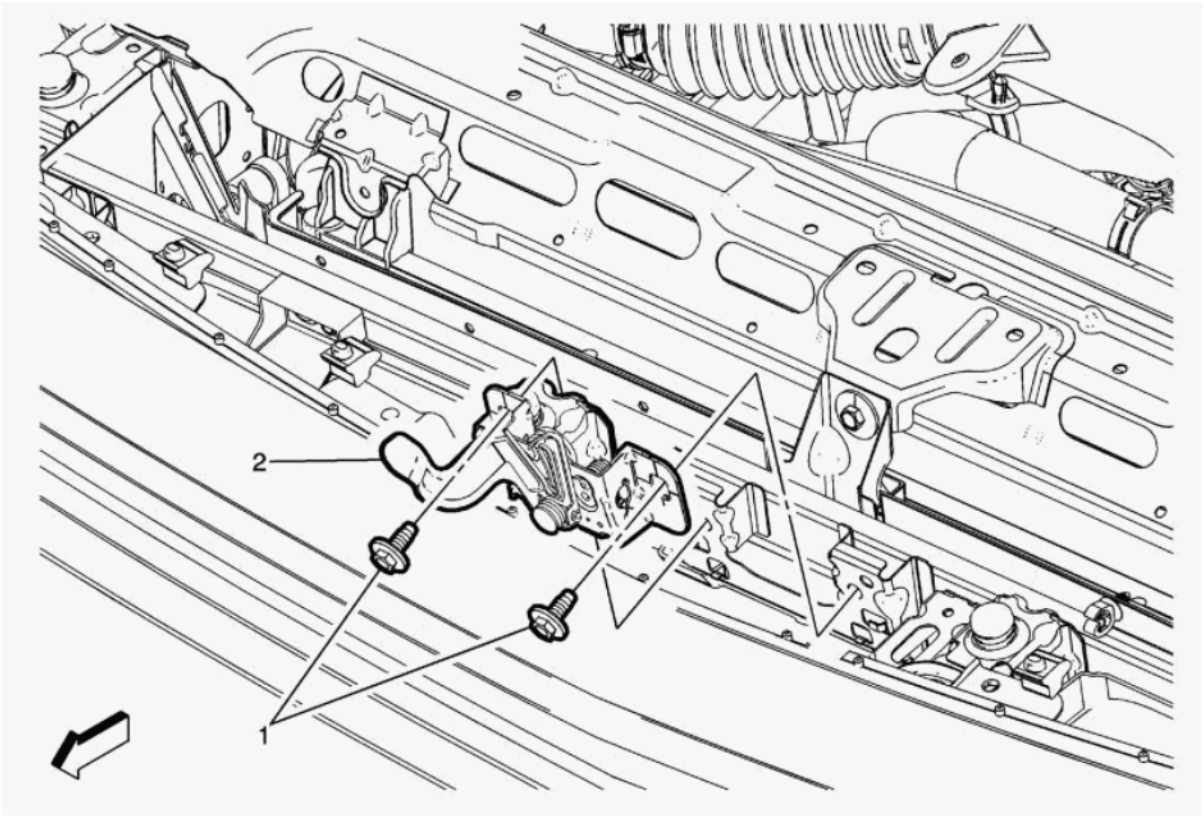


Fig. 43: Hood Primary and Secondary Latch
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the front compartment front sight shield. Refer to **Front Compartment Front Sight Shield Replacement (GMC)Front Compartment Front Sight Shield Replacement (Chevrolet)Front Compartment Front Sight Shield Replacement (Cadillac)**	
1	Hood Primary and Secondary Latch Bolts (Qty: 2)

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Callout	Component Name
	CAUTION: **Refer to** **NOTE: er** **Caution** **Use a grease pencil to mark the location of the hood latch before removing the bolts.** **Tighten** 22 N.m (16 lb ft)
2	Hood Primary and Secondary Latch **Procedure** 1. Disconnect the hood release cable from hood latch. 2. Disconnect any electrical connectors. 3. Align the hood latch if necessary.

FRONT SIDE DOOR CHECK LINK REPLACEMENT (CHEVROLET, GMC)

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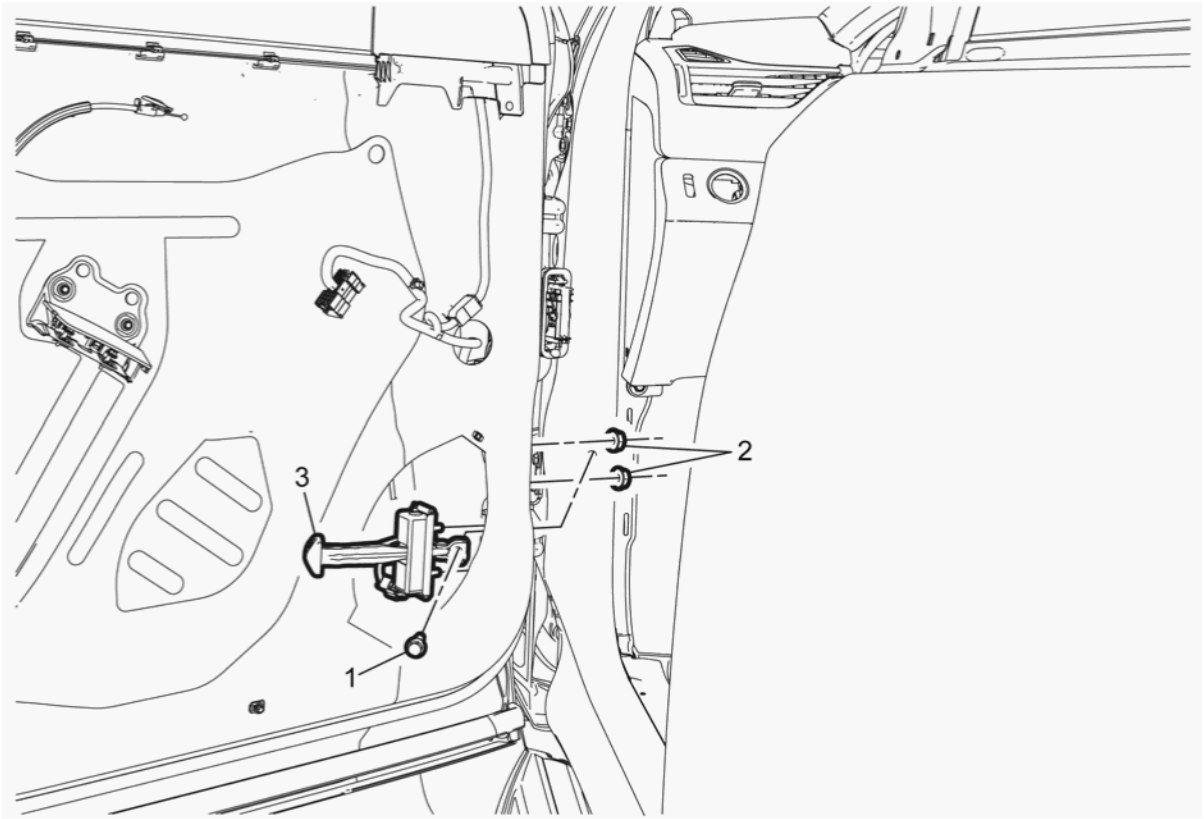


Fig. 44: Front Side Door Check Link
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Open the door to the full open position. 2. Place the window in the full up position. 3. Remove the front side door speaker. Refer to **Radio Front Side Door Speaker Replacement** .	
1	Front Side Door Check Link Bolt **CAUTION:**

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Callout	Component Name
	Refer to Fastener Caution . **Tighten** 22 N.m (16 lb ft)
2	Front Side Door Check Link Nut (Qty: 2) **Tighten** 10 N.m (89 lb in)
3	Front Side Door Check Link **NOTE:** **Inspect the door for proper operation before installing the door trim.**

FRONT SIDE DOOR CHECK LINK REPLACEMENT (CADILLAC)

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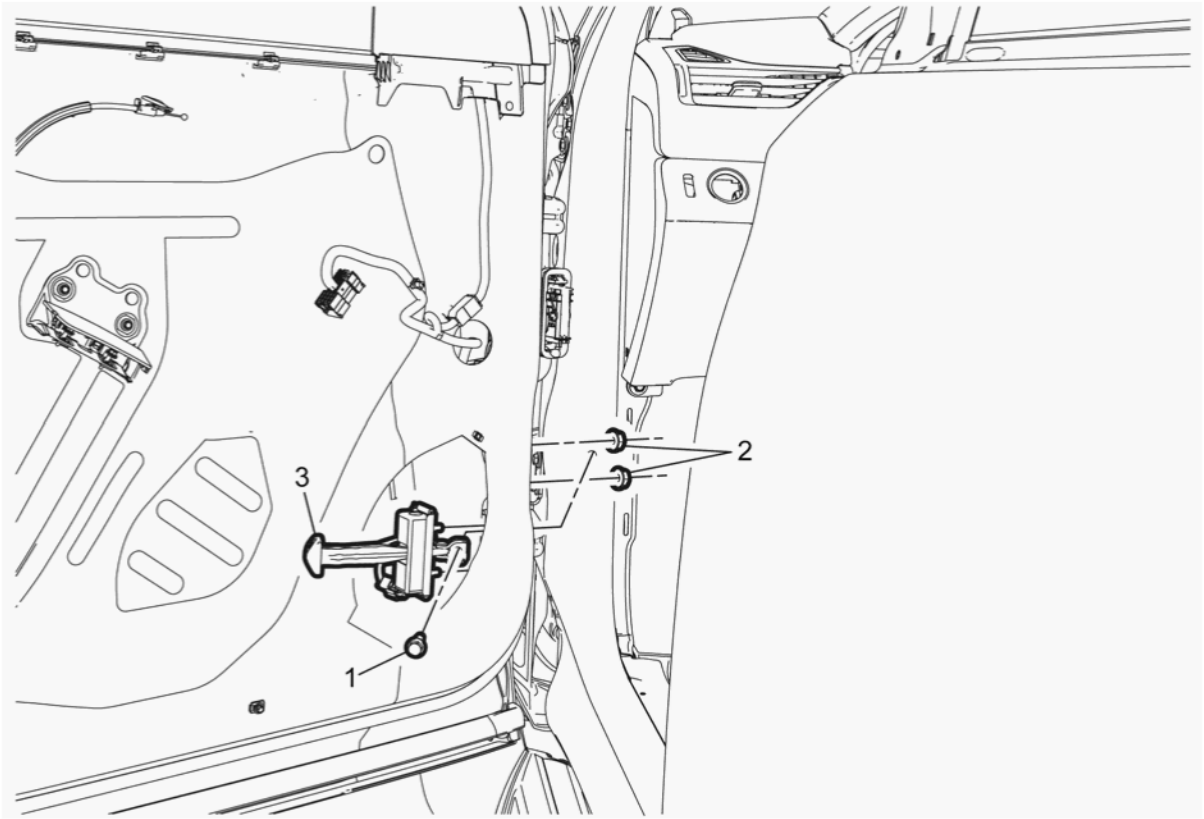


Fig. 45: Front Side Door Check Link
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Open the door to the full open position. 2. Place the window in the full up position. 3. Remove the front side door speaker. Refer to **Radio Front Side Door Speaker Replacement** .	
1	Front Side Door Check Link Bolt **CAUTION:**

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Callout	Component Name
	Refer to Fastener Caution . **Procedure** Slide the front side door check link cover rearward to gain access to the bolt. **Tighten** 22 N.m (16 lb ft)
2	Front Side Door Check Link Nut (Qty: 2) **Tighten** 10 N.m (89 lb in)
3	Front Side Door Check Link **Procedure** Transfer all necessary components. **NOTE:** **Inspect the door for proper operation before installing the door trim.**

FRONT SIDE DOOR CHECK LINK COVER REPLACEMENT

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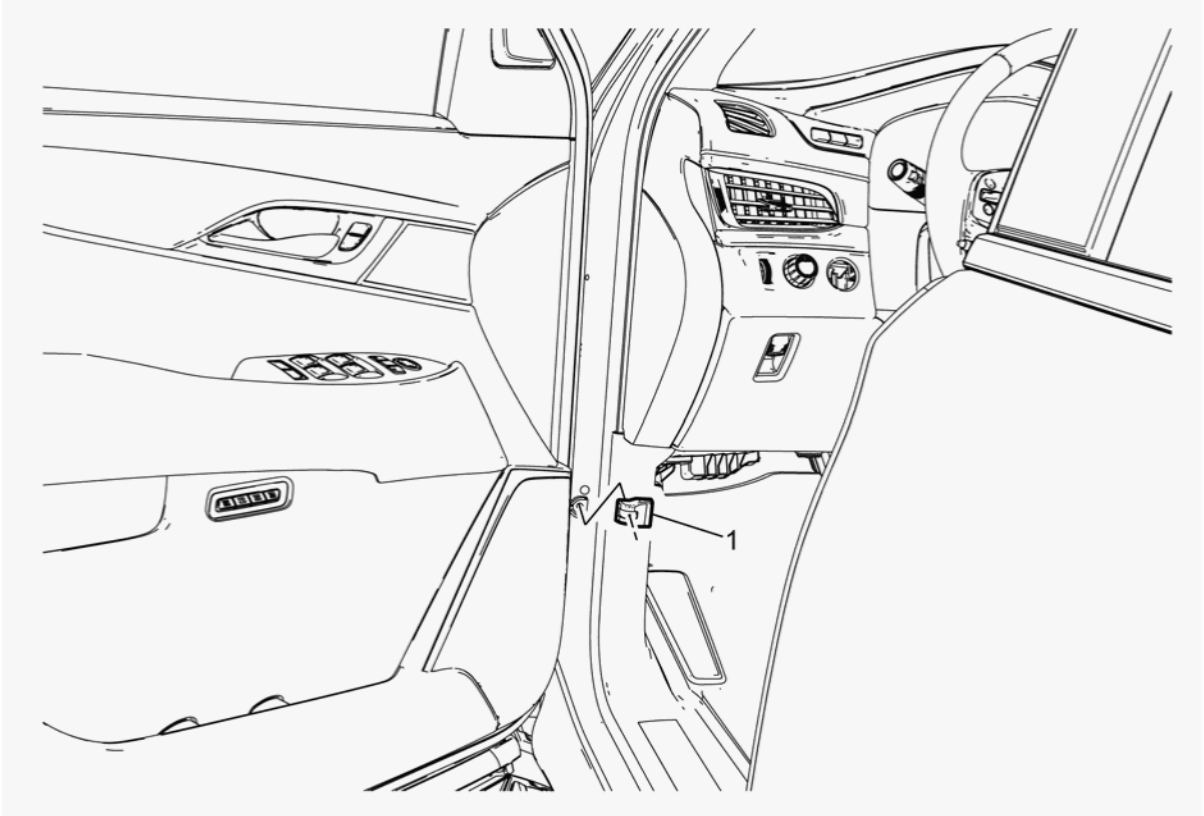


Fig. 46: Front Side Door Check Link Cover
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the front side door check link bolt. Refer to **Front Side Door Check Link Replacement (Chevrolet, GMC)Front Side Door Check Link Replacement (Cadillac)**.	
1	Front Side Door Check Link Cover **Procedure** Slide the front side door check link cover over the end of the front side door check link.

REAR SIDE DOOR CHECK LINK REPLACEMENT (CHEVROLET, GMC WITH SHORT WHEELBASE)

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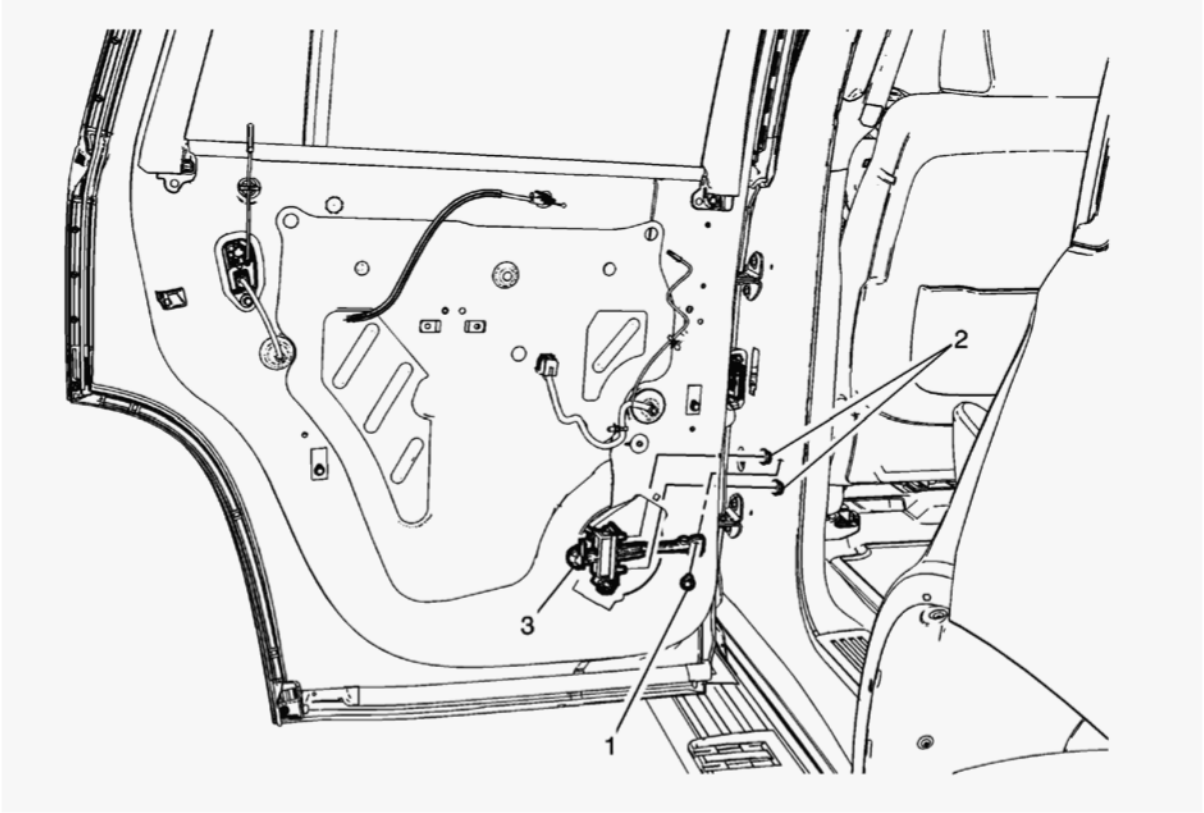


Fig. 47: Rear Side Door Check Link (Chevrolet, GMC with Short Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Open the door to the full open position. 2. Place the window in the full up position. 3. Remove rear side door speaker. Refer to **Radio Rear Side Door Speaker Replacement** .	
1	Rear Side Door Check Link Bolt **CAUTION:**

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Callout	Component Name
	Refer to **Fastener Caution** **Tighten** 22 N.m (16 lb ft)
2	Rear Side Door Check Link Nut (Qty: 2) **Tighten** 10 N.m (89 lb in)
3	Rear Side Door Check Link **NOTE:** **Inspect the door for proper operation before installing the door trim.**

REAR SIDE DOOR CHECK LINK REPLACEMENT (CHEVROLET, GMC WITH LONG WHEELBASE)

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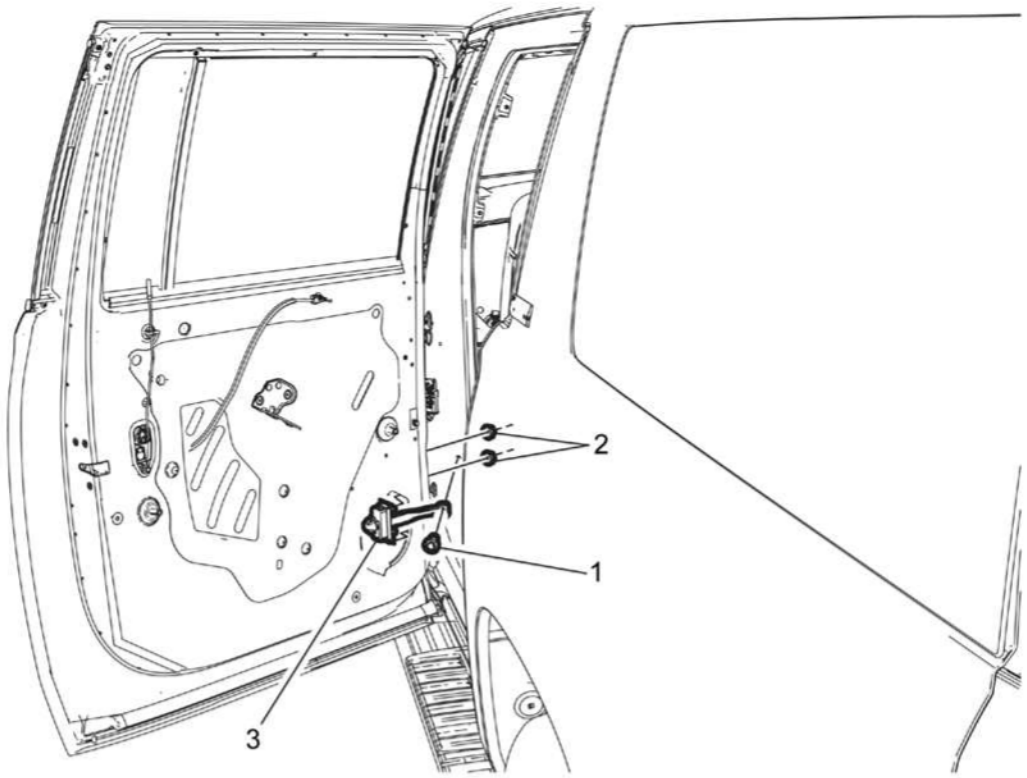


Fig. 48: Rear Side Door Check Link (Chevrolet, GMC with Long Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Open the door to the full open position. 2. Place the window in the full up position. 3. Remove rear side door speaker. Refer to **Radio Rear Side Door Speaker Replacement** .	
1	Rear Side Door Check Link Bolt **CAUTION:**

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Callout	Component Name
	Refer to **Fastener Caution** **Tighten** 22 N.m (16 lb ft)
2	Rear Side Door Check Link Nut (Qty: 2) **Tighten** 10 N.m (89 lb in)
3	Rear Side Door Check Link **NOTE:** **Inspect the door for proper operation before installing the door trim.**

REAR SIDE DOOR CHECK LINK REPLACEMENT (CADILLAC WITH SHORT WHEELBASE)

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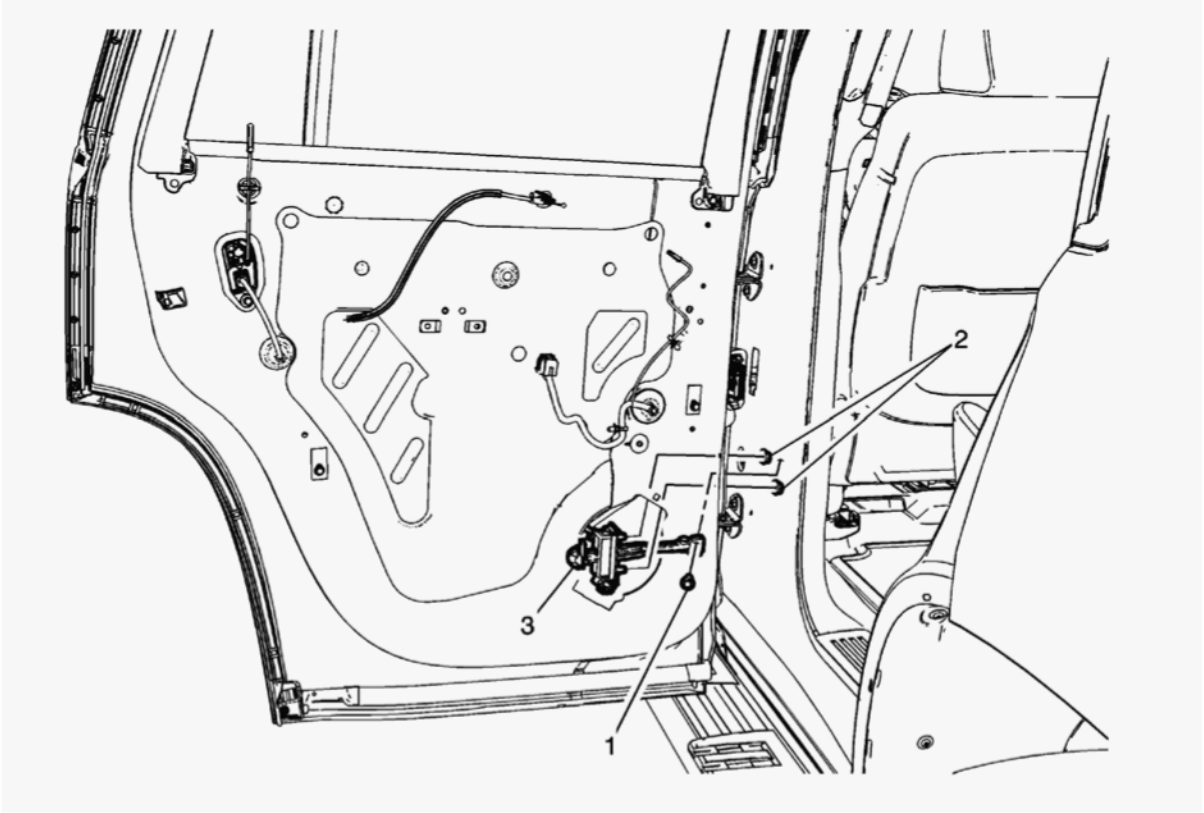


Fig. 49: Rear Side Door Check Link (Chevrolet, GMC with Short Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Open the door to the full open position. 2. Place the window in the full up position. 3. Remove rear side door speaker. Refer to **Radio Rear Side Door Speaker Replacement** .	
1	Rear Side Door Check Link Bolt **CAUTION:**

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Callout	Component Name
	Refer to **Fastener Caution** **Procedure** Slide the check link cover rearward to gain access to the check link bolt. **Tighten** 22 N.m (16 lb ft)
2	Rear Side Door Check Link Nut (Qty: 2) **Tighten** 10 N.m (89 lb in)
3	Rear Side Door Check Link **Procedure** Transfer all necessary components. **NOTE:** **Inspect the door for proper operation before installing the door trim.**

REAR SIDE DOOR CHECK LINK REPLACEMENT (CADILLAC WITH LONG WHEELBASE)

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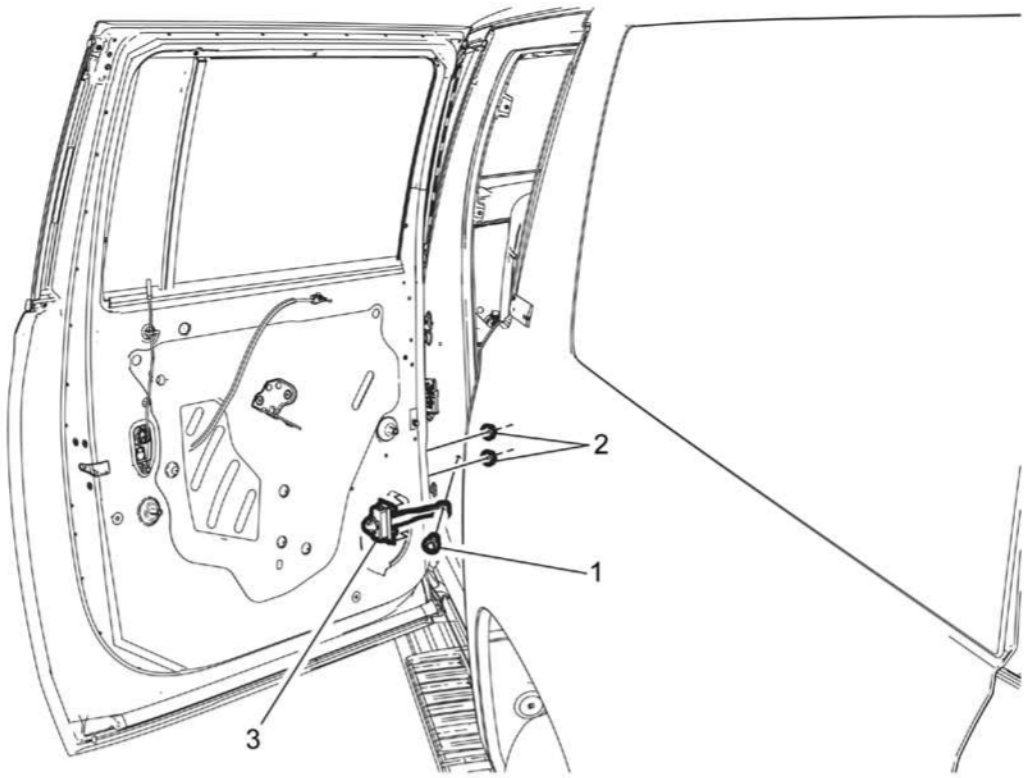


Fig. 50: Rear Side Door Check Link (Chevrolet, GMC with Long Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Open the door to the full open position. 2. Place the window in the full up position. 3. Remove rear side door speaker. Refer to **Radio Rear Side Door Speaker Replacement** .	
1	Rear Side Door Check Link Bolt **CAUTION:**

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Callout	Component Name
	Refer to **Fastener** **Caution** **Procedure** Slide the check link cover rearward to gain access to the check link bolt. **Tighten** 22 N.m (16 lb ft)
2	Rear Side Door Check Link Nut (Qty: 2) **Tighten** 10 N.m (89 lb in)
3	Rear Side Door Check Link **Procedure** Transfer all necessary components. **NOTE:** **Inspect the door for proper operation before installing the door trim.**

REAR SIDE DOOR CHECK LINK COVER REPLACEMENT

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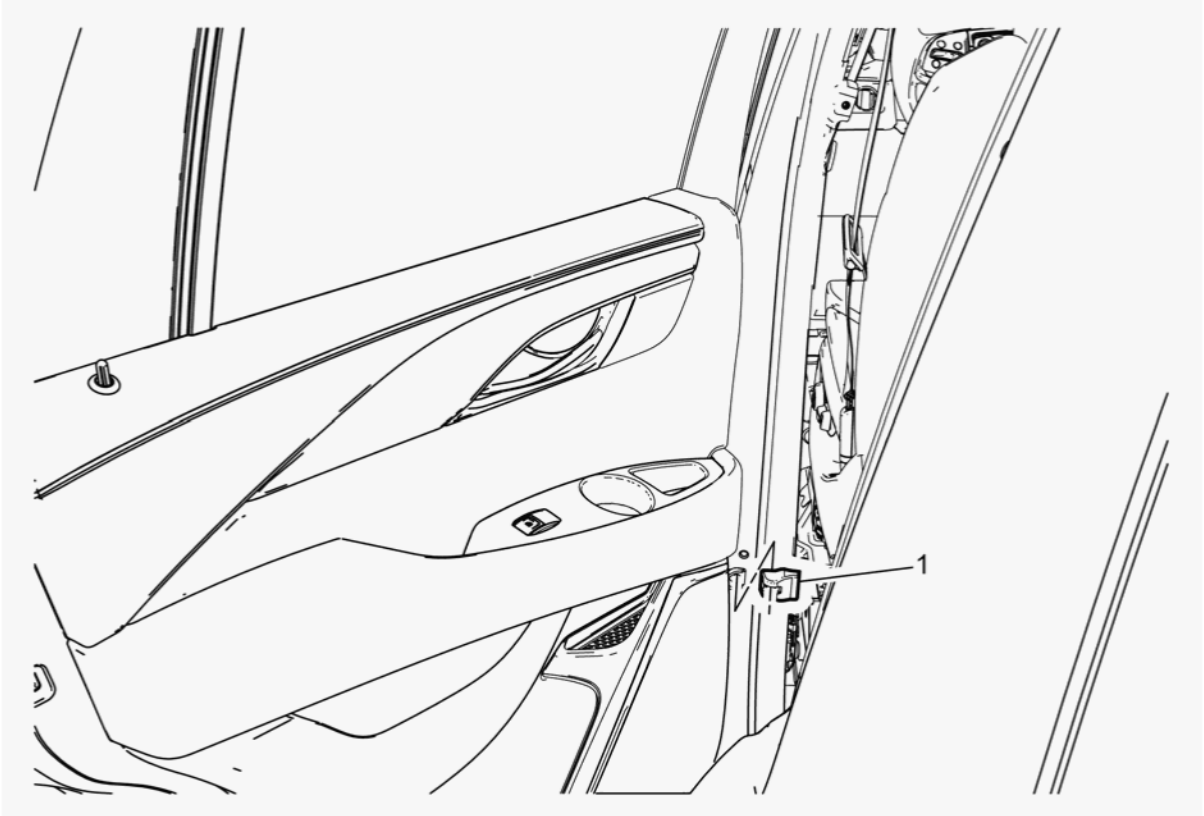


Fig. 51: Rear Side Door Check Link Cover
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the rear side door check link bolt. Refer to **Rear Side Door Check Link Replacement (Chevrolet, GMC with Short Wheelbase)Rear Side Door Check Link Replacement (Chevrolet, GMC with Long Wheelbase)Rear Side Door Check Link Replacement (Cadillac with Short Wheelbase)Rear Side Door Check Link Replacement (Cadillac with Long Wheelbase)**.	
1	Rear Side Door Check Link Cover **Procedure** Slide the rear side door check link cover over the end of the rear side door check link.

FUEL TANK FILLER DOOR REPLACEMENT

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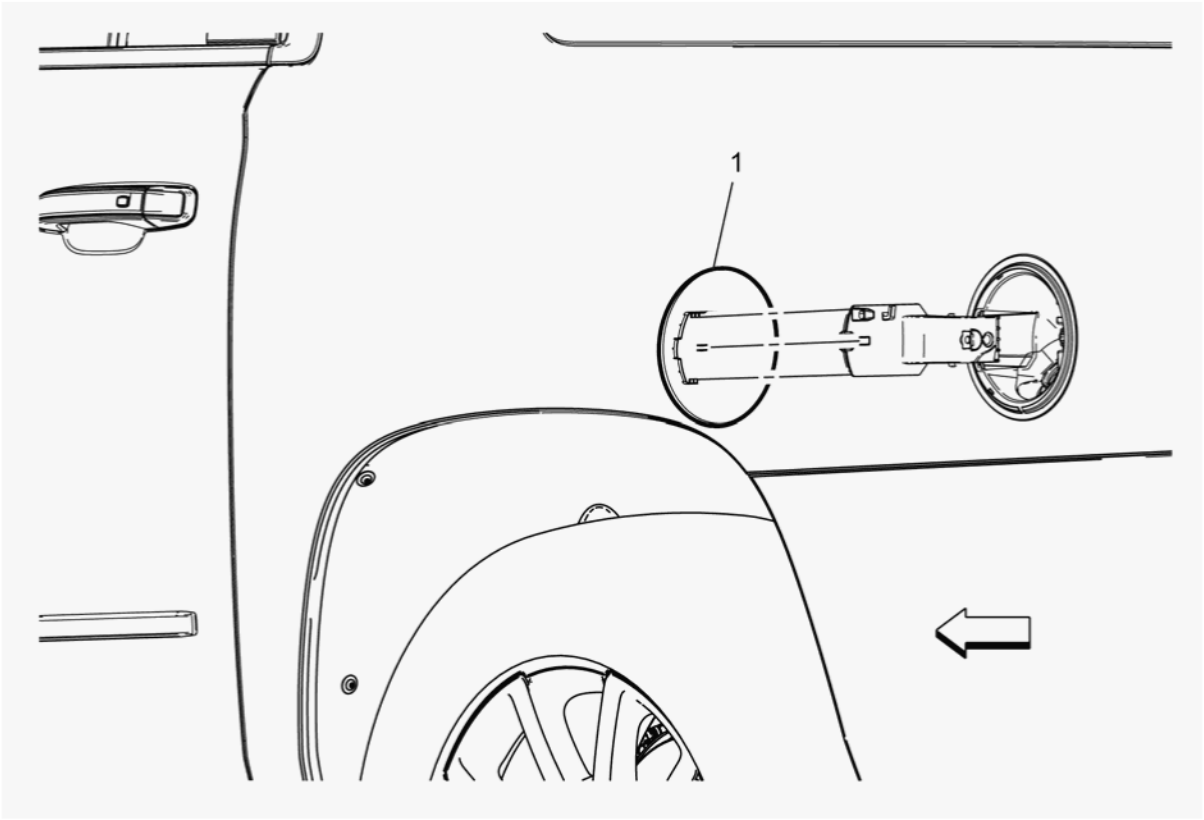


Fig. 52: Fuel Tank Filler Door
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Fuel Tank Filler Door **Procedure** Position the fuel tank filler door to the full open position. Using light outward sliding pressure on the filler door, release the retainer on the fuel tank filler door from the hinge.

FUEL TANK FILLER PIPE HOUSING REPLACEMENT

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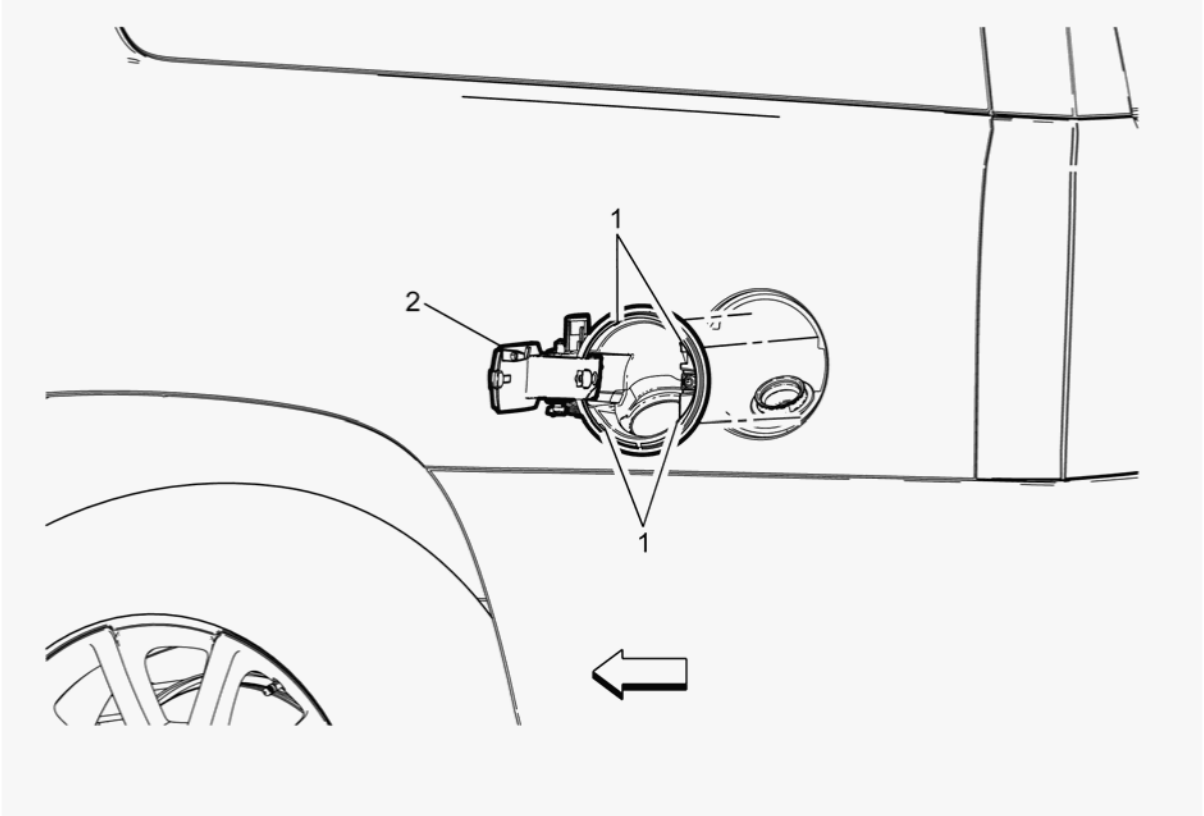


Fig. 53: Fuel Tank Filler Pipe Housing
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the fuel tank filler door. Refer to **Fuel Tank Filler Door Replacement**.	
1	Fuel Tank Filler Pipe Housing Retainer (Qty: 4) **Procedure** 1. Using a flat-bladed tool that fits into the 4 depressions, break through the 4 depressions with light pressure and then pry the clips free to release the fuel tank filler pipe housing from the panel. 2. The fuel tank filler pipe housing once removed cannot be reused and must be replaced with a NEW fuel tank filler pipe housing.

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HOOD FRONT EDGE WEATHERSTRIP REPLACEMENT (CHEVROLET, GMC)

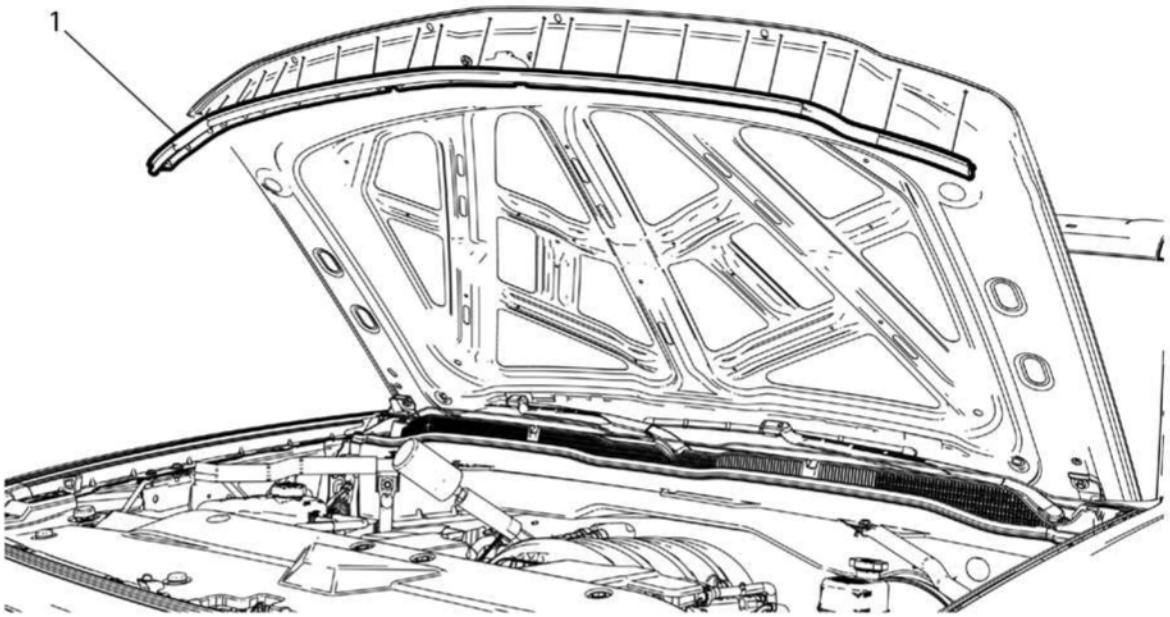


Fig. 54: Hood Front Edge Weatherstrip (Chevrolet, GMC)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Hood Front Weatherstrip **Procedure** Release the nineteen integral retainers from the hood.

HOOD FRONT EDGE WEATHERSTRIP REPLACEMENT (CADILLAC)

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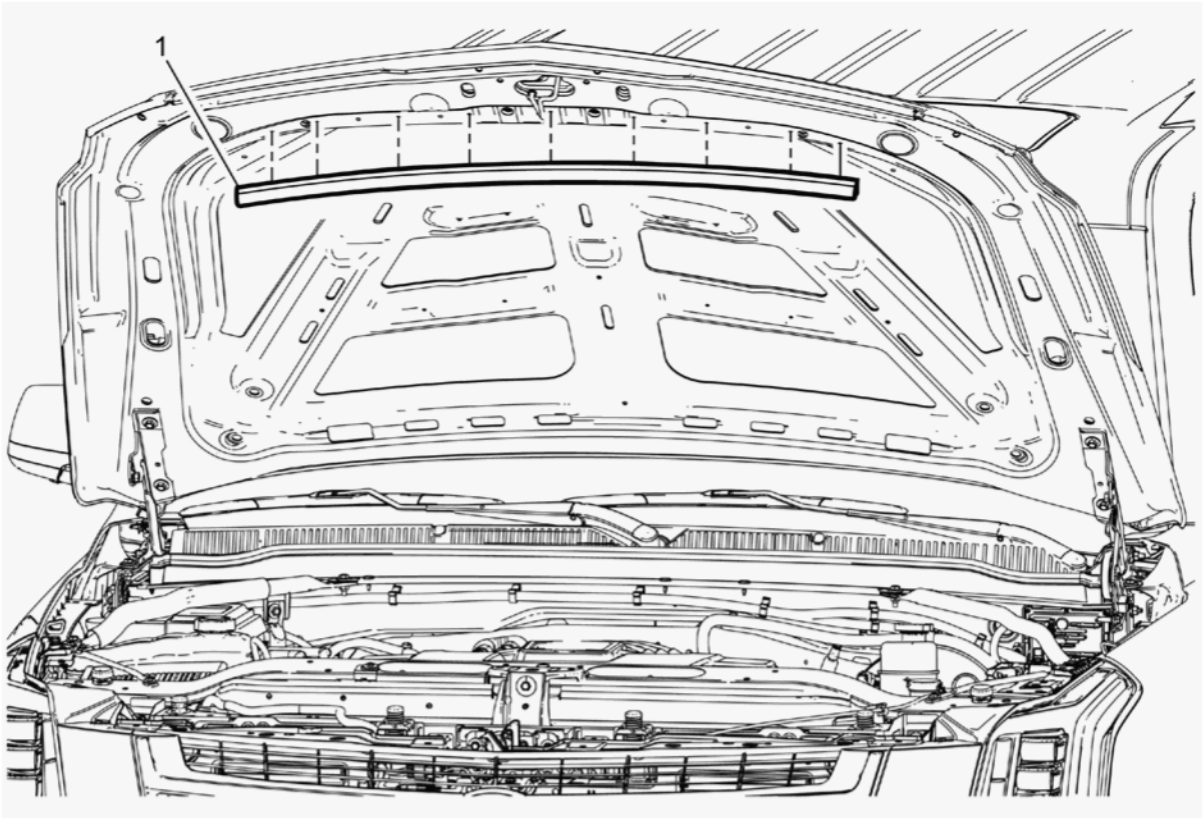


Fig. 55: Hood Front Edge Weatherstrip (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Hood Front Weatherstrip **Procedure** Release the 13 integral retainers from the hood.

FRONT COMPARTMENT FRONT SIGHT SHIELD REPLACEMENT (GMC)

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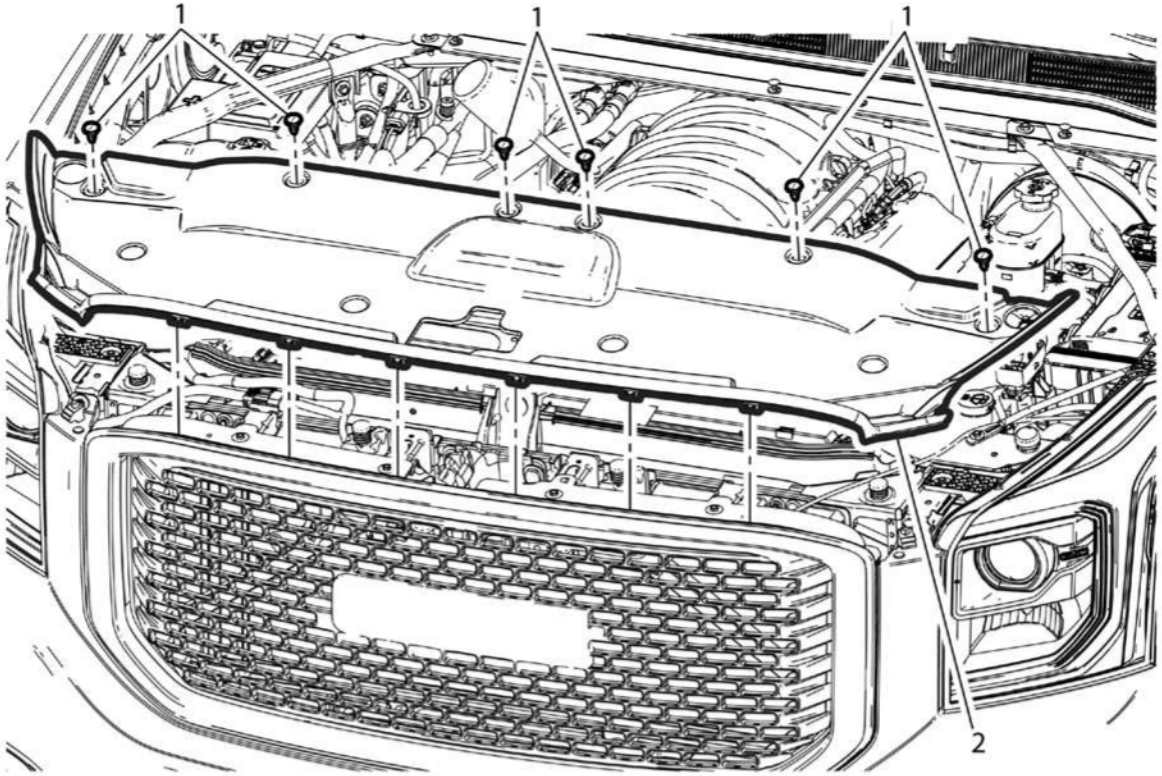


Fig. 56: Front Compartment Front Sight Shield (GMC)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Front Compartment Front Sight Shield Push-In Retainer (Qty: 6)
2	Front Compartment Front Sight Shield **Procedure** Using a trim type tool release the front tab retainers.

FRONT COMPARTMENT FRONT SIGHT SHIELD REPLACEMENT (CHEVROLET)

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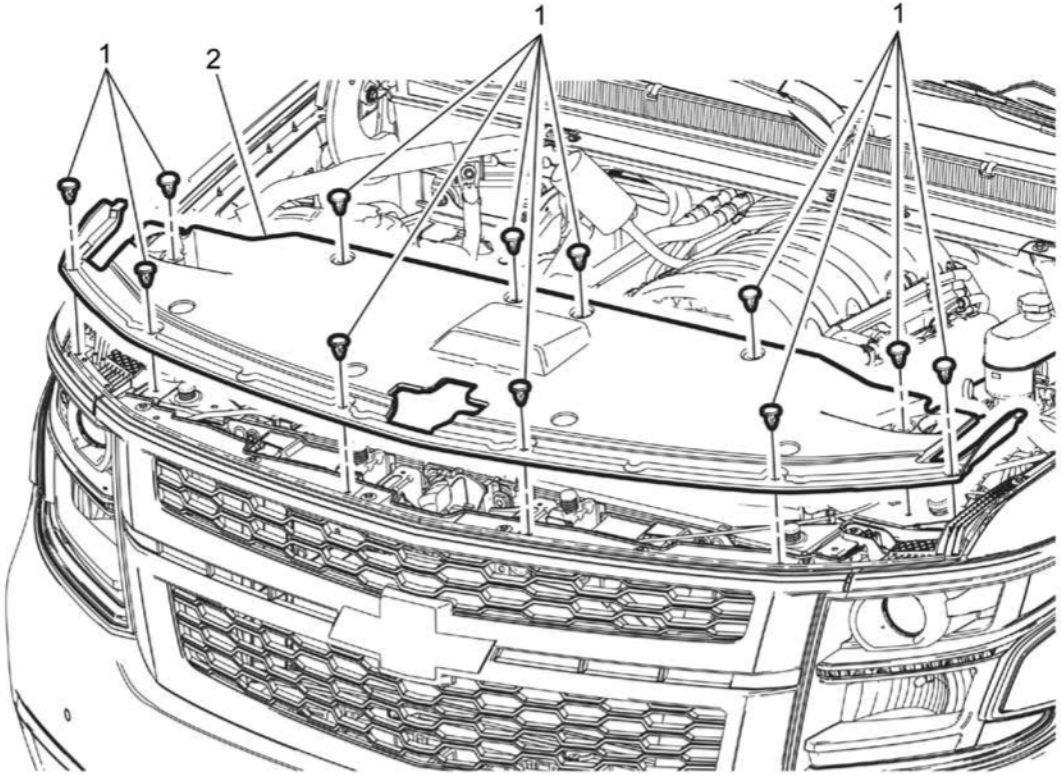


Fig. 57: Front Compartment Front Sight Shield (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Front Compartment Front Sight Shield Push-In Retainer (Qty: 12)
2	Front Compartment Front Sight Shield

FRONT COMPARTMENT FRONT SIGHT SHIELD REPLACEMENT (CADILLAC)

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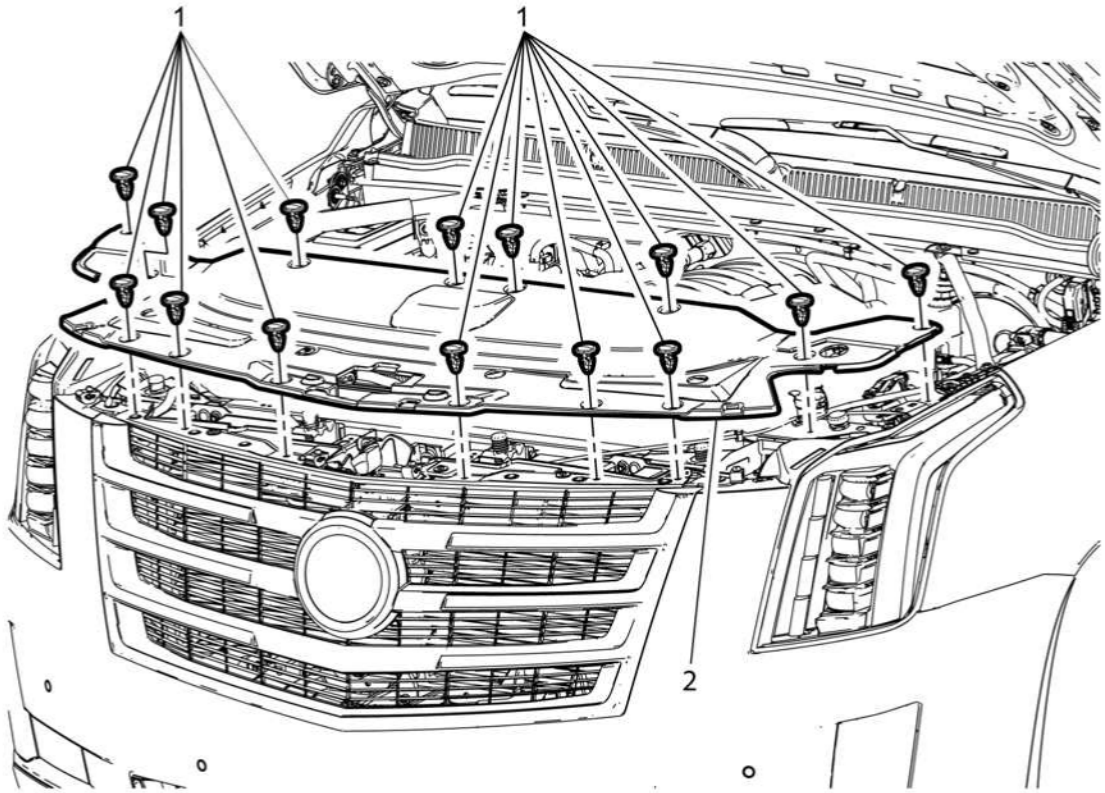


Fig. 58: Front Compartment Front Sight Shield (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Front Compartment Front Sight Shield Push-In Retainer (Qty: 14)
2	Front Compartment Front Sight Shield

REAR SIDE DOOR LOWER AUXILIARY WEATHERSTRIP REPLACEMENT (SHORT WHEELBASE)

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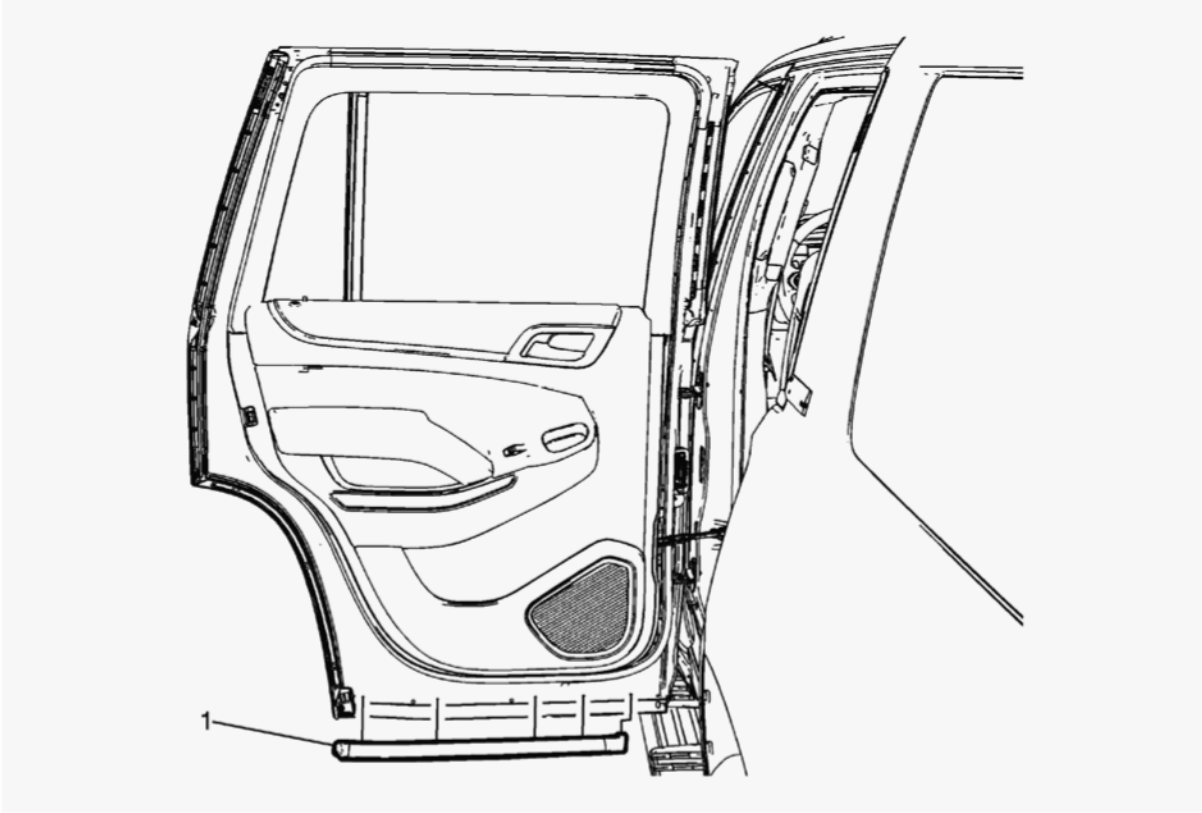


Fig. 59: Rear Side Door Lower Auxiliary Weatherstrip (Short Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Rear Side Door Lower Auxiliary Weatherstrip **Procedure** 1. Open the door to the full open position. 2. Using the appropriate tool, unclip the rear side door lower auxiliary weatherstrip from the front door. **NOTE:** **Inspect the door to**

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Callout	Component Name
	ensure a proper seal after the weatherstrip has been replaced.

REAR SIDE DOOR LOWER AUXILIARY WEATHERSTRIP REPLACEMENT (LONG WHEELBASE)

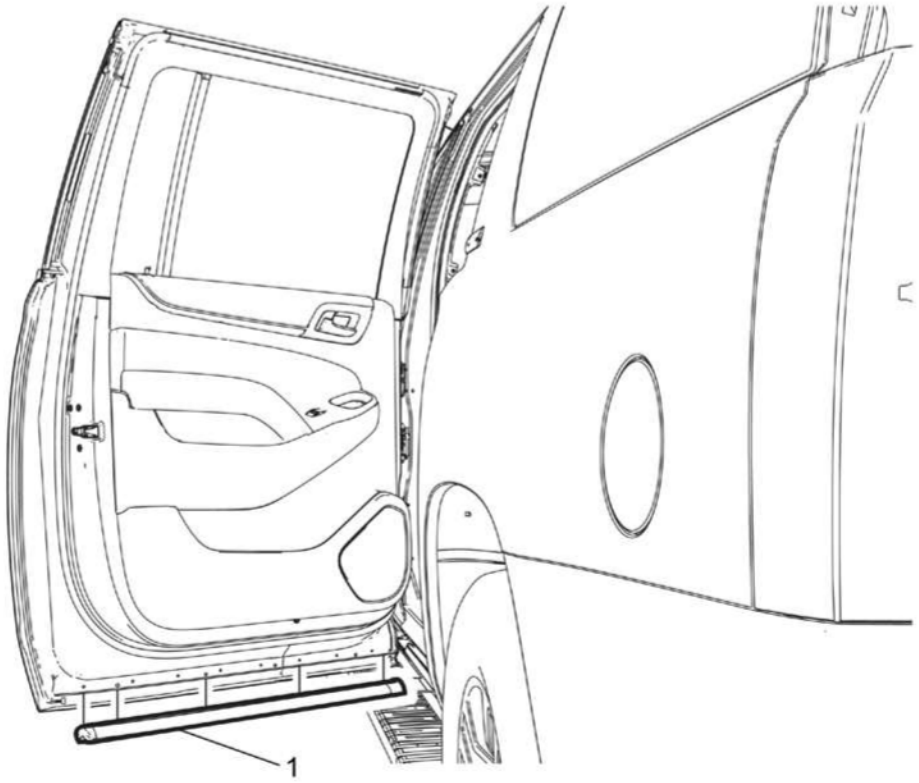


Fig. 60: Rear Side Door Lower Auxiliary Weatherstrip (Long Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name

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Callout	Component Name
1	Rear Side Door Lower Auxiliary Weatherstrip **Procedure** 1. Open the door to the full open position. 2. Using the appropriate tool, unclip the rear side door lower auxiliary weatherstrip from the front door. **NOTE:** **Inspect the door to ensure a proper seal after the weatherstrip has been replaced.**

LIFTGATE STRUT REPLACEMENT (MANUAL)

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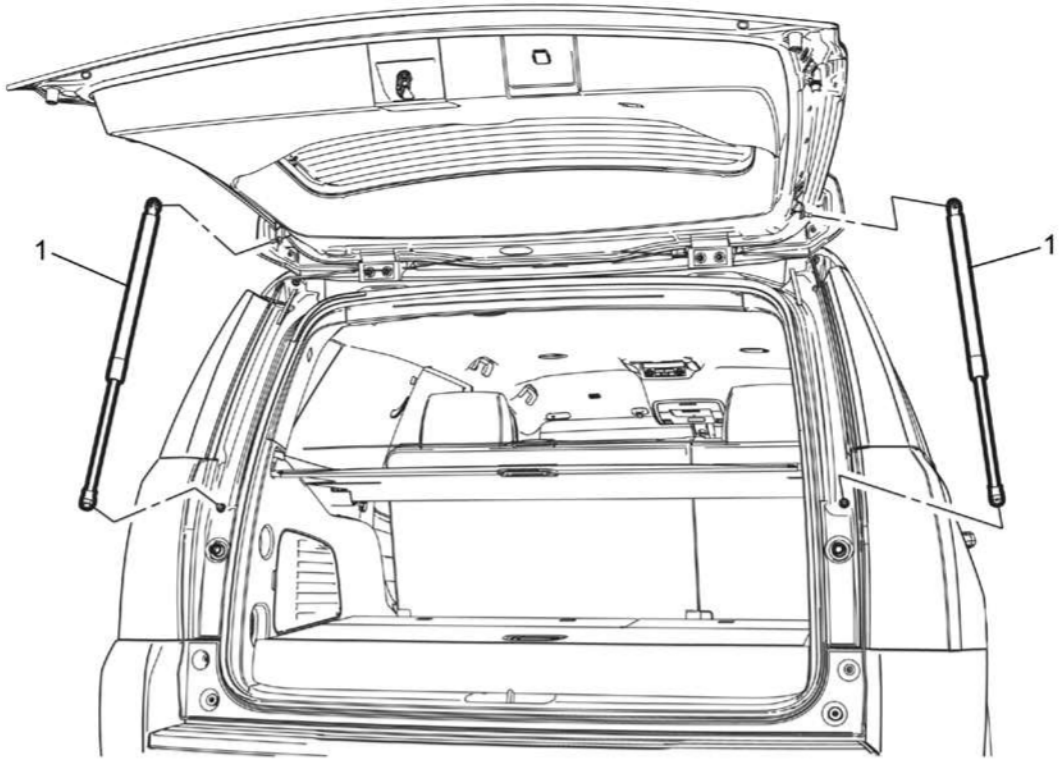


Fig. 61: Liftgate Strut (Manual)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: **When a lift gate hold open device is being removed or installed, provide alternate support to**	

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Callout	Component Name
avoid the possibility of damage to the vehicle or personal injury.	
1	Liftgate Strut (Qty: 2) **Procedure** 1. Using a small flat bladed tool to retract clip slightly while removing the lock tabs. 2. Ensure the clip is fully seated when rod is reinstalled. If clip cannot be fully seated, a new rod should be installed

LIFTGATE STRUT REPLACEMENT (POWER ASSIST)

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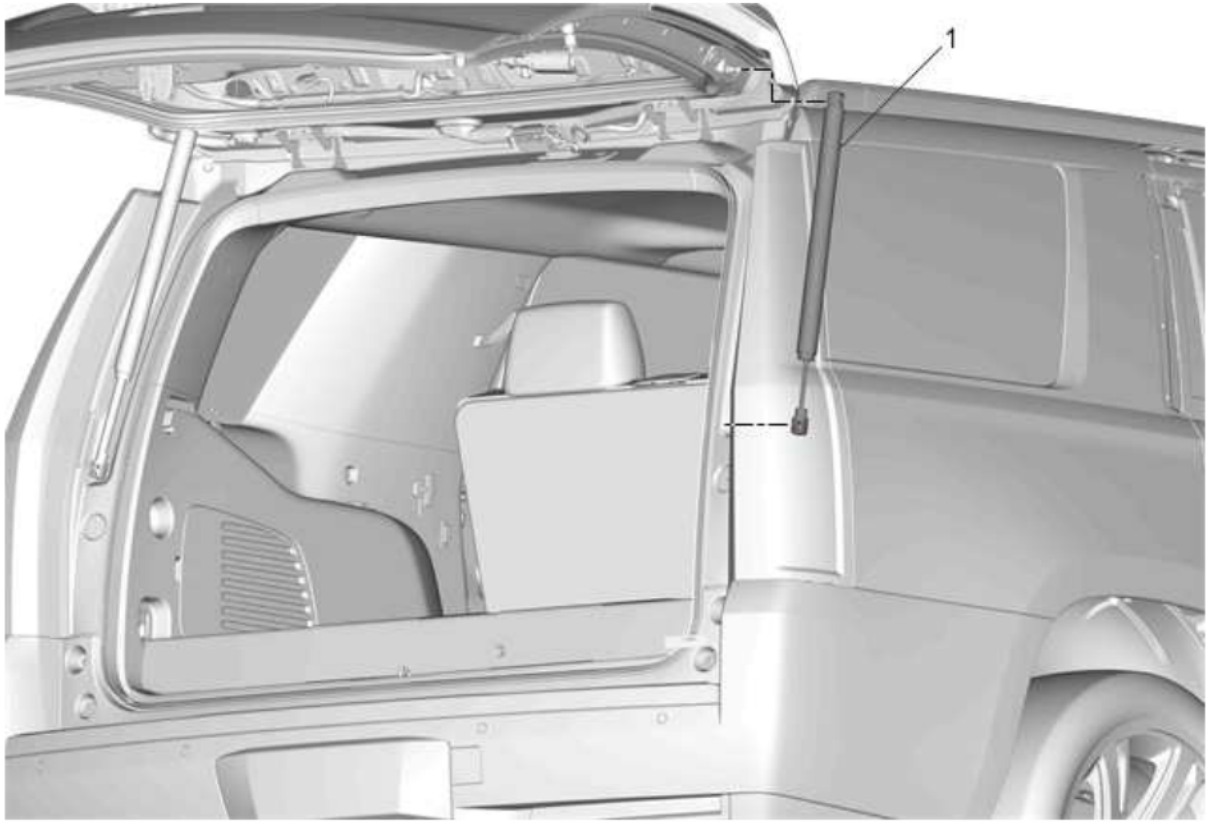


Fig. 62: Liftgate Strut (Power Assist)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: **When a lift gate hold open device is being removed or installed, provide alternate support to**	

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Callout	Component Name
avoid the possibility of damage to the vehicle or personal injury.	
1	Liftgate Strut **Procedure** 1. Using a small flat bladed tool to retract clip slightly while removing the lock tabs. 2. Ensure the clip is fully seated when rod is reinstalled. If clip cannot be fully seated, a new rod should be installed 3. **Liftgate Calibration**

LIFTGATE STRUT BRACKET REPLACEMENT

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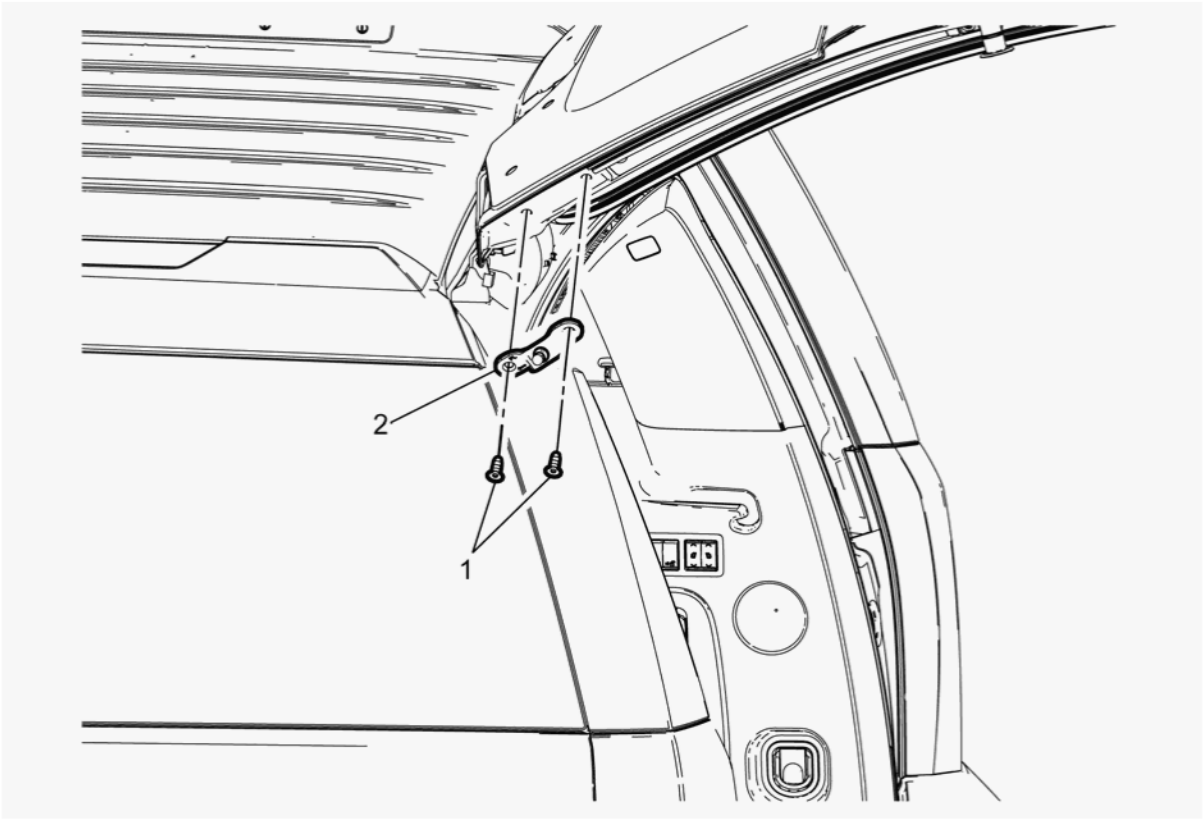


Fig. 63: Liftgate Strut Bracket
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Liftgate Strut Bracket Bolt (Qty: 2) **WARNING:** **When a lift gate hold open device is being removed or installed, provide**

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Callout	Component Name
	alternate support to avoid the possibility of damage to the vehicle or personal injury. **CAUTION:** **Refer to Fastener Caution .** **Tighten** 22 N.m (16 lb ft)
2	Liftgate Strut Bracket **Procedure** Disconnect the strut support rod or liftgate power assist actuator from the liftgate strut bracket. Reposition and secure out of the way.

LIFTGATE STRUT BALL STUD REPLACEMENT

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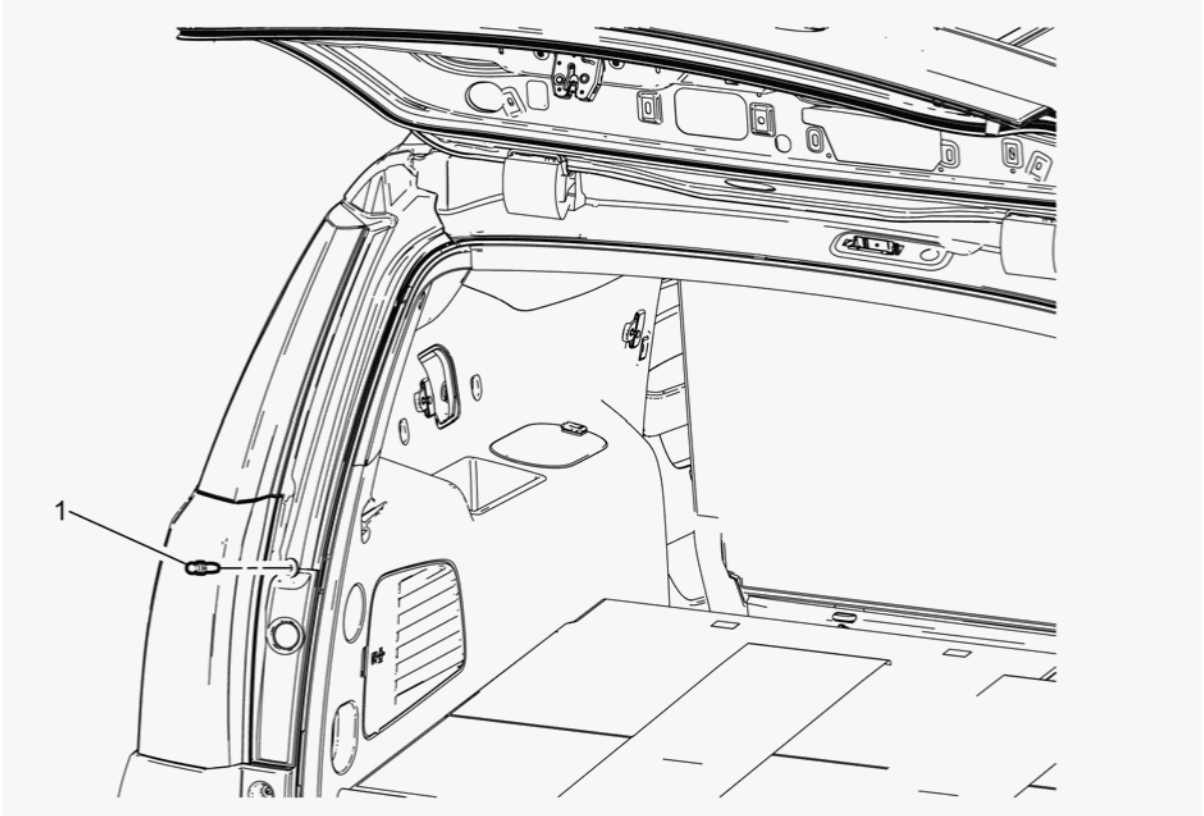


Fig. 64: Liftgate Strut Ball Stud
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
WARNING: **When a lift gate hold open device is being removed or installed, provide alternate support to**	

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Callout	Component Name
avoid the possibility of damage to the vehicle or personal injury.	
1	Liftgate Strut Ball Stud **CAUTION:** **Refer to Fastener Caution .** **Procedures** 1. Disconnect the strut support rod or liftgate power assist actuator from the ball stud reposition and secure aside. 2. Loosen the ball stud, keep pressure on the washer to hold it's position. Remove the ball stud and install the new stud while maintaining the position of the washer. **NOTE:** **There is a flat washer between the body and side gutter held in by the ball stud.** **Tighten** 30 N.m (22 lb ft)

RADIATOR LOWER SUPPORT REPLACEMENT

Removal Procedure

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1. Drain the cooling system. **Cooling System Draining and Filling (Static Fill L96)** **Cooling System Draining and Filling (Vac N Fill L96)** **Cooling System Draining and Filling (Vac N Fill L83 L86)** **Cooling System Draining and Filling (Static Fill L83 L86)**
2. Evacuate the refrigerant system. **Refrigerant Recovery and Recharging (R134A)** **Refrigerant Recovery and Recharging (R1234yf)**
3. Disconnect the battery negative cable. **Battery Negative Cable Disconnection and Connection (Dual Battery)** **Battery Negative Cable Disconnection and Connection (Single Battery)**
4. Raise the vehicle. **Lifting and Jacking the Vehicle**
5. Remove the front tire and wheel assembly. **Tire and Wheel Removal and Installation (6-Lug Wheel)** **Tire and Wheel Removal and Installation (8-Lug Wheel)**

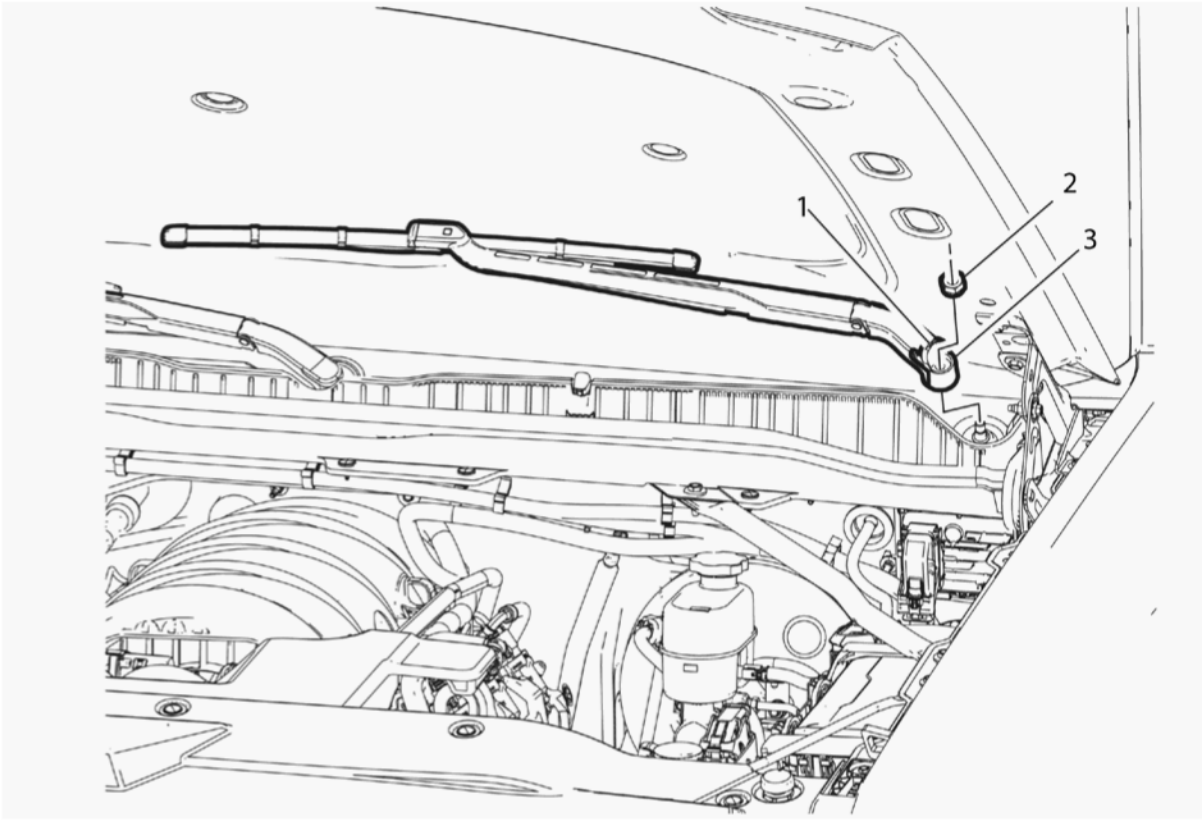


Fig. 65: Windshield Wiper Arm (LD)
Courtesy of GENERAL MOTORS COMPANY

6. Remove Windshield Wiper Arm (3)**Windshield Wiper Arm Replacement (Chevrolet/GMC)** **Windshield Wiper Arm Replacement (Cadillac)**

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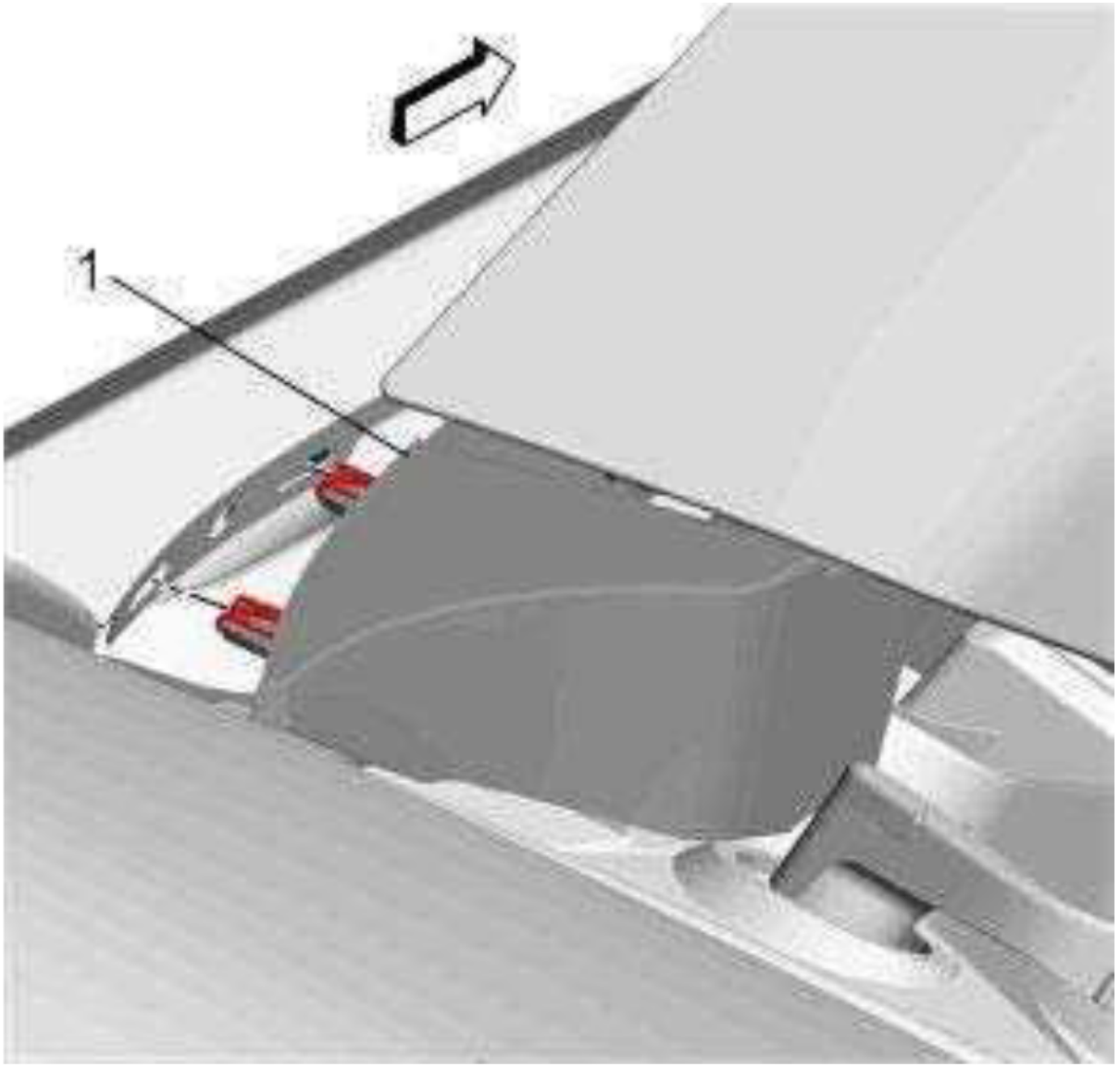


Fig. 66: Inlet Grille Panel Extension
Courtesy of GENERAL MOTORS COMPANY

7. Remove Air Inlet Grille Panel Extension (1)**Air Inlet Grille Panel Extension Replacement**

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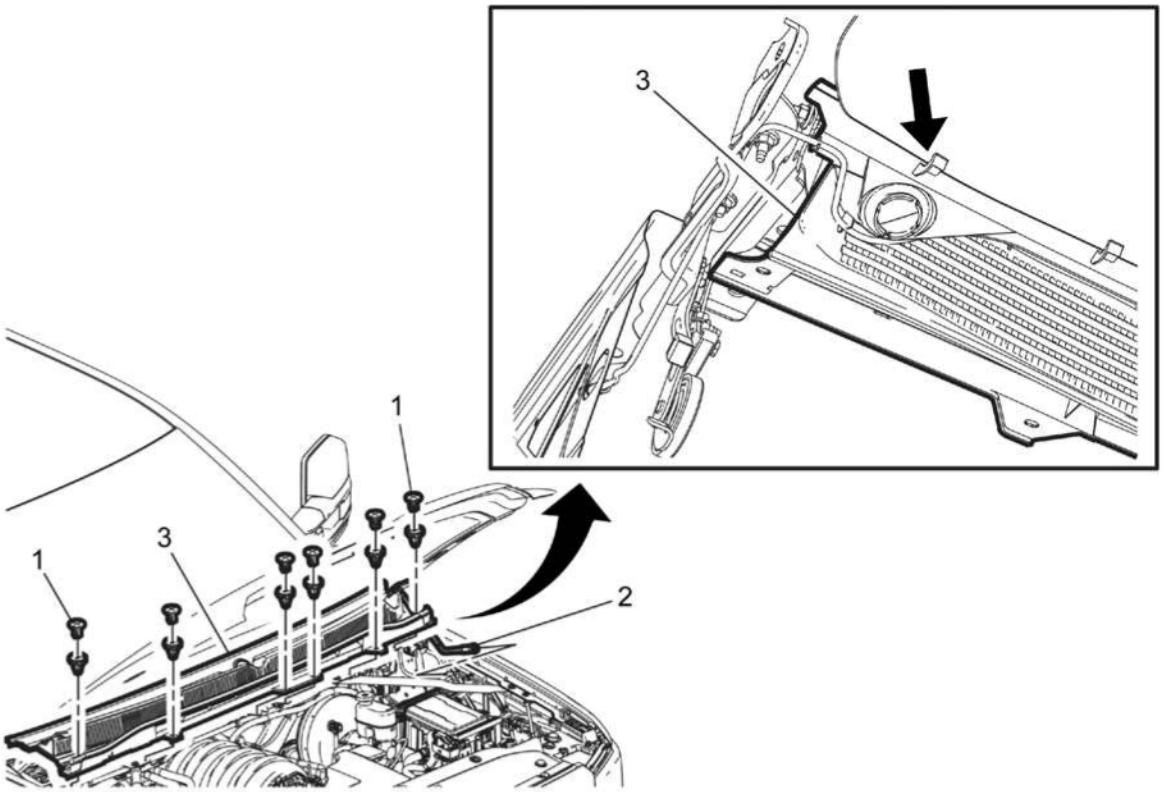


Fig. 67: Air Inlet Grille Panel (LD)
Courtesy of GENERAL MOTORS COMPANY

8. Remove Air Inlet Grille Panel (3)**Air Inlet Grille Panel Replacement (Chevrolet/GMC)** **Air Inlet Grille Panel Replacement (Cadillac)**

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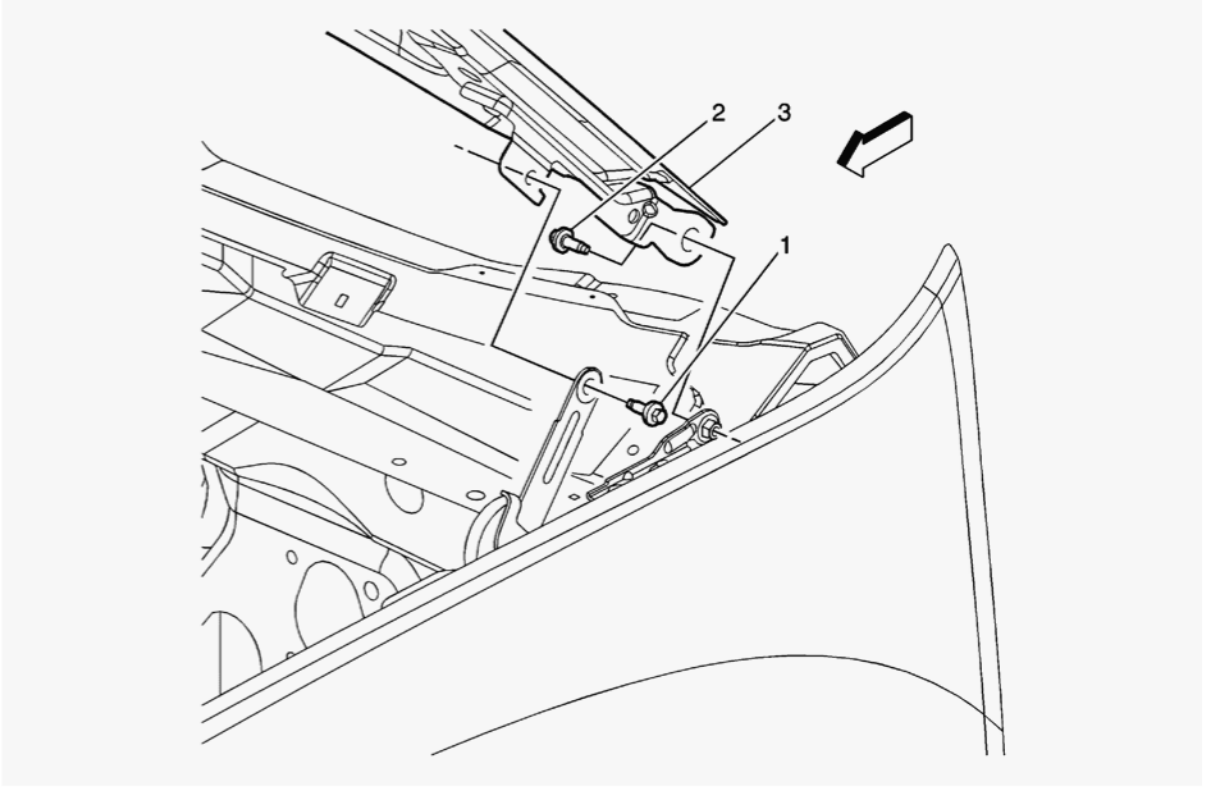


Fig. 68: View Of Hood & Bolts
Courtesy of GENERAL MOTORS COMPANY

9. Remove Hood (3)**Hood Replacement**

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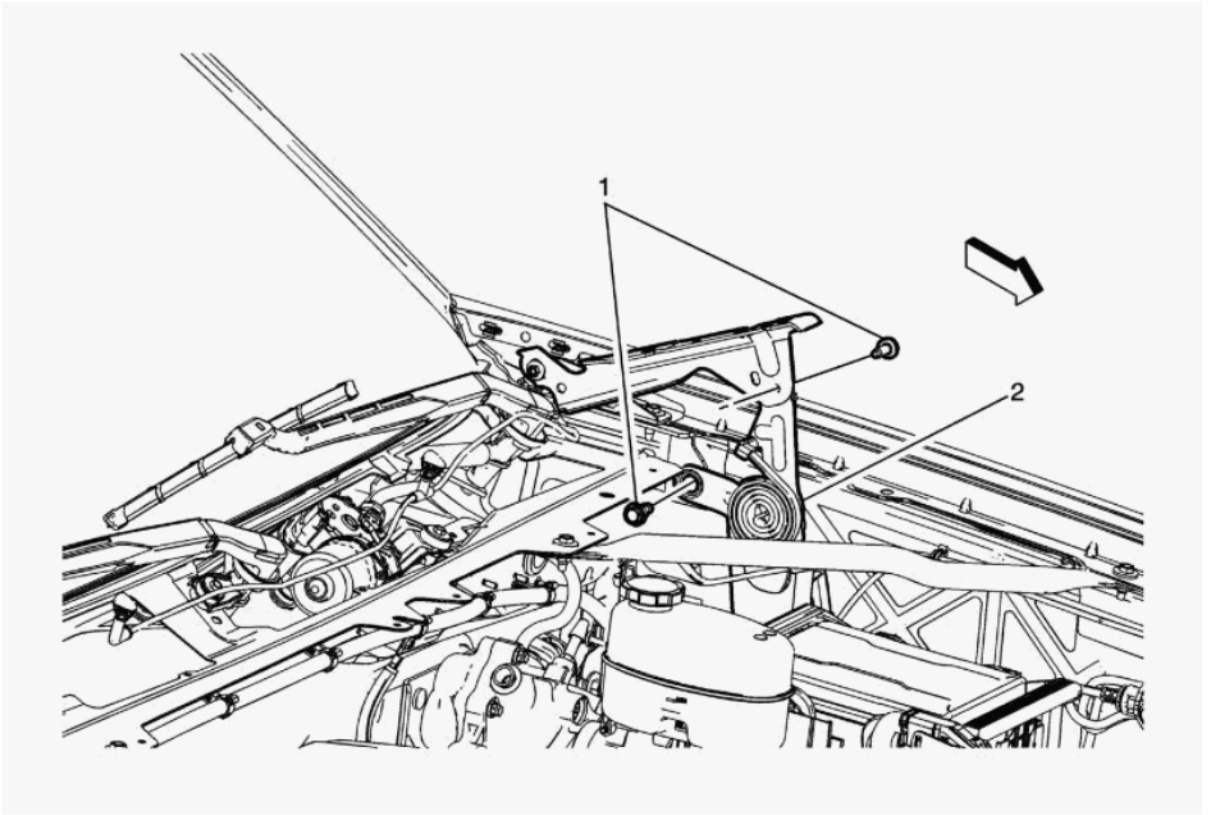


Fig. 69: Hood Open Assist Spring
Courtesy of GENERAL MOTORS COMPANY

10. Remove Hood Open Assist Spring (2) **Hood Open Assist Spring Replacement**

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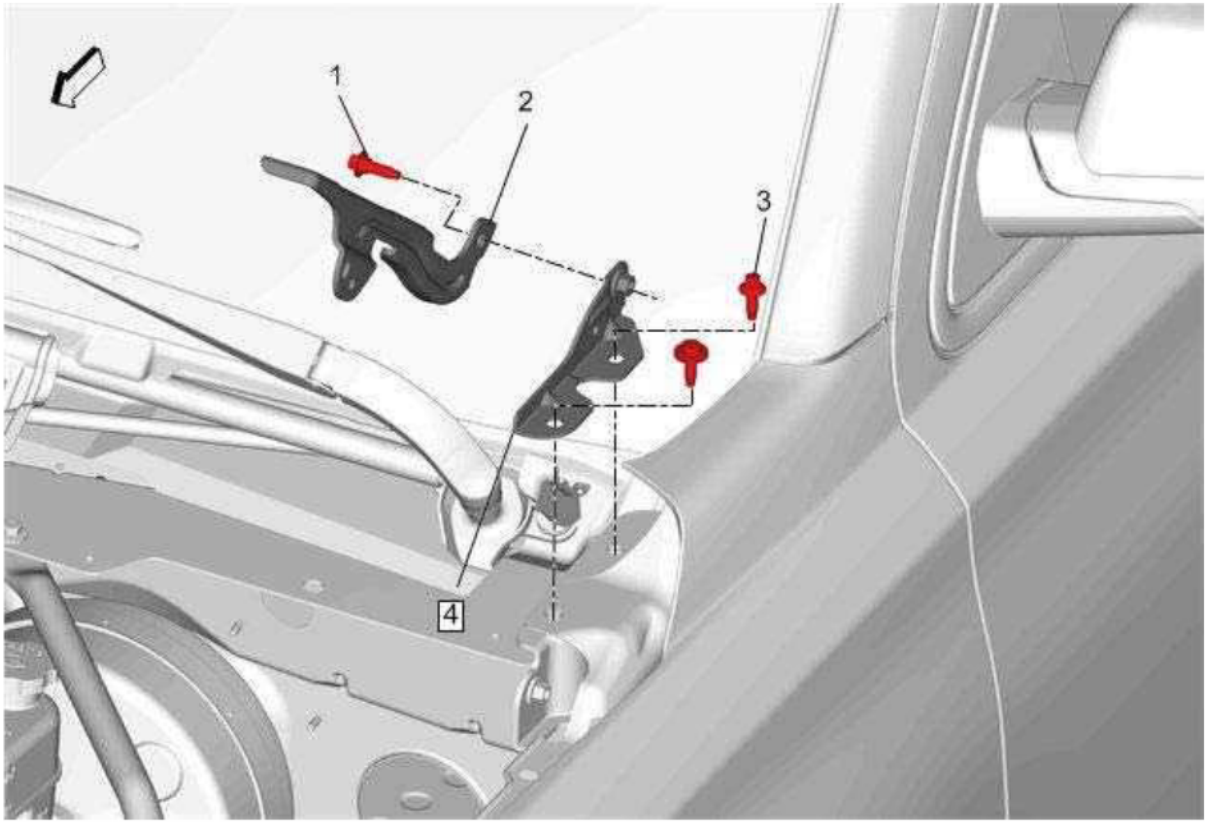


Fig. 70: Hood Hinge
Courtesy of GENERAL MOTORS COMPANY

11. Remove Hood Hinge (4) **Hood Hinge Replacement**<p01>

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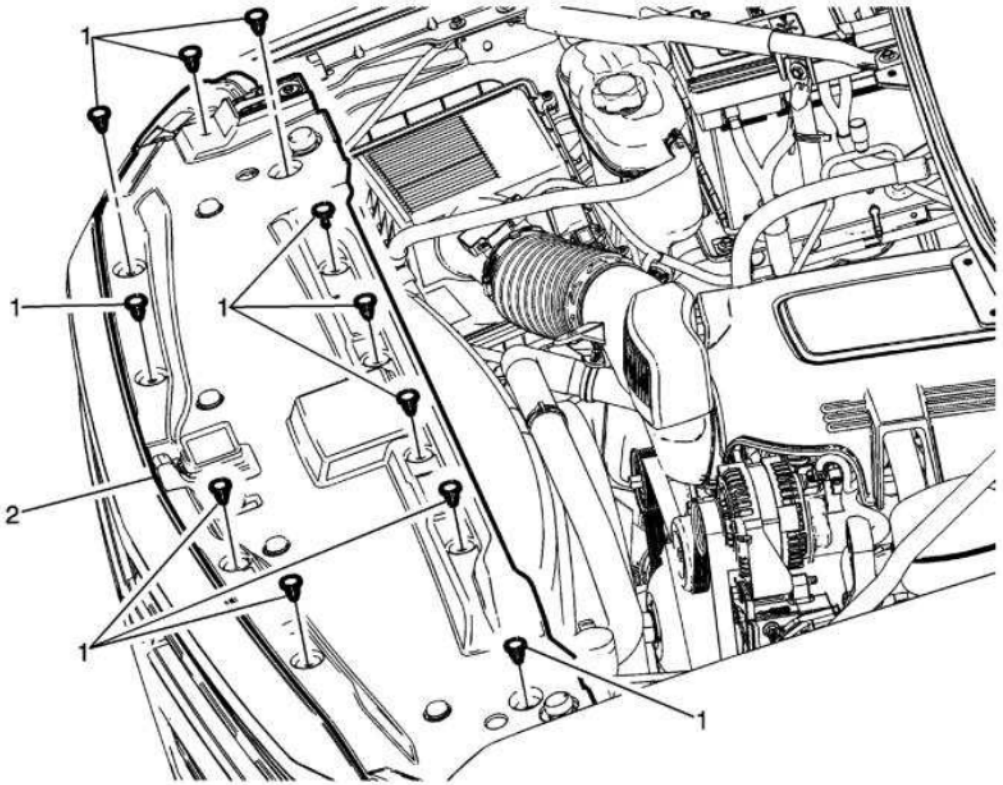


Fig. 71: Front Compartment Front Sight Shield
Courtesy of GENERAL MOTORS COMPANY

12. Remove Front Compartment Front Sight Shield **Front Compartment Front Sight Shield Replacement (GMC)Front Compartment Front Sight Shield Replacement (Chevrolet)Front Compartment Front Sight Shield Replacement (Cadillac)**

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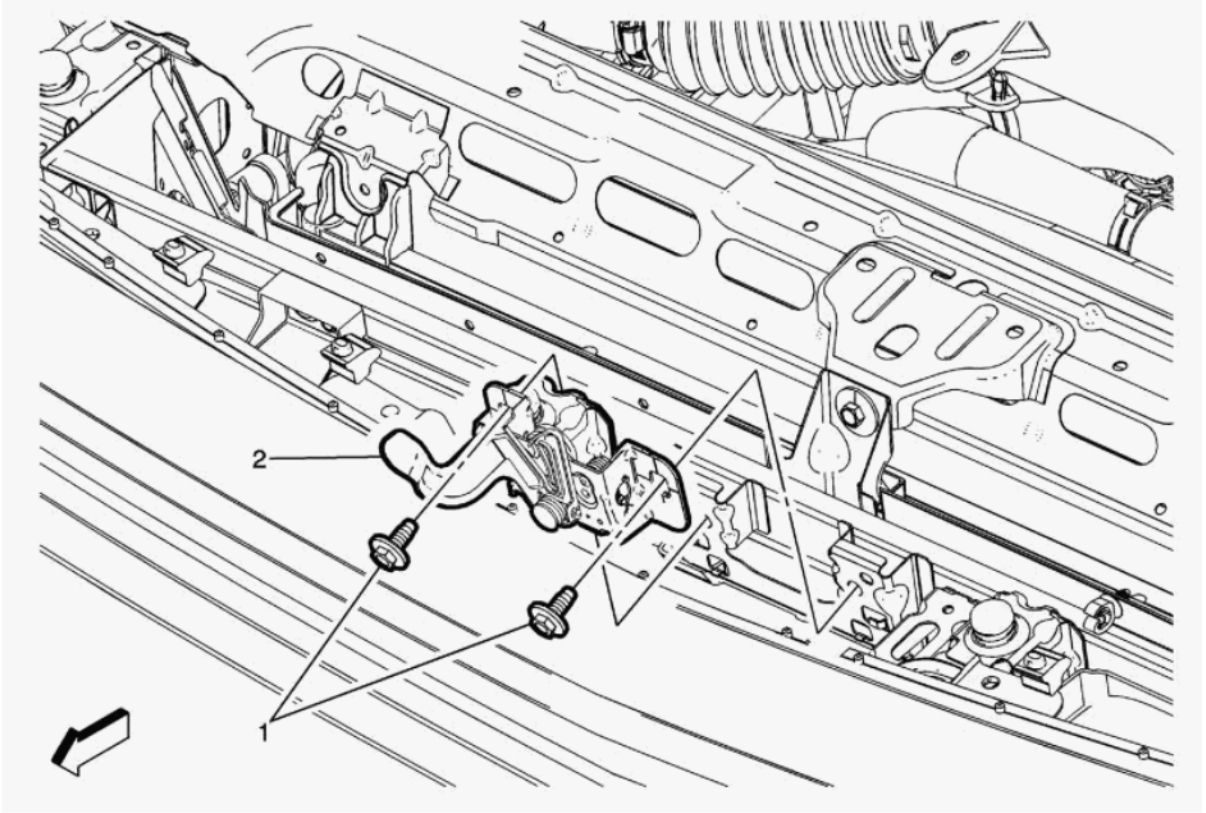


Fig. 72: Hood Primary and Secondary Latch
Courtesy of GENERAL MOTORS COMPANY

13. Remove Hood Primary and Secondary Latch (2) **Hood Primary and Secondary Latch Replacement**

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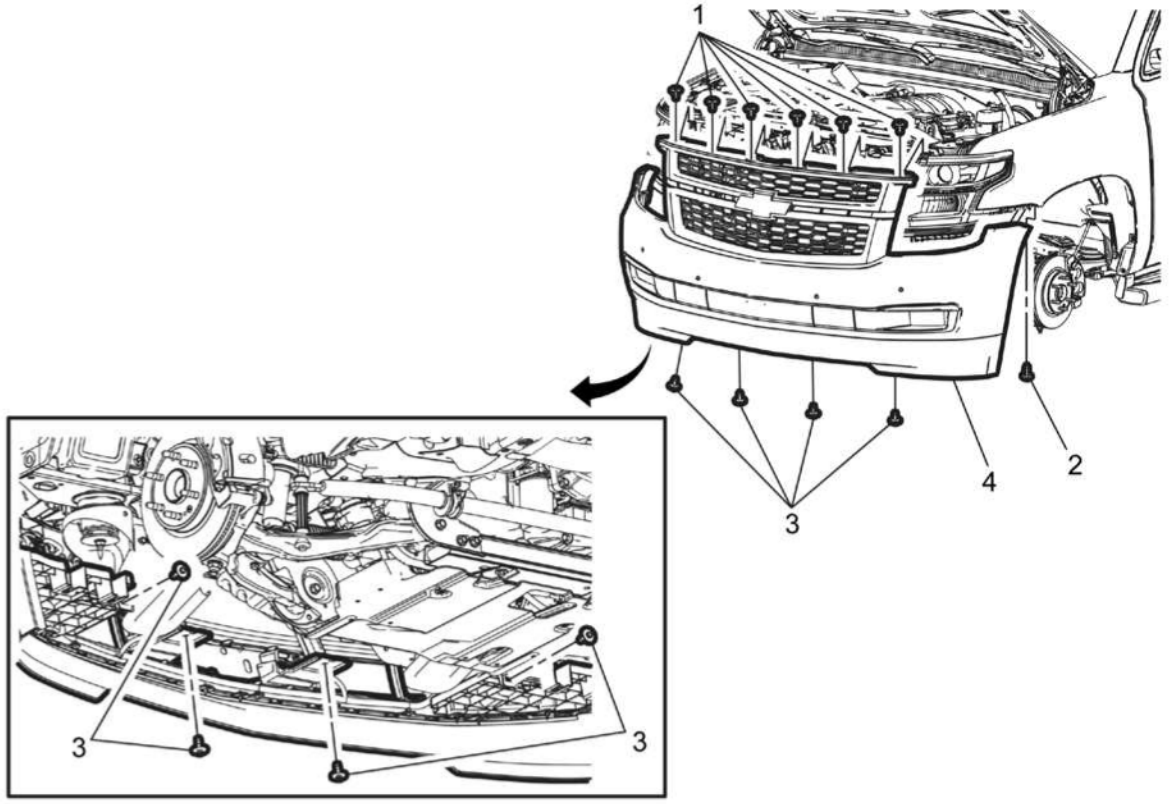


Fig. 73: Front Bumper Fascia (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

14. Remove Front Bumper Fascia (4) **Front Bumper Fascia Replacement (GMC)** **Front Bumper Fascia Replacement (Chevrolet)** **Front Bumper Fascia Replacement (Cadillac)**

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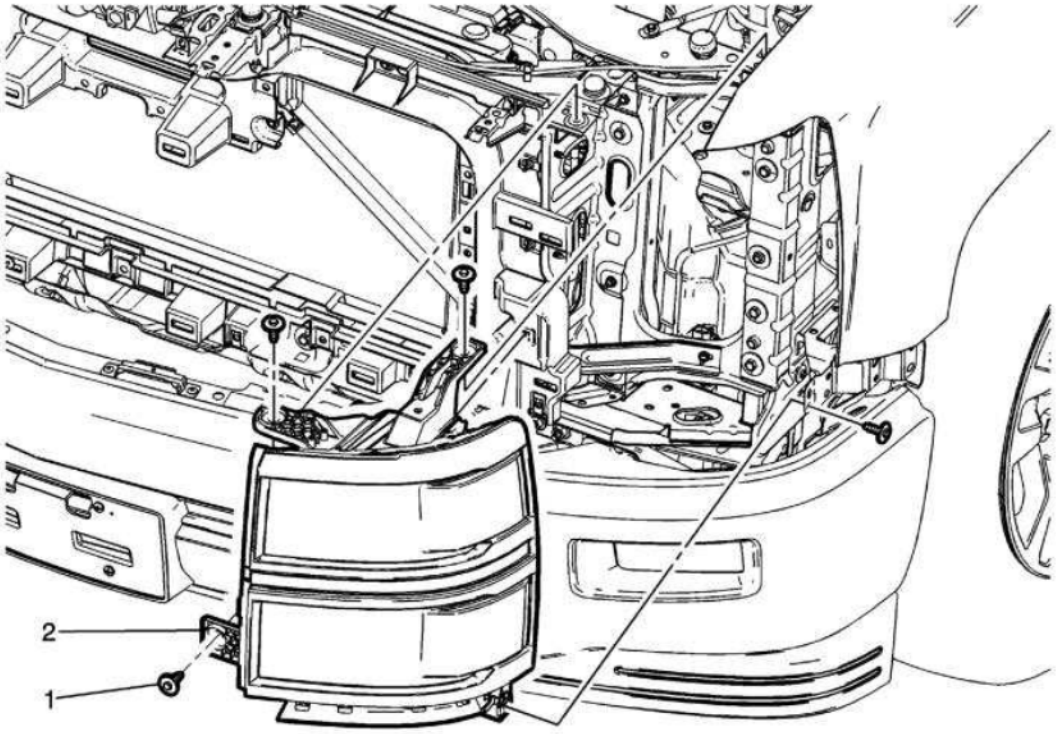


Fig. 74: Headlamp (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

15. Remove Headlamp (2) **Headlamp Replacement (GMC)** **Headlamp Replacement (Chevrolet)** **Headlamp Replacement (Cadillac)** <p01>

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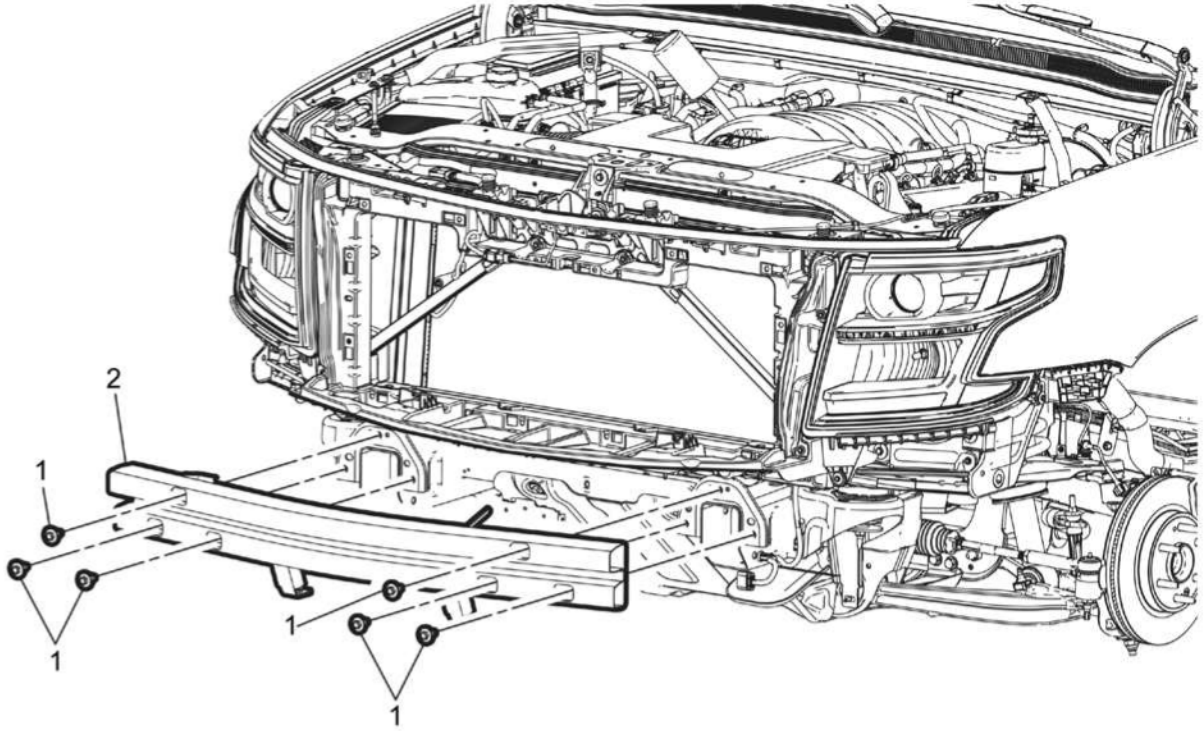


Fig. 75: Front Bumper Impact Bar (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

16. Remove Front Bumper Impact Bar (2) **Front Bumper Impact Bar Replacement (GMC)** **Front Bumper Impact Bar Replacement (Chevrolet)** **Front Bumper Impact Bar Replacement (Cadillac)**

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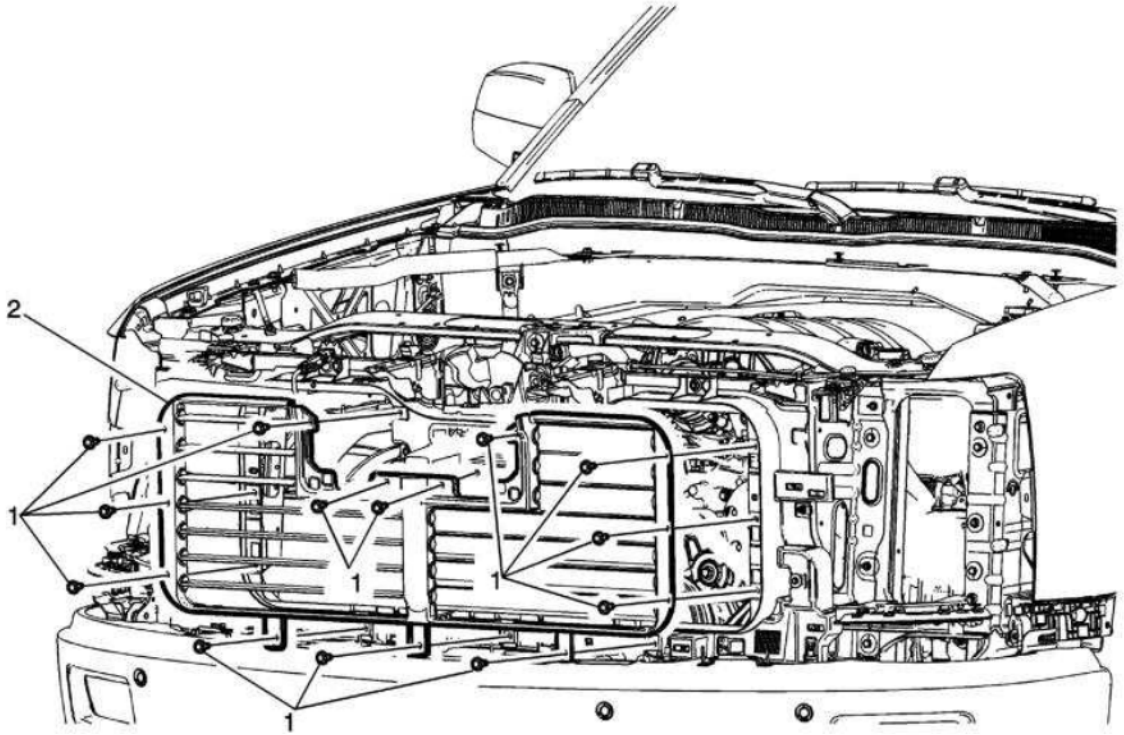


Fig. 76: Front Bumper Shutter
Courtesy of GENERAL MOTORS COMPANY

17. Remove Front Bumper Shutter (2) **Front Bumper Shutter Replacement (Upper,)** **Front Bumper Shutter Replacement (Lower)** **Front Bumper Shutter Replacement (Mechanical, Cadillac)**

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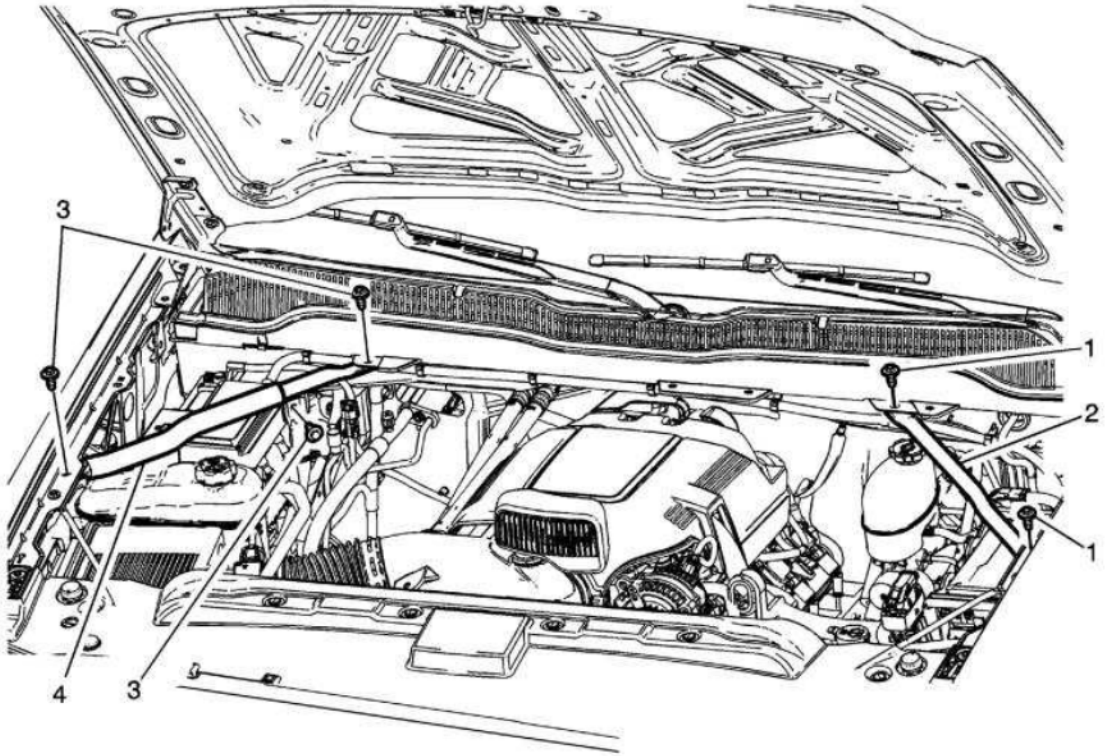


Fig. 77: Front Fender Rear Upper Brace
Courtesy of GENERAL MOTORS COMPANY

18. Remove Front Fender Rear Upper Brace (4) **Front Fender Rear Upper Brace Replacement**

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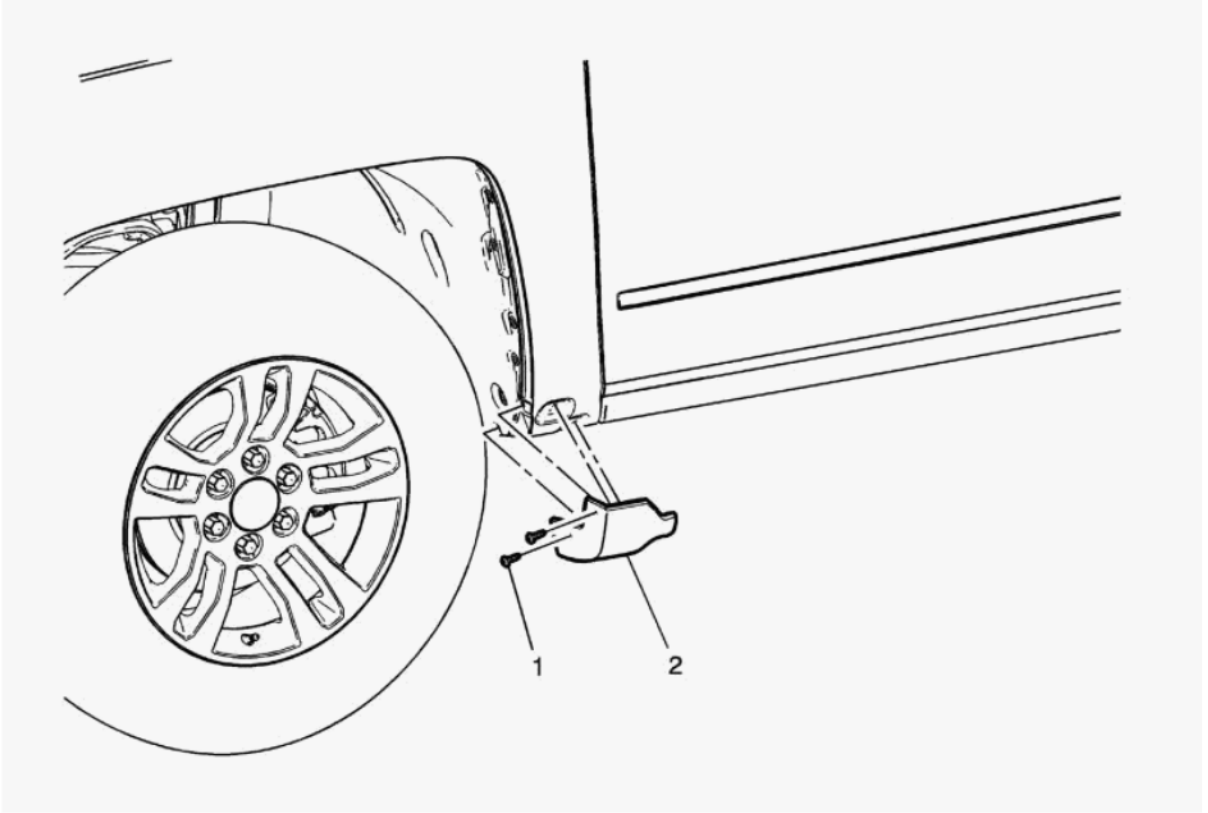


Fig. 78: Front Fender Paint Protector
Courtesy of GENERAL MOTORS COMPANY

19. Remove Front Fender Paint Protector (2) **Front Fender Paint Protector Replacement**

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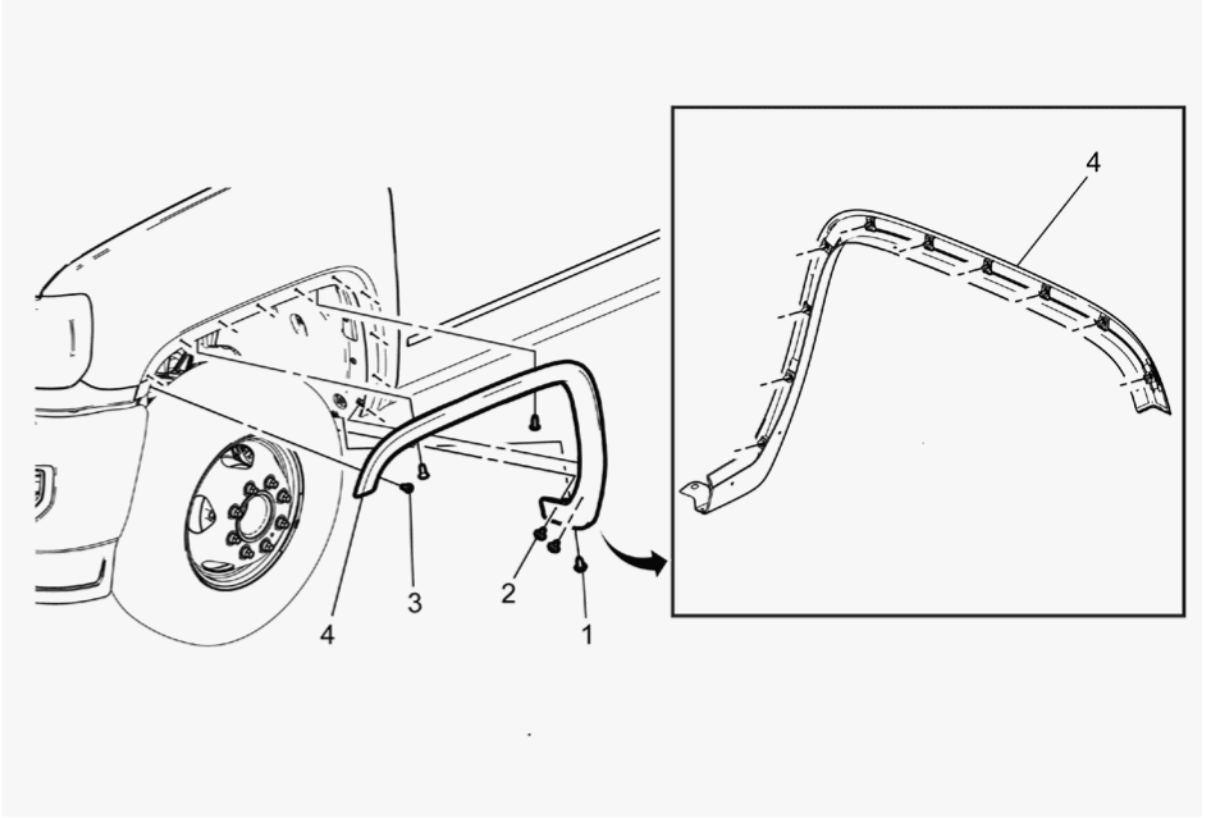


Fig. 79: Front Wheel Opening Molding
Courtesy of GENERAL MOTORS COMPANY

20. Remove Front Wheel Opening Front Molding (4) **Front Wheel Opening Molding Replacement** <p01>

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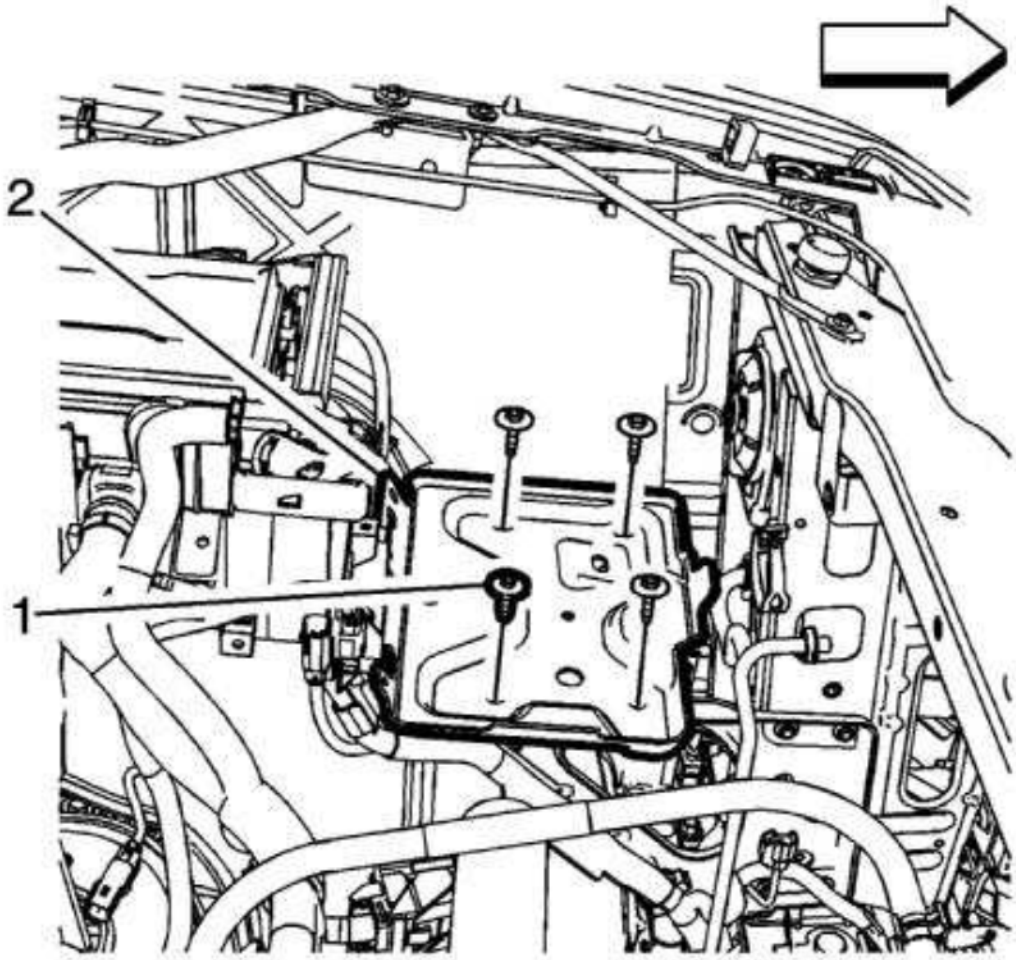


Fig. 80: Auxiliary Battery Tray And Fasteners
Courtesy of GENERAL MOTORS COMPANY

21. Remove Auxiliary Battery Tray (2) **Auxiliary Battery Tray Replacement (9C1)**

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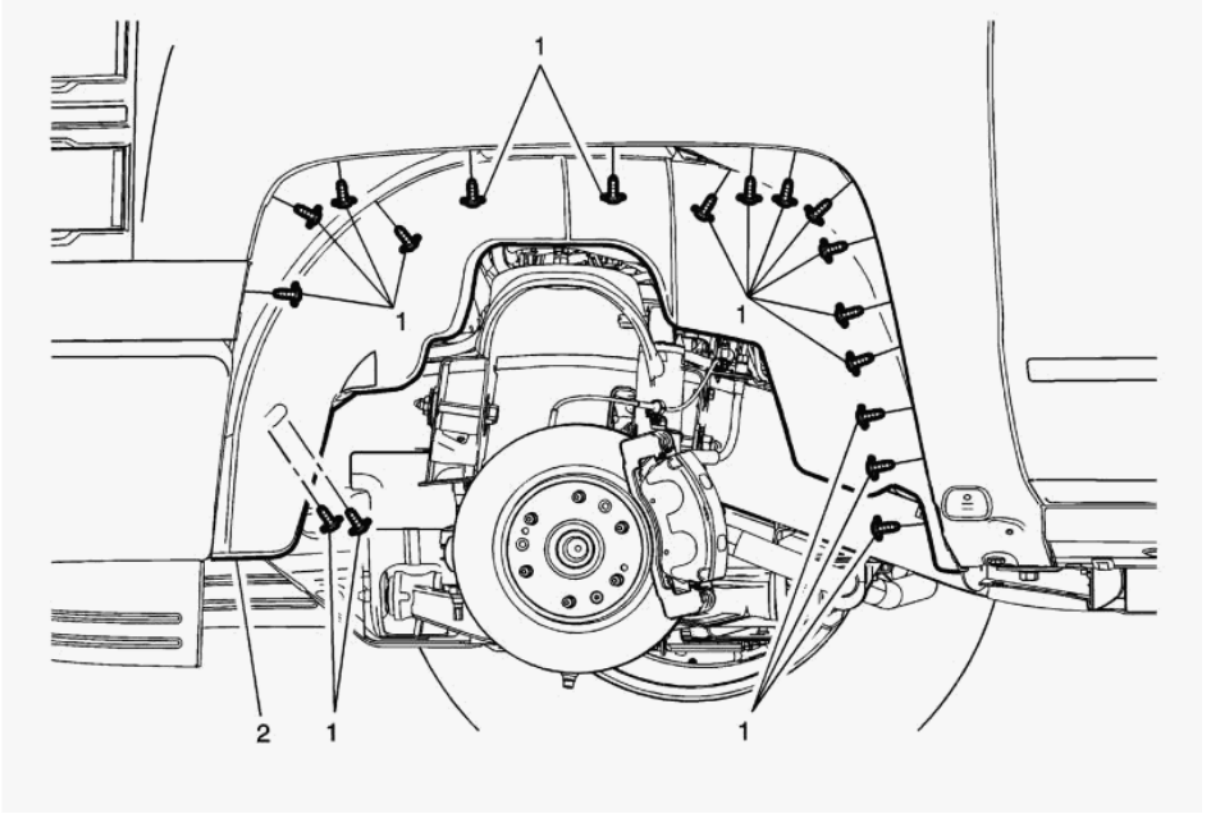


Fig. 81: Front Wheelhouse Liner - Left Side (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

22. Remove Front Wheelhouse Liner- Left Side **Front Wheelhouse Liner Replacement - Left Side (Cadillac)** **Front Wheelhouse Liner Replacement - Left Side (GMC)** **Front Wheelhouse Liner Replacement - Left Side (Chevrolet)**

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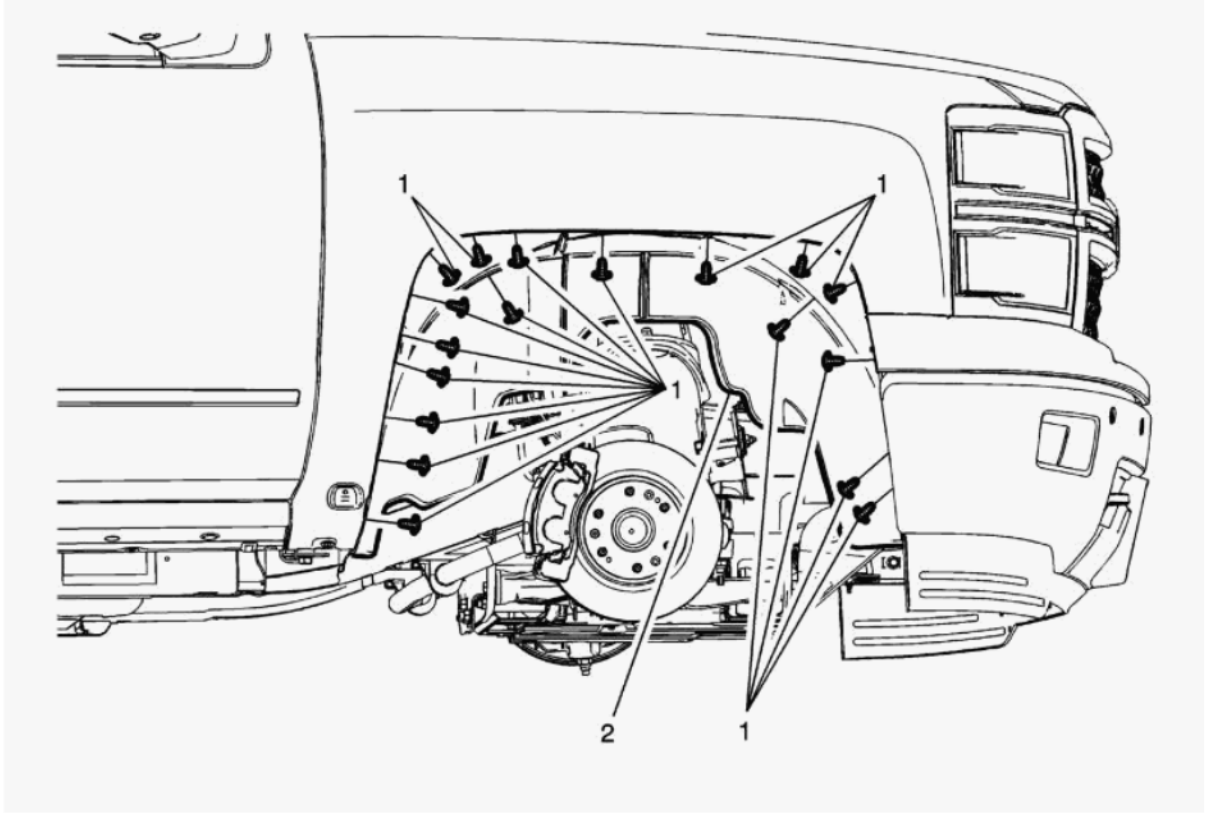


Fig. 82: Front Wheelhouse Liner - Right Side (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

23. Remove Front Wheelhouse Liner-Right Side **Front Wheelhouse Liner Replacement - Right Side (Cadillac)** **Front Wheelhouse Liner Replacement - Right Side (Chevrolet)** **Front Wheelhouse Liner Replacement - Right Side (GMC)**

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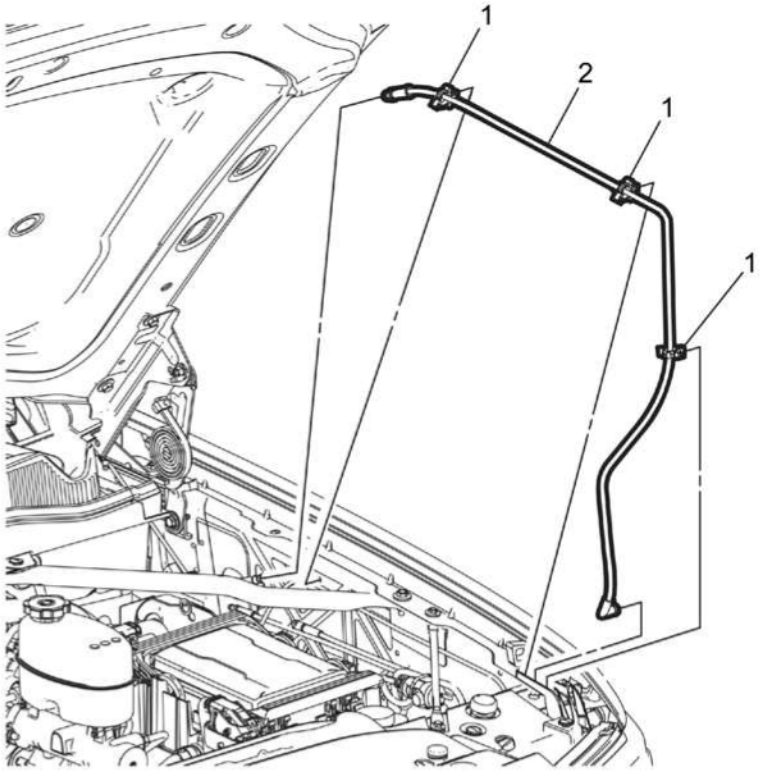


Fig. 83: Windshield Washer Pump Hose
Courtesy of GENERAL MOTORS COMPANY

24. Remove Windshield Washer Pump Hose (2) **Windshield Washer Pump Hose Replacement (Chevrolet/GMC)** **Windshield Washer Pump Hose Replacement (Cadillac)**

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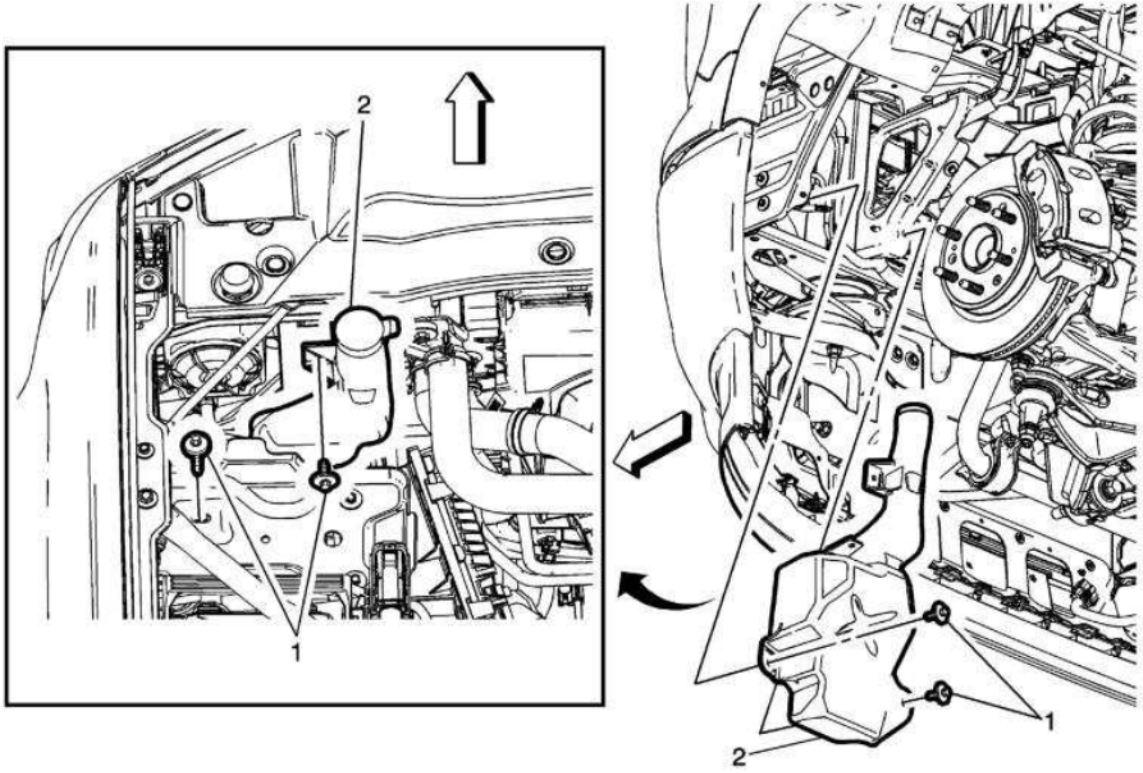


Fig. 84: Windshield Washer Solvent Container
Courtesy of GENERAL MOTORS COMPANY

25. Remove Windshield Washer Solvent Container (2) **Windshield Washer Solvent Container Replacement (Chevrolet/GMC)** **Windshield Washer Solvent Container Replacement (Cadillac)**

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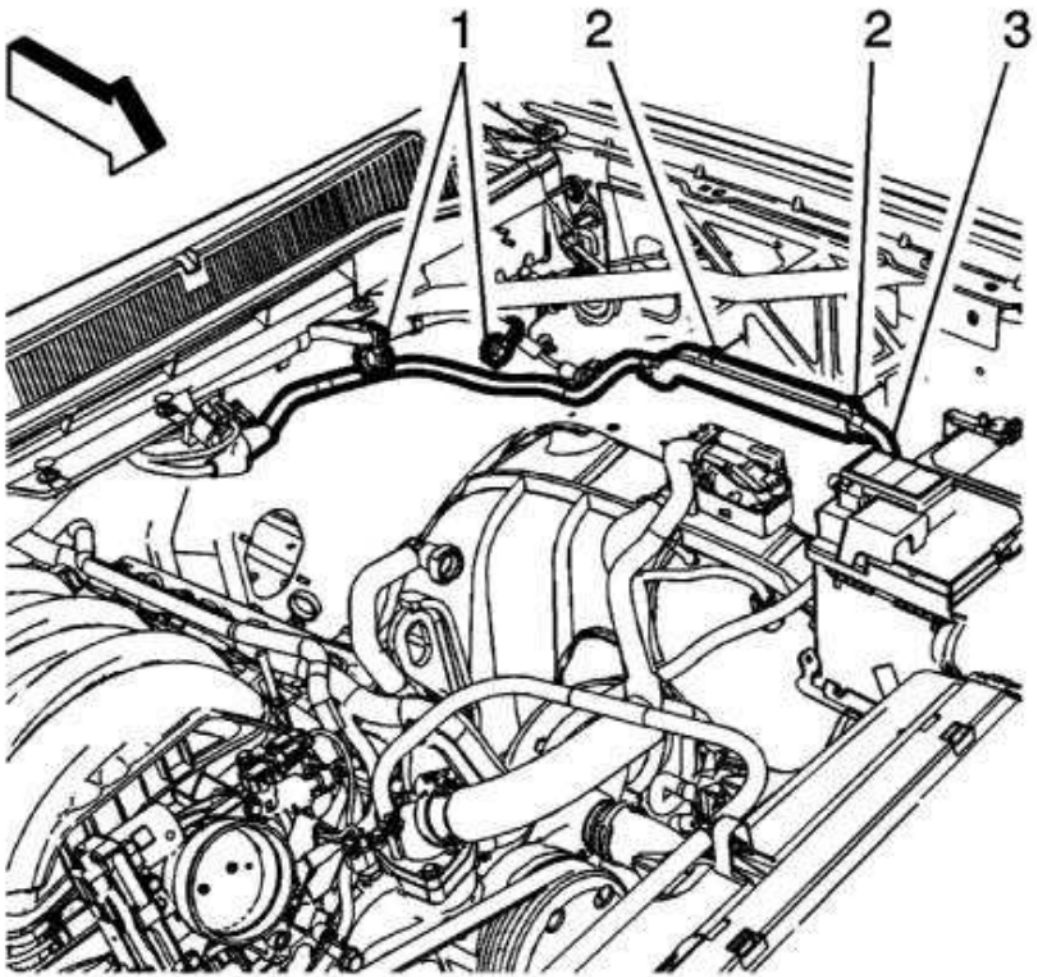


Fig. 85: Auxiliary Battery Positive Cable Conduit Retainers
Courtesy of GENERAL MOTORS COMPANY

26. Remove Auxiliary Battery Positive Cable Replacement - Battery to Battery Relay (3) **Auxiliary Battery Positive Cable Replacement - Battery to Battery Relay (9C1)**

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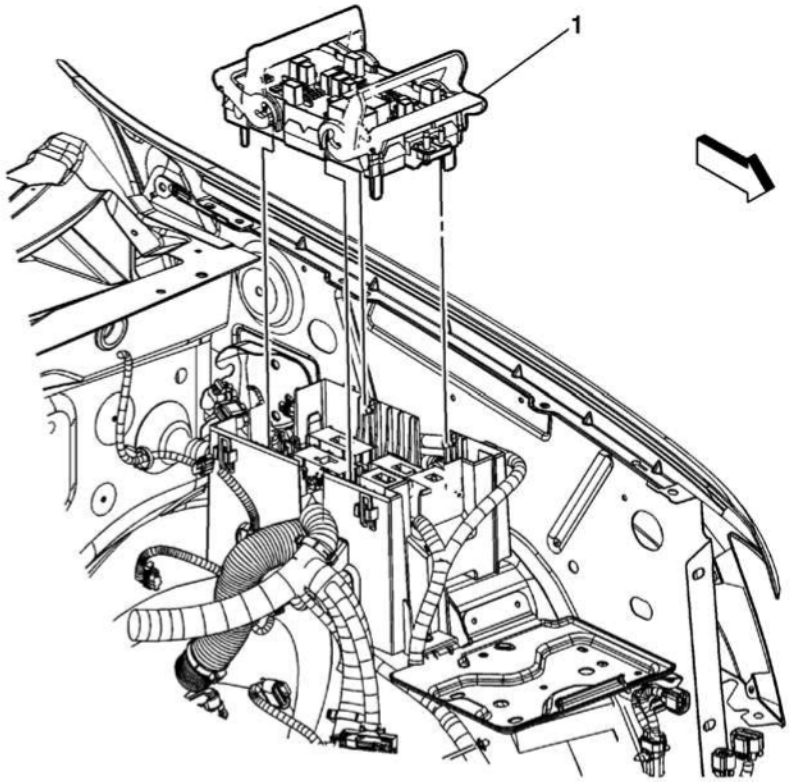


Fig. 86: View Of Underhood Electrical Center/Junction Block
Courtesy of GENERAL MOTORS COMPANY

27. Remove Underhood Electrical Center or Junction Block (1) **Underhood Electrical Center or Junction Block Replacement**

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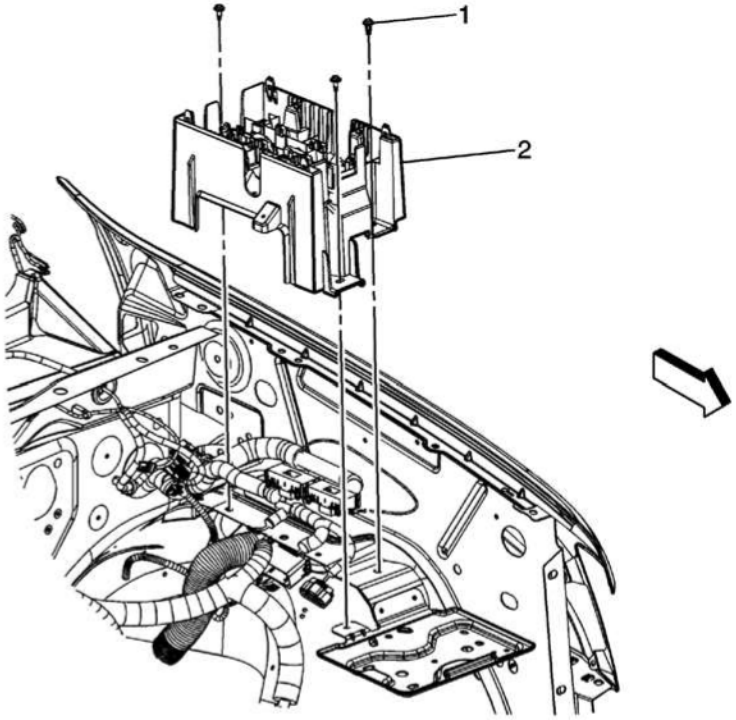


Fig. 87: View Of Underhood Electrical Center/Junction Block Bracket & Screws
Courtesy of GENERAL MOTORS COMPANY

28. Remove Underhood Electrical Center or Junction Block Bracket (2) **Underhood Electrical Center or Junction Block Bracket Replacement**

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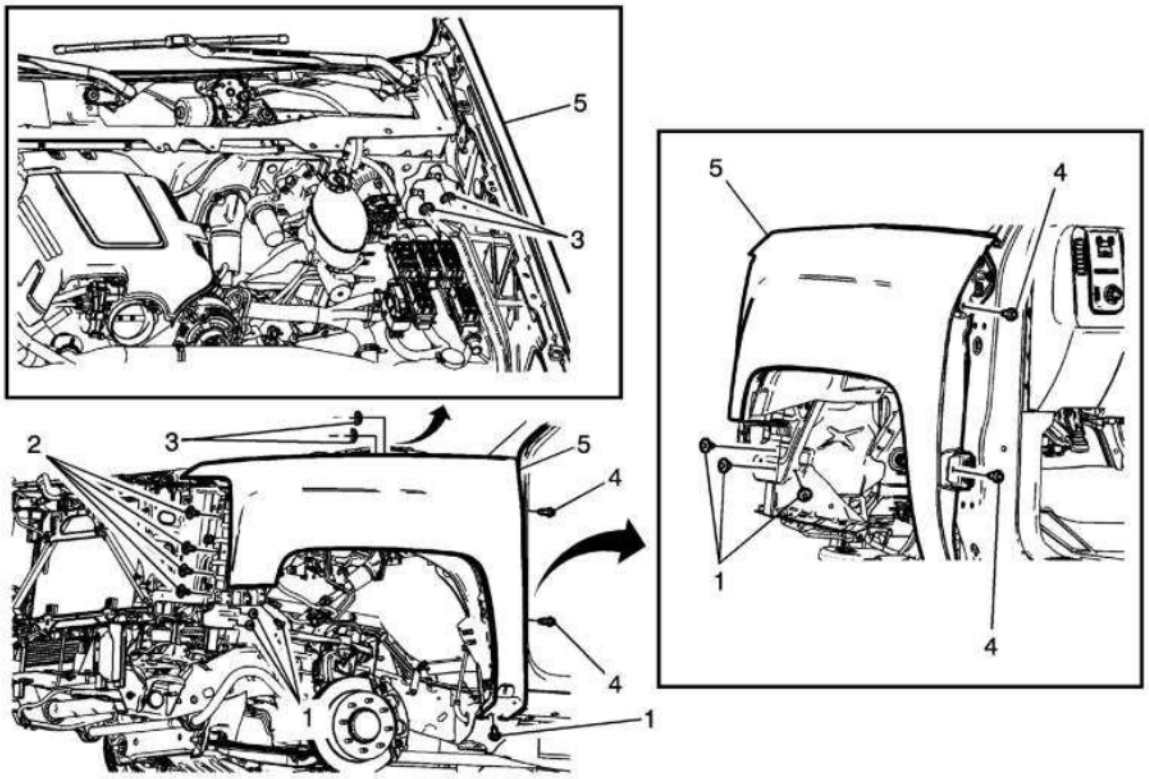


Fig. 88: Front Fender - Left Side
Courtesy of GENERAL MOTORS COMPANY

29. Remove Front Fender-Left Side **Front Fender Replacement - Left Side (GMC)Front Fender Replacement - Left Side (Chevrolet)Front Fender Replacement - Left Side (Cadillac)**

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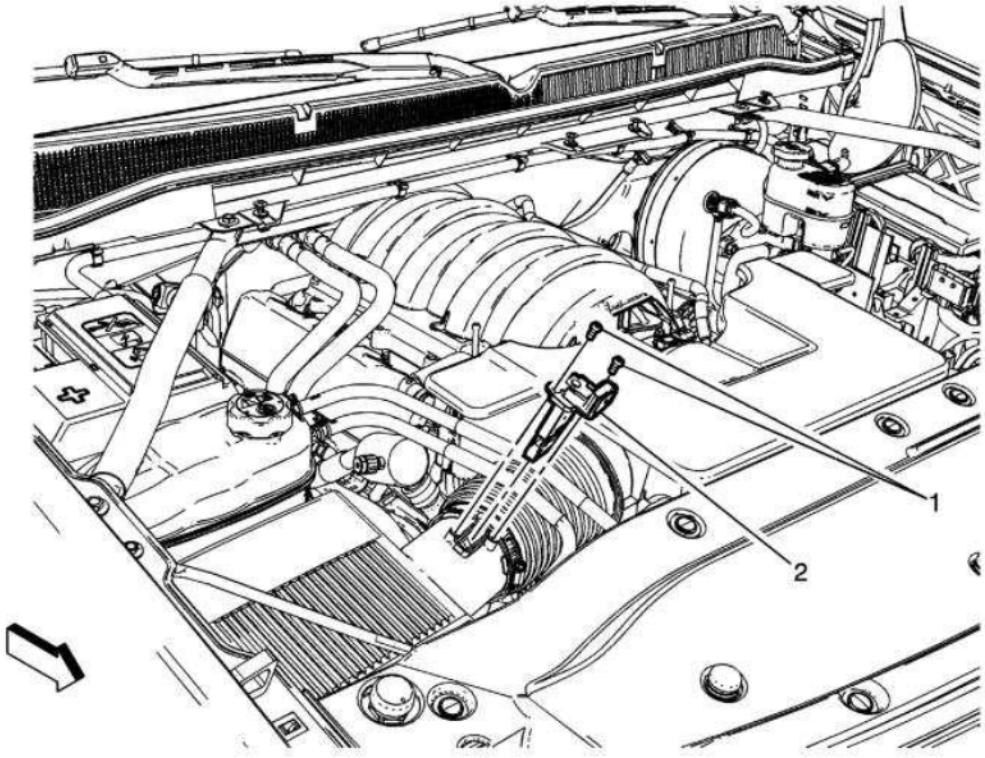


Fig. 89: Mass Airflow Sensor with Intake Air Temperature Sensor
Courtesy of GENERAL MOTORS COMPANY

30. Remove Mass Airflow Sensor (2) **Mass Airflow Sensor with Intake Air Temperature Sensor Replacement**

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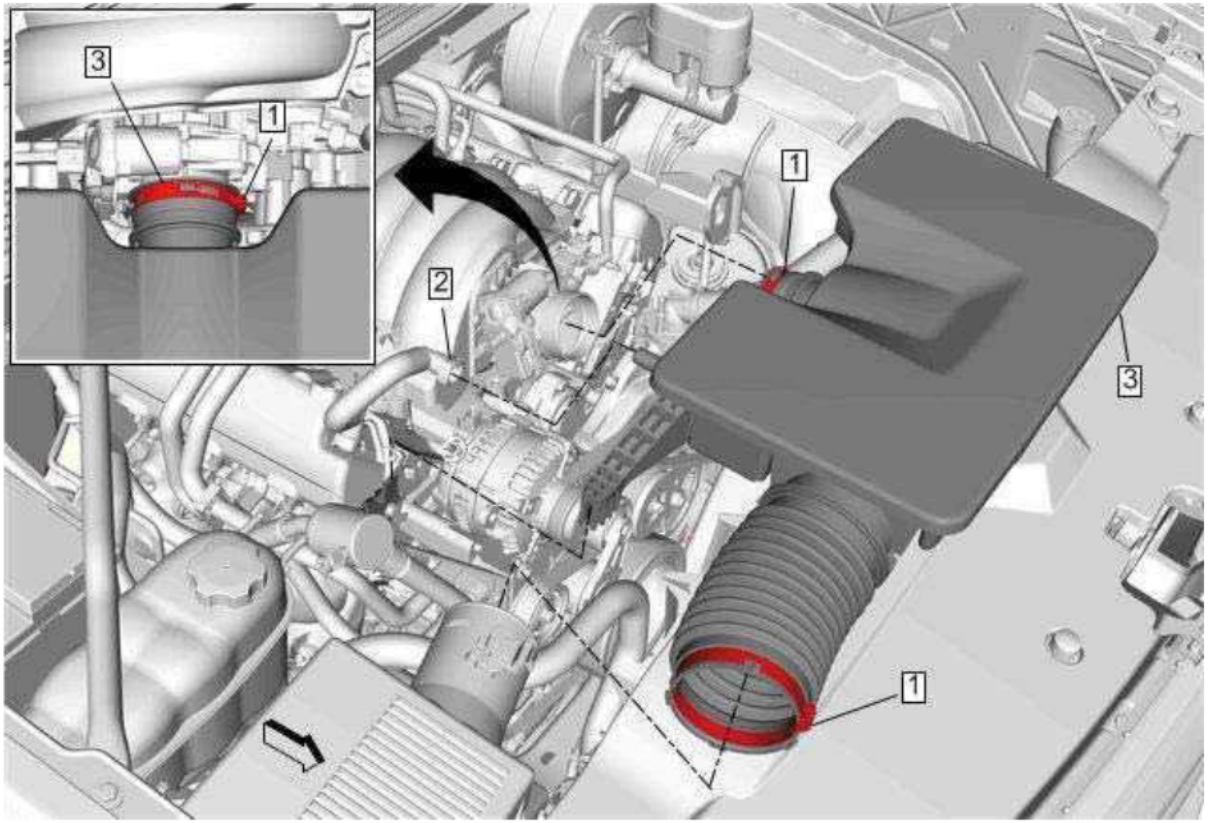


Fig. 90: Air Cleaner Outlet Duct
Courtesy of GENERAL MOTORS COMPANY

31. Remove Air Cleaner Outlet Duct (3) **Air Cleaner Outlet Duct Replacement (Chevrolet and GMC)** **Air Cleaner Outlet Duct Replacement (Cadillac)**

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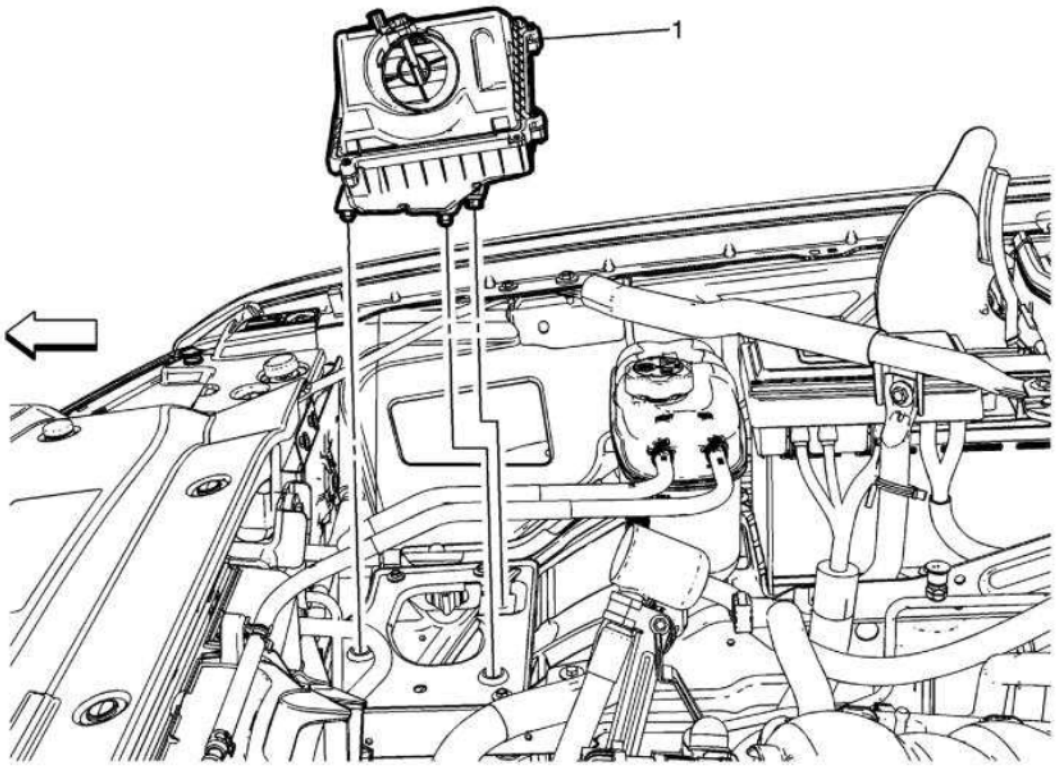


Fig. 91: Air Cleaner Assembly
Courtesy of GENERAL MOTORS COMPANY

32. Remove Air Cleaner Assembly (1)**Air Cleaner Assembly Replacement**

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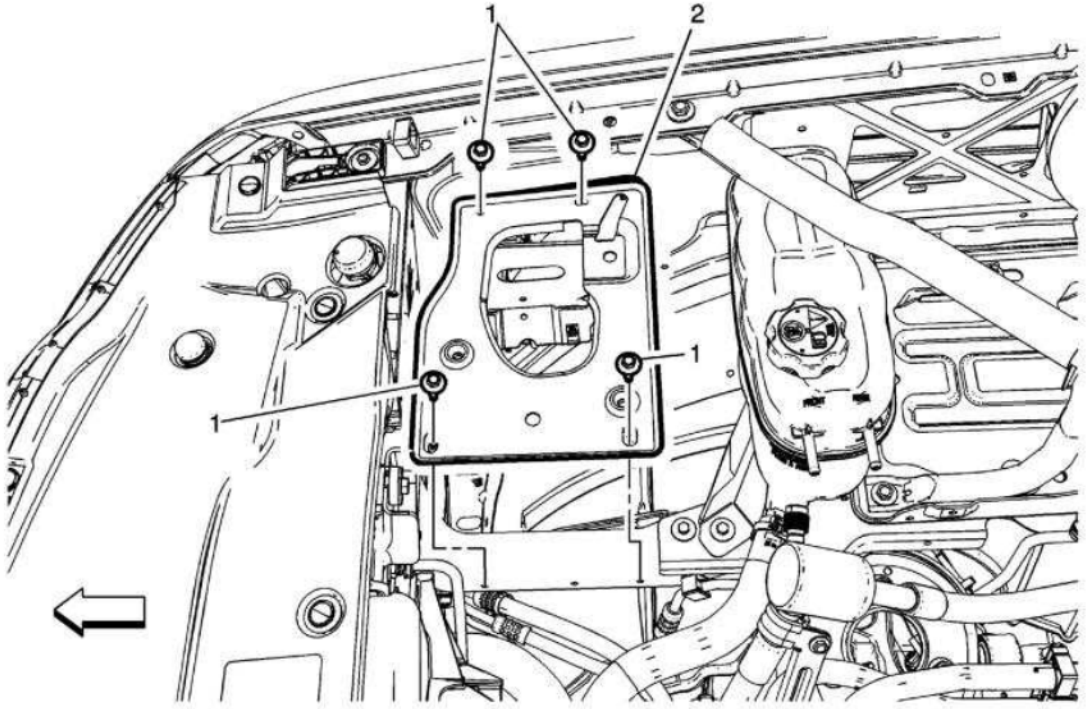


Fig. 92: Air Cleaner Bracket
Courtesy of GENERAL MOTORS COMPANY

33. Remove Air Cleaner Bracket (2) **Air Cleaner Bracket Replacement**

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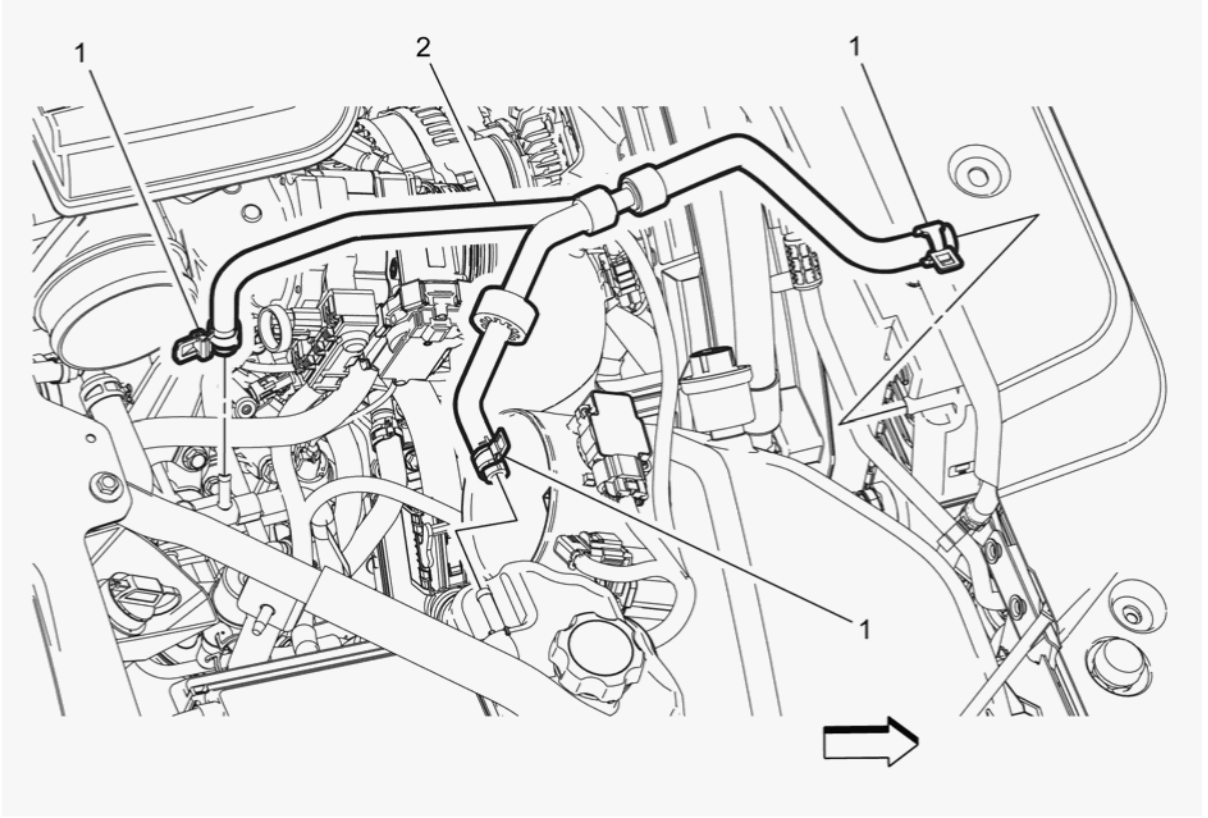


Fig. 93: Radiator Surge Tank Inlet Hose Replacement (LML)
Courtesy of GENERAL MOTORS COMPANY

34. Remove Radiator Surge Tank Inlet Hose (2) **Radiator Surge Tank Inlet Hose Replacement (Surge Tank To Radiator L83 L86)** **Radiator Surge Tank Inlet Hose Replacement (Surge Tank To Water Outlet L83 L86)** **Radiator Surge Tank Inlet Hose Replacement (L96)**

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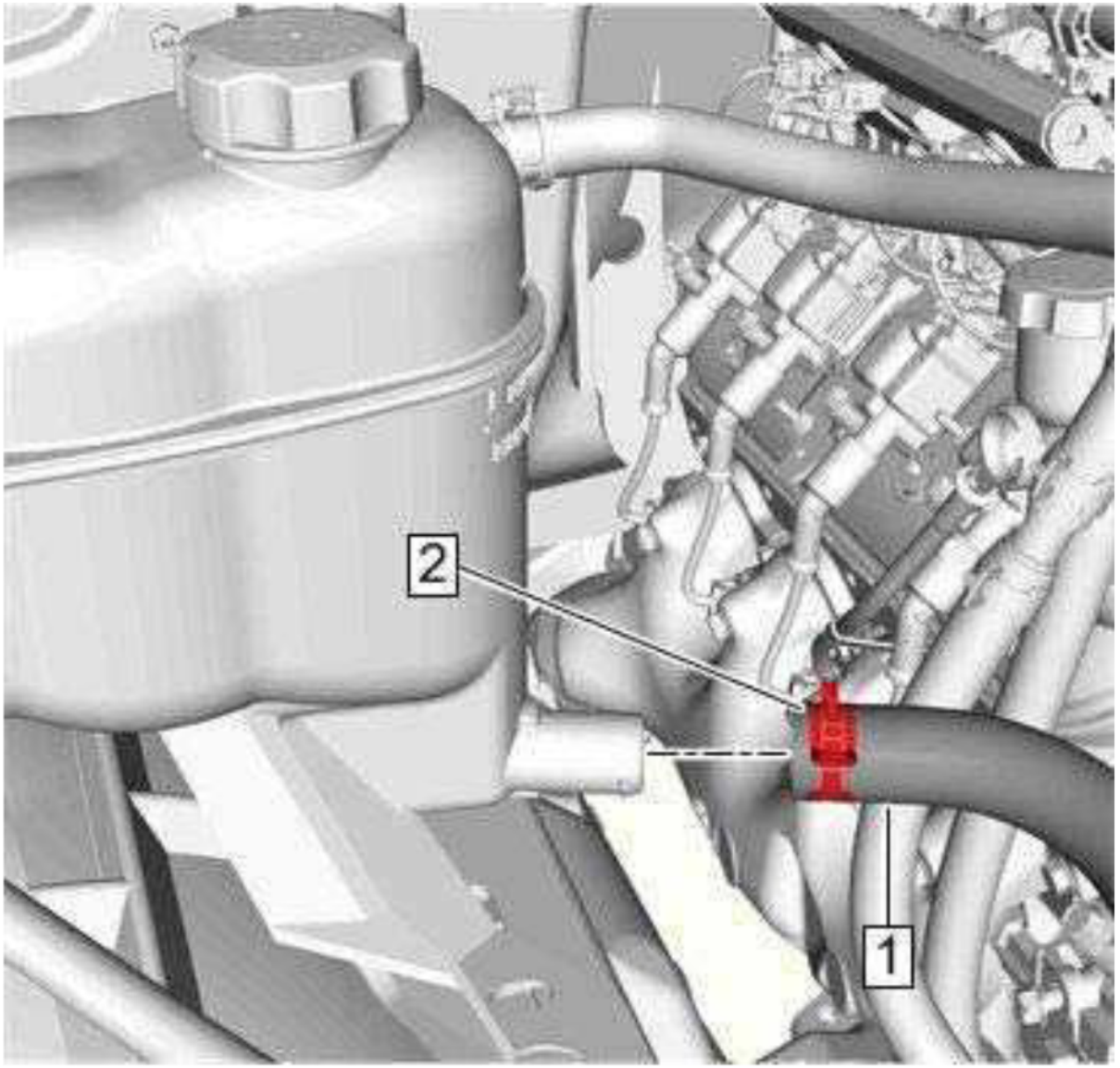


Fig. 94: Radiator Surge Tank Outlet Hose Clamp at Radiator Surge Tank
Courtesy of GENERAL MOTORS COMPANY

35. Remove Radiator Surge Tank Outlet Hose (2) **Radiator Surge Tank Outlet Hose Replacement (L96)**

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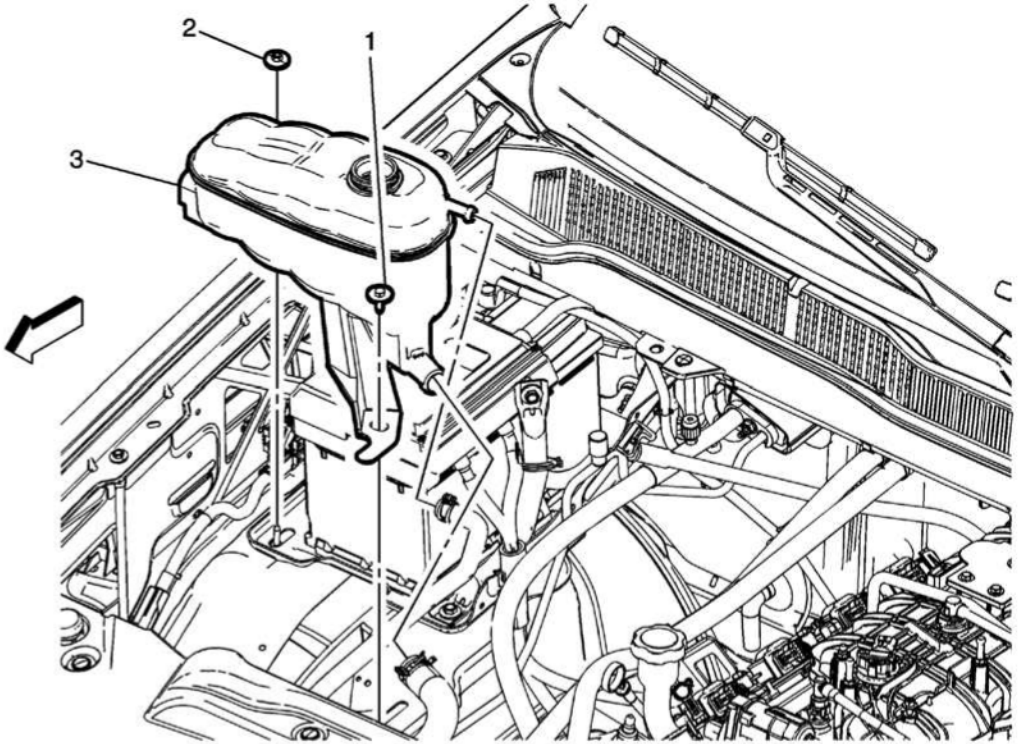


Fig. 95: Radiator Surge Tank (LC8, L96)
Courtesy of GENERAL MOTORS COMPANY

36. Remove Radiator Surge Tank (3) **Radiator Surge Tank Replacement (L83 L86)** **Radiator Surge Tank Replacement (L96)**

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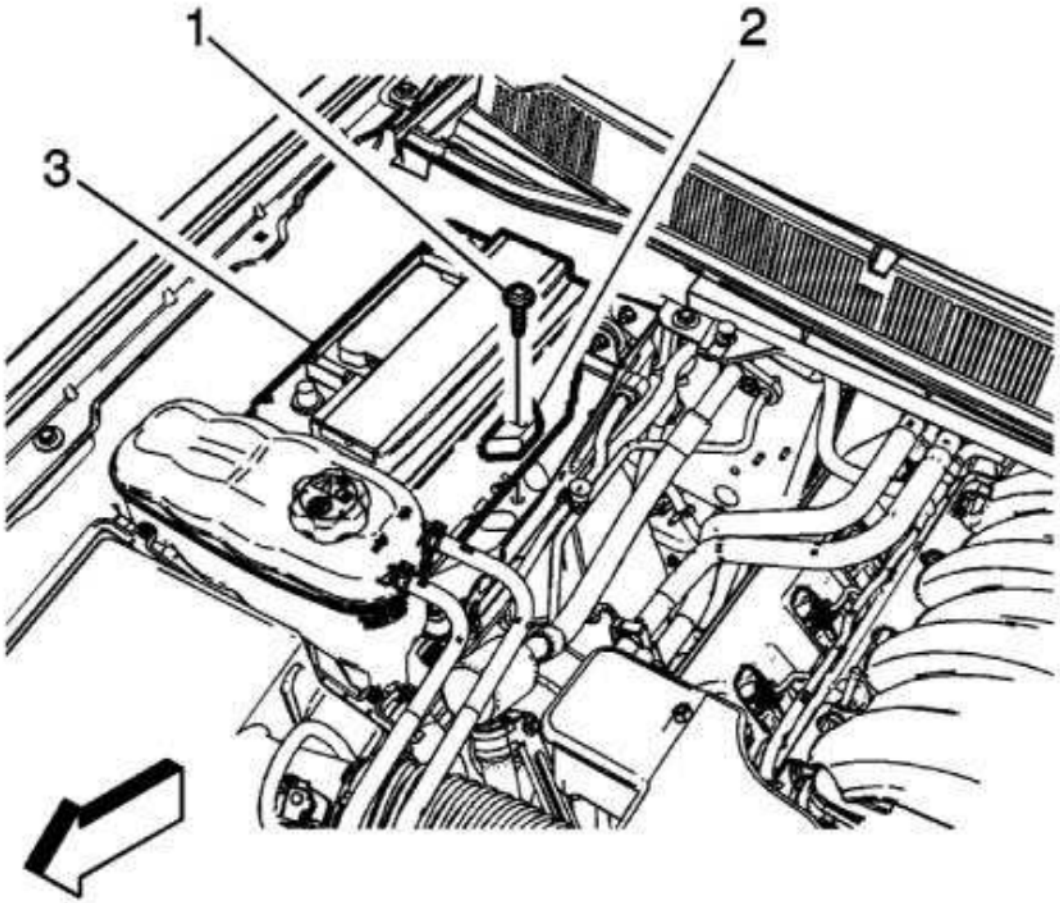


Fig. 96: Battery Retainer Fastener And Battery Retainer
Courtesy of GENERAL MOTORS COMPANY

37. Remove Battery (3) **Battery Replacement**

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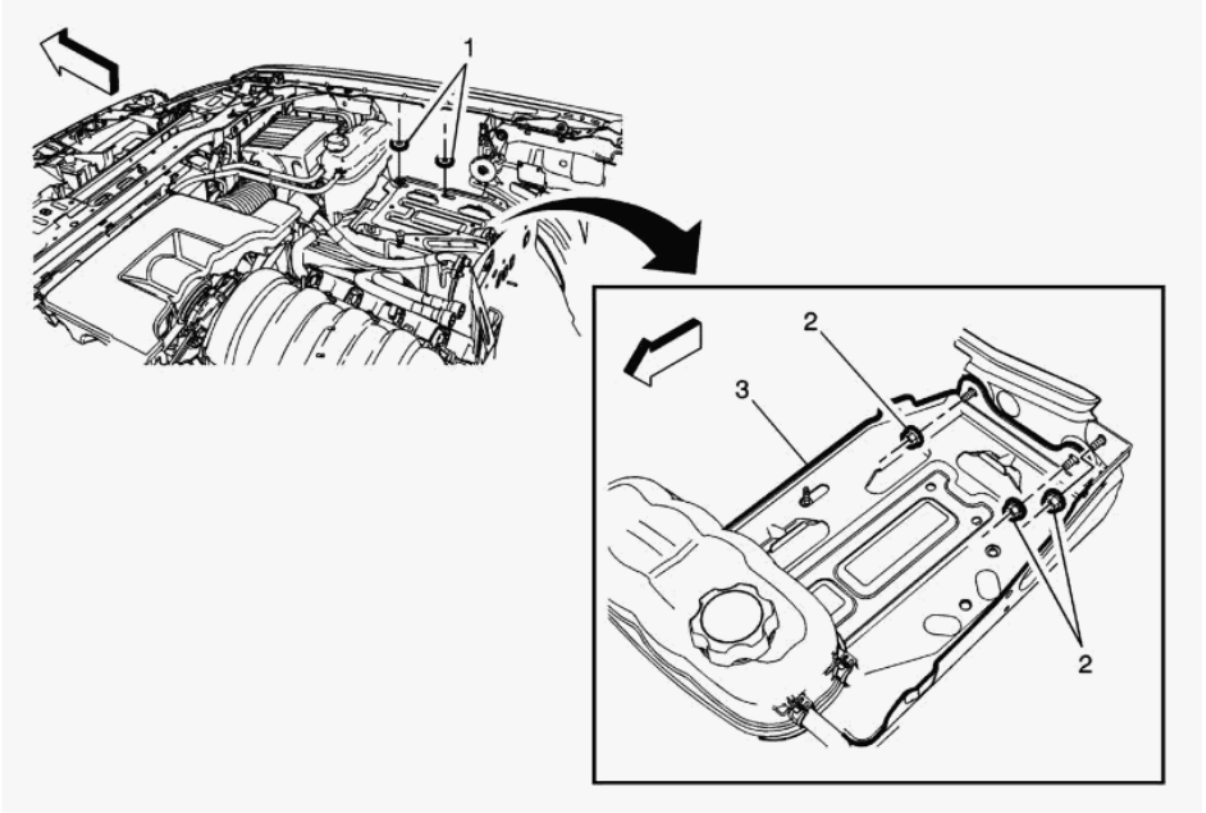


Fig. 97: Battery Tray
Courtesy of GENERAL MOTORS COMPANY

38. Remove Battery Tray (4) **Battery Tray Replacement**

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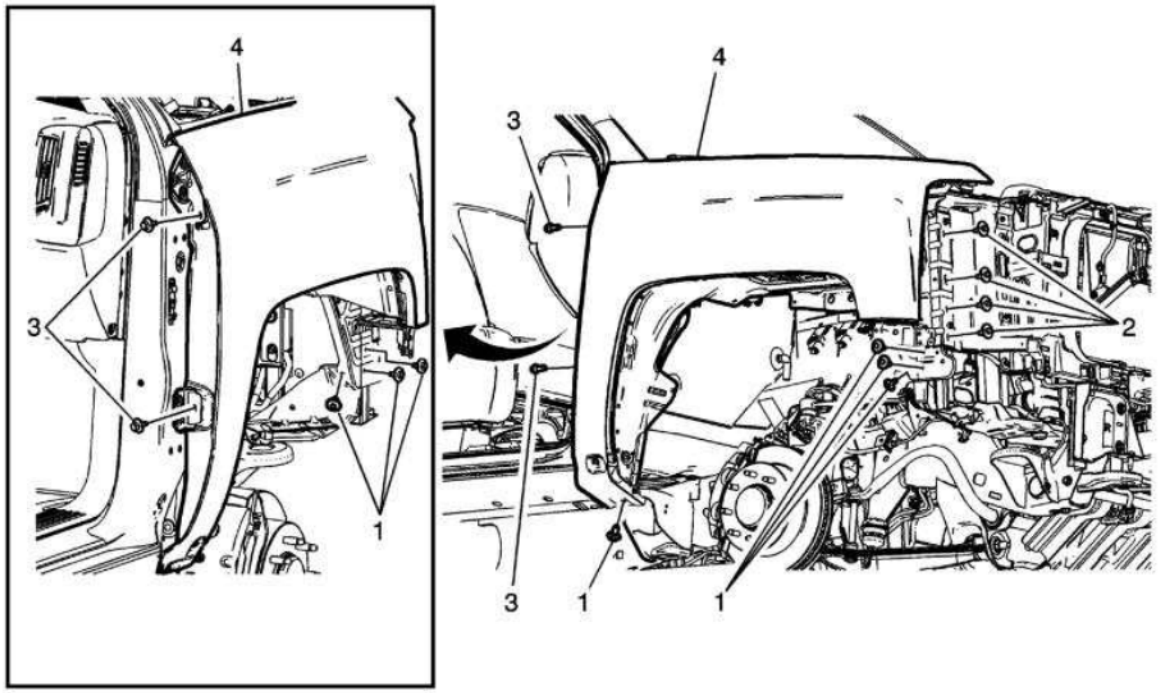


Fig. 98: Front Fender - Right Side
Courtesy of GENERAL MOTORS COMPANY

39. Remove Front Fender-Right Side (4) **Front Fender Replacement - Right Side (GMC)Front Fender Replacement - Right Side (Chevrolet)Front Fender Replacement - Right Side (Cadillac)**

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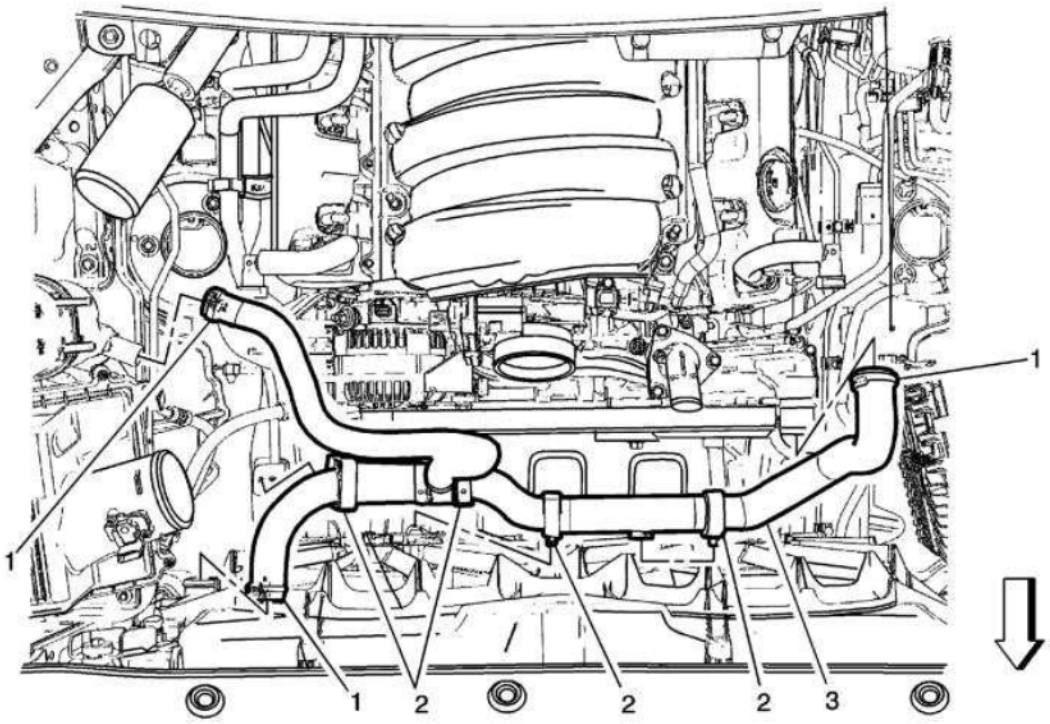


Fig. 99: Radiator Outlet Hose Retainers
Courtesy of GENERAL MOTORS COMPANY

40. Remove Radiator Outlet Hose (3) **Radiator Outlet Hose Replacement (L83 L86)** **Radiator Outlet Hose Replacement (L96)**

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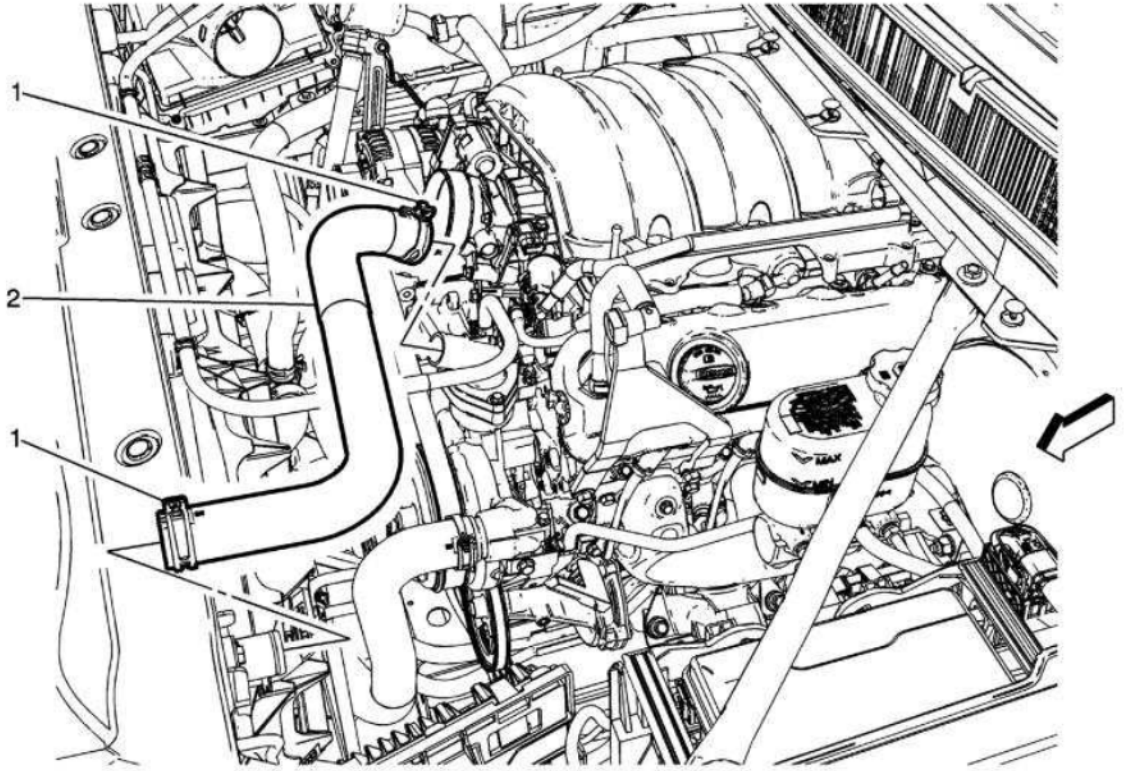


Fig. 100: Radiator Inlet Hose
Courtesy of GENERAL MOTORS COMPANY

41. Remove Radiator Inlet Hose (2) **Radiator Inlet Hose Replacement (L83 L86)** **Radiator Inlet Hose Replacement (L96)**

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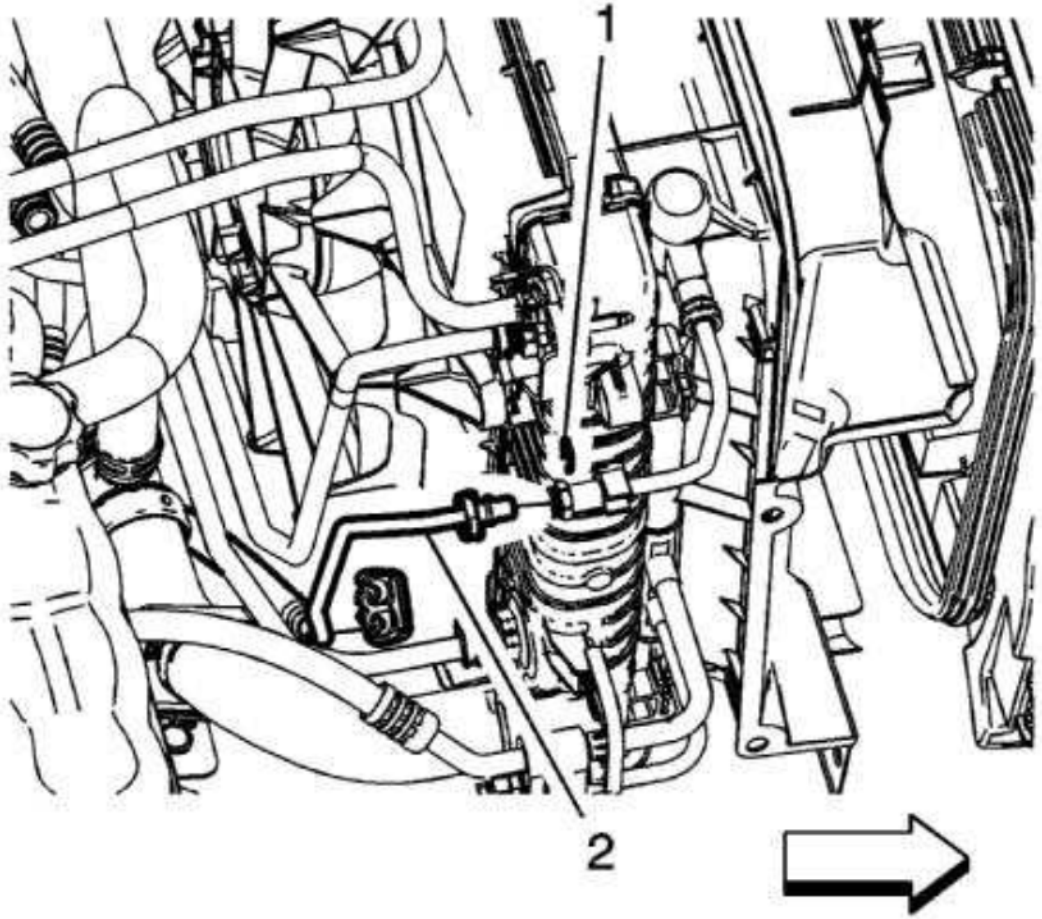


Fig. 101: Transmission Fluid Cooler Inlet And Outlet Pipe Retainer
Courtesy of GENERAL MOTORS COMPANY

42. Disconnect Transmission Fluid Cooler Inlet and Outlet Pipe (2) **Transmission Fluid Cooler Inlet and Outlet Pipe Replacement (L83 MYC)** **Transmission Fluid Cooler Inlet and Outlet Pipe Replacement (L86 M5U)**

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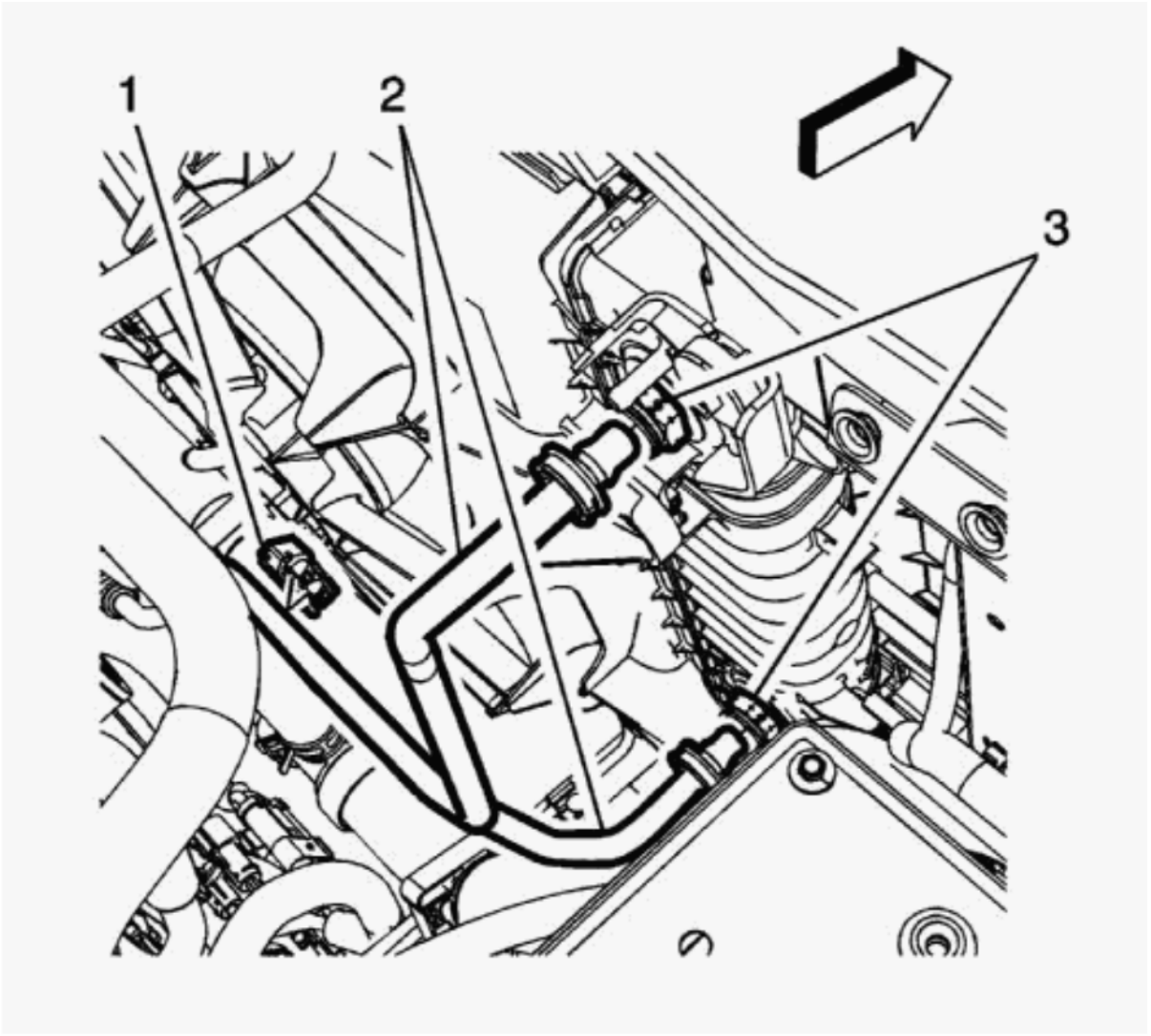


Fig. 102: Engine Oil Cooler Hoses And Retainer
Courtesy of GENERAL MOTORS COMPANY

43. Disconnect Engine Oil Cooler Hose (2) **Engine Oil Cooler Hose Replacement**

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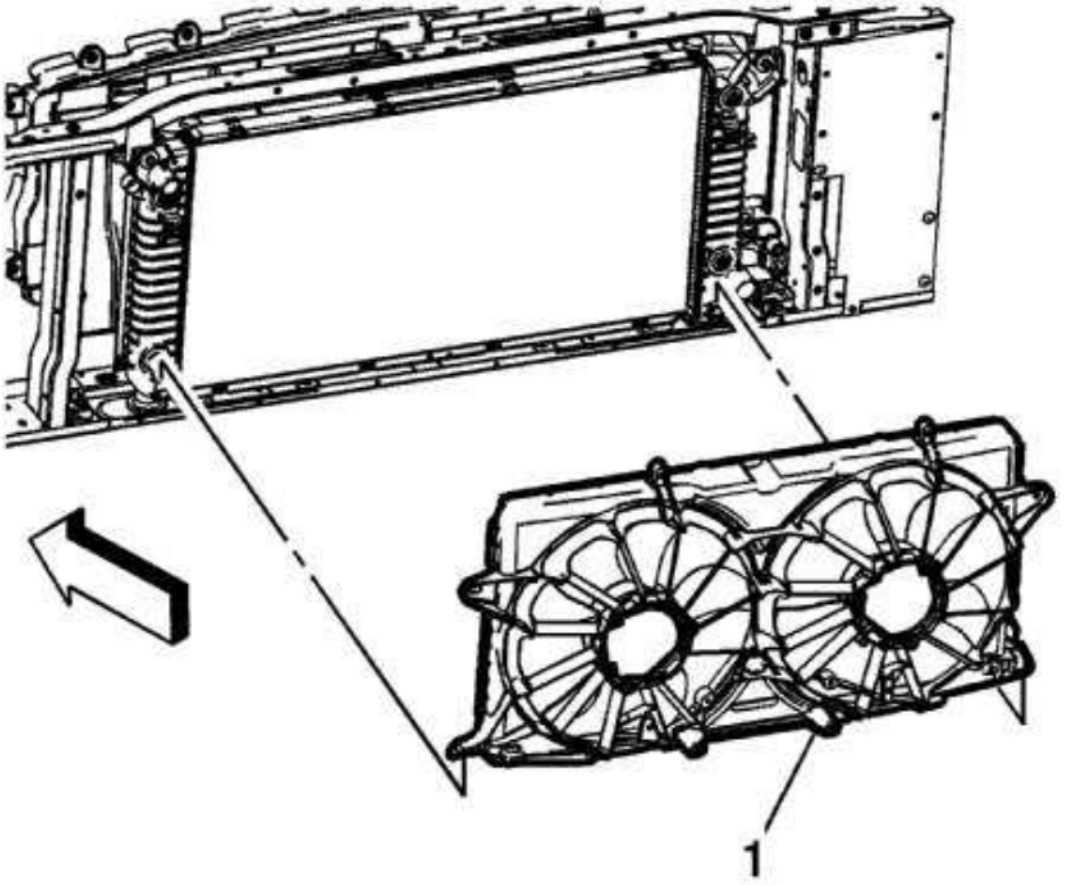


Fig. 103: Engine Coolant Fan Rear Shroud
Courtesy of GENERAL MOTORS COMPANY

44. Remove Engine Coolant Fan Rear Shroud (1) **Engine Coolant Fan Rear Shroud Replacement (L83, L86)** **Engine Coolant Fan Rear Shroud Replacement (L96)**

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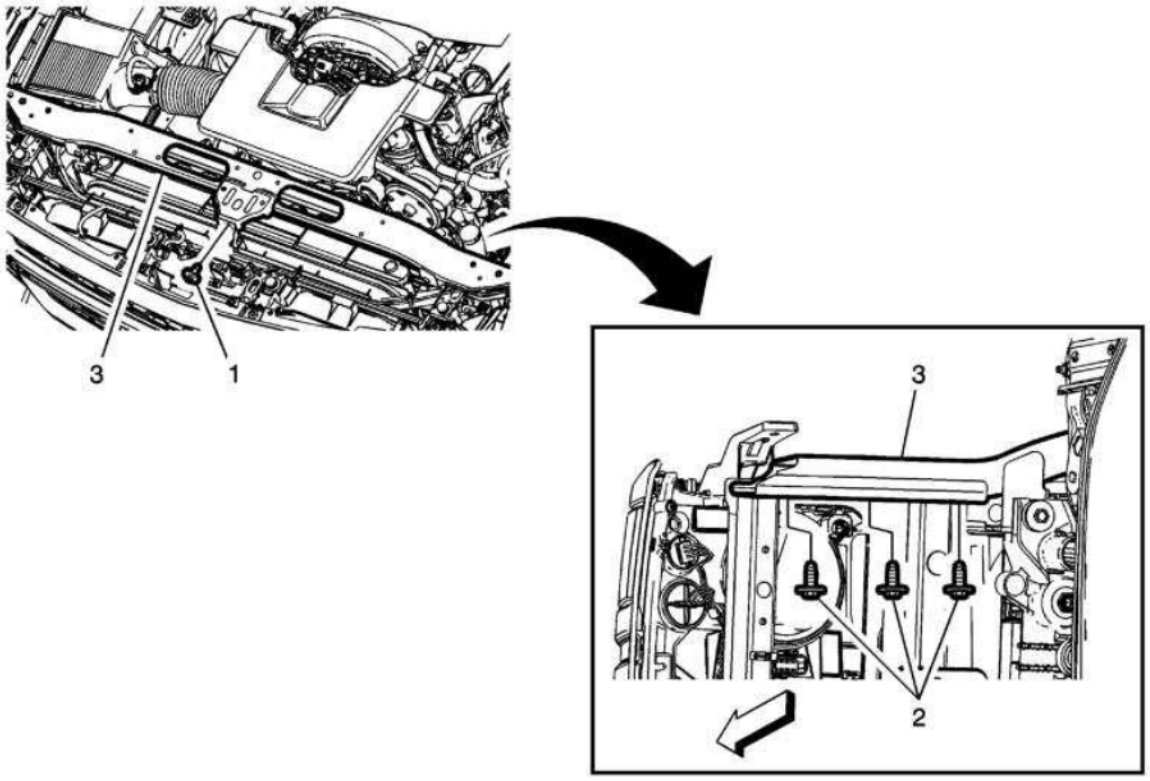


Fig. 104: Front End Upper Tie Bar Support
Courtesy of GENERAL MOTORS COMPANY

45. Remove Front End Upper Tie Bar Support (3) **Front End Upper Tie Bar Support Replacement**

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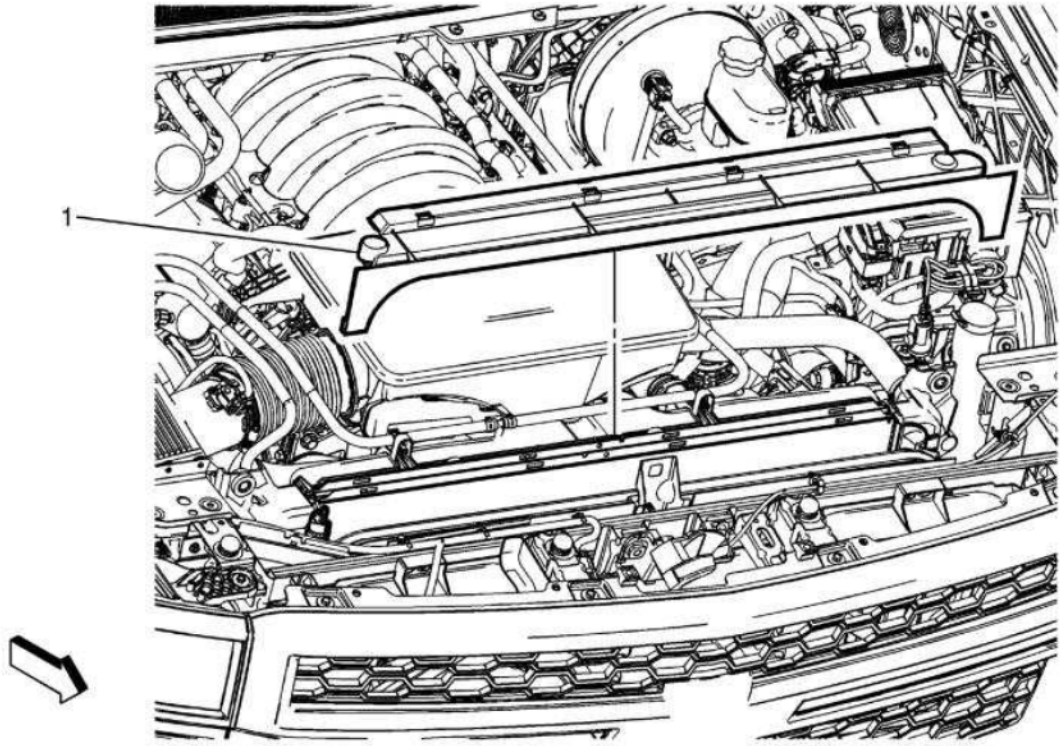


Fig. 105: Radiator Air Upper Baffle And Deflector (L83, L86, LV1, LV3)
Courtesy of GENERAL MOTORS COMPANY

46. Remove Radiator Air Upper Baffle and Deflector (1) **Radiator Air Upper Baffle and Deflector Replacement (Top of Radiator L83 L86)** **Radiator Air Upper Baffle and Deflector Replacement (Right of Radiator L83 L86)**

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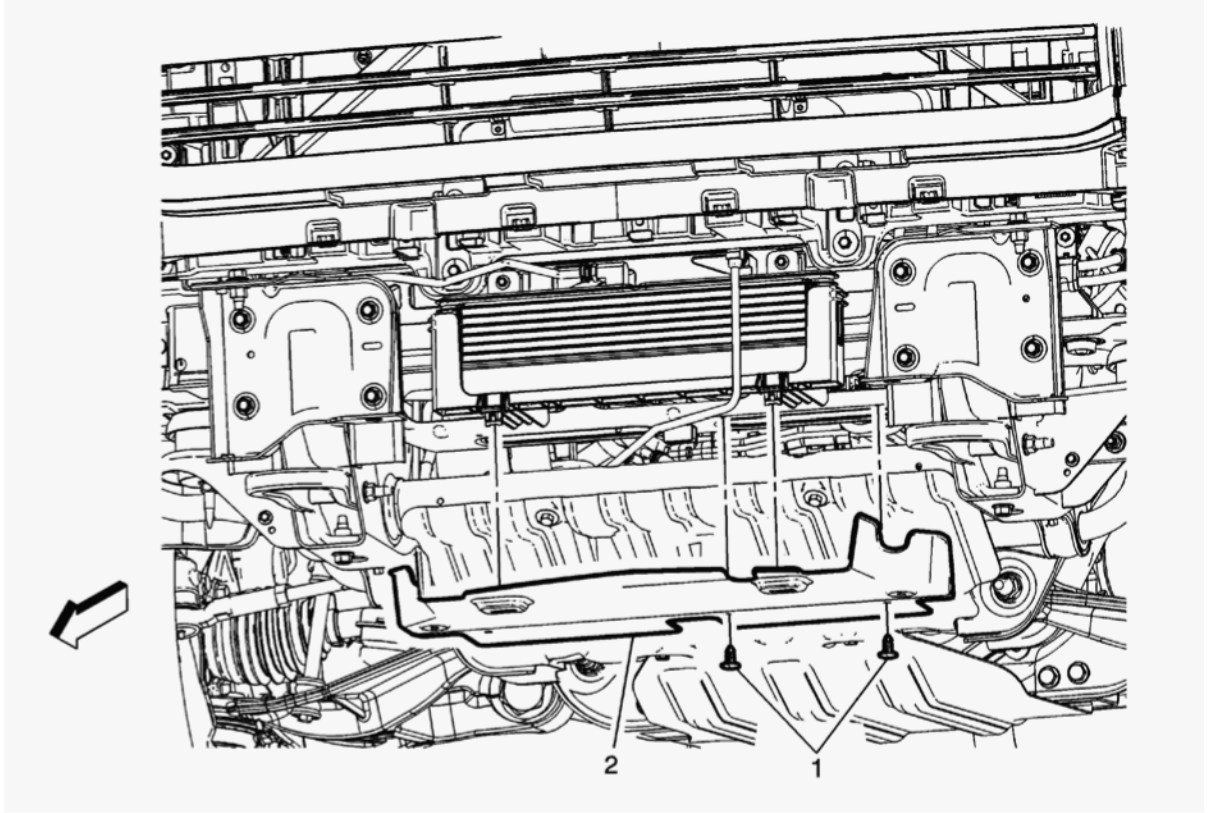


Fig. 106: Radiator Air Lower Baffle (LC8, L96, LML)
Courtesy of GENERAL MOTORS COMPANY

47. Remove Radiator Air Lower Baffle (2) **Radiator Air Lower Baffle Replacement (L83 L86)** **Radiator Air Lower Baffle Replacement (L96)**

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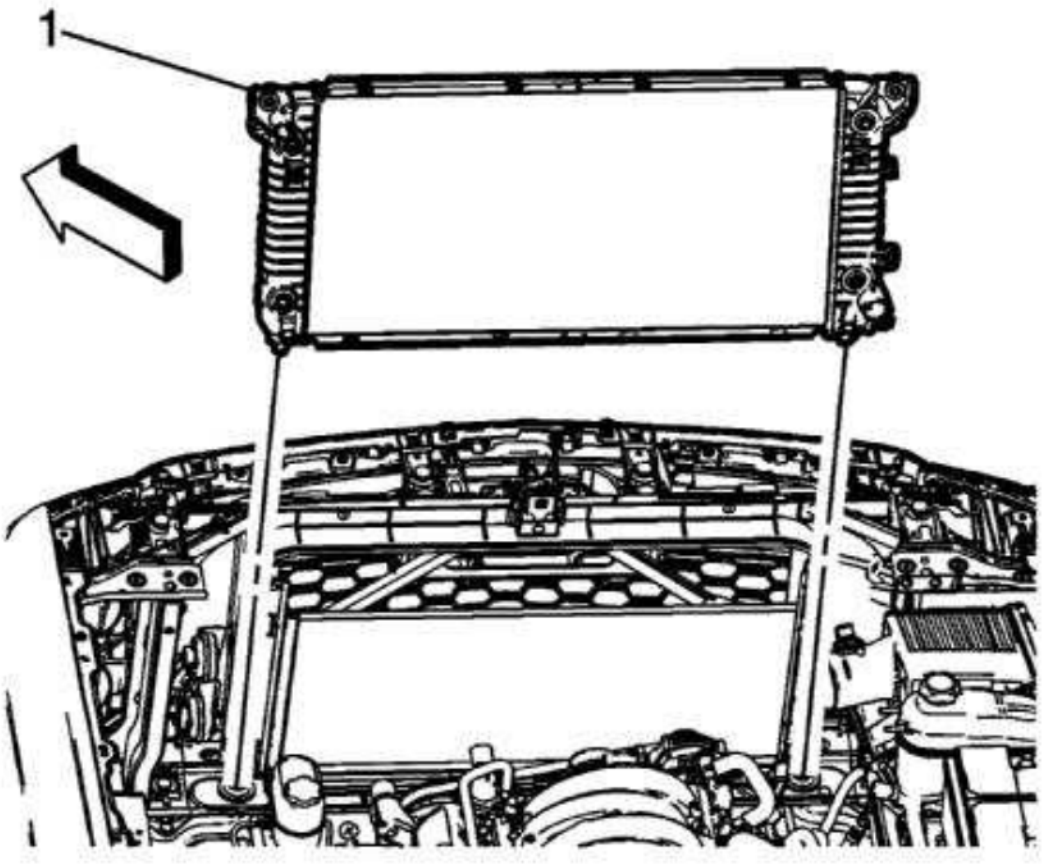


Fig. 107: Radiator
Courtesy of GENERAL MOTORS COMPANY

48. Remove Radiator (1) **Radiator Replacement (L83 L86)** **Radiator Replacement (L96)**

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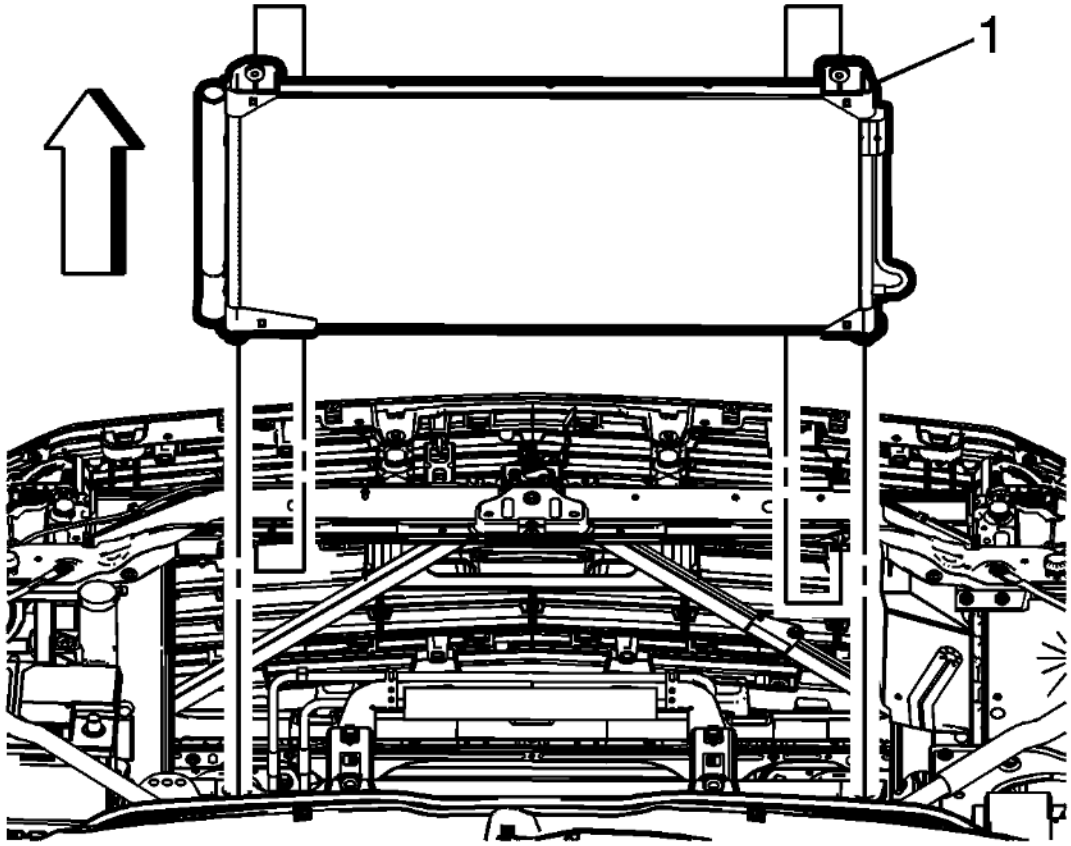


Fig. 108: Air Conditioning Condenser
Courtesy of GENERAL MOTORS COMPANY

49. Remove Air Conditioning Condenser (1) **Air Conditioning Condenser Replacement (L83 L86)** **Air Conditioning Condenser Replacement (L96)**

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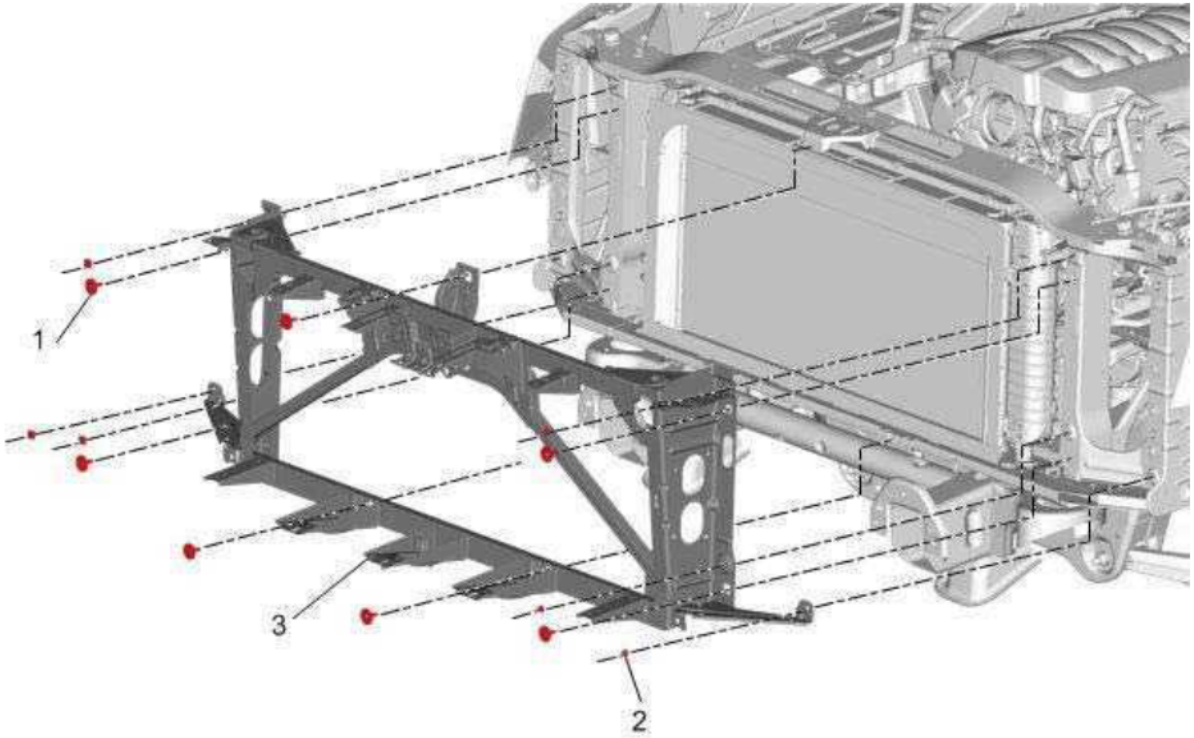


Fig. 109: Headlamp and Radiator Grille Mount Panel
Courtesy of GENERAL MOTORS COMPANY

50. Remove Headlamp and Radiator Grille Mount Panel (3) **Headlamp and Radiator Grille Mount Panel Replacement**

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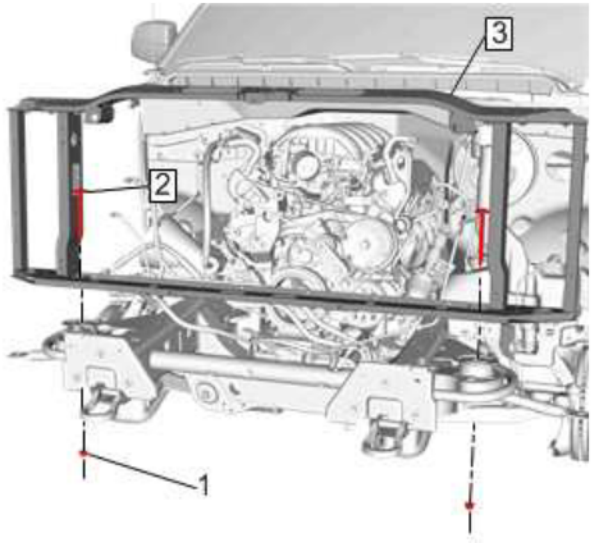


Fig. 110: Body Mount Nut, Bolt And Radiator Lower Support
Courtesy of GENERAL MOTORS COMPANY

51. Remove Body Mount Nut (1)
52. Remove Body Mount Bolt (2)
53. Remove Radiator Lower Support (3)

Installation Procedure

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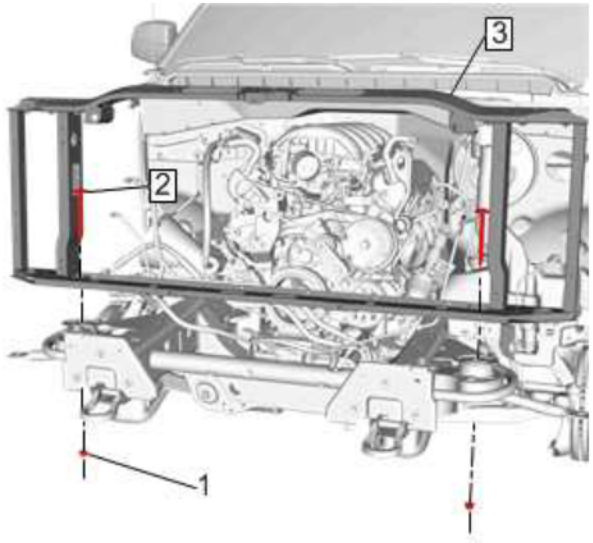


Fig. 111: Body Mount Nut, Bolt And Radiator Lower Support
Courtesy of GENERAL MOTORS COMPANY

1. Install Radiator Lower Support (3)
2. Install Body Mount Bolt (2)
3. Install Body Mount Nut (1)

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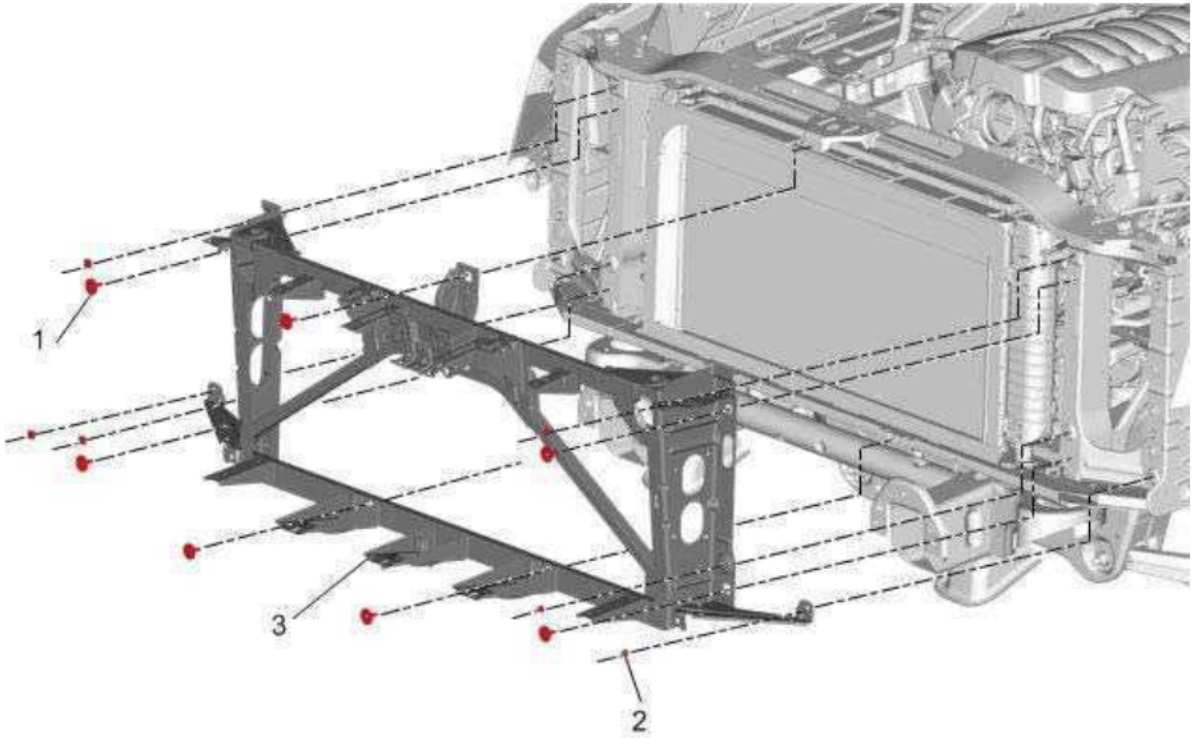


Fig. 112: Headlamp and Radiator Grille Mount Panel
Courtesy of GENERAL MOTORS COMPANY

4. Install Headlamp and Radiator Grille Mount Panel (3) **Headlamp and Radiator Grille Mount Panel Replacement**

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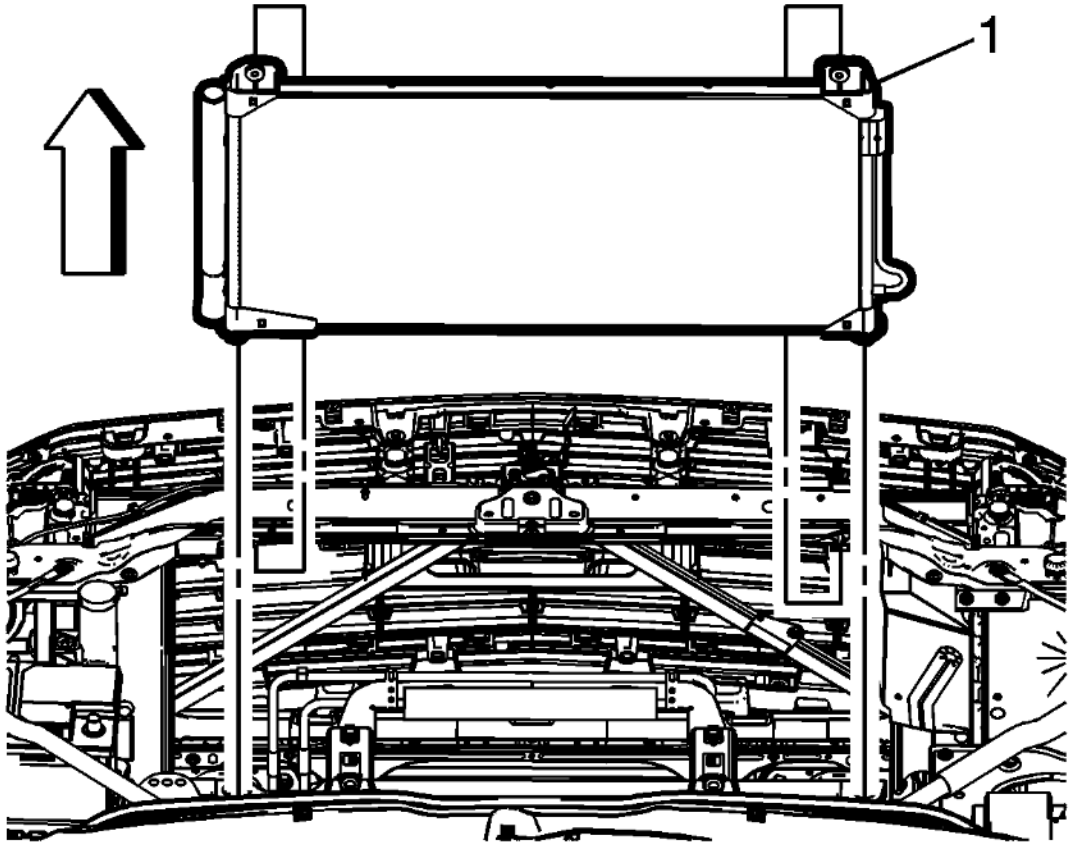


Fig. 113: Air Conditioning Condenser
Courtesy of GENERAL MOTORS COMPANY

5. Install Air Conditioning Condenser (1) **Air Conditioning Condenser Replacement (L83 L86)** **Air Conditioning Condenser Replacement (L96)**

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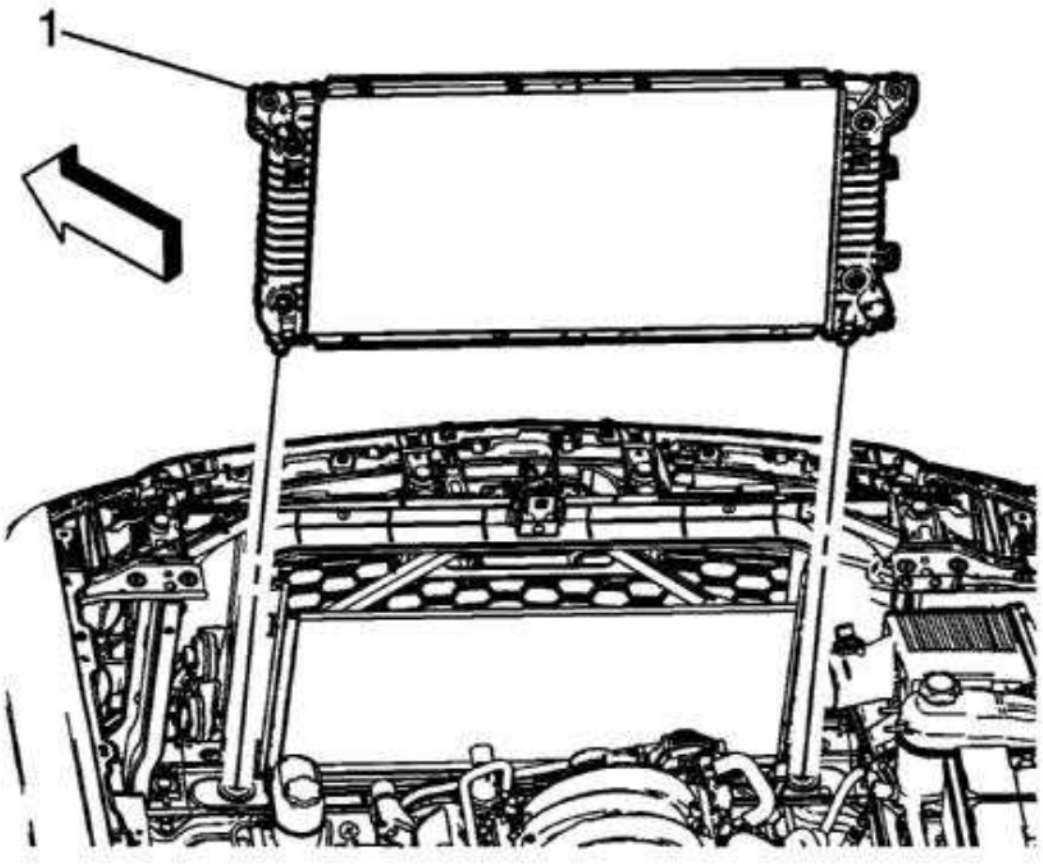


Fig. 114: Radiator
Courtesy of GENERAL MOTORS COMPANY

6. Install Radiator (1) **Radiator Replacement (L83 L86)** **Radiator Replacement (L96)**

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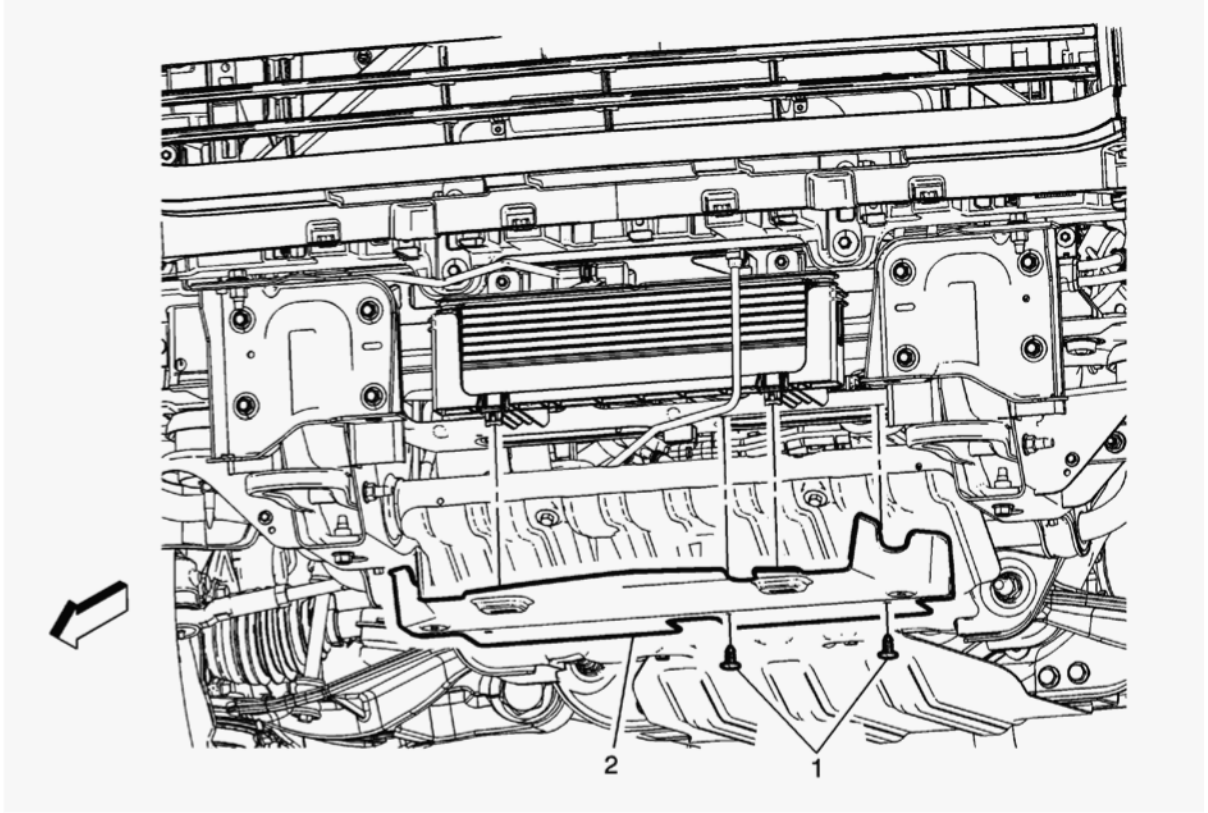


Fig. 115: Radiator Air Lower Baffle (LC8, L96, LML)
Courtesy of GENERAL MOTORS COMPANY

7. Install Radiator Air Lower Baffle (2) **Radiator Air Lower Baffle Replacement (L83 L86)** **Radiator Air Lower Baffle Replacement (L96)**

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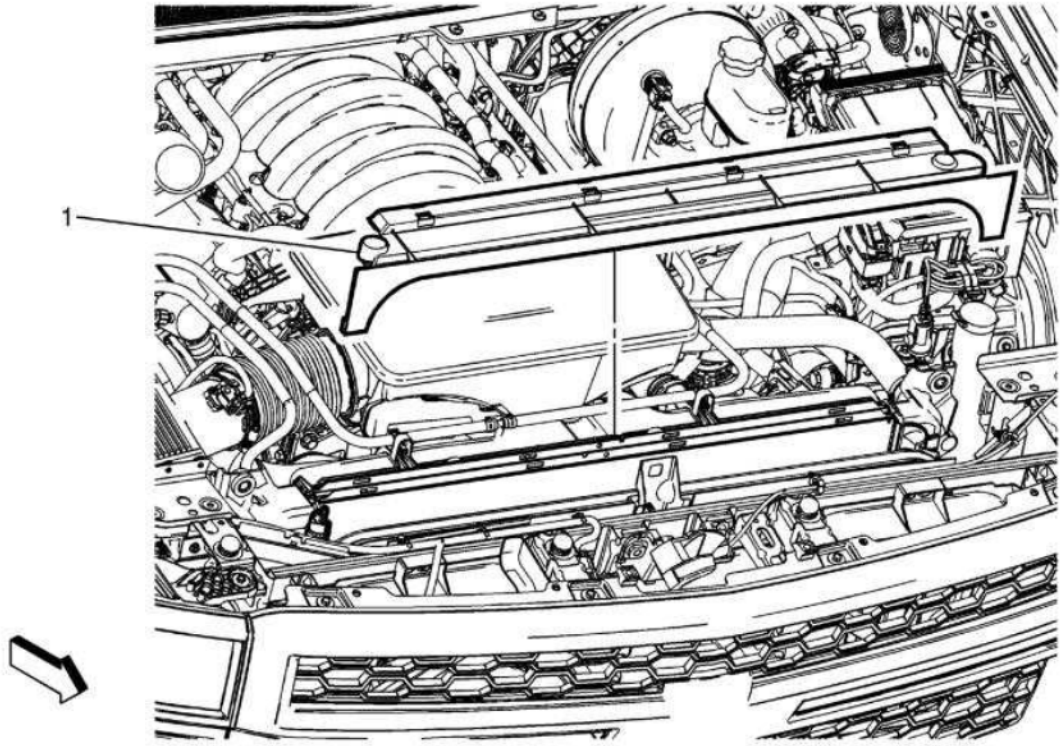


Fig. 116: Radiator Air Upper Baffle And Deflector (L83, L86, LV1, LV3)
Courtesy of GENERAL MOTORS COMPANY

8. Install Radiator Air Upper Baffle and Deflector (1) **Radiator Air Upper Baffle and Deflector Replacement (Top of Radiator L83 L86)** **Radiator Air Upper Baffle and Deflector Replacement (Right of Radiator L83 L86)**

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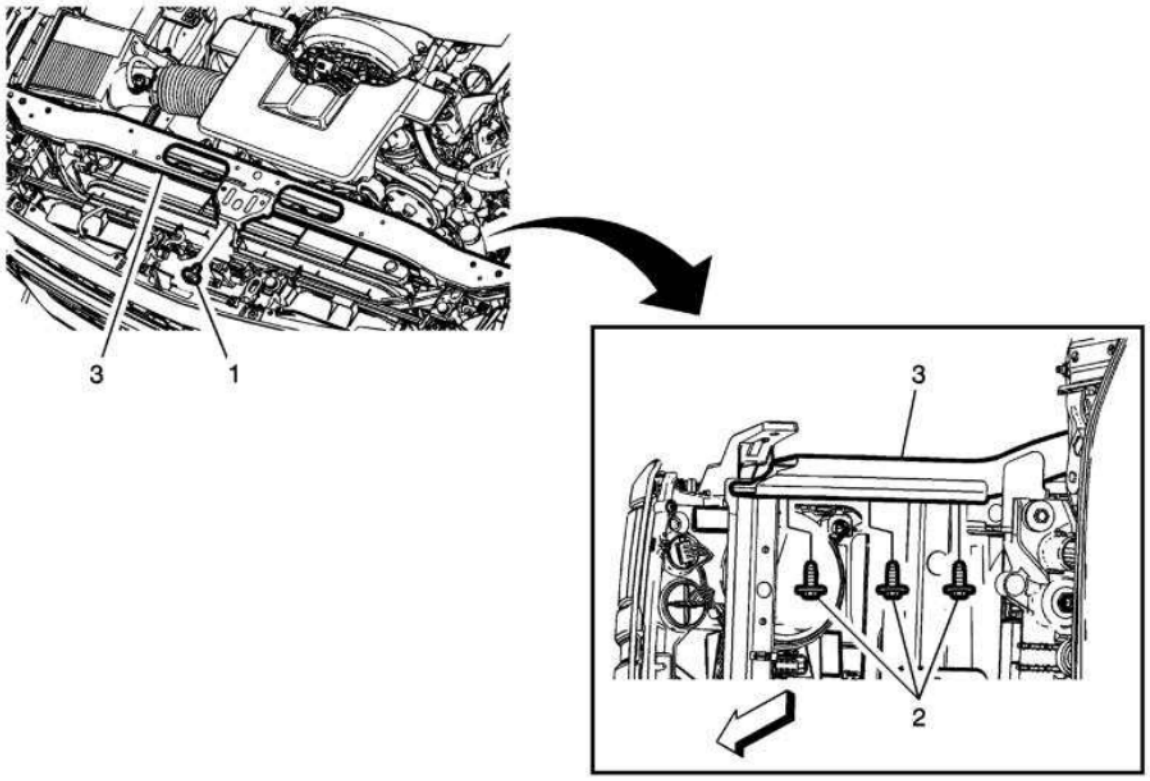


Fig. 117: Front End Upper Tie Bar Support
Courtesy of GENERAL MOTORS COMPANY

9. Install Front End Upper Tie Bar Support (3) **Front End Upper Tie Bar Support Replacement**

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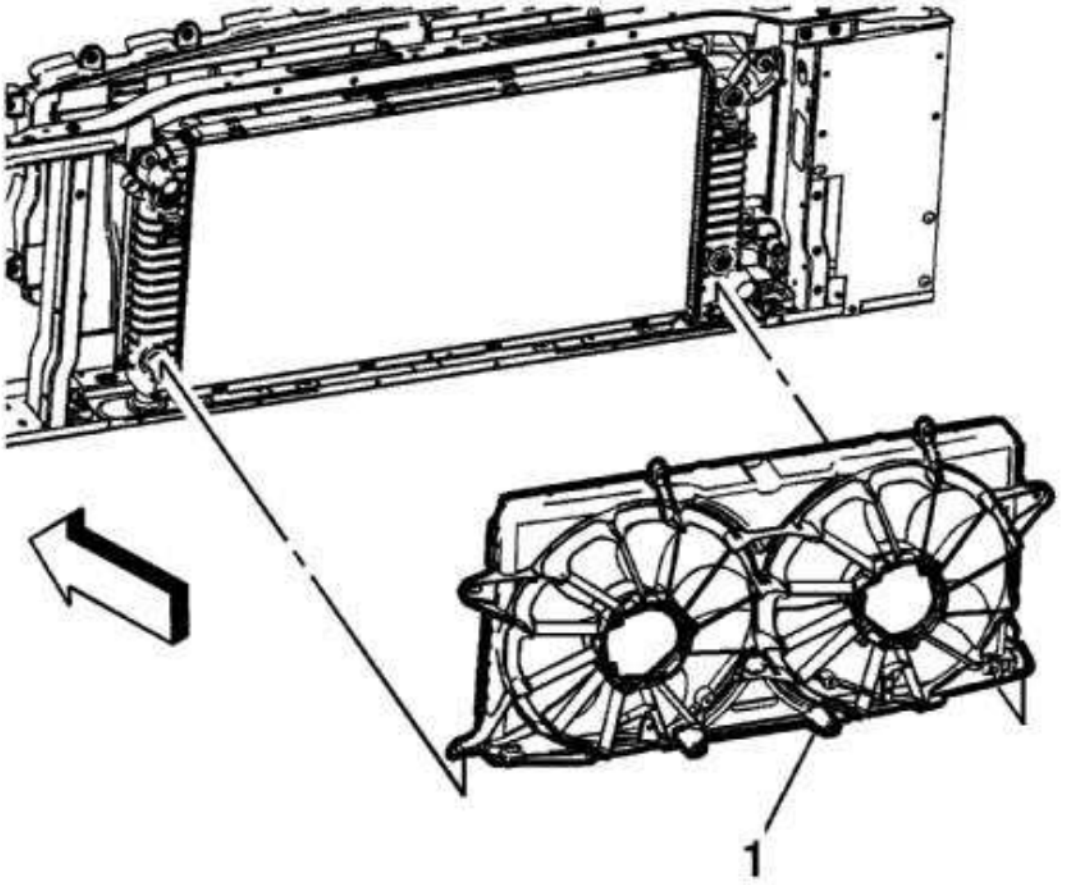


Fig. 118: Engine Coolant Fan Rear Shroud
Courtesy of GENERAL MOTORS COMPANY

10. Install Engine Coolant Fan Rear Shroud (1) **Engine Coolant Fan Rear Shroud Replacement (L83, L86)** **Engine Coolant Fan Rear Shroud Replacement (L96)**

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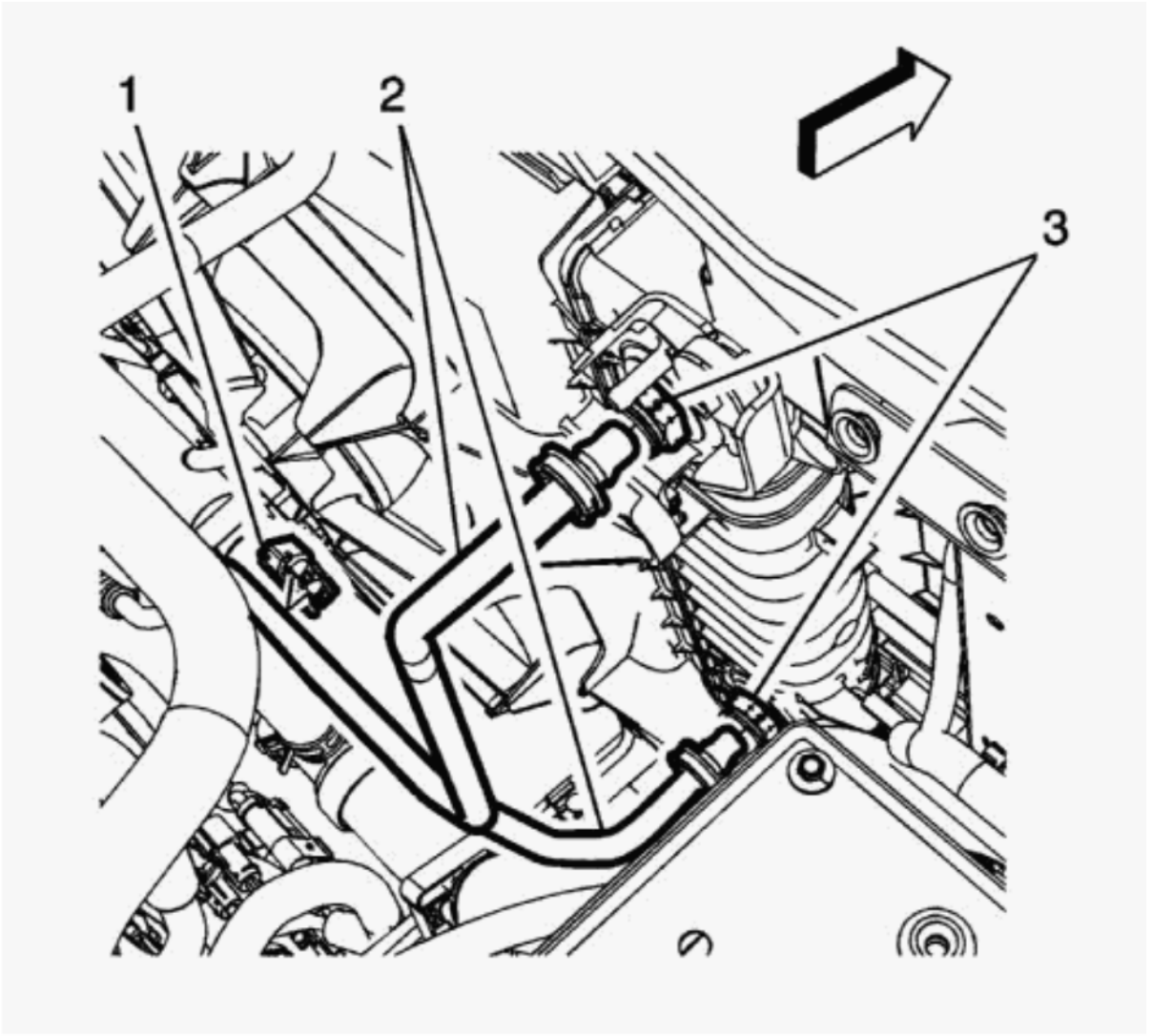


Fig. 119: Engine Oil Cooler Hoses And Retainer
Courtesy of GENERAL MOTORS COMPANY

11. Connect Engine Oil Cooler Hose (2) **Engine Oil Cooler Hose Replacement**

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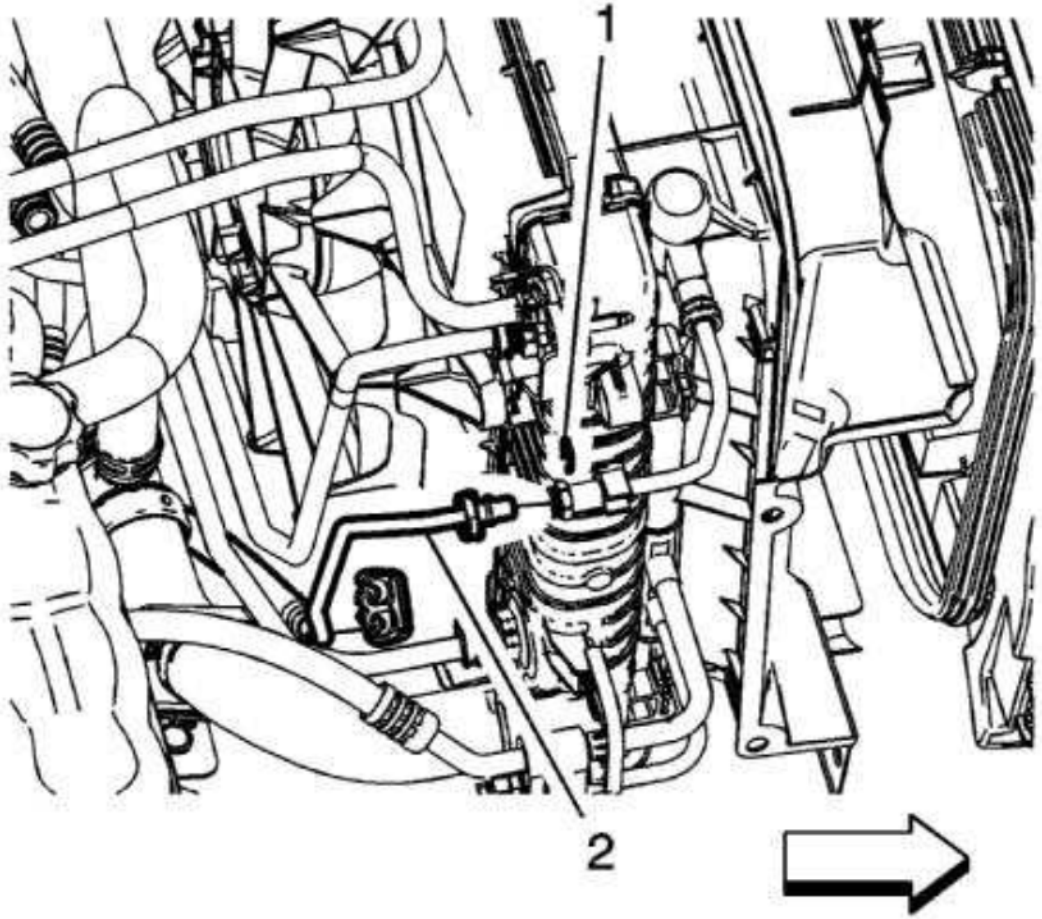


Fig. 120: Transmission Fluid Cooler Inlet And Outlet Pipe Retainer
Courtesy of GENERAL MOTORS COMPANY

12. Connect Transmission Fluid Cooler Inlet and Outlet Pipe (2)**Transmission Fluid Cooler Inlet and Outlet Pipe Replacement (L83 MYC)**
Transmission Fluid Cooler Inlet and Outlet Pipe Replacement (L86 M5U)

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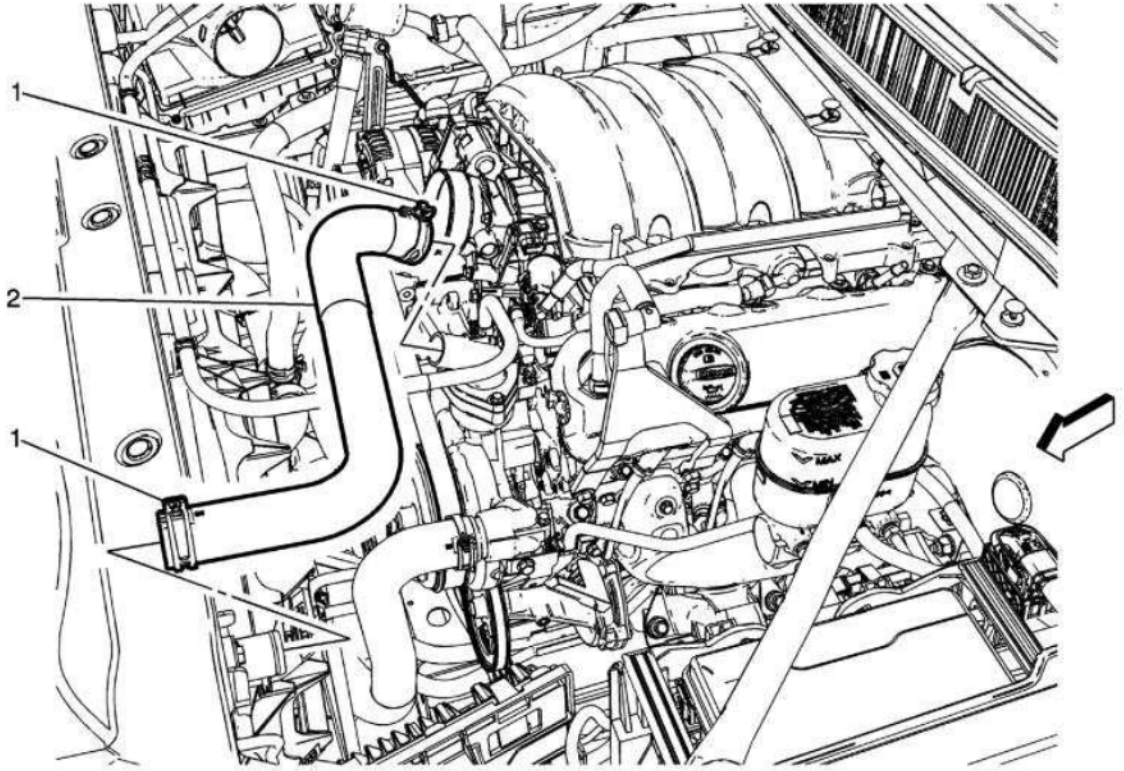


Fig. 121: Radiator Inlet Hose
Courtesy of GENERAL MOTORS COMPANY

13. Radiator Inlet Hose (2) **Radiator Inlet Hose Replacement (L83 L86)** **Radiator Inlet Hose Replacement (L96)**

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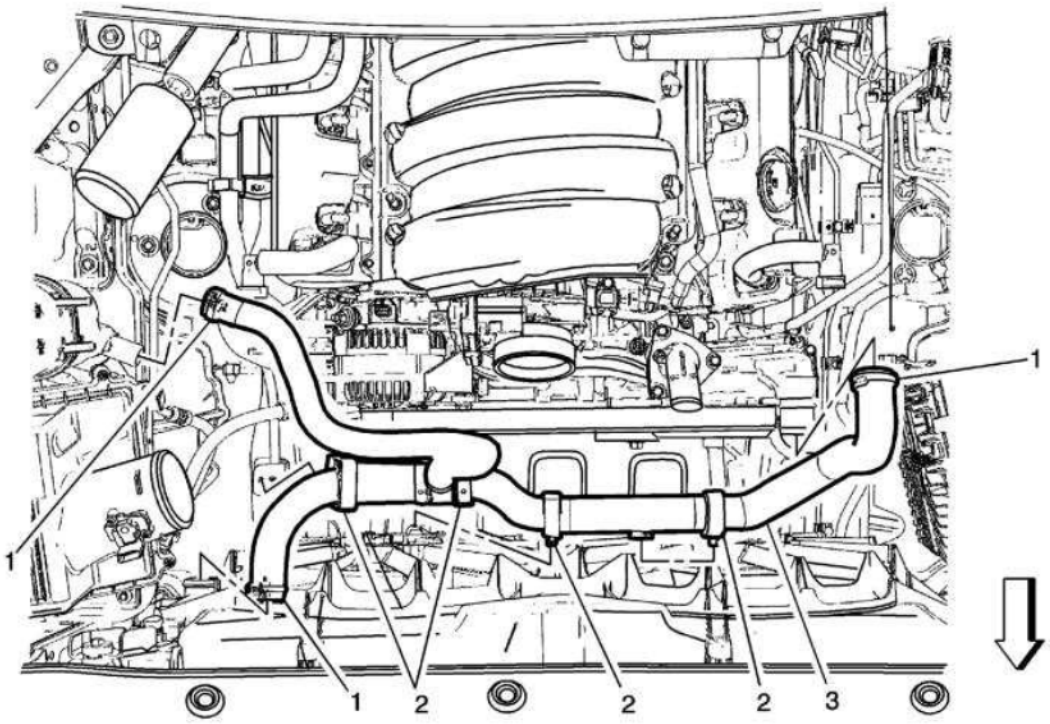


Fig. 122: Radiator Outlet Hose Retainers
Courtesy of GENERAL MOTORS COMPANY

14. Install Radiator Outlet Hose (3) **Radiator Outlet Hose Replacement (L83 L86)** **Radiator Outlet Hose Replacement (L96)**

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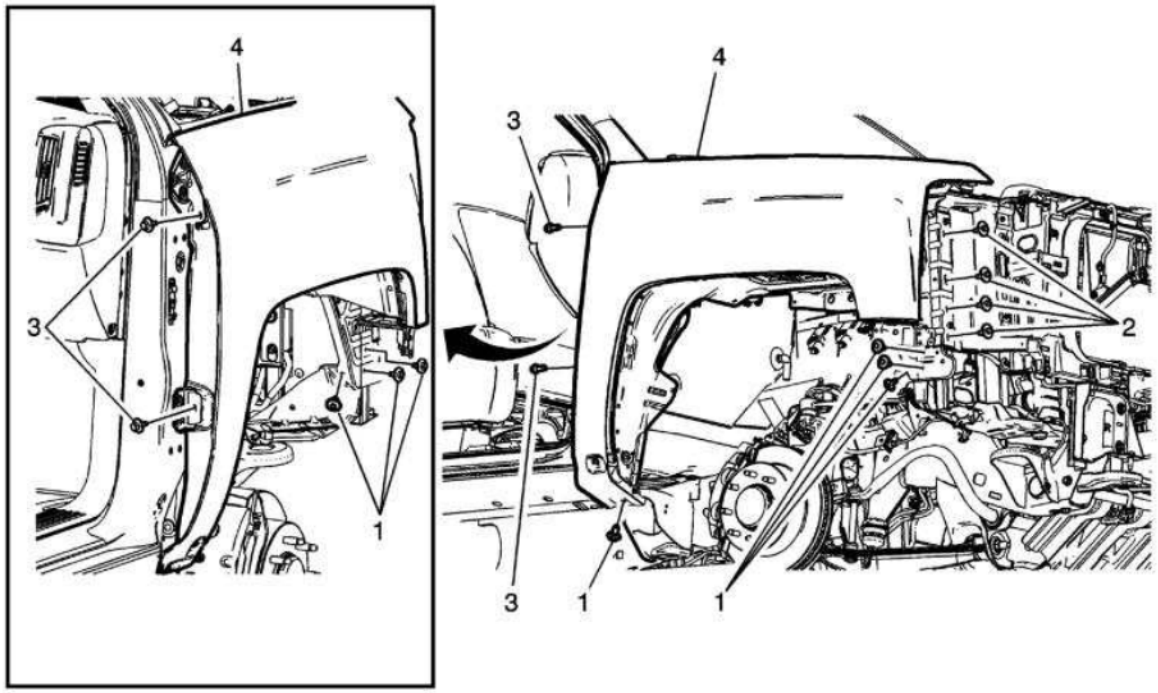


Fig. 123: Front Fender - Right Side
Courtesy of GENERAL MOTORS COMPANY

15. Install Front Fender - Right Side (4) **Front Fender Replacement - Right Side (GMC)Front Fender Replacement - Right Side (Chevrolet)Front Fender Replacement - Right Side (Cadillac)**

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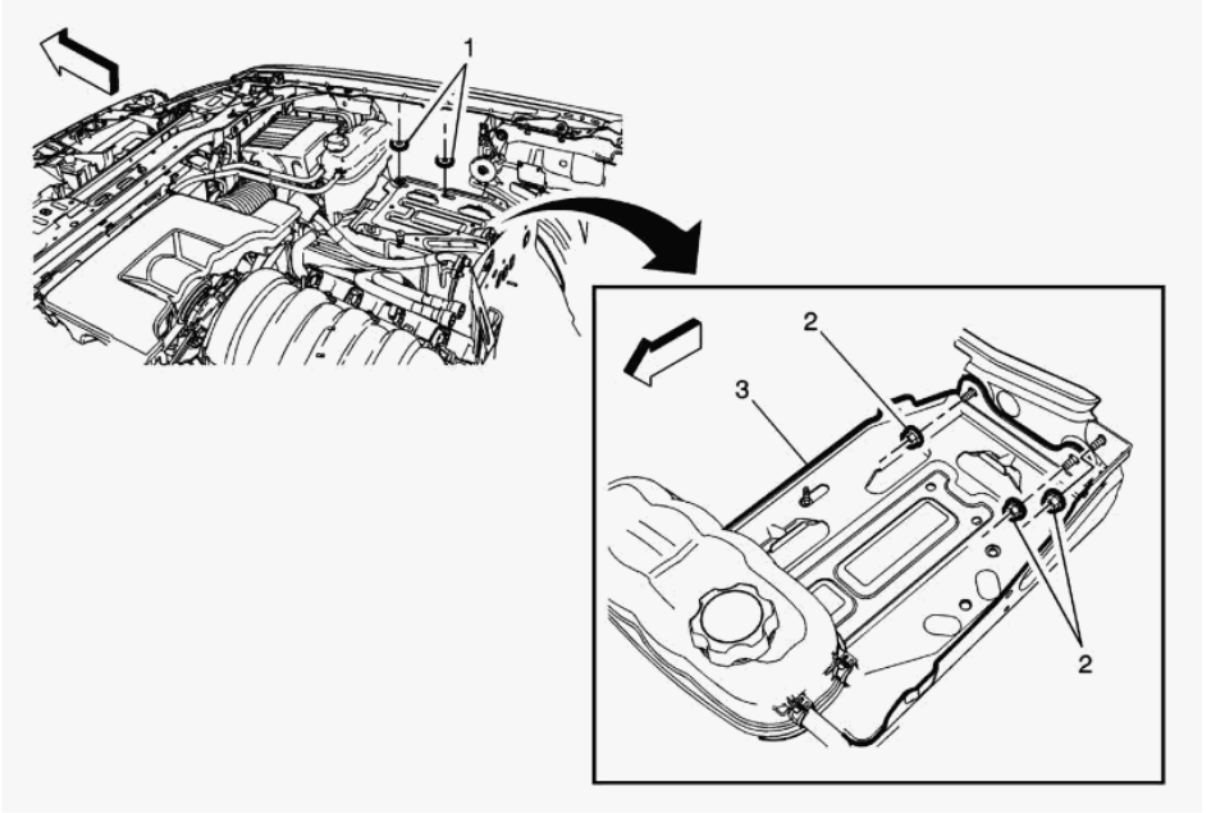


Fig. 124: Battery Tray
Courtesy of GENERAL MOTORS COMPANY

16. Install Battery Tray (4) **Battery Tray Replacement**

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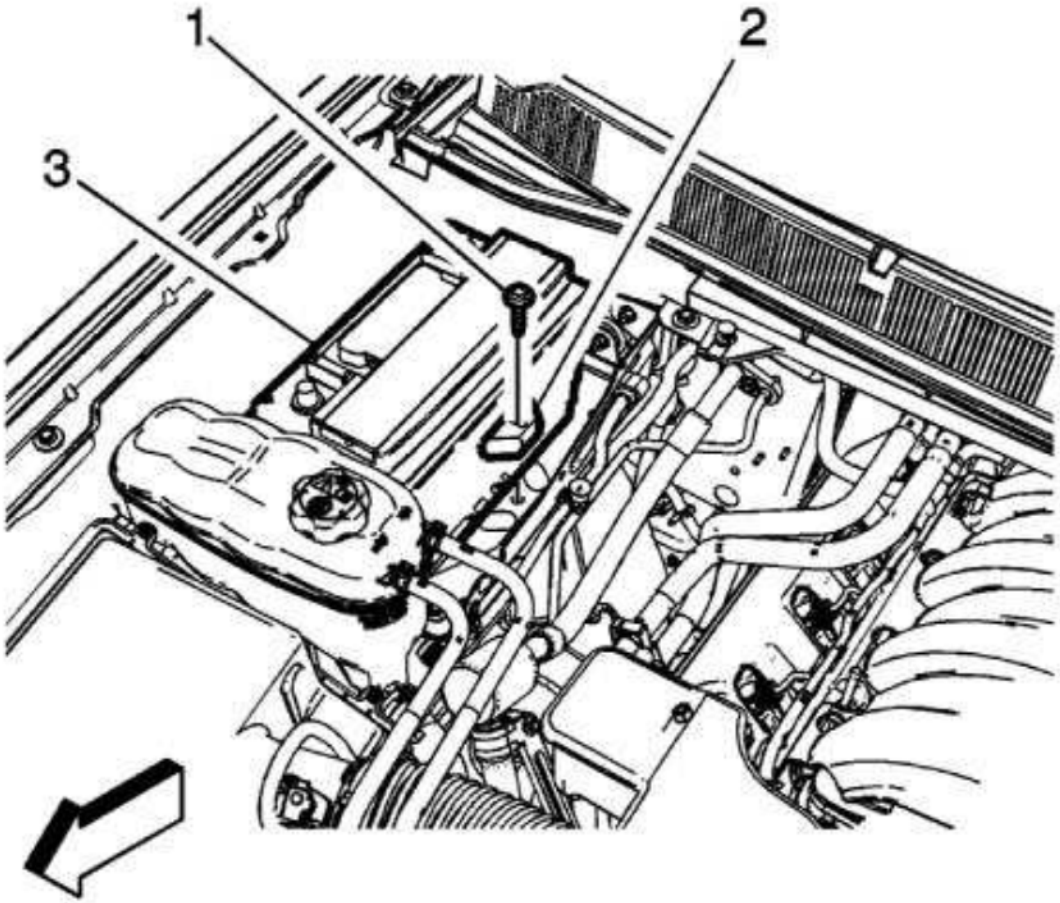


Fig. 125: Battery Retainer Fastener And Battery Retainer
Courtesy of GENERAL MOTORS COMPANY

17. Install Battery (3) **Battery Replacement**

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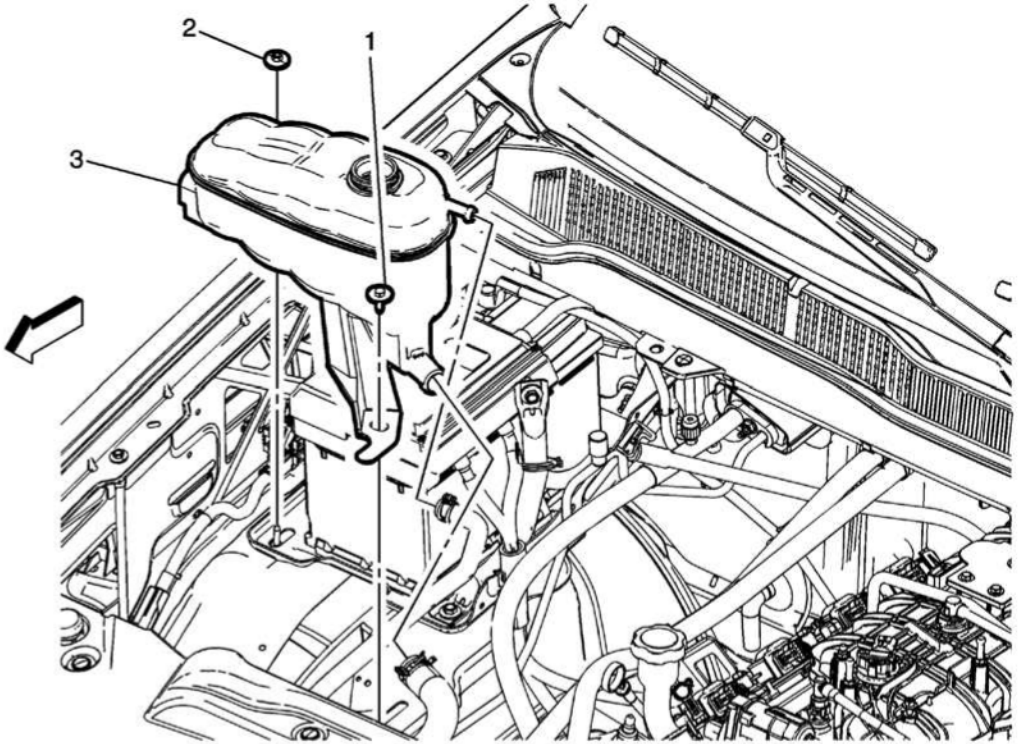


Fig. 126: Radiator Surge Tank (LC8, L96)
Courtesy of GENERAL MOTORS COMPANY

18. Install Radiator Surge Tank (3) **Radiator Surge Tank Replacement (L83 L86)** **Radiator Surge Tank Replacement (L96)**

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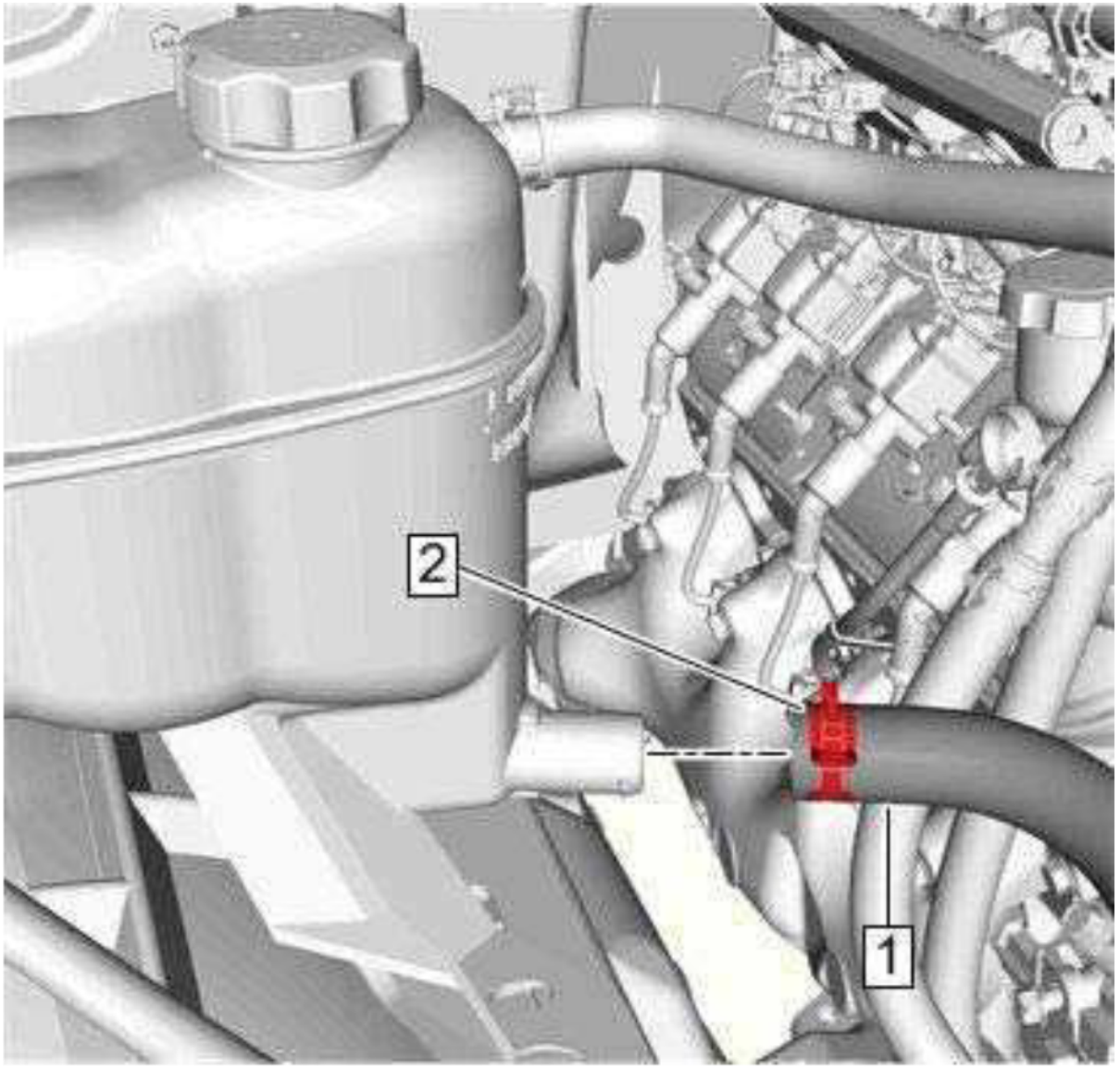


Fig. 127: Radiator Surge Tank Outlet Hose Clamp at Radiator Surge Tank
Courtesy of GENERAL MOTORS COMPANY

19. Install Radiator Surge Tank Outlet Hose (2) **Radiator Surge Tank Outlet Hose Replacement (L96)**

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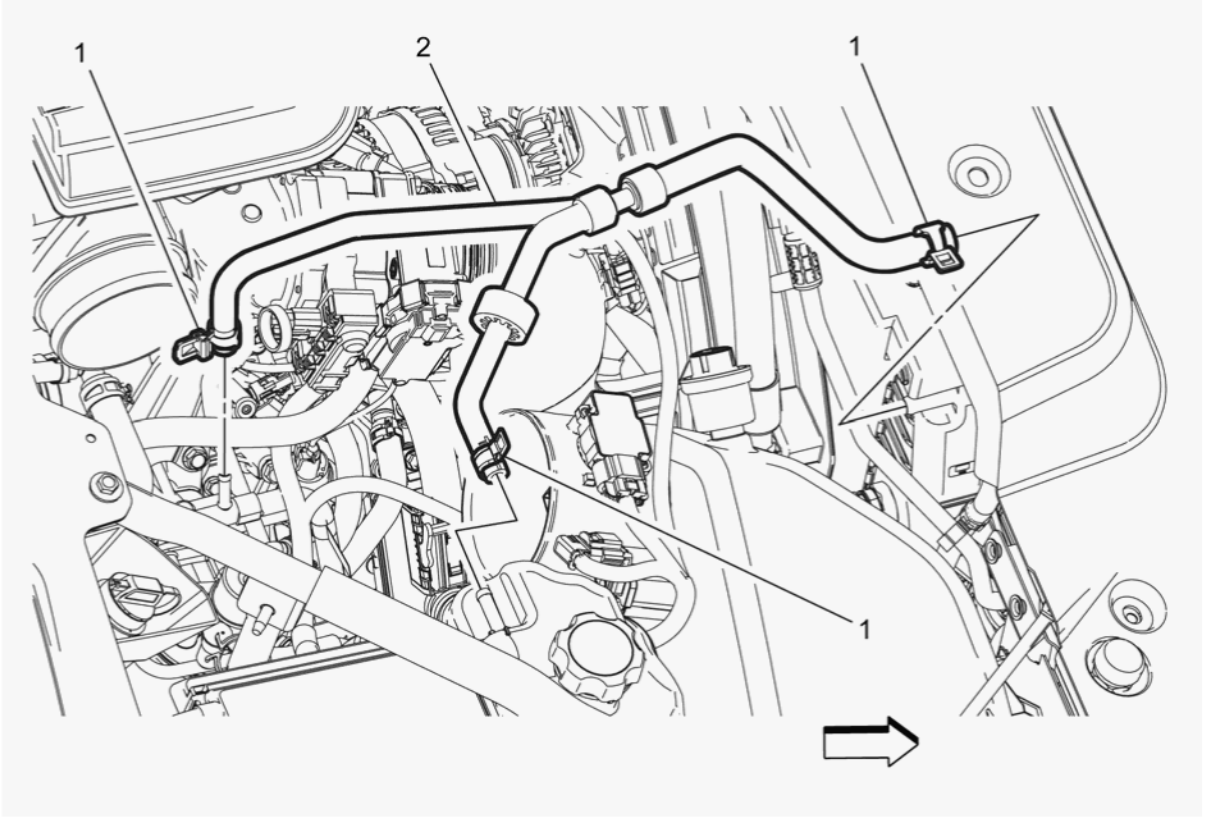


Fig. 128: Radiator Surge Tank Inlet Hose Replacement (LML)
Courtesy of GENERAL MOTORS COMPANY

20. Install Radiator Surge Tank Inlet Hose (2) **Radiator Surge Tank Inlet Hose Replacement (Surge Tank To Radiator L83 L86)** **Radiator Surge Tank Inlet Hose Replacement (Surge Tank To Water Outlet L83 L86)** **Radiator Surge Tank Inlet Hose Replacement (L96)**

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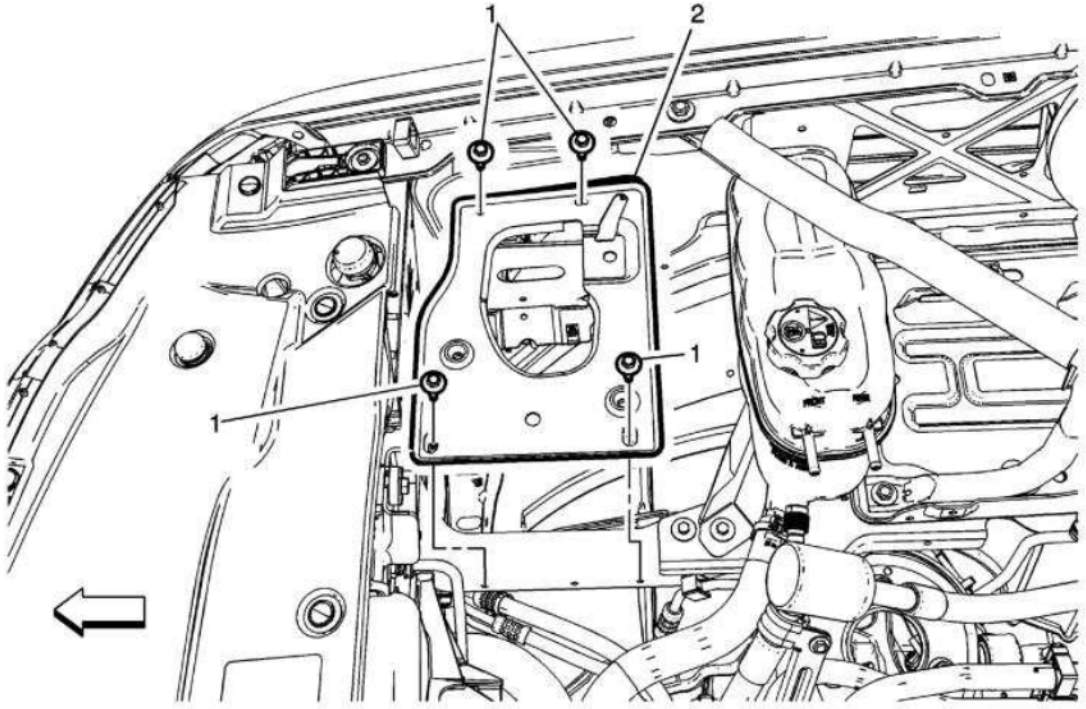


Fig. 129: Air Cleaner Bracket
Courtesy of GENERAL MOTORS COMPANY

21. Install Air Cleaner Bracket (2) **Air Cleaner Bracket Replacement**

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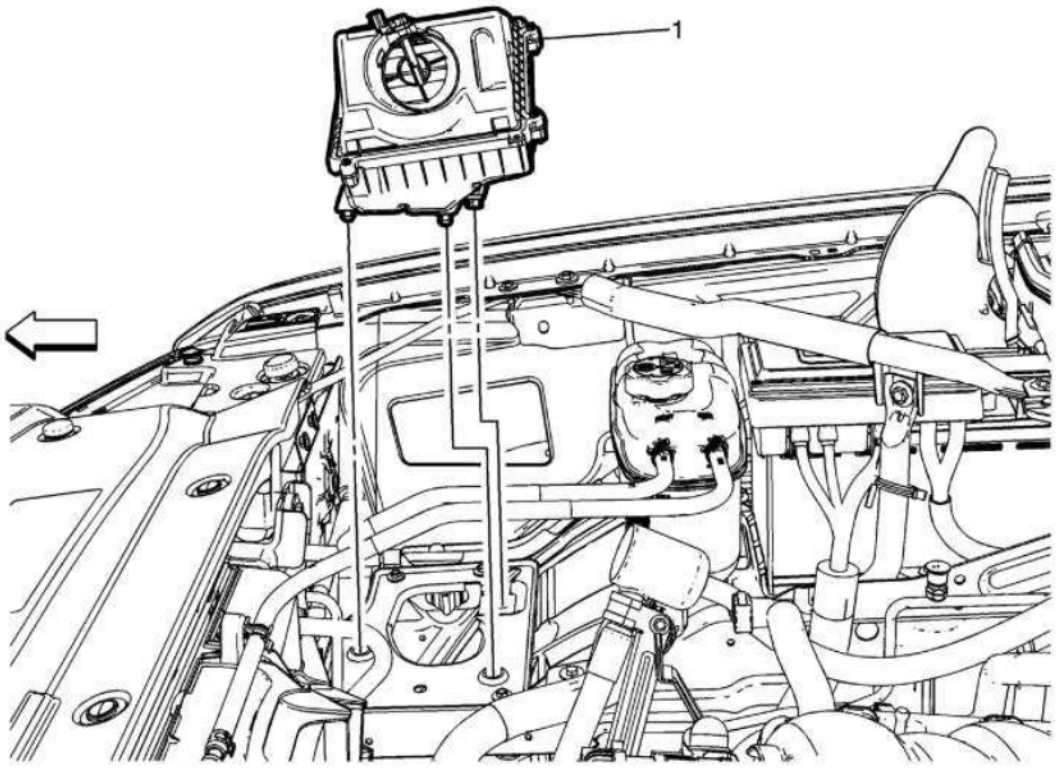


Fig. 130: Air Cleaner Assembly
Courtesy of GENERAL MOTORS COMPANY

22. Install Air Cleaner Assembly (1) **Air Cleaner Assembly Replacement**

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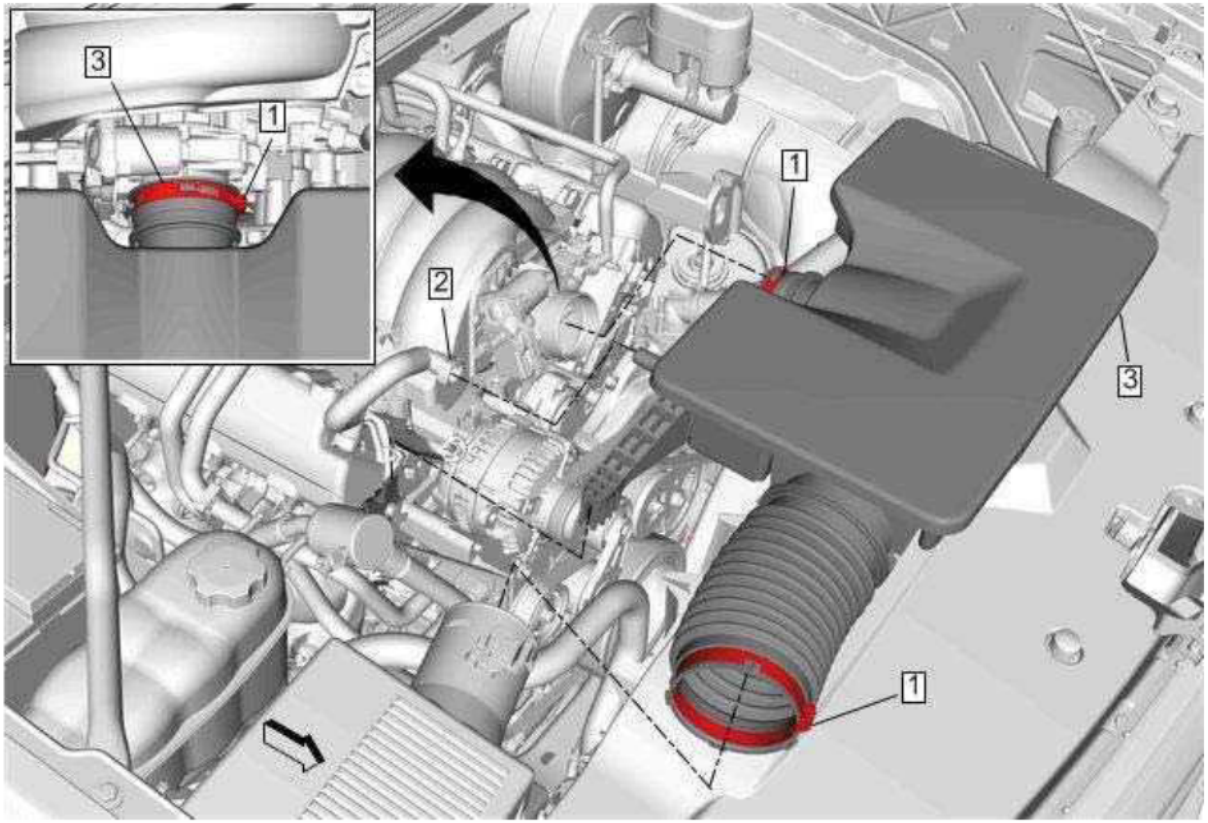


Fig. 131: Air Cleaner Outlet Duct
Courtesy of GENERAL MOTORS COMPANY

23. Install Air Cleaner Outlet Duct (3) **Air Cleaner Outlet Duct Replacement (Chevrolet and GMC)** **Air Cleaner Outlet Duct Replacement (Cadillac)**

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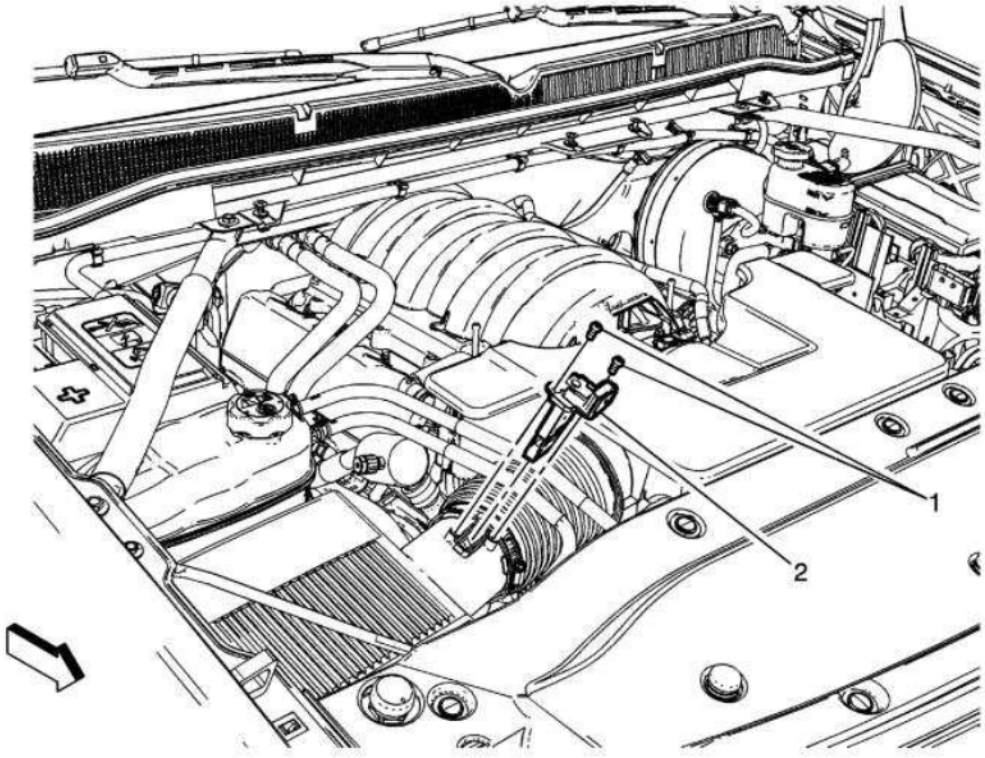


Fig. 132: Mass Airflow Sensor with Intake Air Temperature Sensor
Courtesy of GENERAL MOTORS COMPANY

24. Install Mass Airflow Sensor (2) **Mass Airflow Sensor with Intake Air Temperature Sensor Replacement**

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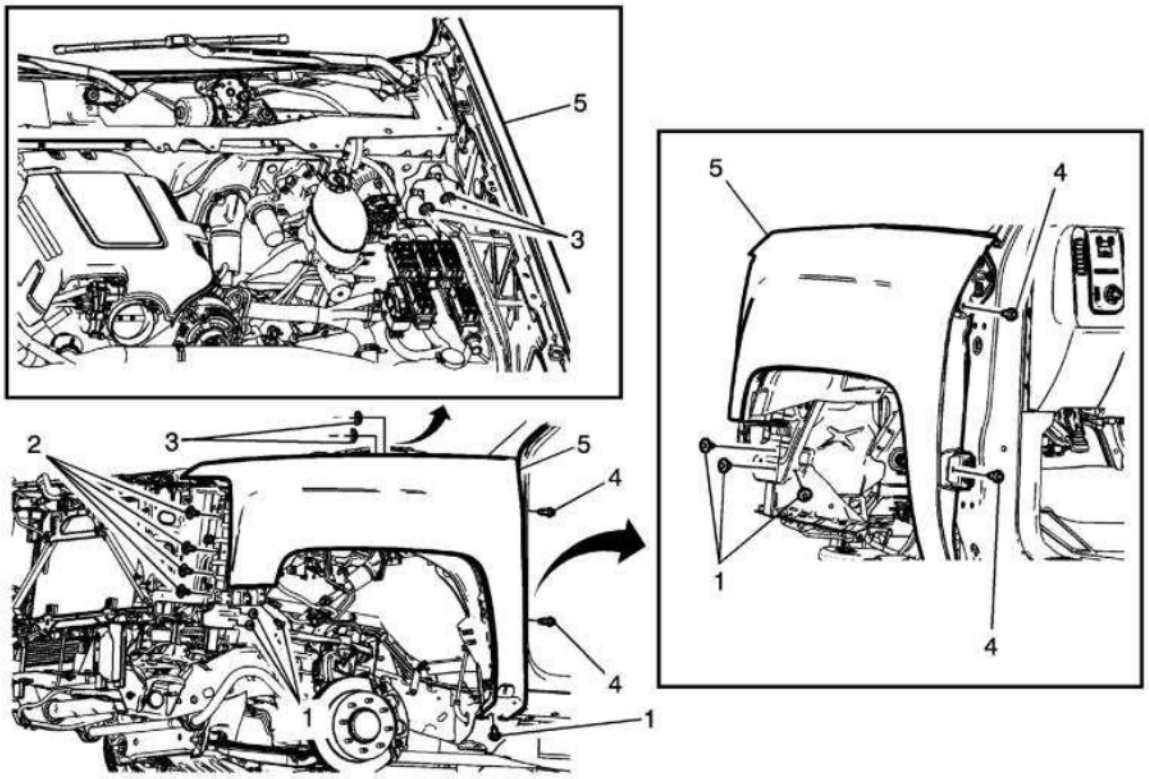


Fig. 133: Front Fender - Left Side
Courtesy of GENERAL MOTORS COMPANY

25. Install Front Fender-Left Side (5) **Front Fender Replacement - Left Side (GMC)Front Fender Replacement - Left Side (Chevrolet)Front Fender Replacement - Left Side (Cadillac)**

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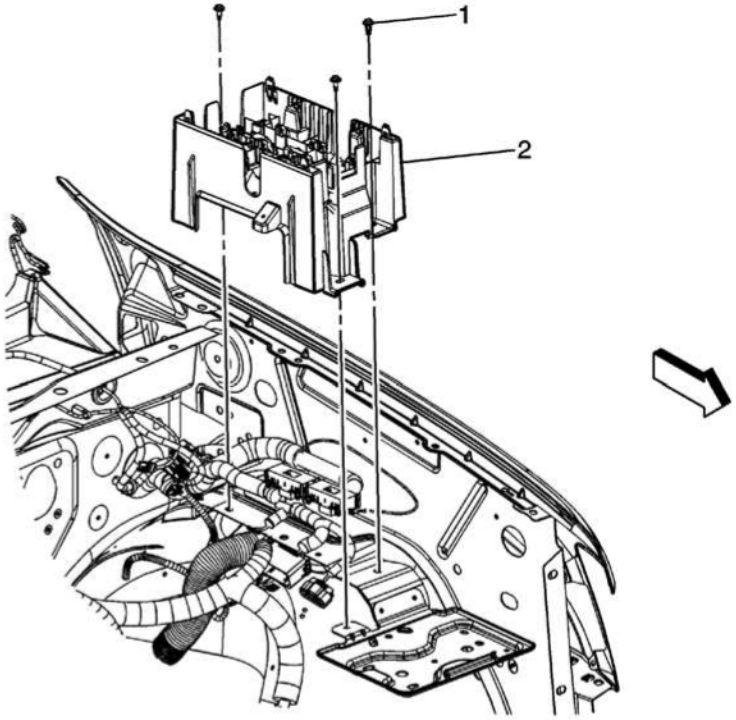


Fig. 134: View Of Underhood Electrical Center/Junction Block Bracket & Screws
Courtesy of GENERAL MOTORS COMPANY

26. Install Underhood Electrical Center or Junction Block Bracket (2) **Underhood Electrical Center or Junction Block Bracket Replacement**

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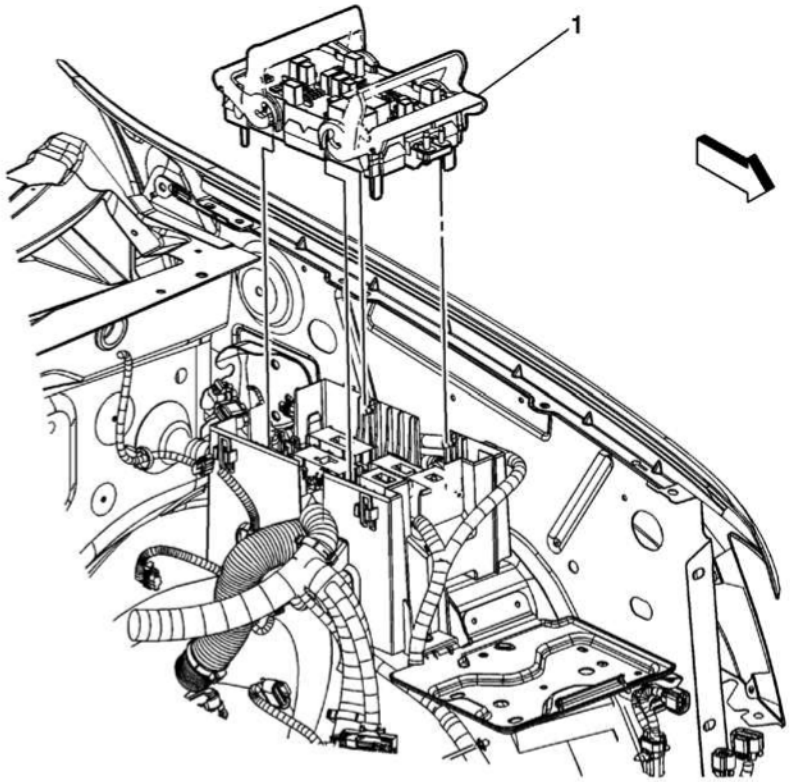


Fig. 135: View Of Underhood Electrical Center/Junction Block
Courtesy of GENERAL MOTORS COMPANY

27. Install Underhood Electrical Center or Junction Block (1)**Underhood Electrical Center or Junction Block Replacement**

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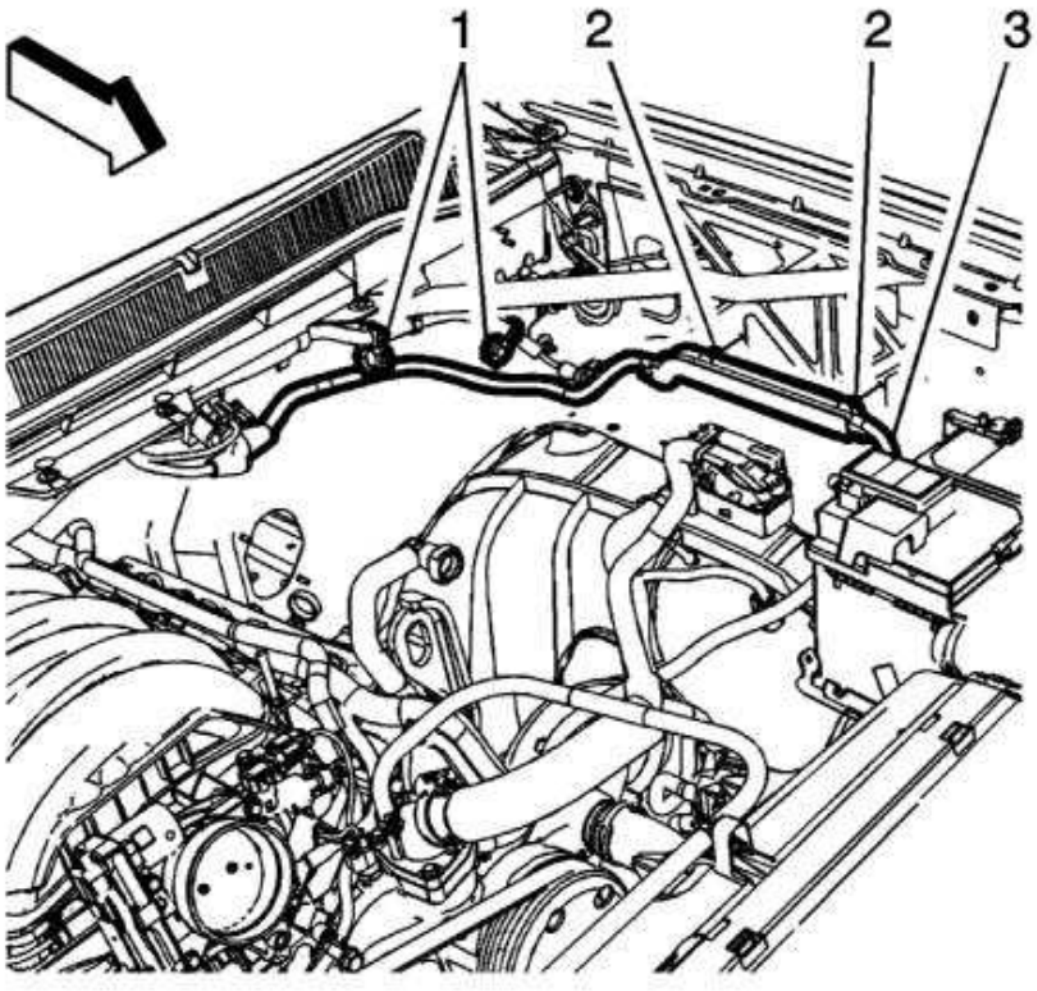


Fig. 136: Auxiliary Battery Positive Cable Conduit Retainers
Courtesy of GENERAL MOTORS COMPANY

28. Install Auxiliary Battery Positive Cable Replacement - Battery to Battery Relay (3) **Auxiliary Battery Positive Cable Replacement - Battery to Battery Relay (9C1)**

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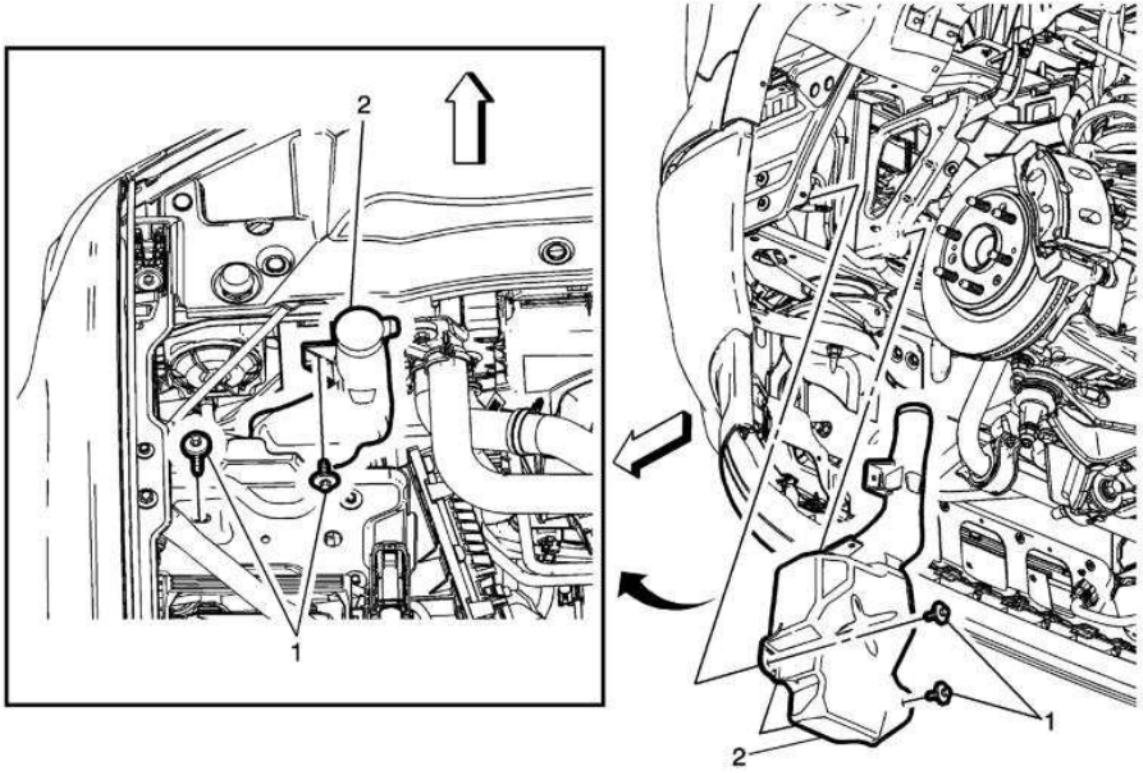


Fig. 137: Windshield Washer Solvent Container
Courtesy of GENERAL MOTORS COMPANY

29. Install Windshield Washer Solvent Container (2) **Windshield Washer Solvent Container Replacement (Chevrolet/GMC)** **Windshield Washer Solvent Container Replacement (Cadillac)**

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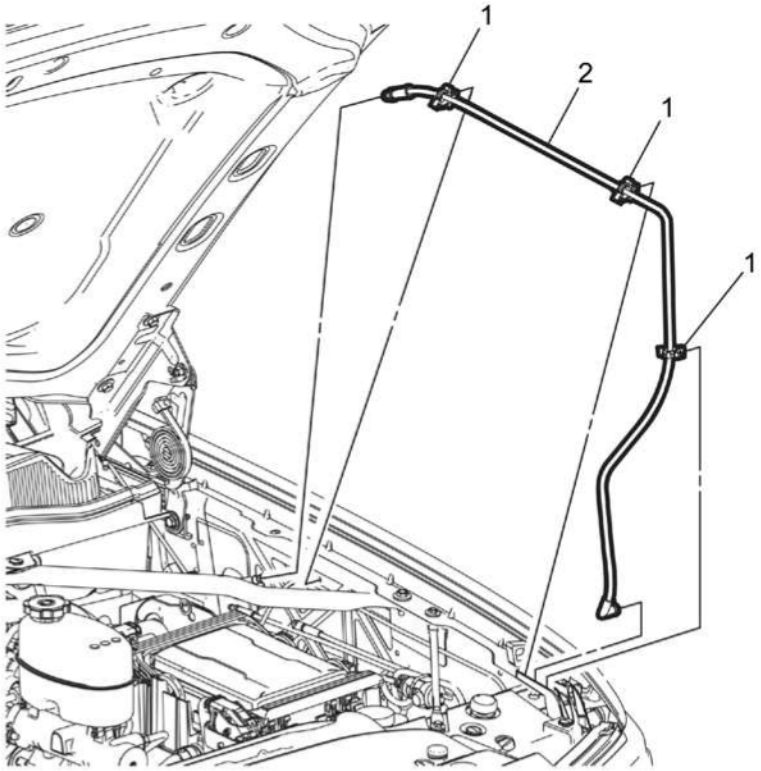


Fig. 138: Windshield Washer Pump Hose
Courtesy of GENERAL MOTORS COMPANY

30. Install Windshield Washer Pump Hose (2) **Windshield Washer Pump Hose Replacement (Chevrolet/GMC)** **Windshield Washer Pump Hose Replacement (Cadillac)**

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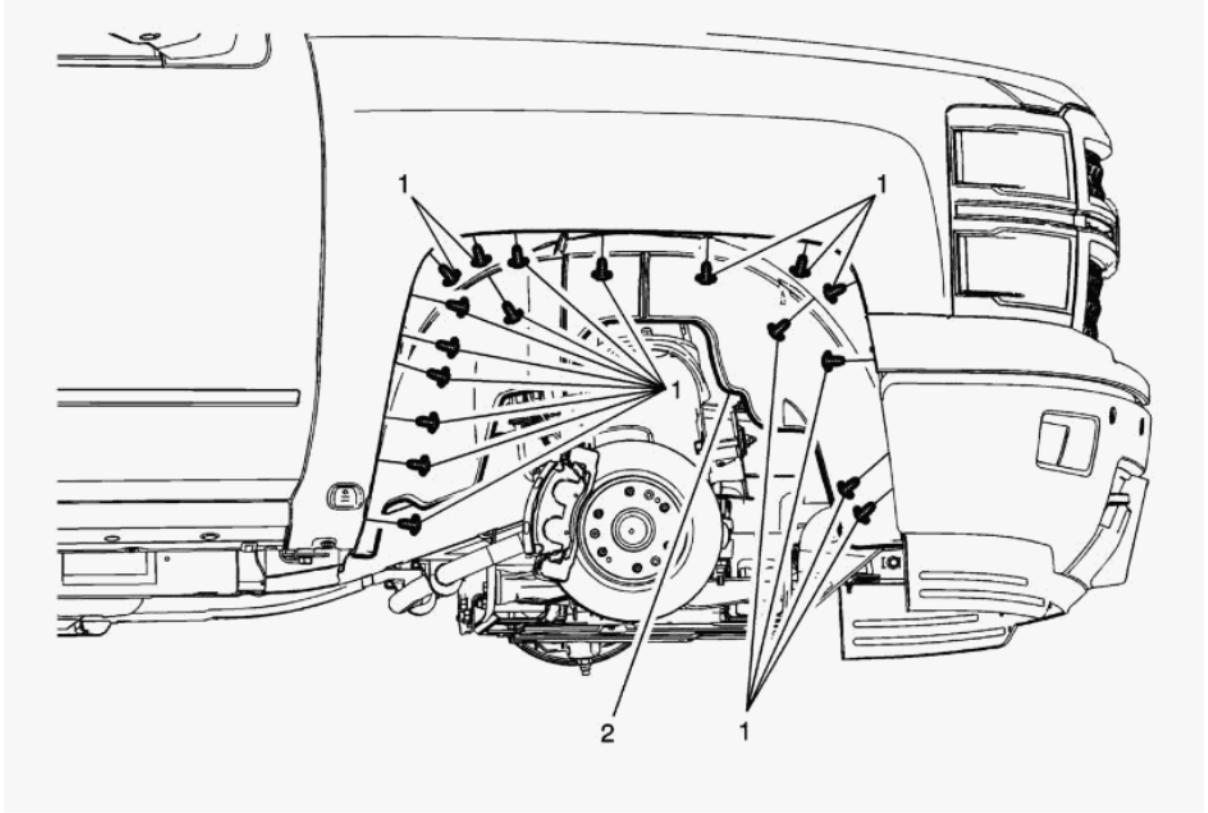


Fig. 139: Front Wheelhouse Liner - Right Side (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

31. Install Front Wheelhouse Liner-Right Side (2) **Front Wheelhouse Liner Replacement - Right Side (Cadillac)** **Front Wheelhouse Liner Replacement - Right Side (Chevrolet)** **Front Wheelhouse Liner Replacement - Right Side (GMC)**

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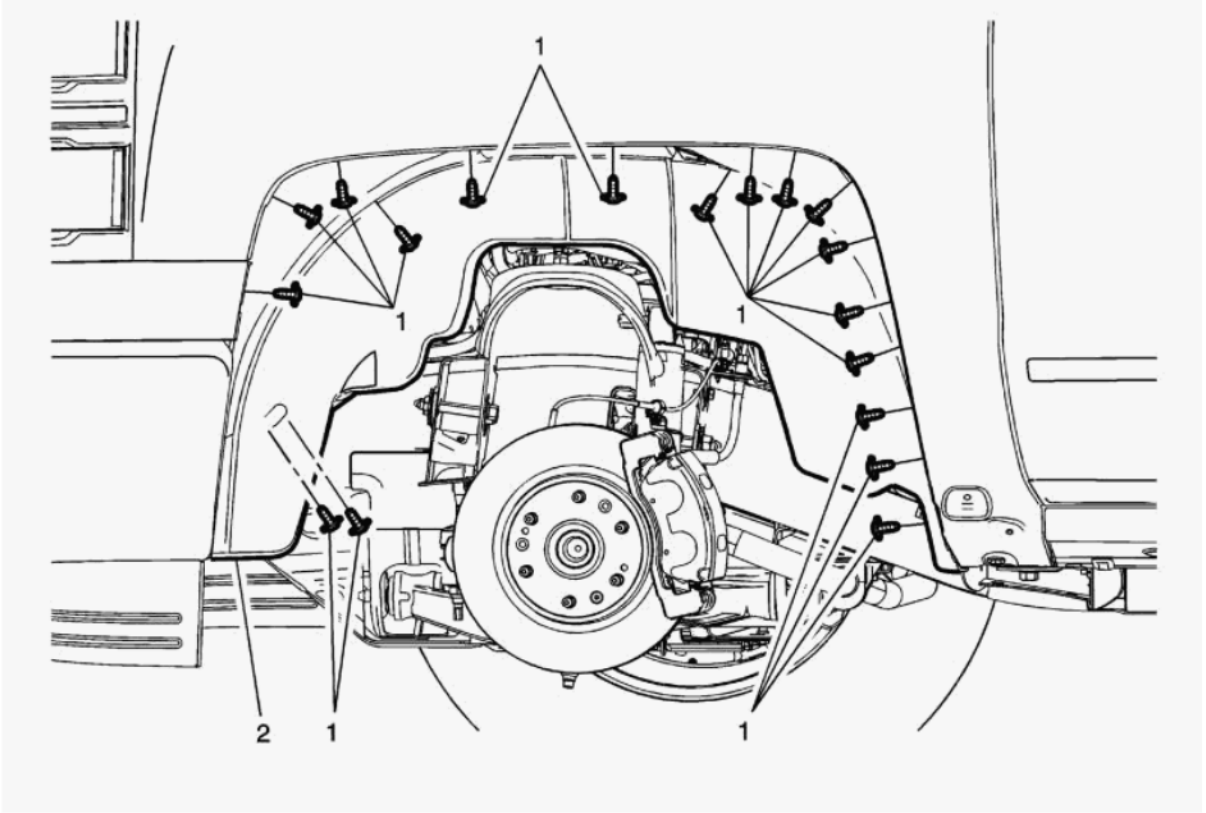


Fig. 140: Front Wheelhouse Liner - Left Side (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

32. Install Front Wheelhouse Liner-Left Side (2) **Front Wheelhouse Liner Replacement - Left Side (Cadillac)** **Front Wheelhouse Liner Replacement - Left Side (GMC)** **Front Wheelhouse Liner Replacement - Left Side (Chevrolet)**

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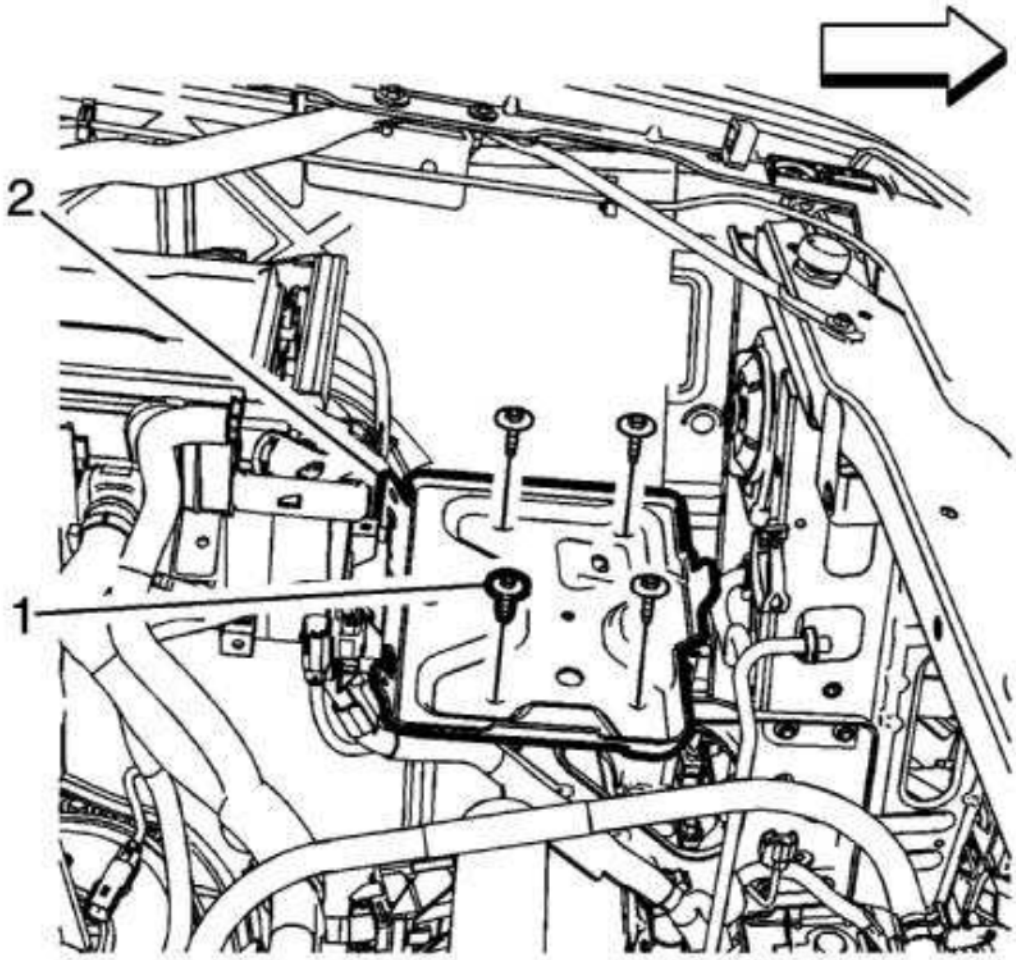


Fig. 141: Auxiliary Battery Tray And Fasteners
Courtesy of GENERAL MOTORS COMPANY

33. Install Auxiliary Battery Tray (2) **Auxiliary Battery Tray Replacement (9C1)**

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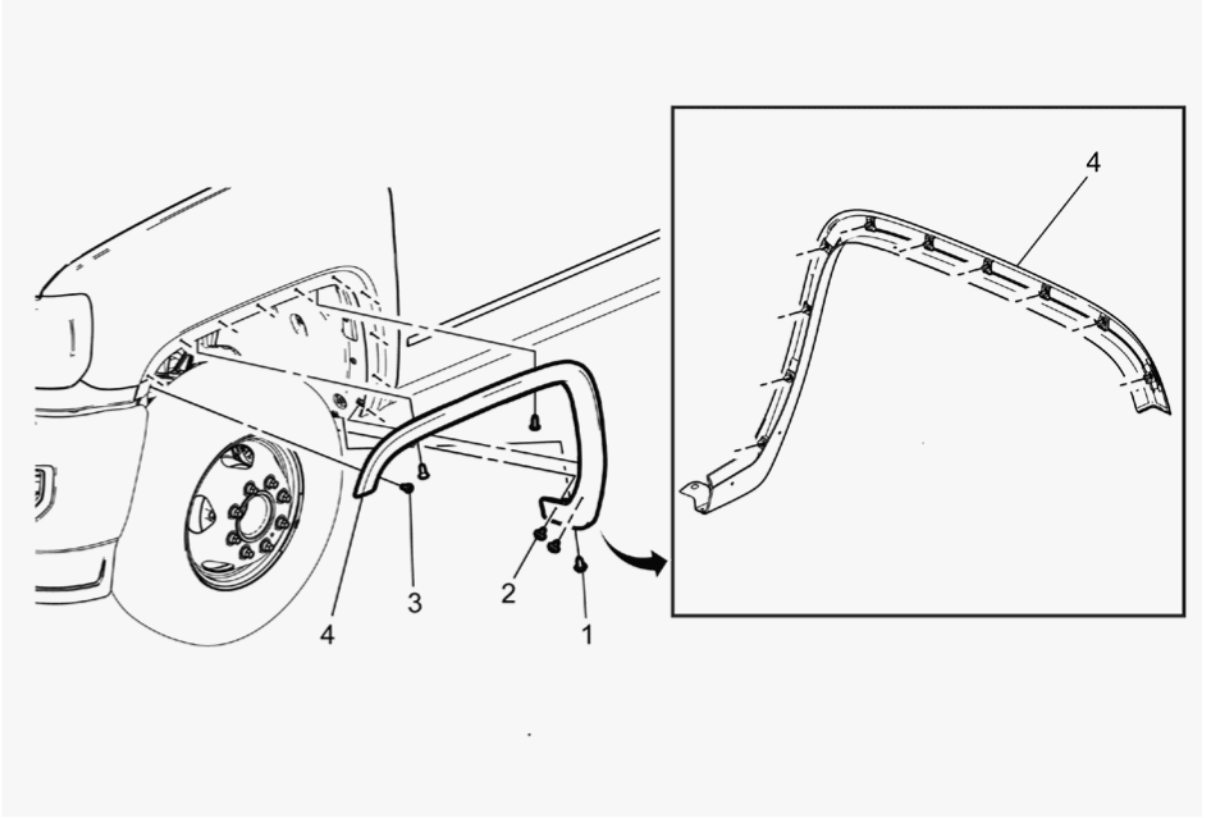


Fig. 142: Front Wheel Opening Molding
Courtesy of GENERAL MOTORS COMPANY

34. Install Front Wheel Opening Front Molding (4) **Front Wheel Opening Molding Replacement**

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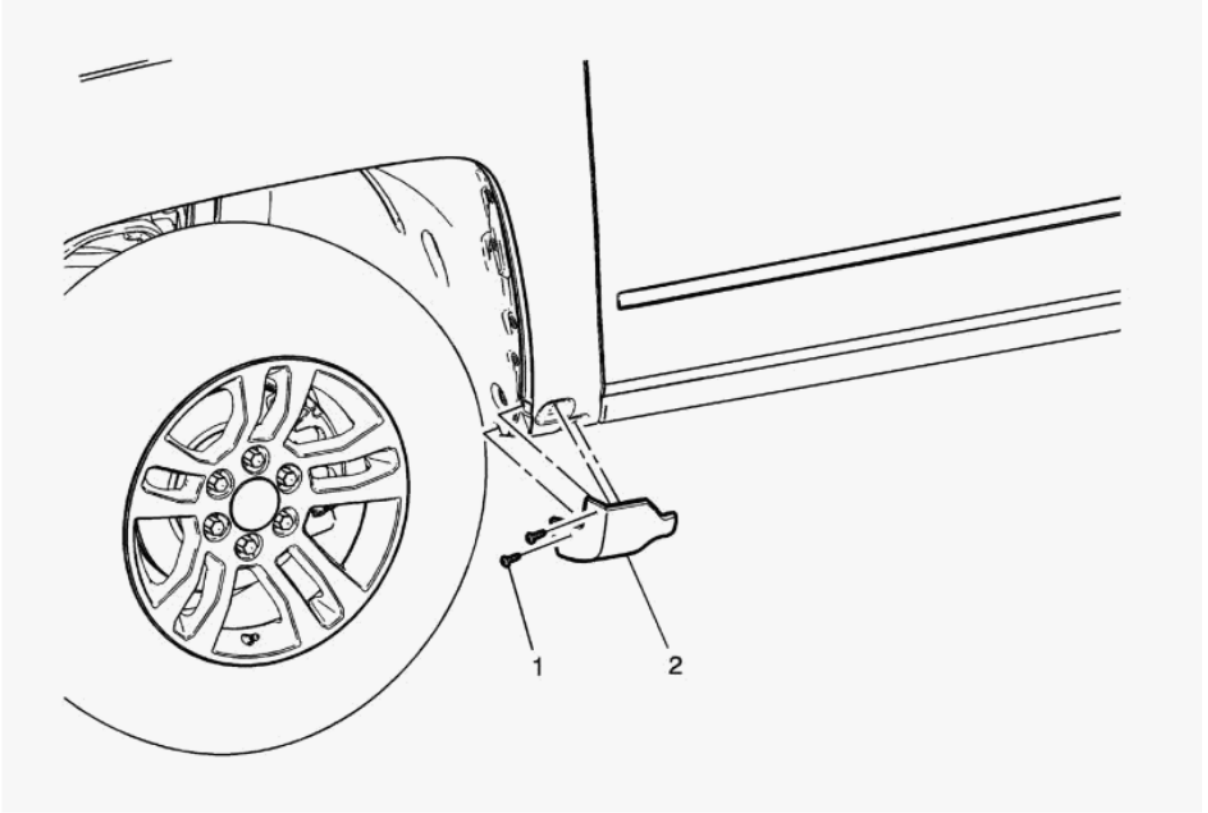


Fig. 143: Front Fender Paint Protector
Courtesy of GENERAL MOTORS COMPANY

35. Install Front Fender Paint Protector (2) **Front Fender Paint Protector Replacement**

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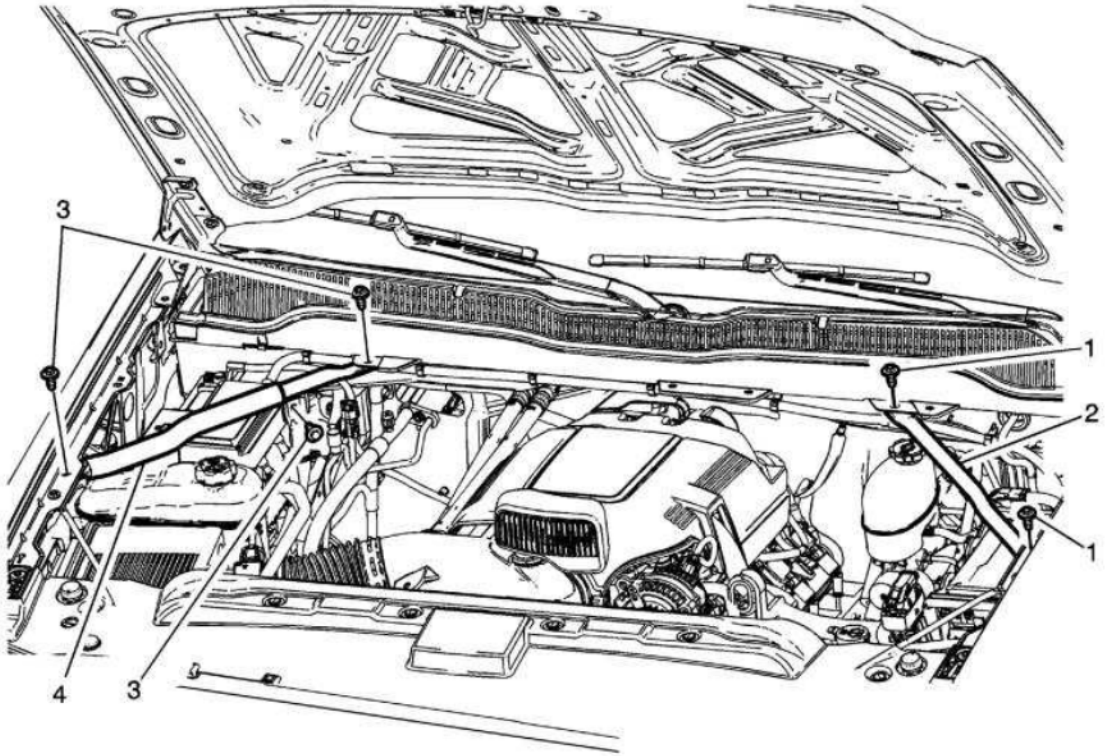


Fig. 144: Front Fender Rear Upper Brace
Courtesy of GENERAL MOTORS COMPANY

36. Install Front Fender Rear Upper Brace (4) **Front Fender Rear Upper Brace Replacement**<p01>

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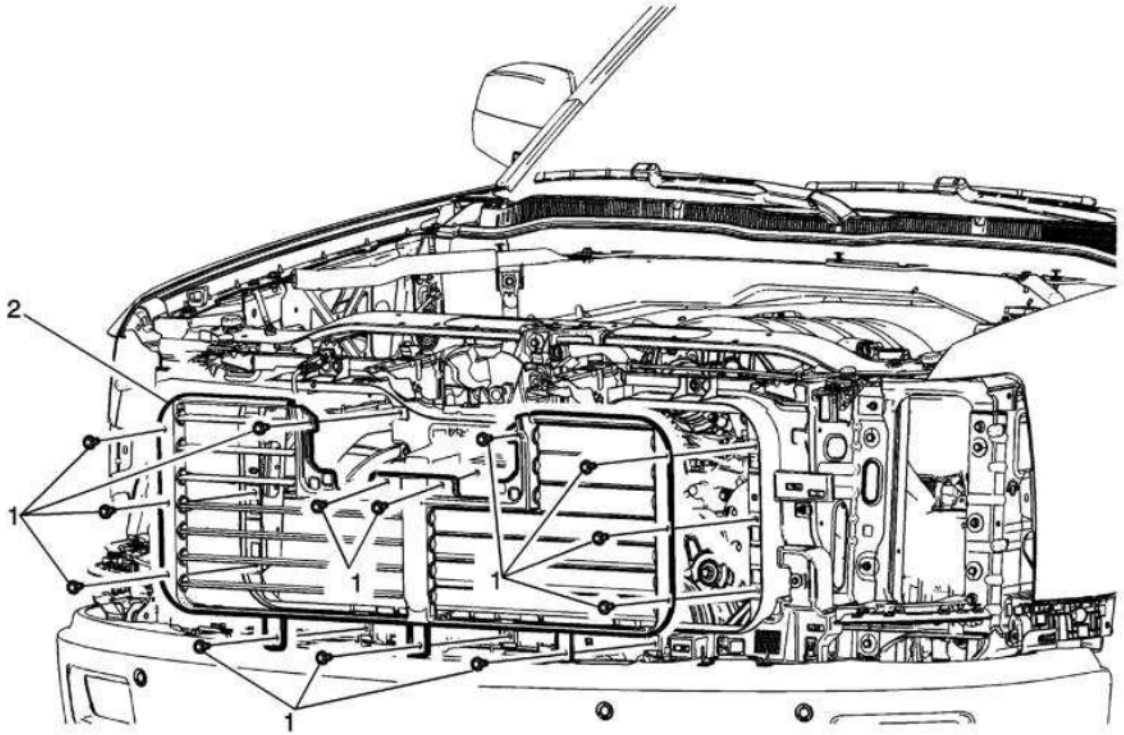


Fig. 145: Front Bumper Shutter
Courtesy of GENERAL MOTORS COMPANY

37. Install Front Bumper Shutter (2) **Front Bumper Shutter Replacement (Upper,)** **Front Bumper Shutter Replacement (Lower)** **Front Bumper Shutter Replacement (Mechanical, Cadillac)**

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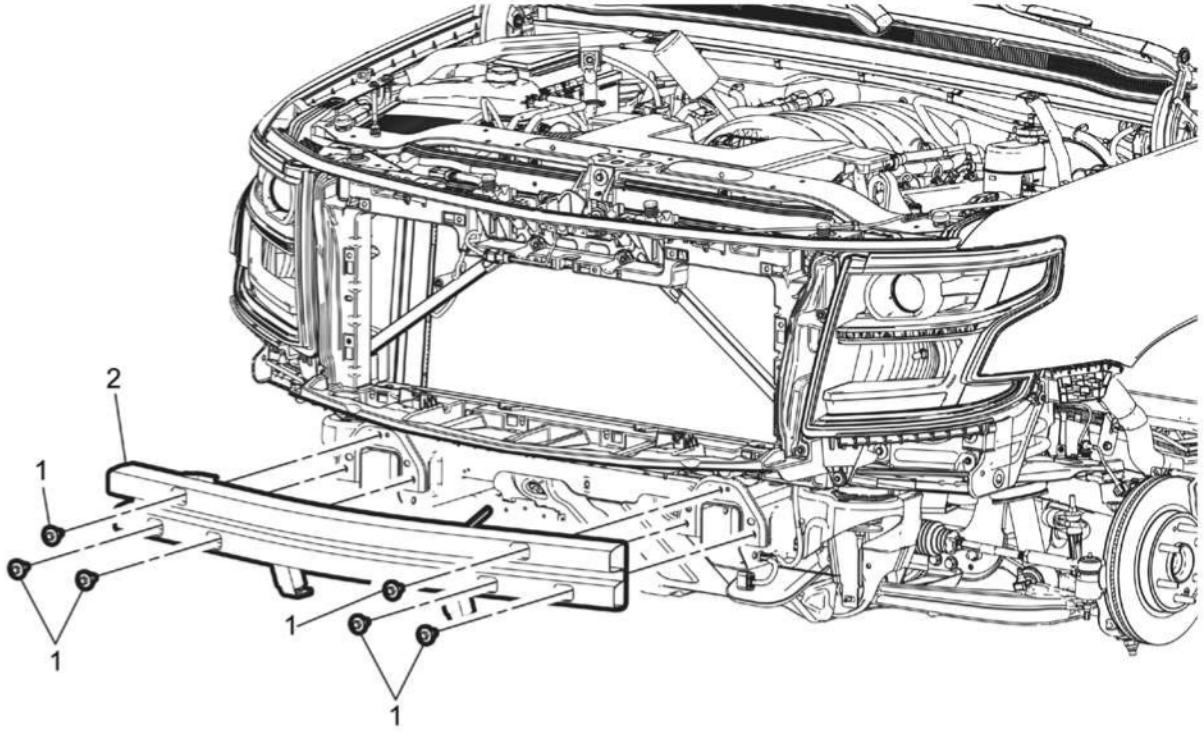


Fig. 146: Front Bumper Impact Bar (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

38. Install Front Bumper Impact Bar (4) **Front Bumper Impact Bar Replacement (GMC)** **Front Bumper Impact Bar Replacement (Chevrolet)** **Front Bumper Impact Bar Replacement (Cadillac)**

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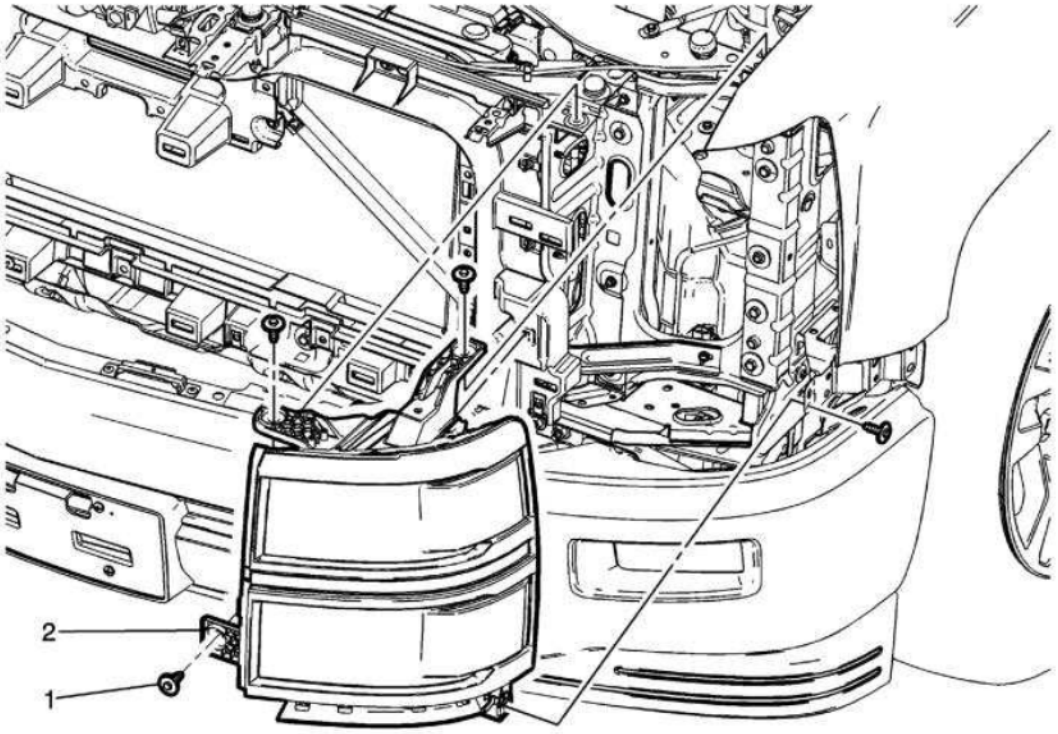


Fig. 147: Headlamp (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

39. Install Headlamp (2) **Headlamp Replacement (GMC)** **Headlamp Replacement (Chevrolet)** **Headlamp Replacement (Cadillac)**

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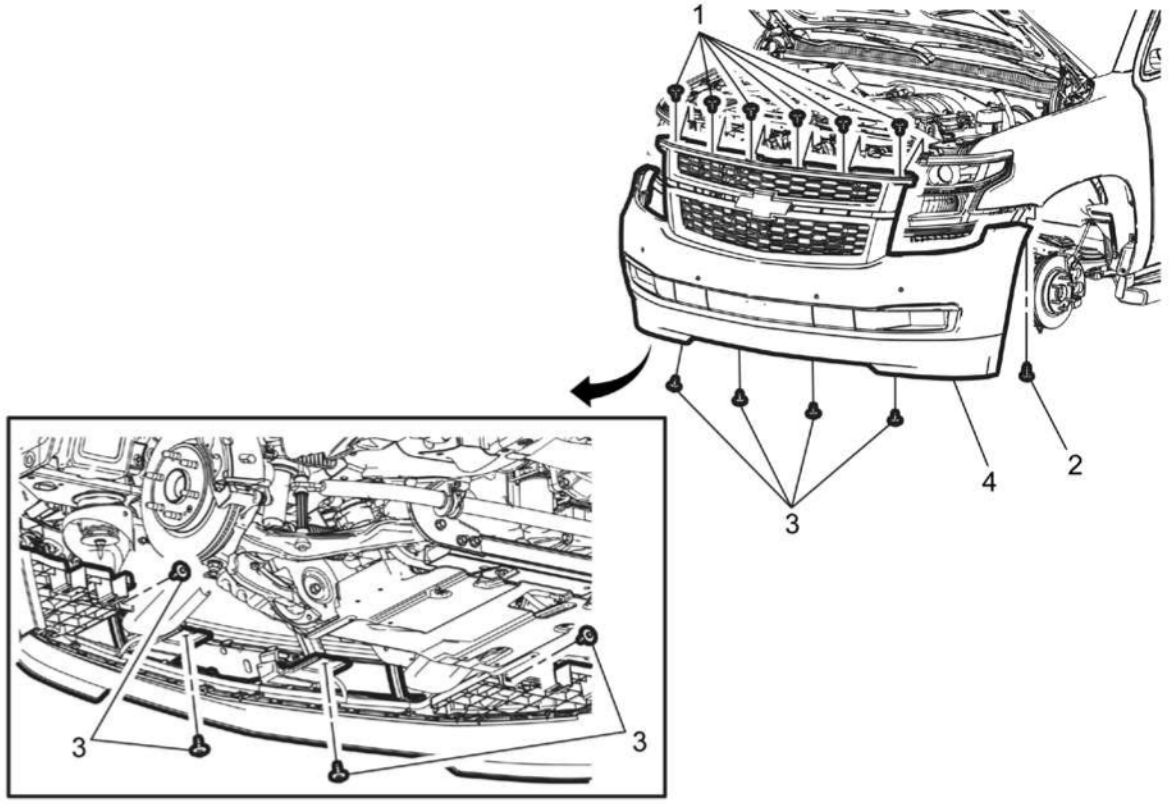


Fig. 148: Front Bumper Fascia (Chevrolet)
Courtesy of GENERAL MOTORS COMPANY

40. Install Front Bumper Fascia (4) **Front Bumper Fascia Replacement (GMC)** **Front Bumper Fascia Replacement (Chevrolet)** **Front Bumper Fascia Replacement (Cadillac)**

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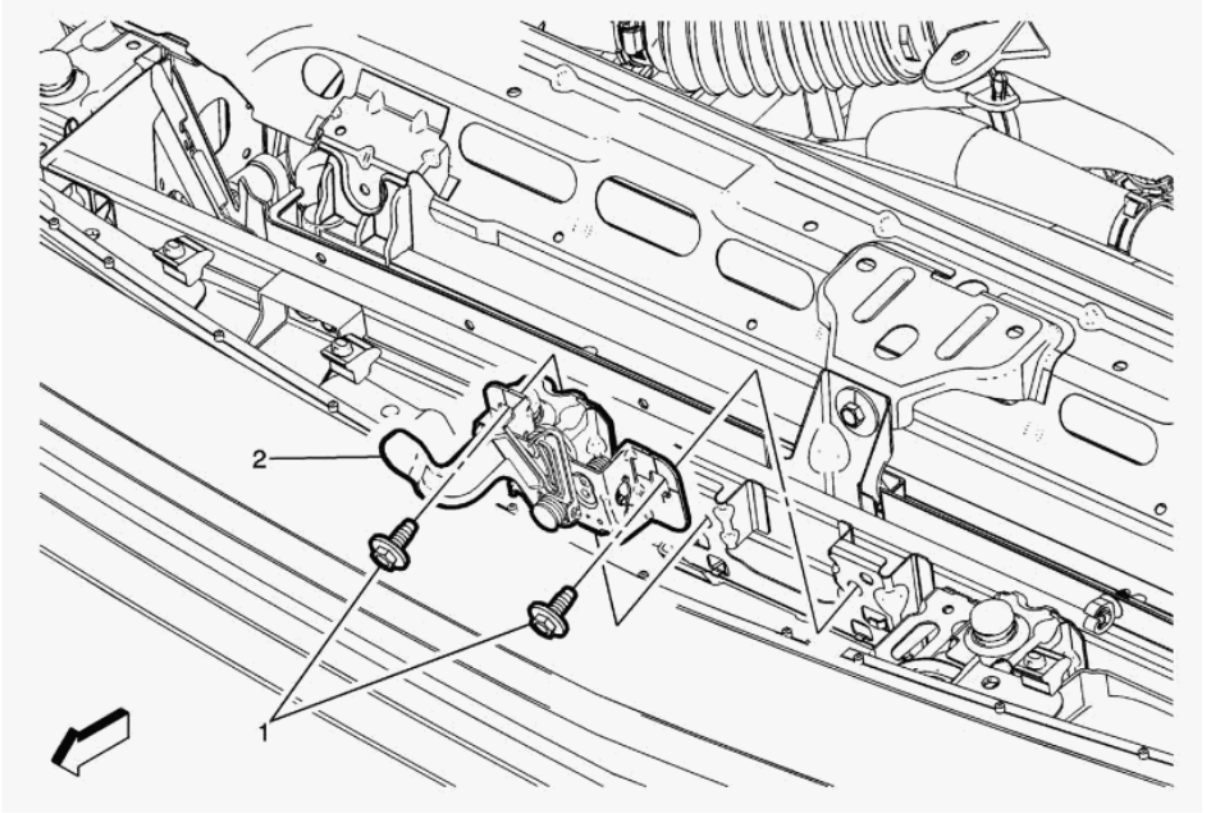


Fig. 149: Hood Primary and Secondary Latch
Courtesy of GENERAL MOTORS COMPANY

41. Install Hood Primary and Secondary Latch (2) **Hood Primary and Secondary Latch Replacement**

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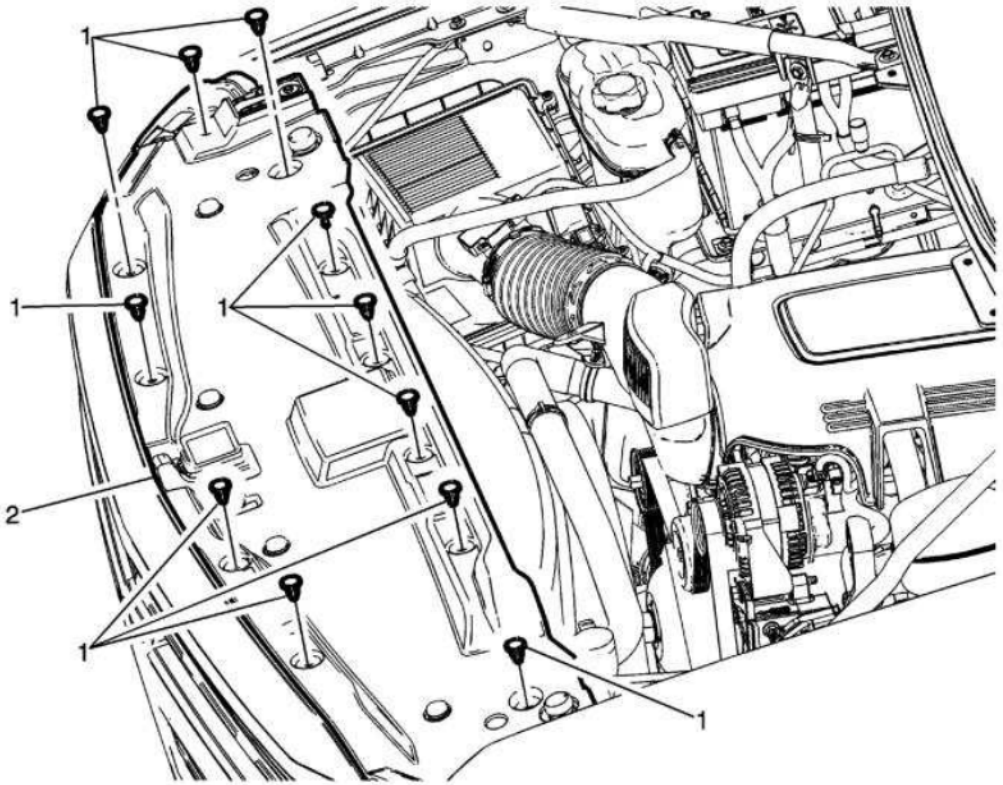


Fig. 150: Front Compartment Front Sight Shield
Courtesy of GENERAL MOTORS COMPANY

42. Install Front Compartment Front Sight Shield (2) **Front Compartment Front Sight Shield Replacement (GMC)Front Compartment Front Sight Shield Replacement (Chevrolet)Front Compartment Front Sight Shield Replacement (Cadillac)**

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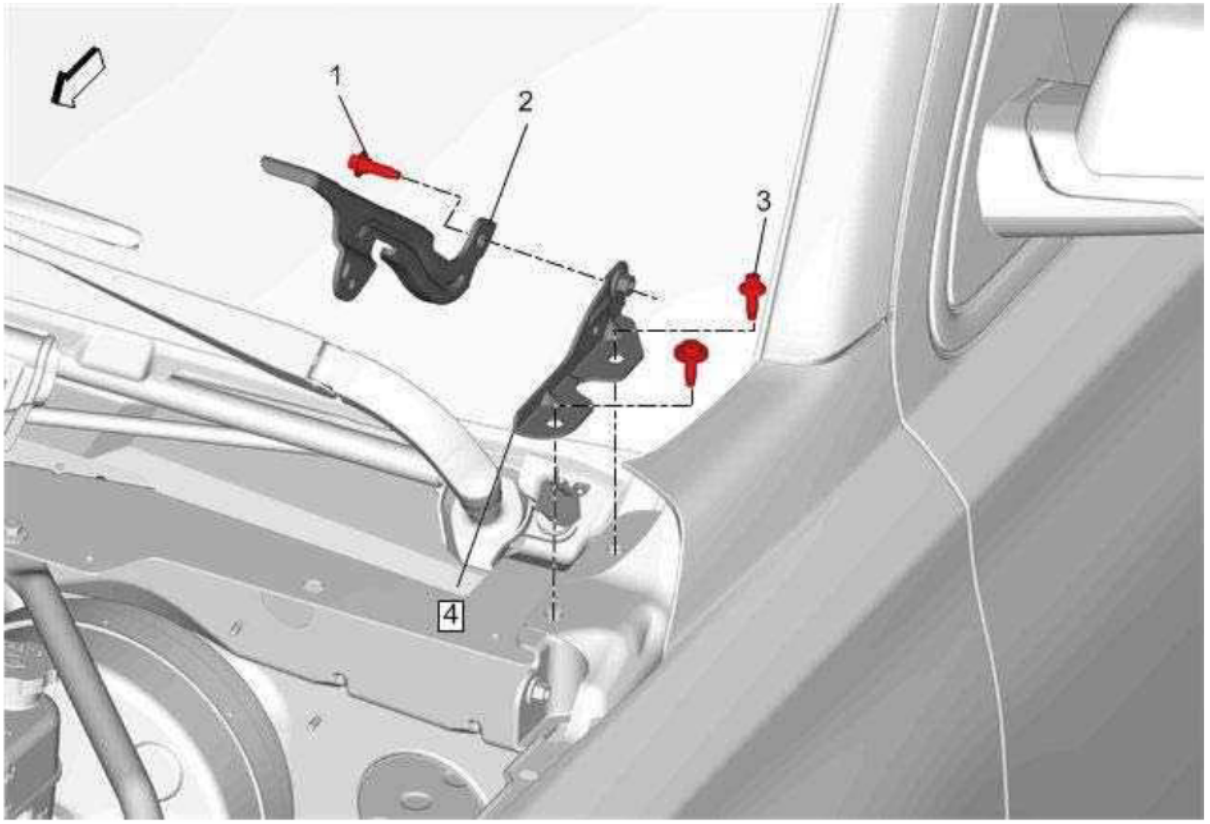


Fig. 151: Hood Hinge
Courtesy of GENERAL MOTORS COMPANY

43. Install Hood Hinge (4) **Hood Hinge Replacement**

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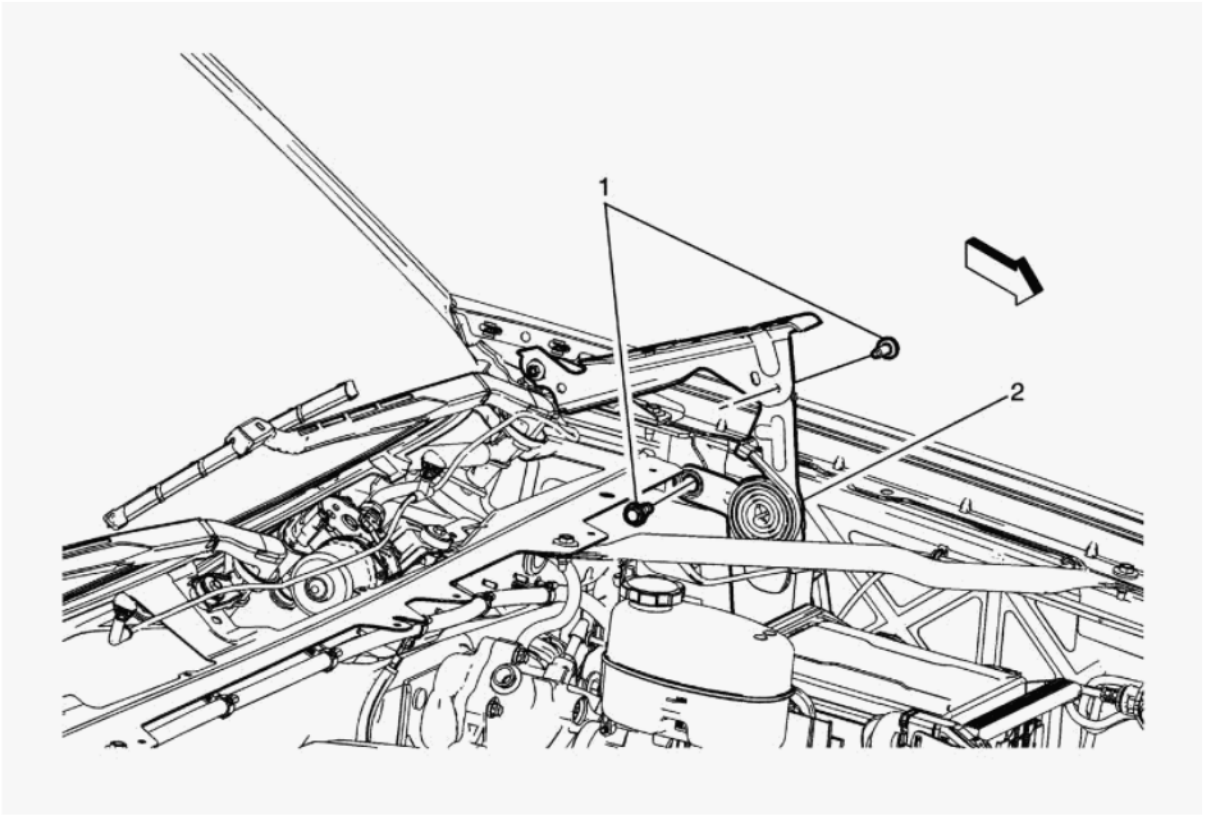


Fig. 152: Hood Open Assist Spring
Courtesy of GENERAL MOTORS COMPANY

44. Install Hood Open Assist Spring (2) **Hood Open Assist Spring Replacement**

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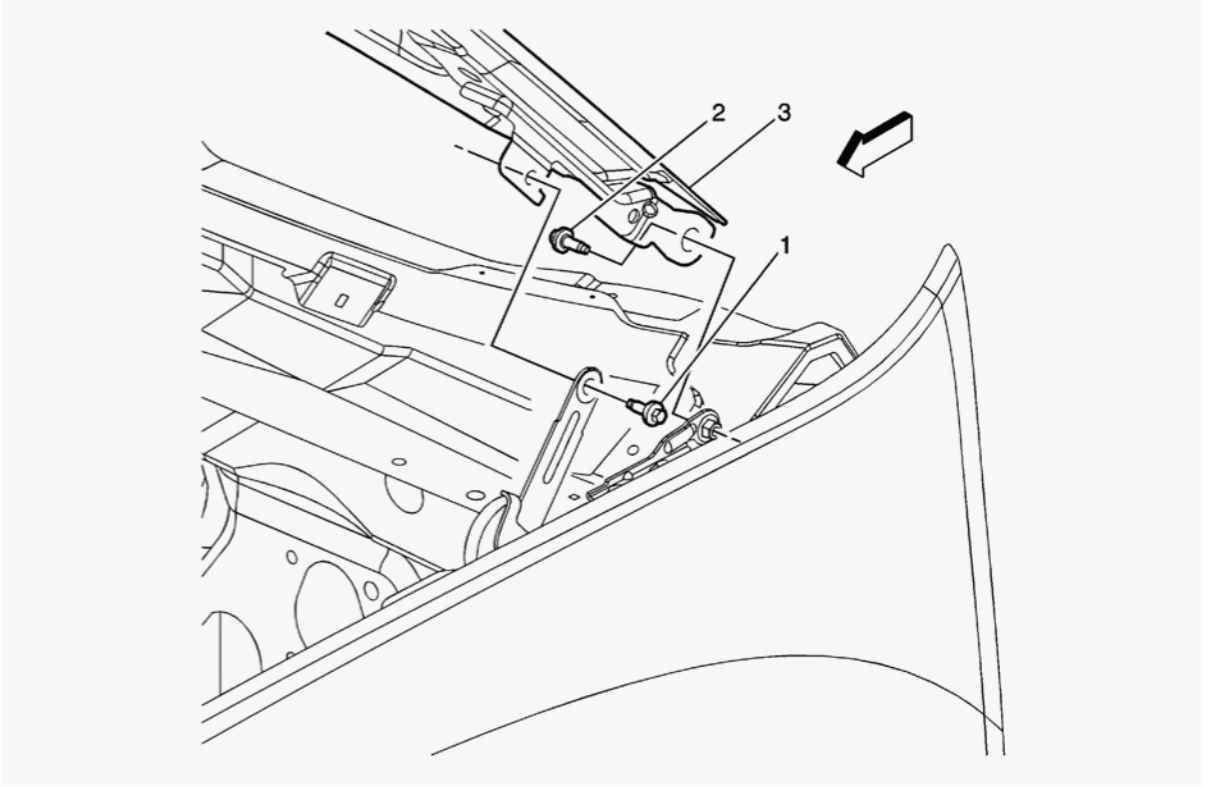


Fig. 153: View Of Hood & Bolts
Courtesy of GENERAL MOTORS COMPANY

45. Install Hood (3) **Hood Replacement**

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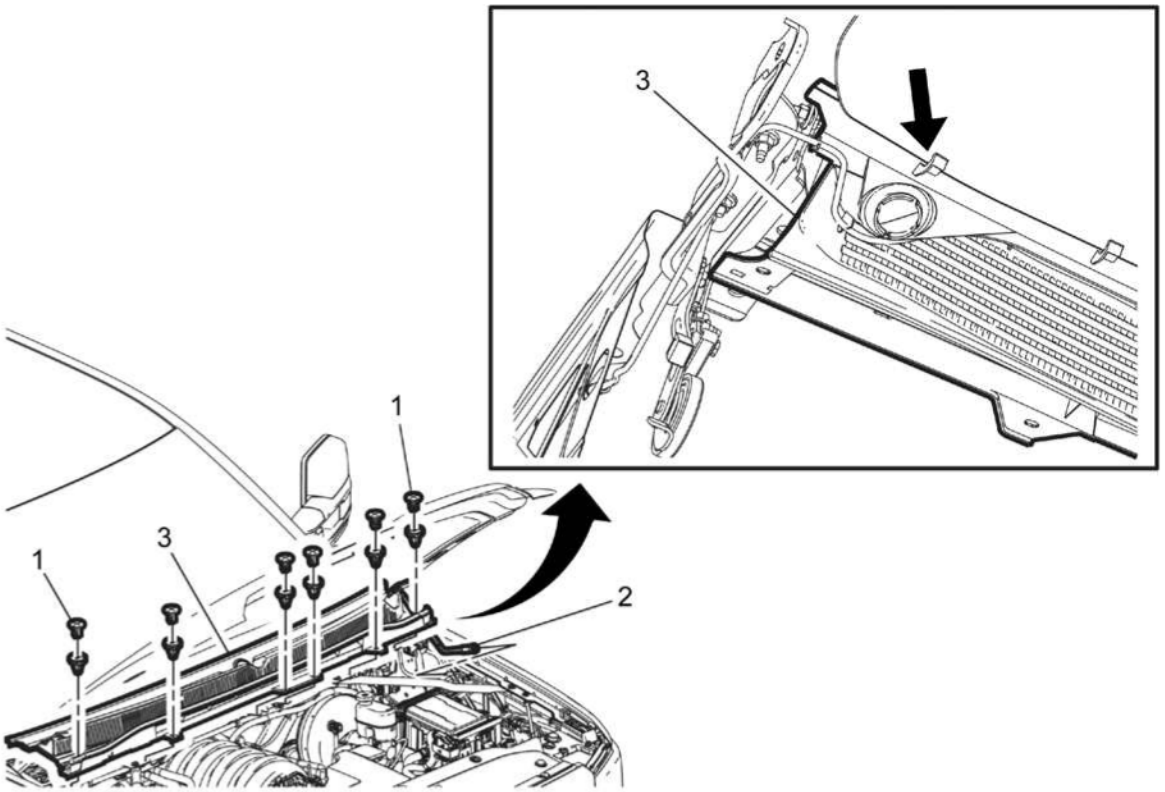


Fig. 154: Air Inlet Grille Panel (LD)
Courtesy of GENERAL MOTORS COMPANY

46. Install Air Inlet Grille Panel (3) **Air Inlet Grille Panel Replacement (Chevrolet/GMC)** **Air Inlet Grille Panel Replacement (Cadillac)**

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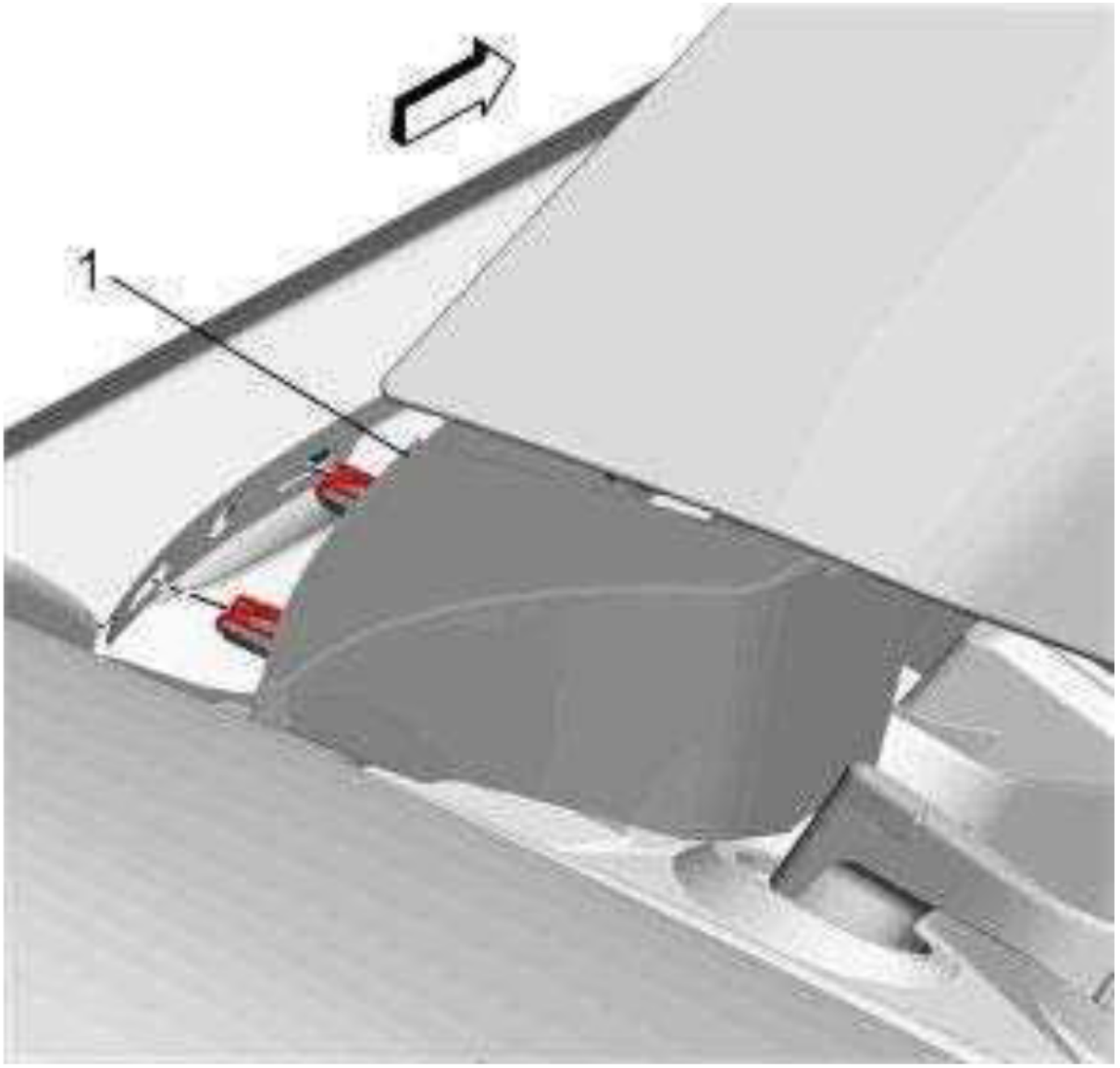


Fig. 155: Inlet Grille Panel Extension
Courtesy of GENERAL MOTORS COMPANY

47. Install Air Inlet Grille Panel Extension(1) **Air Inlet Grille Panel Extension Replacement**

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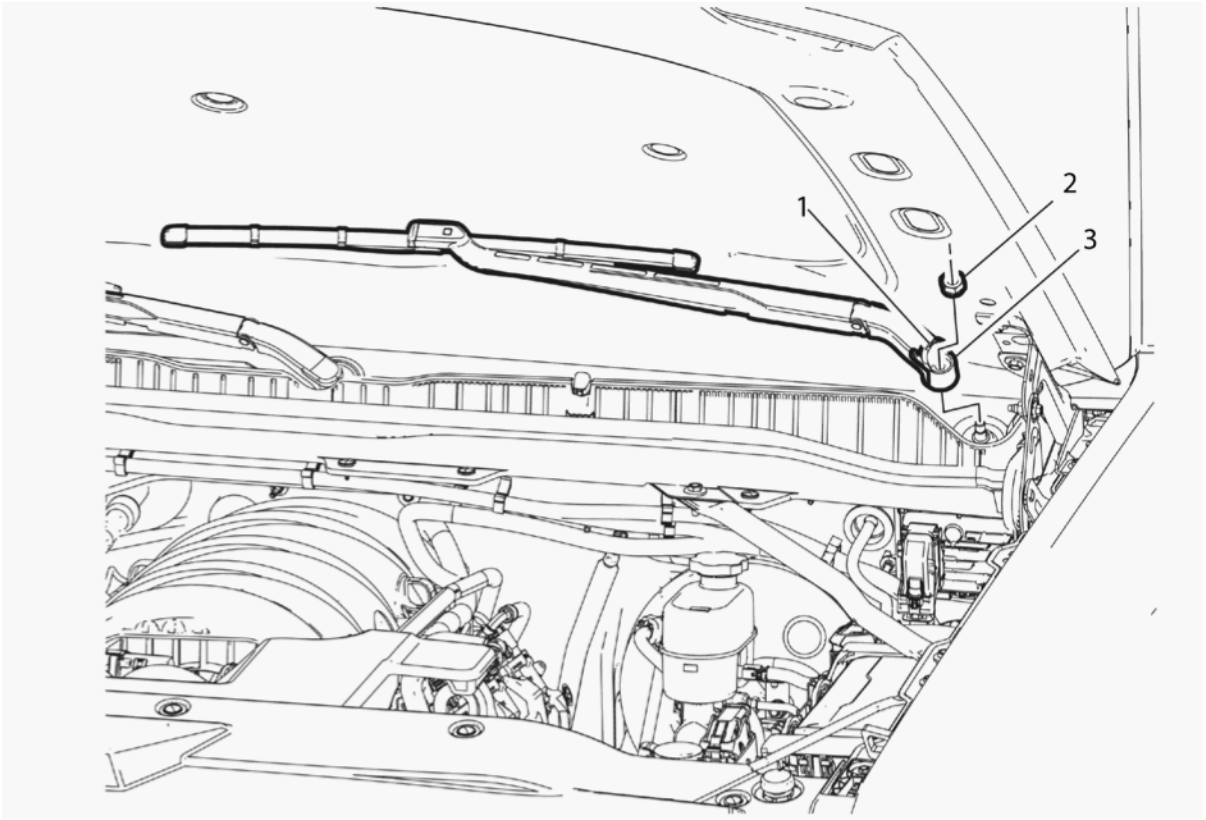


Fig. 156: Windshield Wiper Arm (LD)
Courtesy of GENERAL MOTORS COMPANY

48. Install Windshield Wiper Arm (3) **Windshield Wiper Arm Replacement (Chevrolet/GMC)** **Windshield Wiper Arm Replacement (Cadillac)**
49. Install the front tire and wheel assembly. **Tire and Wheel Removal and Installation (6-Lug Wheel)** **Tire and Wheel Removal and Installation (8-Lug Wheel)**
50. Lower the vehicle.
51. Connect the battery negative cable. **Battery Negative Cable Disconnection and Connection (Dual Battery)** **Battery Negative Cable Disconnection and Connection (Single Battery)**
52. Charge the refrigerant system. **Refrigerant Recovery and Recharging (R134A)** **Refrigerant Recovery and Recharging (R1234yf)**
53. Fill the cooling system. **Cooling System Draining and Filling (Static Fill L96)** **Cooling System Draining and Filling (Vac N Fill L96)** **Cooling System Draining and Filling (Vac N Fill L83 L86)** **Cooling System Draining and Filling (Static Fill L83 L86)**

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FRONT SIDE DOOR FRONT AUXILIARY WEATHERSTRIP REPLACEMENT

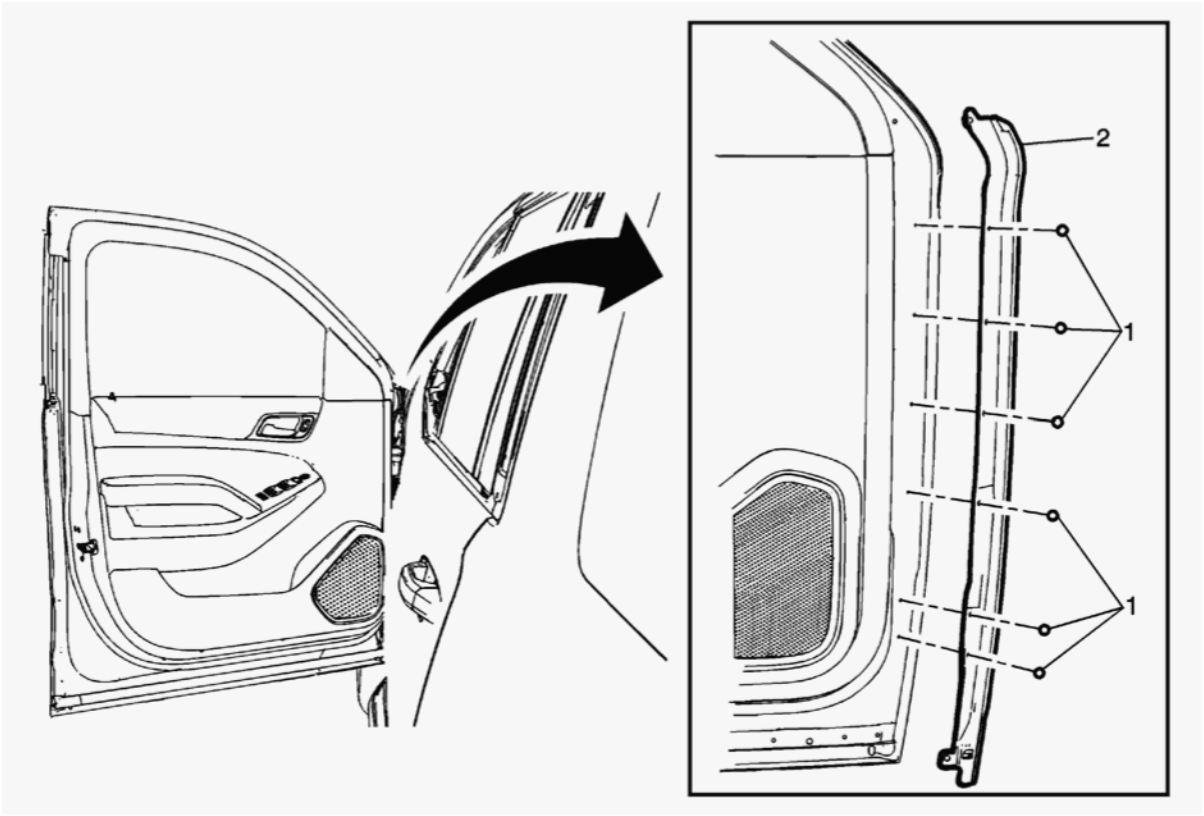


Fig. 157: Front Side Door Front Auxiliary Weatherstrip
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Reposition the top edge of front side door weatherstrip to gain access to the part. It is not necessary to completely remove the weatherstrip. Refer to **Front Side Door Weatherstrip Replacement - Door Side**. 2. Remove the front side door lower auxiliary weatherstrip from the front side door front weatherstrip. It is not necessary to completely remove the weatherstrip. Refer to **Front Side Door Lower Auxiliary Weatherstrip Replacement**.	
1	Front Side Door Front Auxiliary Weatherstrip Retainer (Qty: 6)

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Callout	Component Name
	Procedure Using a suitable tool, remove the front side door front auxiliary weatherstrip retainers.
2	Front Side Door Front Auxiliary Weatherstrip **NOTE:** **Inspect the door to ensure a proper seal after the weatherstrip has been replaced.**

FRONT SIDE DOOR WEATHERSTRIP REPLACEMENT - DOOR SIDE

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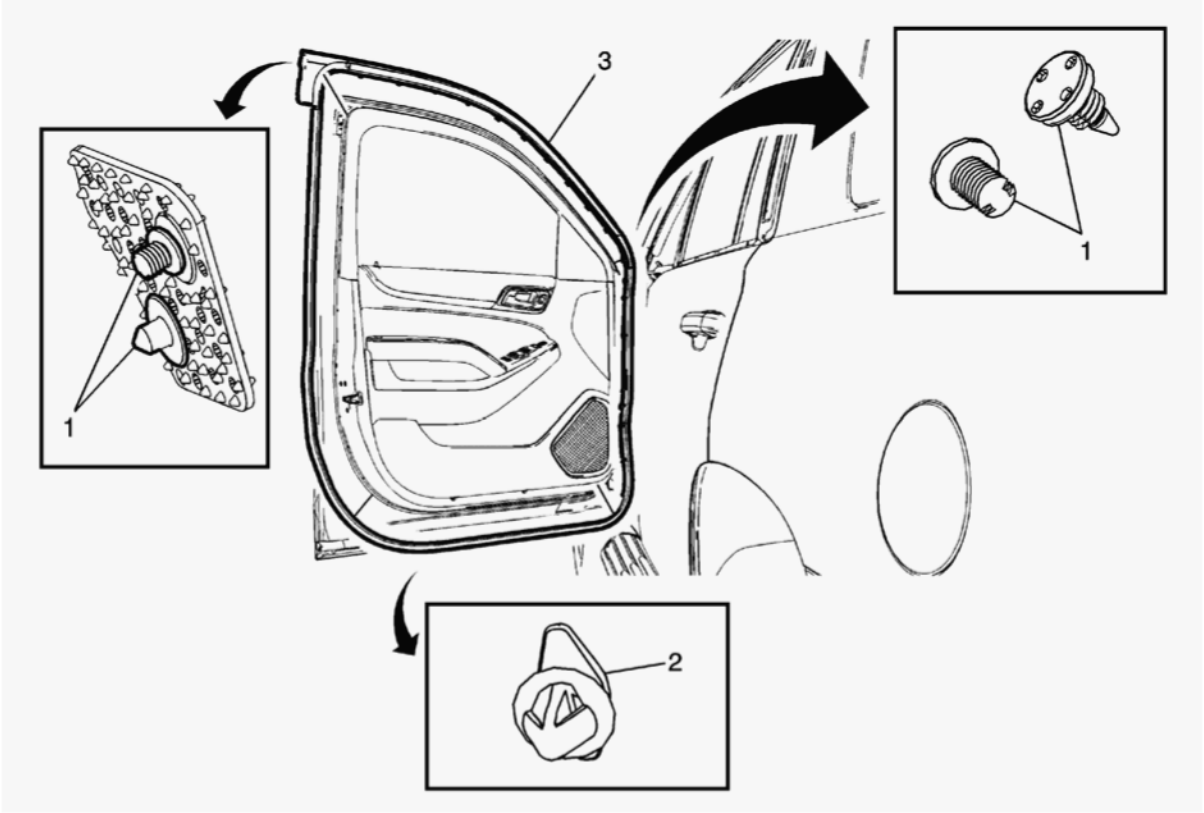


Fig. 158: Front Side Door Weatherstrip - Door Side
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Open the door to the full open position. 2. Remove the front side door check link bolt. Refer to **Front Side Door Check Link Replacement (Chevrolet, GMC)Front Side Door Check Link Replacement (Cadillac)**.	
1	Front Side Door Weatherstrip Upper Clip (Qty:4) **Procedure** Using the appropriate tool, remove the push-in clips from the upper corners of the door.

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Callout	Component Name
2	Front Side Door Weatherstrip Clip (Qty:36) **Procedure** Using the appropriate tool, remove the push-in clips from around the door.
3	Front Side Door Weatherstrip **Procedure** Ensure that the weatherstrip is fully seated in the door frame. **NOTE:** **Inspect the door to ensure a proper seal after the weatherstrip has been replaced.**

FRONT SIDE DOOR WEATHERSTRIP REPLACEMENT - BODY SIDE

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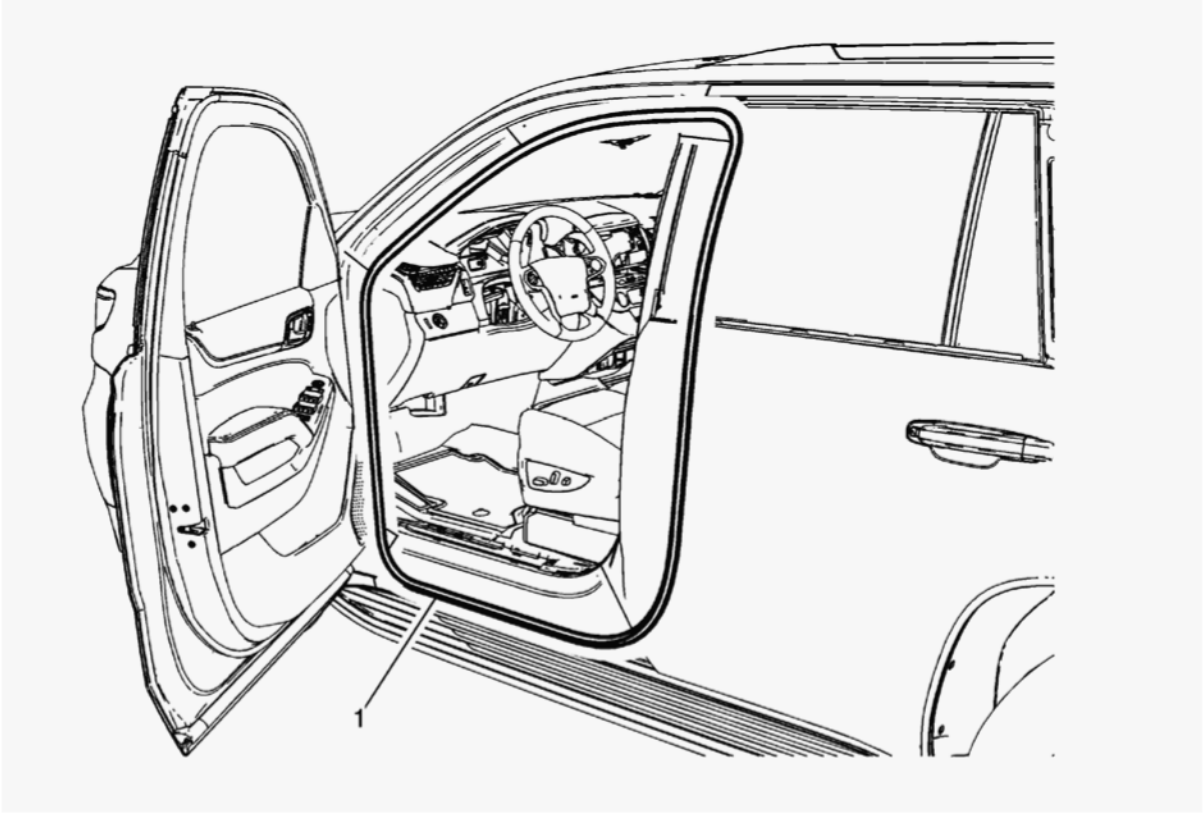


Fig. 159: Front Side Door Weatherstrip - Body Side
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Open the door to the full open position. 2. Remove the front side door sill garnish molding. Refer to **Front Side Door Sill Garnish Molding Replacement** . 3. Remove the instrument panel fuse block access hole cover. Refer to **Instrument Panel Fuse Block Access Hole Cover Replacement (Chevrolet / GMC)** **Instrument Panel Fuse Block Access Hole Cover Replacement (Cadillac)** . 4. Remove the center pillar upper trim panel. Refer to **Center Pillar Upper Trim Panel Replacement** .	
1	Front Side Door Weatherstrip to Body Side

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Callout	Component Name
	Procedure 1. Start at the rear upper corner of the door opening and pull the weatherstrip away from the door opening flange. 2. Position the weatherstrip in the upper corner of the center pillar. 3. Working downward along the front edge, install the weatherstrip on the door opening flange ensuring that the carrier is fully seated in the corners. 4. Ensure that the weatherstrip is seated on the entire door opening flange. **NOTE:** **Inspect the door to ensure a proper seal after the weatherstrip has been replaced.**

FRONT SIDE DOOR LOWER AUXILIARY WEATHERSTRIP REPLACEMENT

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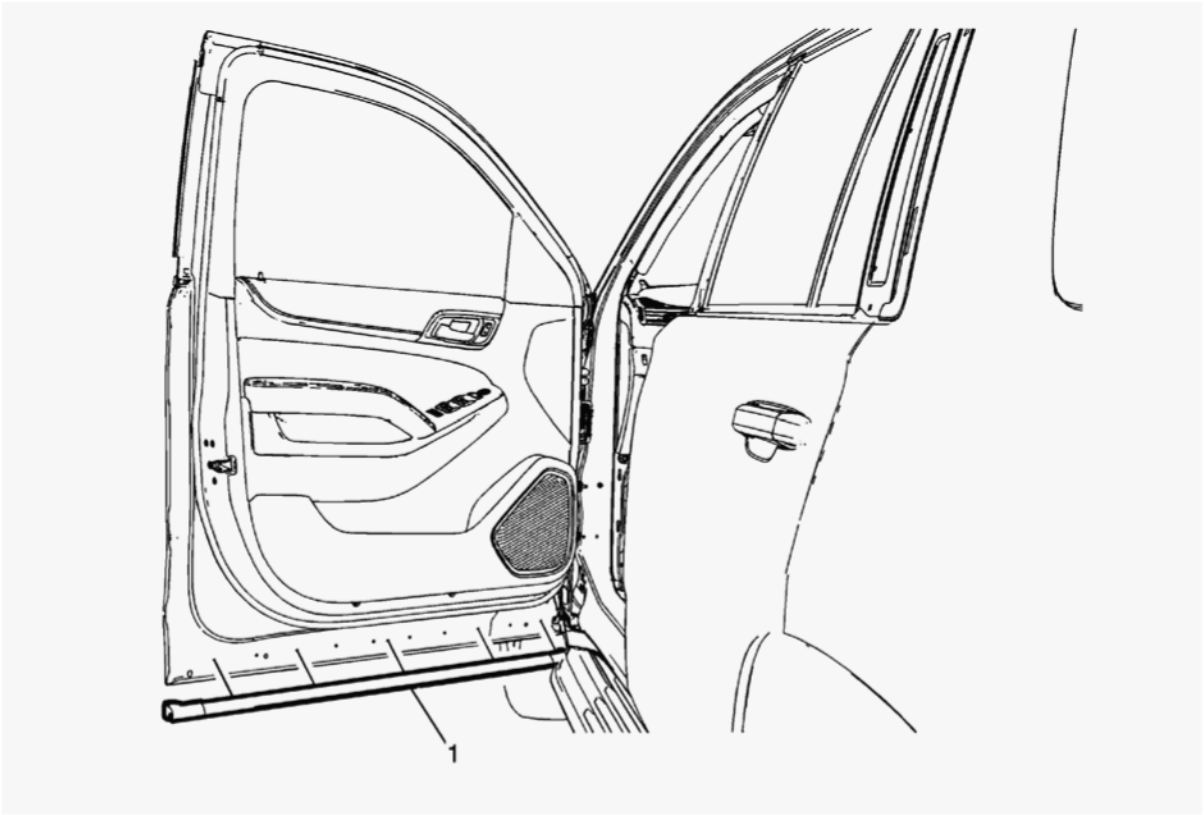


Fig. 160: Front Side Door Lower Auxiliary Weatherstrip
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
1	Front Side Door Lower Auxiliary Weatherstrip **Procedure** 1. Open the door to the full open position. 2. Using the appropriate tool, unclip the front side door lower auxiliary weatherstrip from the front door. **NOTE:** **Inspect the door to**

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Callout	Component Name
	ensure a proper seal after the weatherstrip has been replaced.

LIFTGATE WEATHERSTRIP REPLACEMENT (CHEVROLET, GMC)

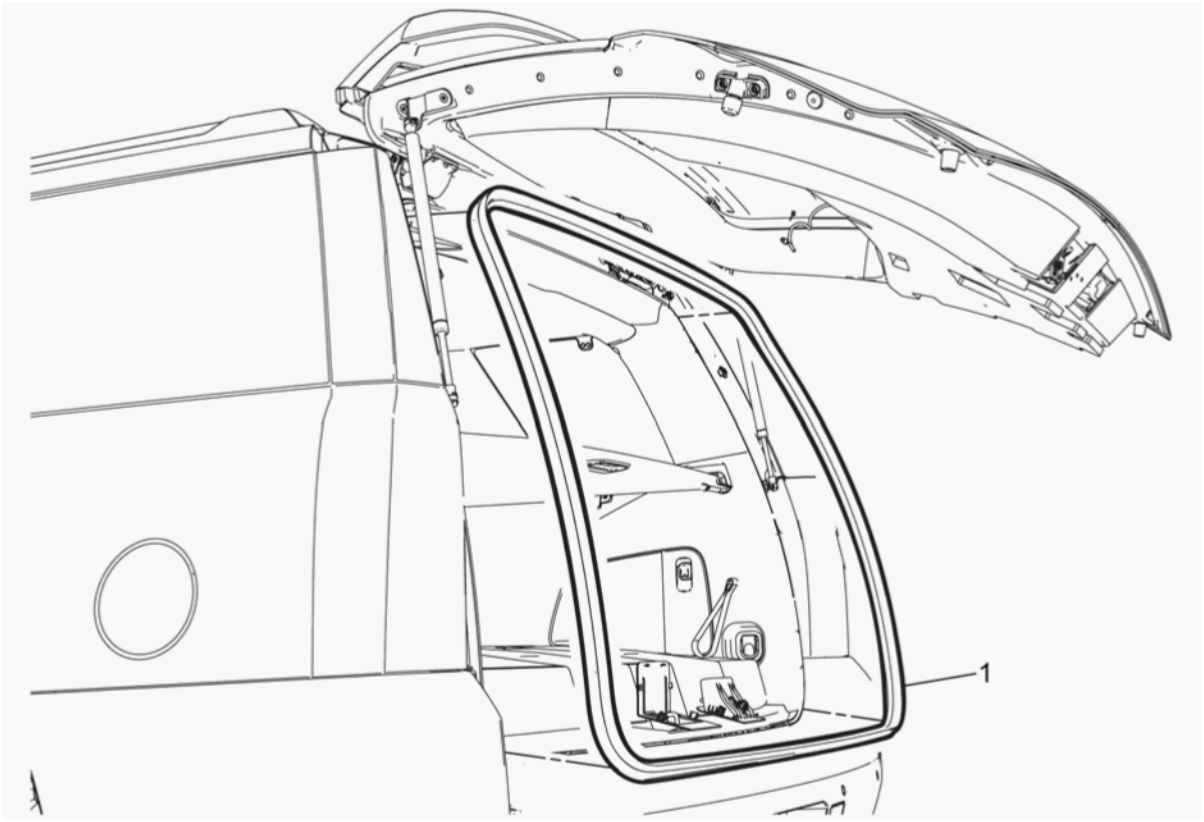


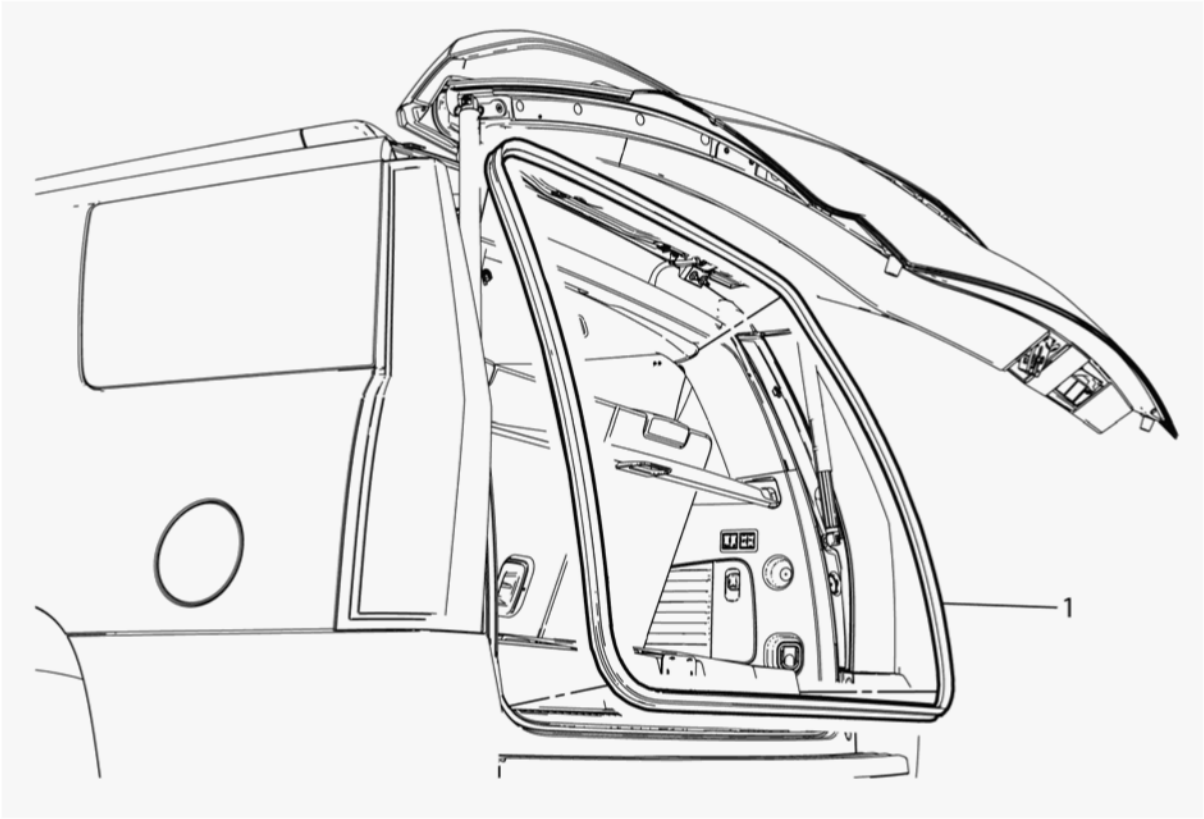
Fig. 161: Liftgate Weatherstrip (Chevrolet, GMC)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name

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Callout	Component Name
Preliminary Procedure Remove the liftgate sill garnish molding. Refer to **Liftgate Sill Garnish Molding Replacement** .	
1	Liftgate Weatherstrip **Procedure** 1. Roll the weatherstrip from the center to the upper corners. 2. Roll the weather strip from the upper corners to the lower corners. 3. Roll the weatherstrip from the lower corners to the center.

LIFTGATE WEATHERSTRIP REPLACEMENT (CADILLAC)



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Fig. 162: Liftgate Weatherstrip (Cadillac)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Remove the liftgate sill garnish molding. Refer to **Liftgate Sill Garnish Molding Replacement** .	
1	Liftgate Weatherstrip **Procedure** 1. Roll the weatherstrip from the center to the upper corners. 2. Roll the weather strip from the upper corners to the lower corners. 3. Roll the weatherstrip from the lower corners to the center.

REAR SIDE DOOR WEATHERSTRIP REPLACEMENT - DOOR SIDE (SHORT WHEELBASE)

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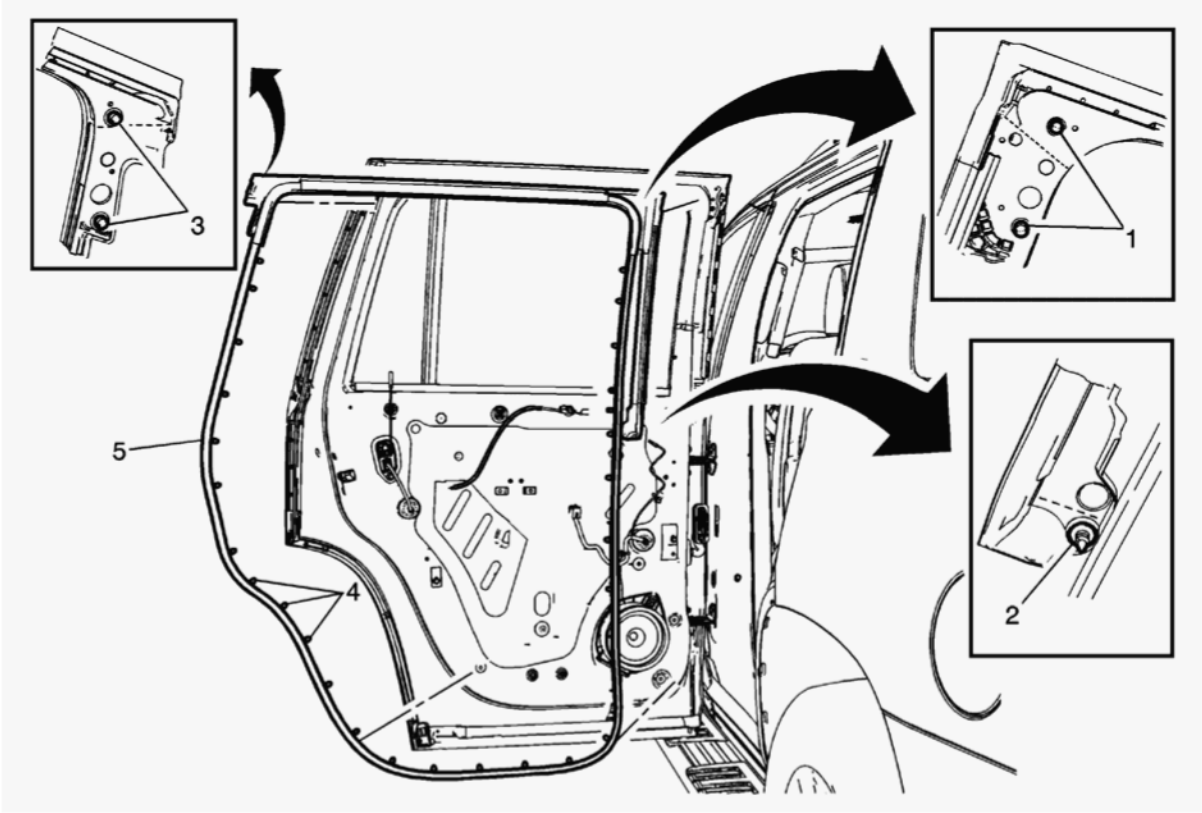


Fig. 163: Rear Side Door Weatherstrip - Door Side (Short Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Open the door to the full open position. 2. Remove the rear side door check link bolt. Refer to **Rear Side Door Check Link Replacement (Chevrolet, GMC with Short Wheelbase)Rear Side Door Check Link Replacement (Cadillac with Short Wheelbase)**.	
1	Rear Side Door Weatherstrip Upper Corner Clip (Qty:2) **Procedure** Using the appropriate tool, remove the push-in clips from around the door.
2	Rear Side Door Weatherstrip Clip

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Callout	Component Name
3	Rear Side Door Weatherstrip Upper Corner Clip (Qty:2)
4	Rear Side Door Weatherstrip Clip (Qty:38)
5	Rear Side Door Weatherstrip **Procedure** Ensure that the weatherstrip is fully seated in the door frame. **NOTE:** **Inspect the door to ensure a proper seal after the weatherstrip has been replaced.**

REAR SIDE DOOR WEATHERSTRIP REPLACEMENT - DOOR SIDE (LONG WHEELBASE)

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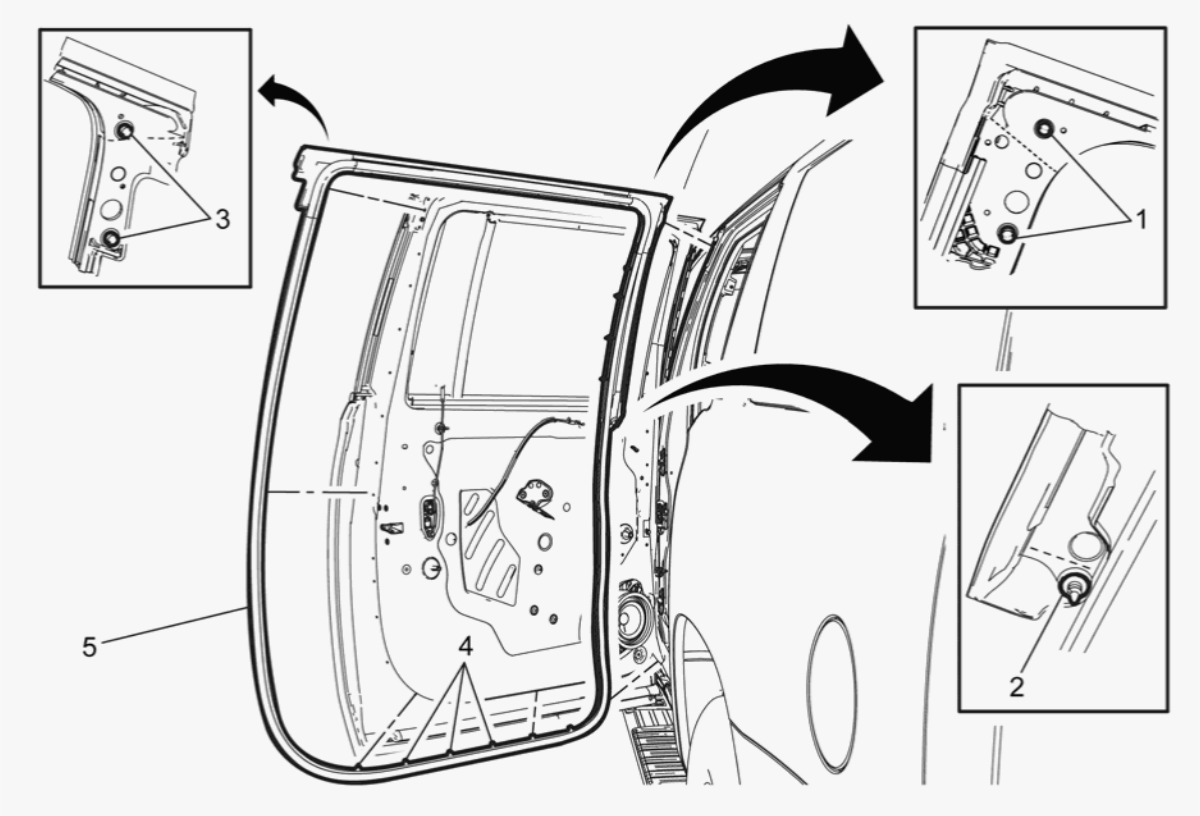


Fig. 164: Rear Side Door Weatherstrip - Door Side (Long Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Open the door to the full open position. 2. Remove Rear Side Door Check Link Bolt **Rear Side Door Check Link Replacement (Chevrolet, GMC with Long Wheelbase)Rear Side Door Check Link Replacement (Cadillac with Long Wheelbase)**	
1	Rear Side Door Weatherstrip Upper Corner Clip (Qty: 2) **Procedure** Using the appropriate tool, remove the push-in clips from around the door.
2	Rear Side Door Weatherstrip Clip

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Callout	Component Name
3	Rear Side Door Weatherstrip Upper Corner Clip (Qty: 2)
4	Rear Side Door Weatherstrip Clip (Qty: 40)
5	Rear Side Door Weatherstrip **Procedure** Ensure that the weatherstrip is fully seated in the door frame. **NOTE:** **Inspect the door to ensure a proper seal after the weatherstrip has been replaced.**

REAR SIDE DOOR WEATHERSTRIP REPLACEMENT - BODY SIDE (SHORT WHEELBASE)

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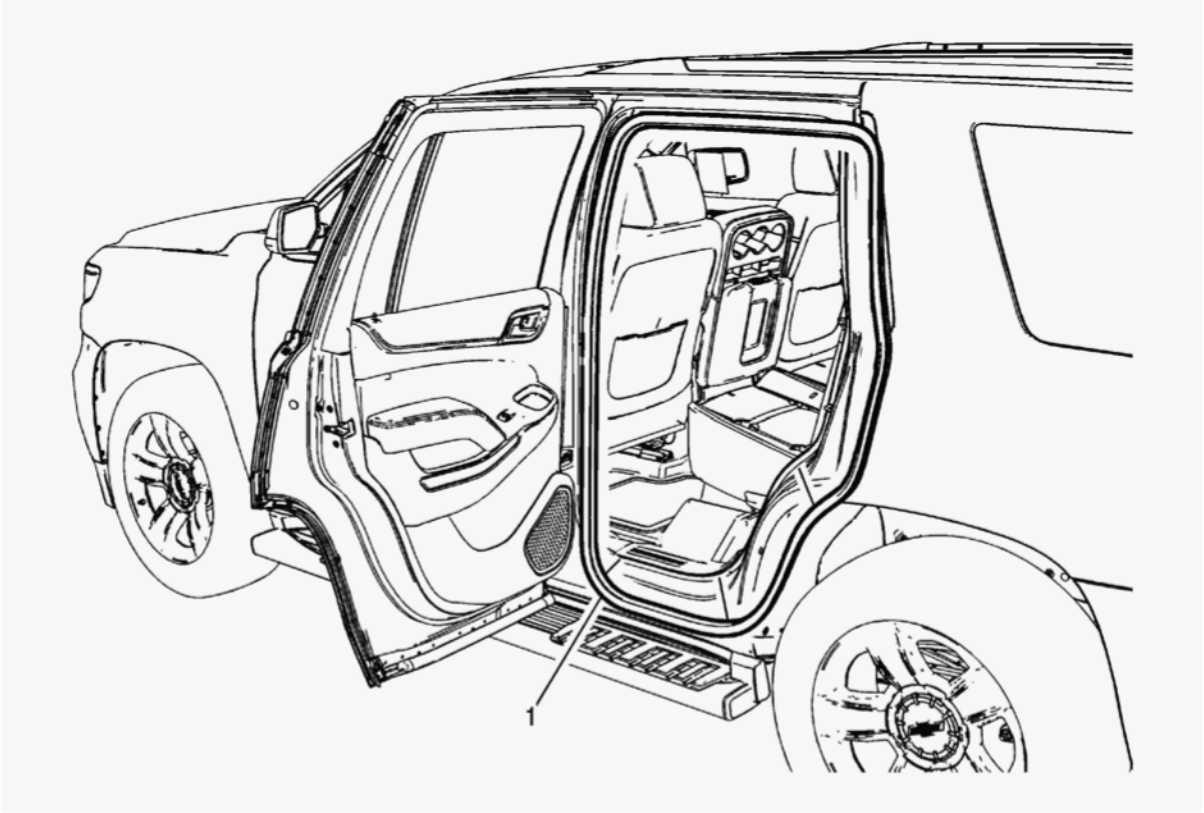


Fig. 165: Rear Side Door Weatherstrip - Body Side (Short Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Open the rear side door. 2. Remove the rear side door sill garnish molding. Refer to **Rear Side Door Sill Garnish Molding Replacement** . 3. Remove the center pillar upper trim panel. Refer to **Center Pillar Upper Trim Panel Replacement** .	
1	Rear Side Door Weatherstrip-Body Side **Procedure**

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Callout	Component Name
	1. Start at the front upper corner of the door opening and pull the weatherstrip away from the door opening flange. 2. Position the weatherstrip in the upper corner of the center pillar. 3. Working downward along the front edge, install the weatherstrip on the door opening flange ensuring that the carrier is fully seated in the corners. 4. Ensure that the weatherstrip is seated on the entire door opening flange. **NOTE:** **Inspect the door to ensure a proper seal after the weatherstrip has been replaced.**

REAR SIDE DOOR WEATHERSTRIP REPLACEMENT - BODY SIDE (LONG WHEELBASE)

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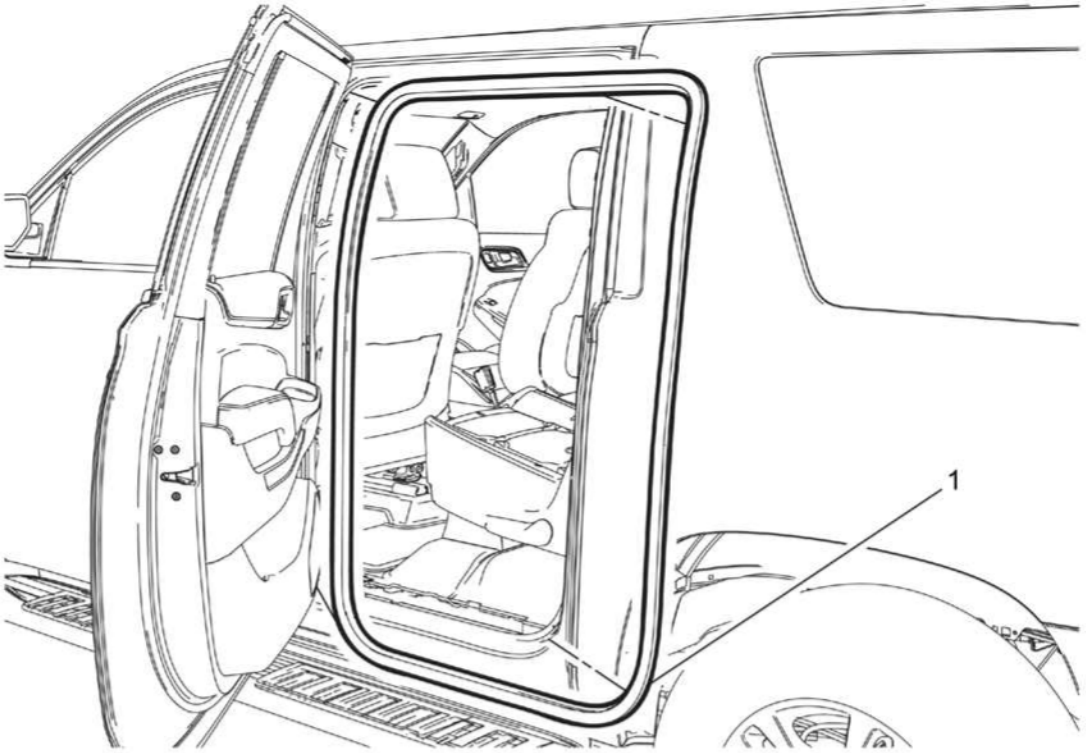


Fig. 166: Rear Side Door Weatherstrip - Body Side (Long Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedures 1. Open the rear side door. 2. Remove the rear side door sill garnish molding. Refer to **Rear Side Door Sill Garnish Molding Replacement** . 3. Remove the center pillar upper trim panel. Refer to **Center Pillar Upper Trim Panel Replacement** .	
1	Rear Side Door Weatherstrip-Body Side **Procedure**

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Callout	Component Name
	1. Start at the front upper corner of the door opening and pull the weatherstrip away from the door opening flange. 2. Position the weatherstrip in the upper corner of the center pillar. 3. Working downward along the front edge, install the weatherstrip on the door opening flange ensuring that the carrier is fully seated in the corners. 4. Ensure that the weatherstrip is seated on the entire door opening flange. **NOTE:** **Inspect the door to ensure a proper seal after the weatherstrip has been replaced.**

REAR SIDE DOOR REAR AUXILIARY WEATHERSTRIP REPLACEMENT (SHORT WHEELBASE)

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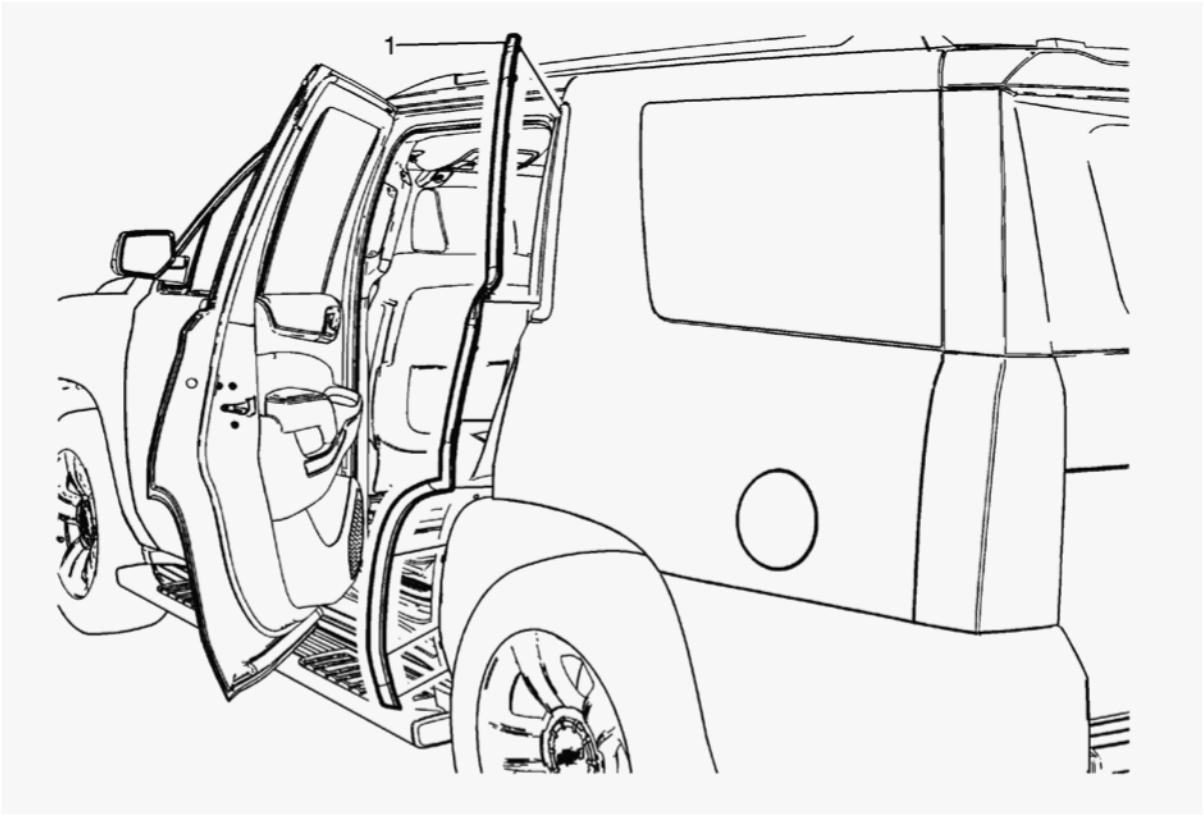


Fig. 167: Rear Side Door Rear Auxiliary Weatherstrip (Short Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Open the rear side door to the full open position.	
1	Rear Side Door Rear Auxiliary Weatherstrip **Procedure** 1. Using the appropriate tool, release the clips from the door frame while pulling the weatherstrip from the vehicle. 2. Use a solution of 50/50 isopropyl alcohol and water to clean the adhesive surface. 3. Peel the protective film from the foam tape and install the rear side door rear auxiliary weatherstrip. 4. Ensure that the weatherstrip is fully seated to the vehicle.

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Callout	Component Name
	NOTE: Inspect the rear side door for proper seal.

REAR SIDE DOOR REAR AUXILIARY WEATHERSTRIP REPLACEMENT (LONG WHEELBASE)

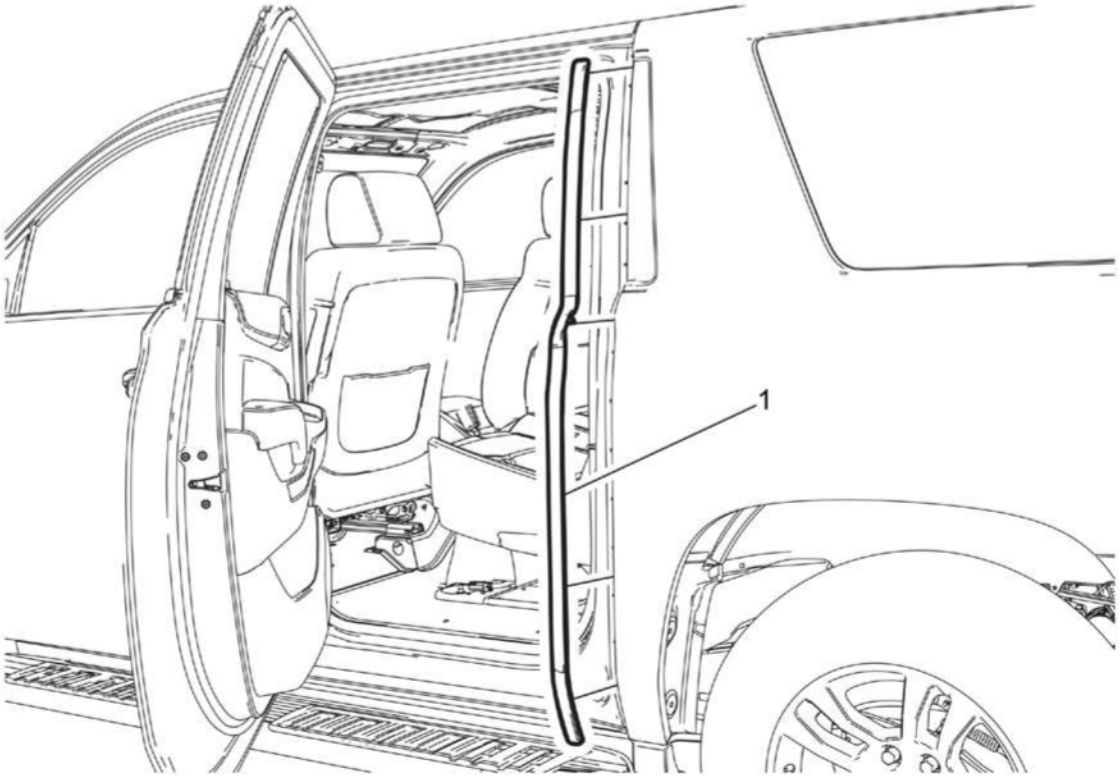


Fig. 168: Rear Side Door Rear Auxiliary Weatherstrip (Long Wheelbase)
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	

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Callout	Component Name
Open the rear side door to the full open position.	
1	Rear Side Door Rear Auxiliary Weatherstrip **Procedure** 1. Using the appropriate tool, release the clips from the door frame while pulling the weatherstrip from the vehicle. 2. Use a solution of 50/50 isopropyl alcohol and water to clean the adhesive surface. 3. Peel the protective film from the foam tape and install the rear side door rear auxiliary weatherstrip. 4. Ensure that the weatherstrip is fully seated to the vehicle. **NOTE:** **Inspect the rear side door for proper seal.**

LIFTGATE ADJUST BUMPER PAD REPLACEMENT

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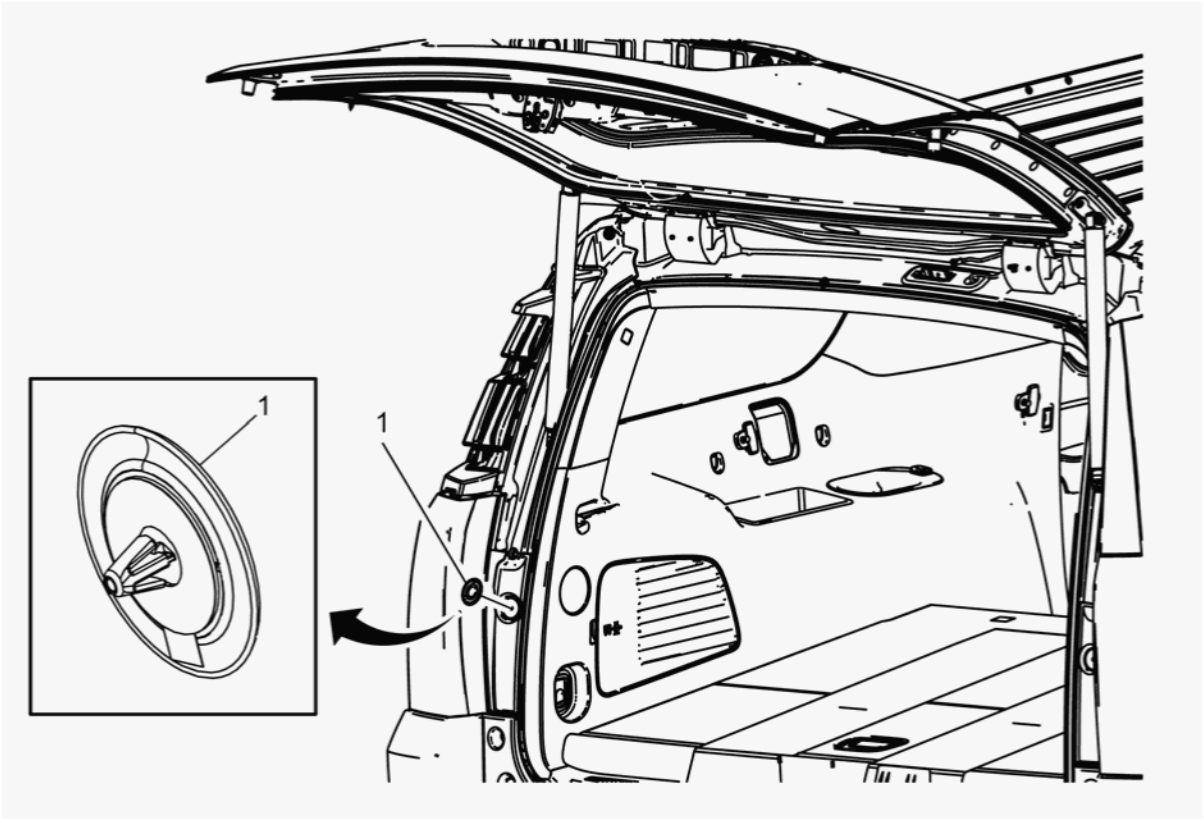


Fig. 169: Liftgate Adjust Bumper Pad
Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure Open the liftgate.	
1	Liftgate Adjust Bumper Pad **Procedure** 1. Using a trim type tool release the liftgate adjust bumper pad and remove. 2. Clean the body with the appropriate 50/50 mixture by volume of isopropyl alcohol and clean drinkable water. Wipe surface dry with a clean lint-free towel.

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Callout	Component Name
	NOTE: The center retainer will break upon removal and need to be replaced.

DESCRIPTION AND OPERATION

HOOD AJAR INDICATOR DESCRIPTION AND OPERATION

Hood Ajar Switch

The hood ajar switch provides closure status of the hood to the body control module (BCM). The switch is integrated into the hood latch assembly. The hood ajar switch provides two separate inputs to the BCM. These separate inputs allow the BCM to actively monitor for a hood ajar switch fault.

The BCM uses the hood ajar switch as a content theft deterrent alarm trigger.

Hood Ajar Indicator/Message

When the hood is ajar, a message is displayed on the driver information center (DIC) or the hood ajar indicator will be illuminated.

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