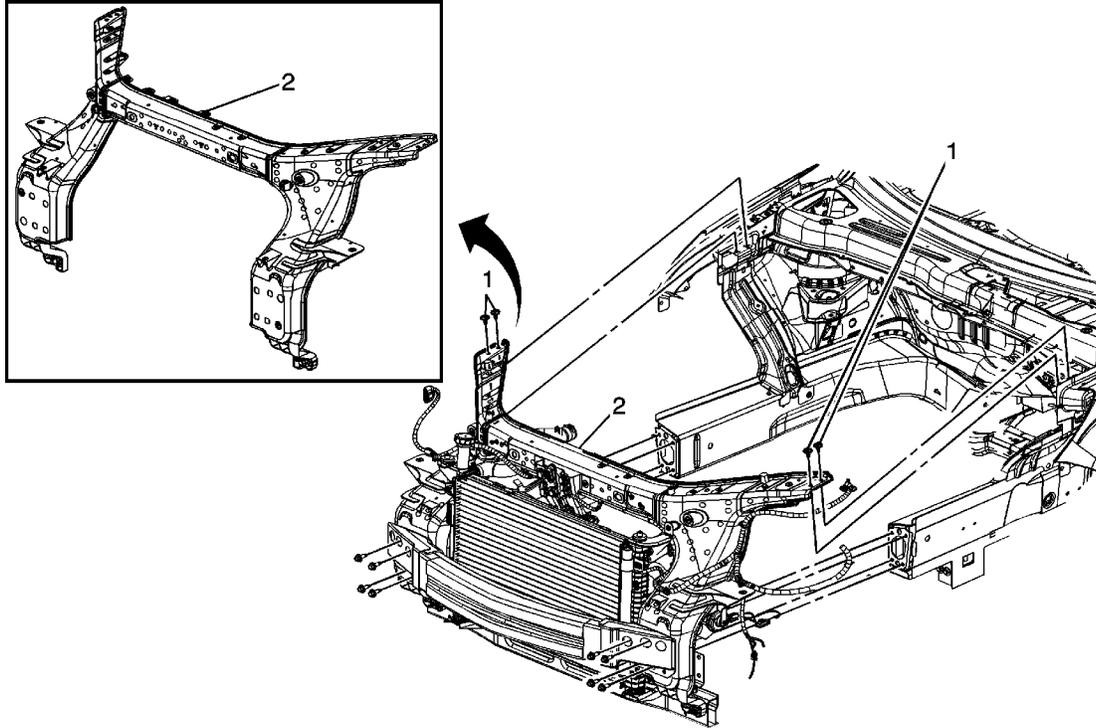


Fastener Tightening Specifications

Application	Specification	
	Metric	English
Fuel Filler Door Bolts	2.5 N·m	22 lb in
Front Door Check Link Bolts	10 N·m	89 lb in
Front Door Check Link to Body	20 N·m	15 lb ft
Front Door Hinge To Body Bolts	36 N·m	27 lb ft
Front Door Hinge To Door Bolts	25 N·m	18 lb ft
Front Fender Bolts	9 N·m	80 lb in
Front Outer Door Panel Bolts	8 N·m	71 lb in
Hood Hinge Bolts	25 N·m	18 lb ft
Hood Latch Bolts	10 N·m	89 lb in
Liftgate Hinge Bolts	25 N·m	18 lb ft
Liftgate Hinge Nuts	25 N·m	18 lb ft
Liftgate Strut Anchor	25 N·m	18 lb ft
Quarter Panel Bolts	9 N·m	80 lb in
Quarter Panel Nuts	9 N·m	80 lb in
Rear Door Check Link Bolts	10 N·m	89 lb in
Rear Door Check Link to Body Bolt	20 N·m	15 lb ft
Rear Door Hinge To Body Bolts	36 N·m	27 lb ft
Rear Door Hinge To Door Bolts	25 N·m	18 lb ft
Rear Outer Door Panel Bolts	8 N·m	71 lb in
Hood Latch Release Cable Bolt	9 N·m	80 lb in
Fuel Tank Filler Door Bolt	2.5 N·m	22 lb in
Hood Latch Release Handle Screw	10 N·m	89 lb in

Front End Upper Tie Bar Support Replacement

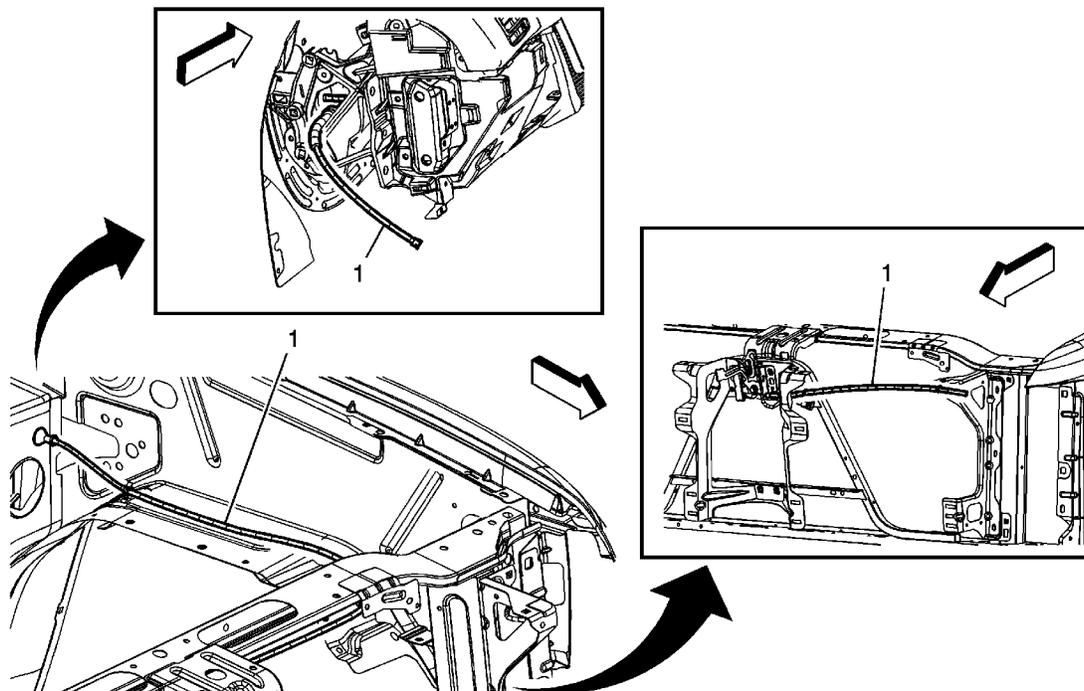


Callout	Component Name
<p>Preliminary Procedures</p> <ol style="list-style-type: none"> 1. Remove the radiator. Refer to Radiator Replacement. 2. Remove the A/C condenser. Refer to Air Conditioning Condenser Replacement. 3. Remove the front bumper impact bar. Refer to Front Bumper Impact Bar Replacement. 4. Remove the headlamps. Refer to Headlamp Replacement. 5. Remove the hood primary and secondary latch. Refer to Hood Primary and Secondary Latch Replacement. 	
<p>1</p>	<p>Front End Upper Tie Bar Support Bolts (Qty: 4)</p> <p>Caution: Refer to Fastener Caution in the Preface section.</p> <p>Tighten 9 N·m (80 lb in)</p>
<p>2</p>	<p>Front End Upper Tie Bar Support</p> <p>Procedure</p> <ol style="list-style-type: none"> 1. Disconnect the electrical connectors/harnesses as needed.

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2. Transfer any parts as needed.

Hood Primary Latch Release Cable Replacement

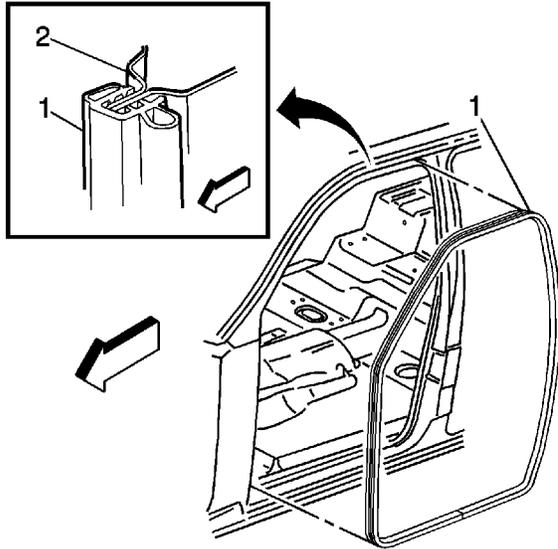


Callout	Component Name
<p>Preliminary Procedures</p> <ol style="list-style-type: none"> 1. Remove the Instrument Panel Insulator Panel Replacement. Refer to Instrument Panel Insulator Panel Replacement - Left Side 2. Remove the Air cleaner. Refer to Air Cleaner Assembly Replacement. 3. Remove the Hood Primary and Secondary Latch. Refer to Hood Primary and Secondary Latch Replacement 	
<p>1</p>	<p>Hood Latch Release Cable</p> <p>Procedure</p> <ol style="list-style-type: none"> 1. Attach mechanic's wire to the existing cable at the latch side to ease installation of the new cab 2. Remove cable by pulling through the dash panel from inside the vehicle.

Front Door Opening Weatherstrip Replacement

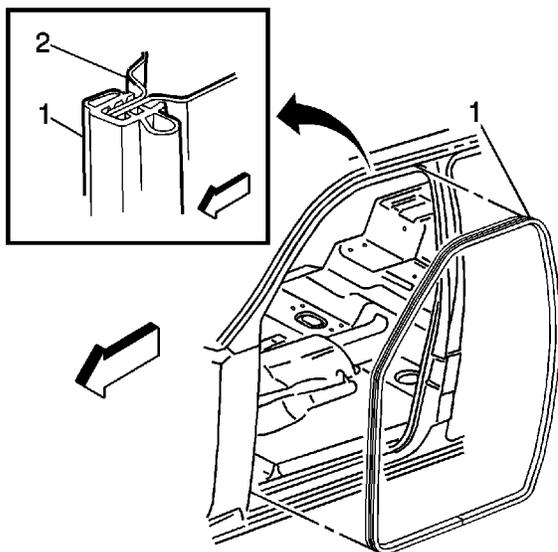
Removal Procedure

1. Remove the front door sill plate. Refer to [Front Side Door Sill Plate Replacement](#) .



2. Remove the weatherstrip (1) from the pinch-weld flange (2).

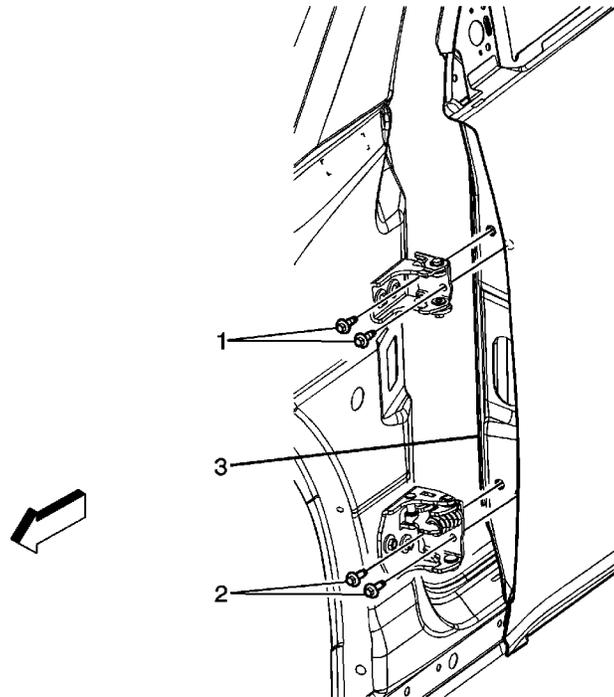
Installation Procedure





1. Align the weatherstrip to the door opening with the bond joint positioned at the lower center of the door opening.
2. Install the weatherstrip to the pinch-weld flange. Ensure the weatherstrip is fully seated.
3. Install the front door sill plate. Refer to [Front Side Door Sill Plate Replacement](#) .

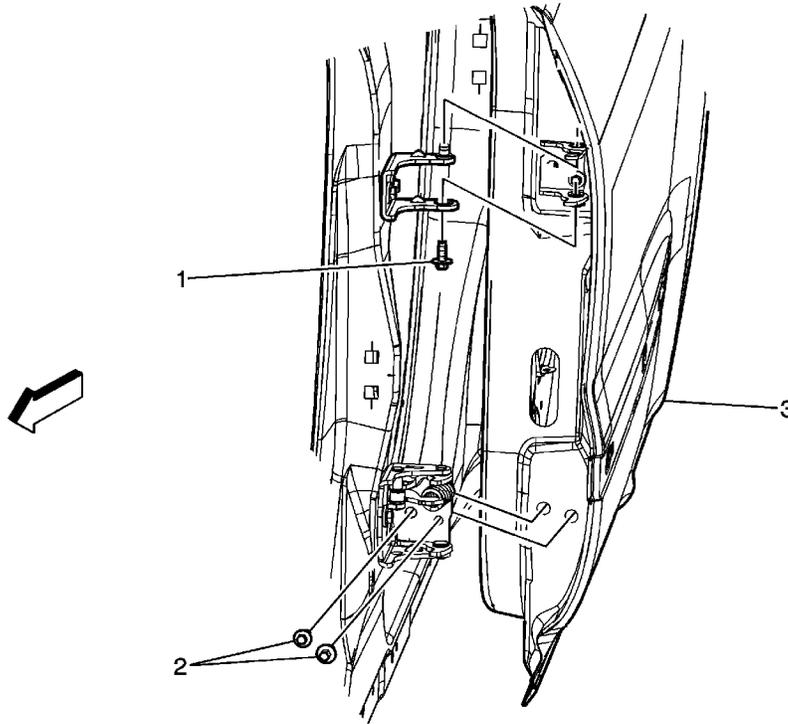
Front Side Door Replacement (Left)



Callout	Component Name
<p>Warning: Refer to SIR Warning in the Preface section.</p>	
<p>Preliminary Procedures</p> <ol style="list-style-type: none"> 1. Disable the supplemental inflatable restraint (SIR) system. Refer to SIR Disabling and Enabling. 2. Remove the front door trim panel. Refer to Front Side Door Trim Panel Replacement - Left Side. 	
<p>1</p>	<p>Front Side Door Upper Hinge Bolt (Qty: 2)</p> <p>Caution: Refer to Fastener Caution in the Preface section.</p> <p>Procedure</p> <ol style="list-style-type: none"> 1. Remove the water deflector. 2. Support the door before removing the hinge bolts. 3. Disconnect the electrical connector, if equipped. 4. With the aid of an assistant, remove the door. <p>Tighten</p>

	8 N·m (71 lb in).
2	Front Side Door Lower Hinge Bolt (Qty: 2) Tighten 8 N·m (71 lb in).
3	Front Side Door Assembly Procedure <ol style="list-style-type: none">1. When replacing the door it is necessary to transfer all of the internal components.2. Apply LOCTITE® Blue GM P/N 12345382, or (Canadian P/N 10953489), or equivalent to the fastener prior to installation.

Rear Side Door Replacement

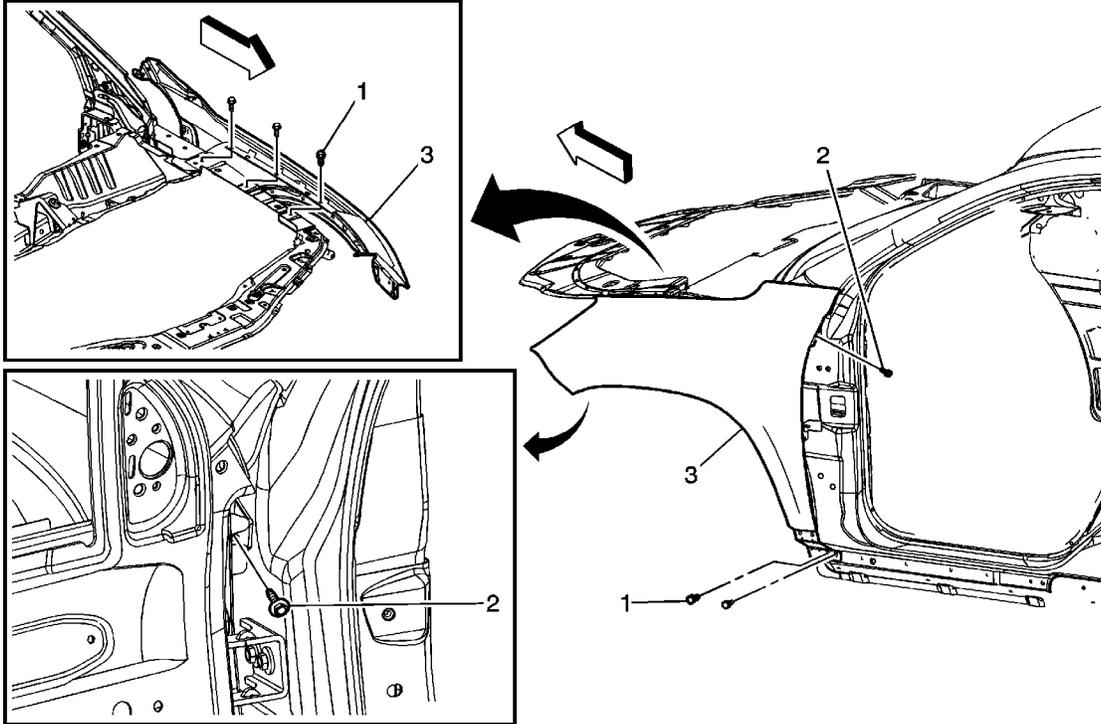


Callout	Component Name
<p>Warning: Refer to SIR Warning in the Preface section.</p>	
<p>Preliminary Procedures</p>	
<ol style="list-style-type: none"> 1. Disable the supplemental inflatable restraint (SIR) system. Refer to SIR Disabling and Enabling. 2. Remove the rear door trim panel. Refer to Rear Side Door Trim Panel Replacement. 	
<p>1</p>	<p>Rear Side Door Hinge Bolt (Qty: 2)</p> <p>Caution: Refer to Fastener Caution in the Preface section.</p> <p>Procedure</p> <ol style="list-style-type: none"> 1. Remove the water deflector. 2. Support the door before removing the hinge bolts. 3. Disconnect the electrical connector, if equipped. 4. With the aid of an assistant, remove the door. <p>Tighten 8 N·m (71 lb in)</p>

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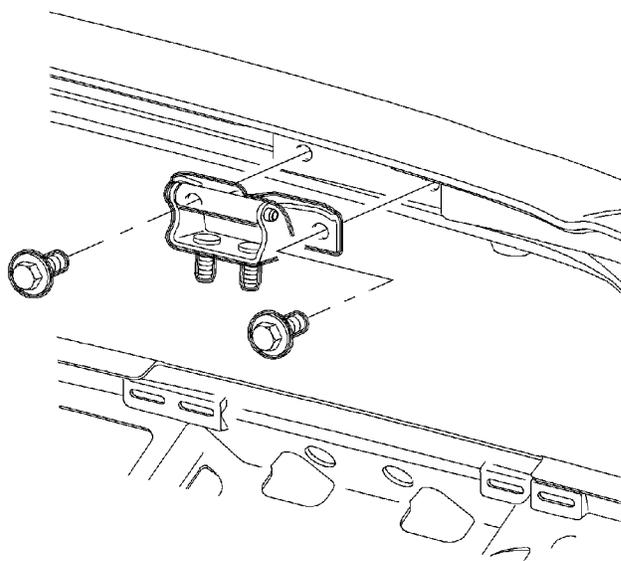
2	Rear Side Door Hinge Bolt (Qty: 2) Tighten 8 N·m (71 lb in)
3	Rear Side Door Assembly Tip When replacing the door it is necessary to transfer all of the internal components.

Front Fender Replacement (Acadia, Enclave, and OUTLOOK)



Callout	Component Name
Preliminary Procedures	
1. Remove the bumper fascia. Refer to Front Bumper Fascia Replacement . 2. Remove the wheelhouse liner. Refer to Front Wheelhouse Front Liner Replacement . 3. Remove the rocker panel molding. Refer to Rocker Panel Front Molding Replacement .	
1	Front Fender Bolt (Qty: 5) Caution: Refer to Fastener Caution in the Preface section. Tighten 3 N·m (25 lb in)
2	Front Fender Bolt Tip Open the door to access the bolt.
3	Front Fender

Liftgate Adjustment

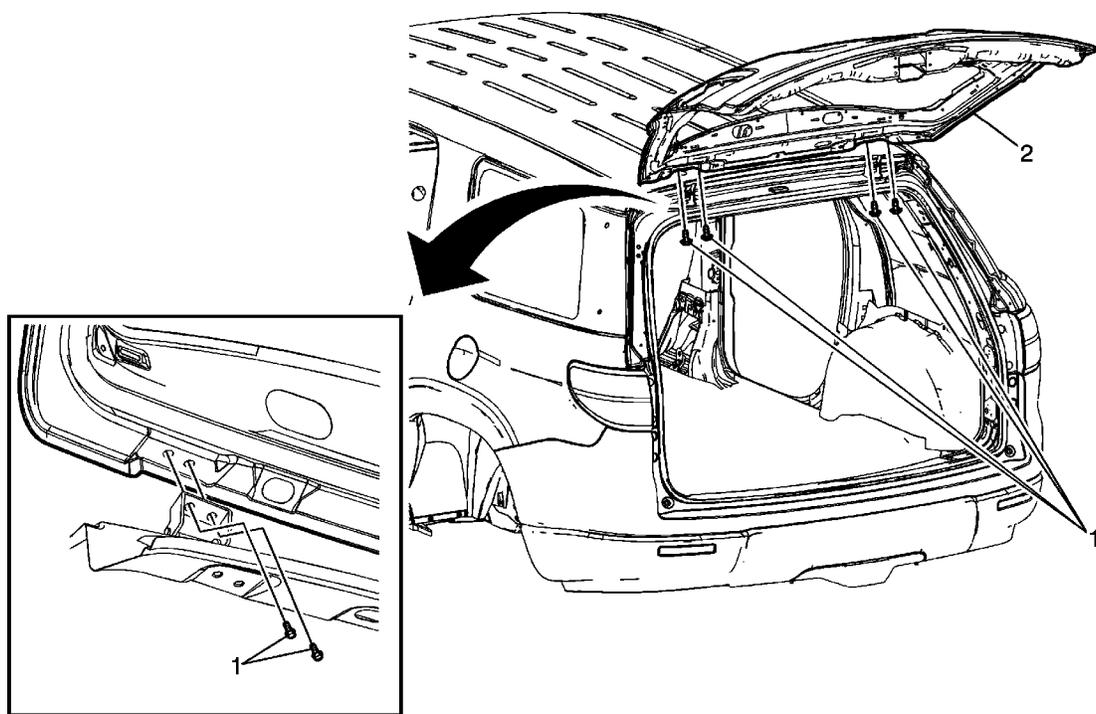


1. Note the original position of the liftgate latch striker.
2. Remove the striker.
3. Loosen the hinge-to-roof panel bolts for forward or rearward adjustments.
4. If adjusting the hinge to roof panel bolts, lower the rear headliner as needed.
5. Loosen the liftgate-to-hinge bolts for up and down adjustment.
6. Move the liftgate within the liftgate opening to achieve the best alignment and operation.
7. Install striker to approximately the proper position.
8. Adjust the striker to achieve the best operation and alignment of the liftgate.
9. Inspect the seals for proper engagement.

Caution: Refer to [Fastener Caution](#) in the Preface section.

10. Tighten the bolts when the proper adjustment is achieved to **25 N·m (18 lb ft)**.

Liftgate Replacement

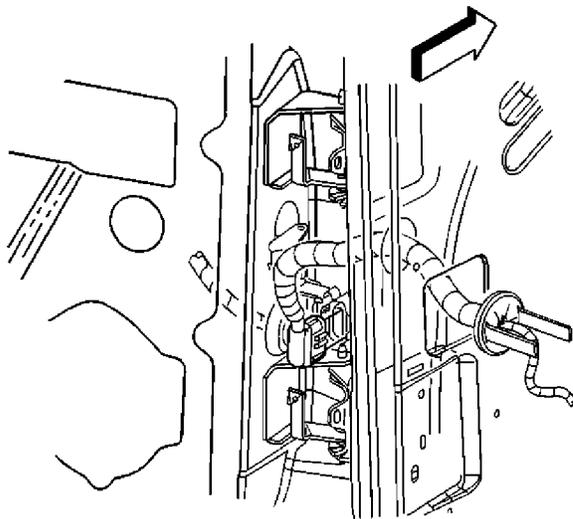


Callout	Component Name
<p>Warning: When a lift gate hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury.</p>	
<p>Preliminary Procedures</p> <ol style="list-style-type: none"> 1. Disconnect the strut rods. Refer to Liftgate Strut Replacement. 2. Remove the rear door upper garnish molding. Refer to Liftgate Garnish Molding Replacement. 3. Disconnect the liftgate actuator rod. Refer to Liftgate Actuator Rod Replacement. 4. Disconnect the electrical connectors. 	
1	<p>Liftgate Body Side Hinge Nuts (Qty: 4)</p> <p>Caution: Refer to Fastener Caution in the Preface section.</p> <p>Tighten 25 N·m (18 lb ft)</p>
2	Liftgate

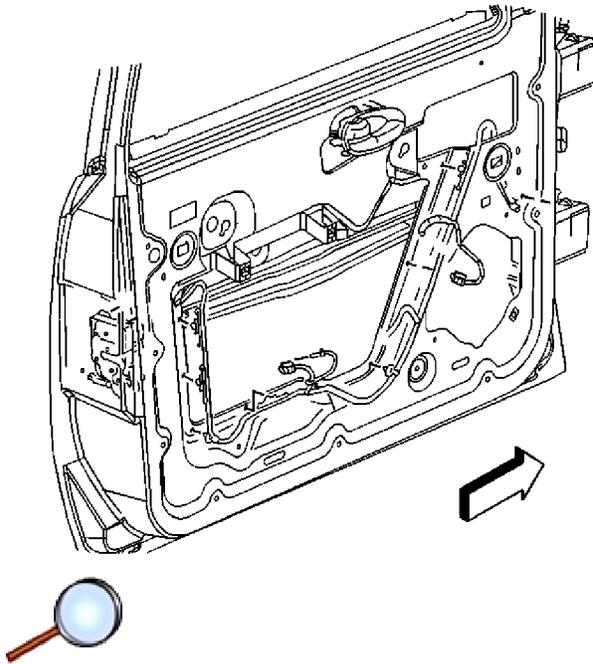
Front Side Door Wiring Harness Replacement

Removal Procedure

1. Disable the SIR. Refer to [SIR Disabling and Enabling](#) .
2. Remove the side front door trim panel. Refer to [Front Side Door Trim Panel Replacement - Left Side](#) or [Front Side Door Trim Panel Replacement - Right Side](#) .
3. Remove the front door speaker. Refer to [Radio Front Side Door Speaker Replacement](#) .
4. Remove the front water deflector. Refer to [Front Side Door Water Deflector Replacement](#) .
5. Disconnect the regulator motor electrical connector.
6. Disconnect the door latch assembly electrical connector.
7. Disconnect the electrical connector from the SIR side impact sensor.

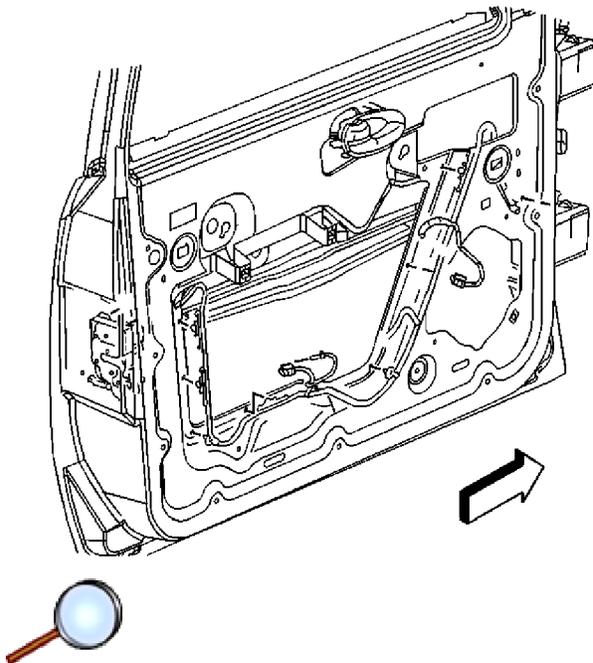


8. Disconnect the body harness inline electrical connector by releasing the connector retaining tab located on the body side of the connector.
9. Remove the front door wiring harness electrical connector from the mounting bracket by releasing the mounting bracket retaining tab located on the hinge side of the connector.
10. Remove the rubber grommet from the door access opening.

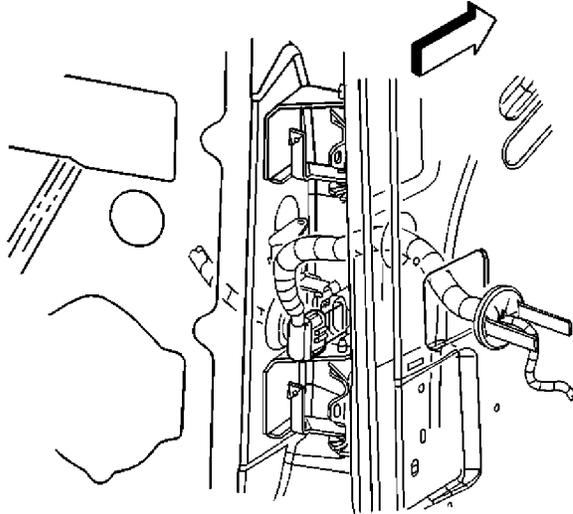


11. Note the routing of the front door wiring harness and release the wire harness attachments from the door .
12. Pass the front door wiring harness electrical connector through the access opening and remove the front door wiring harness from the door.

Installation Procedure

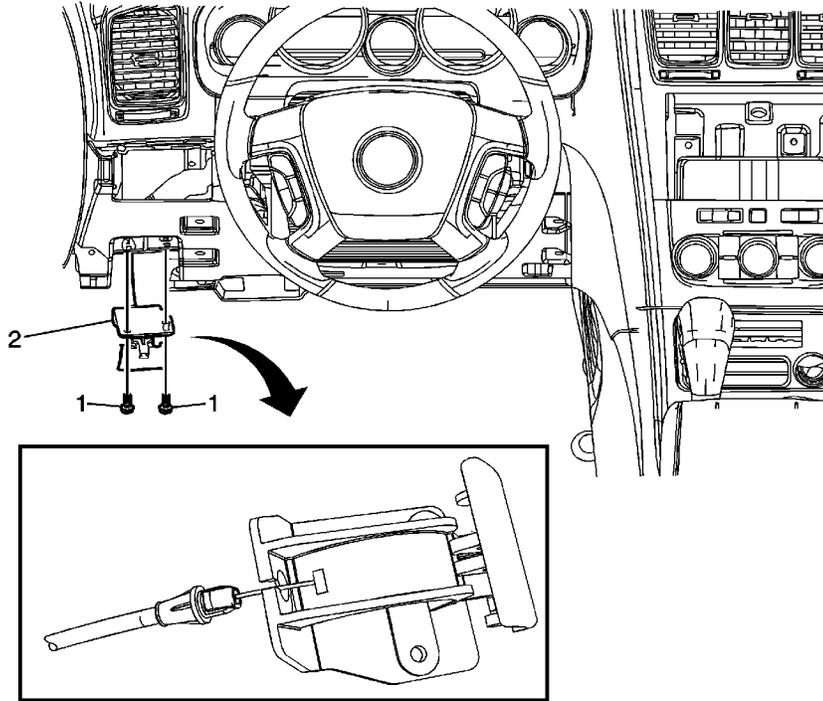


1. Pass the front door wiring harness electrical connector through the access opening and position the front door wiring harness to the door as previously noted.
2. Ensure the front door wiring harness attachments are fully seated.



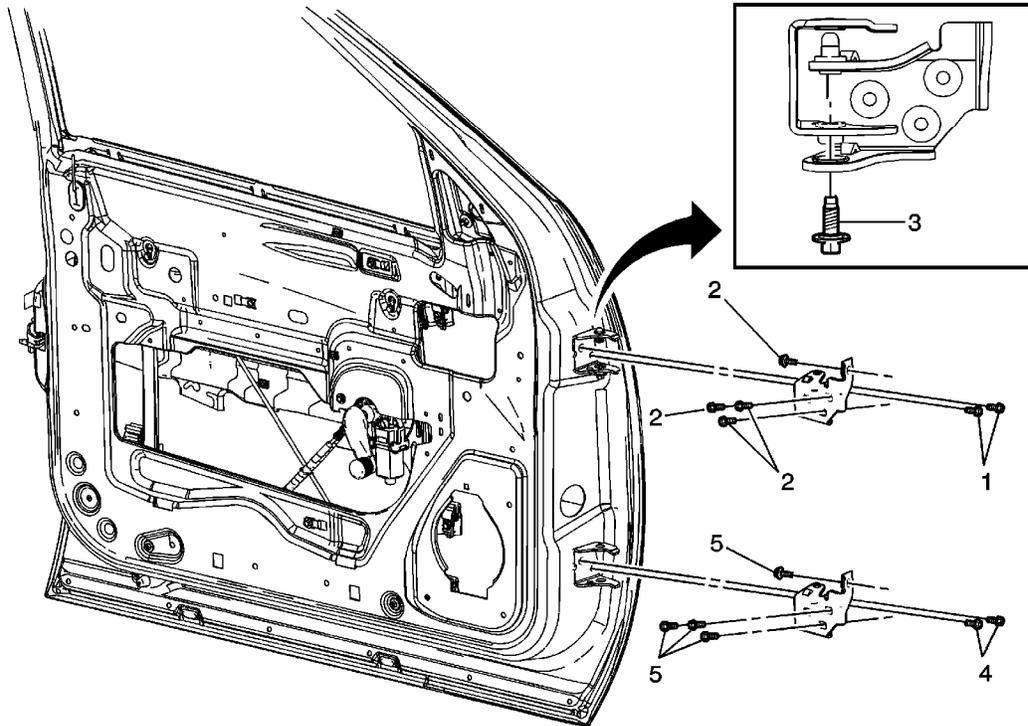
3. Attach the rubber grommet to the door access opening. Ensure the grommet is fully seated.
4. Install the front door wiring harness electrical connector to the mounting bracket. Ensure the mounting bracket retaining tab is fully seated.
5. Connect the body harness inline electrical connector to the door wire harness electrical connector. Ensure the retaining tab is fully seated.
6. Connect the electrical connector to the SIR side impact sensor.
7. Connect the door latch assembly electrical connector.
8. Connect the regulator motor electrical connector.
9. Install the front door water deflector. Refer to [Front Side Door Water Deflector Replacement](#) .
10. Install the front door speaker. Refer to [Radio Front Side Door Speaker Replacement](#) .
11. Install the side front door trim panel. Refer to [Front Side Door Trim Panel Replacement - Left Side](#) or [Front Side Door Trim Panel Replacement - Right Side](#) .
12. Enable the SIR. Refer to [SIR Disabling and Enabling](#) .

Hood Primary Latch Release Cable Handle Replacement



Callout	Component Name
1	Hood Latch Release Handle Screw (Qty: 2) Caution: Refer to Fastener Caution in the Preface section. Tighten 10 N·m (89 lb in)
2	Hood Latch Release Handle Tip Disconnect the release cable.

Front Side Door Upper Hinge and Lower Hinge Replacement

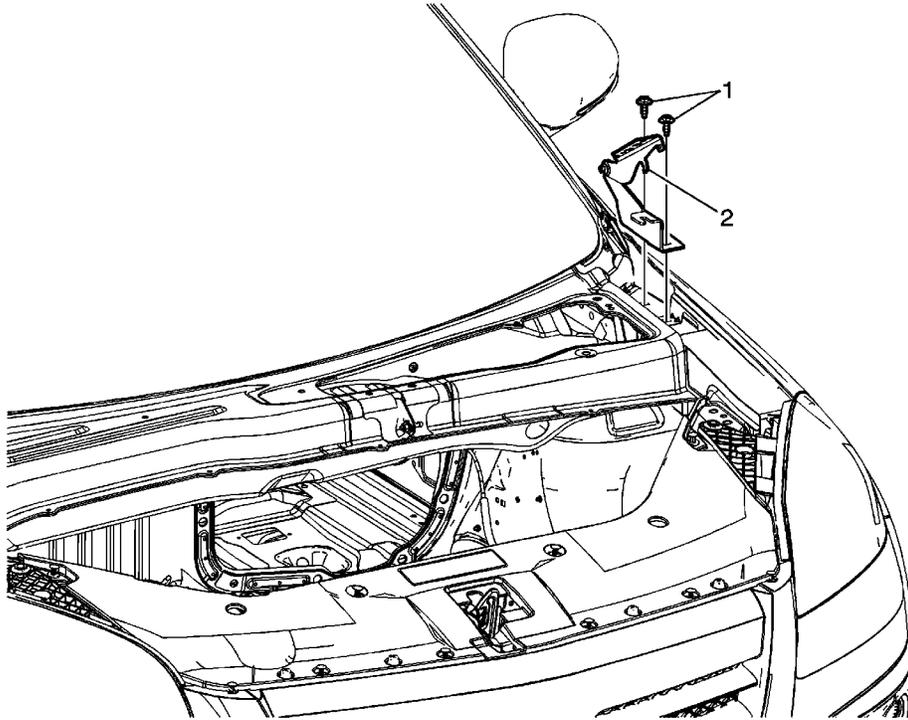


Callout	Component Name
<p>Warning: Refer to SIR Warning in the Preface section.</p>	
<p>Preliminary Procedure</p>	
<p>Disable the supplemental inflatable restraint (SIR) system. Refer to SIR Disabling and Enabling.</p>	
<p>1</p>	<p>Front Side Door Hinge Upper Bolt (Qty: 3)</p> <p>Caution: Refer to Fastener Caution in the Preface section.</p> <p>Tip Replace only one hinge at a time.</p> <p>Tighten 25 N·m (18 lb ft)</p>
<p>2</p>	<p>Front Side Door Hinge Upper Bolt (Qty: 3)</p> <p>Tighten</p>

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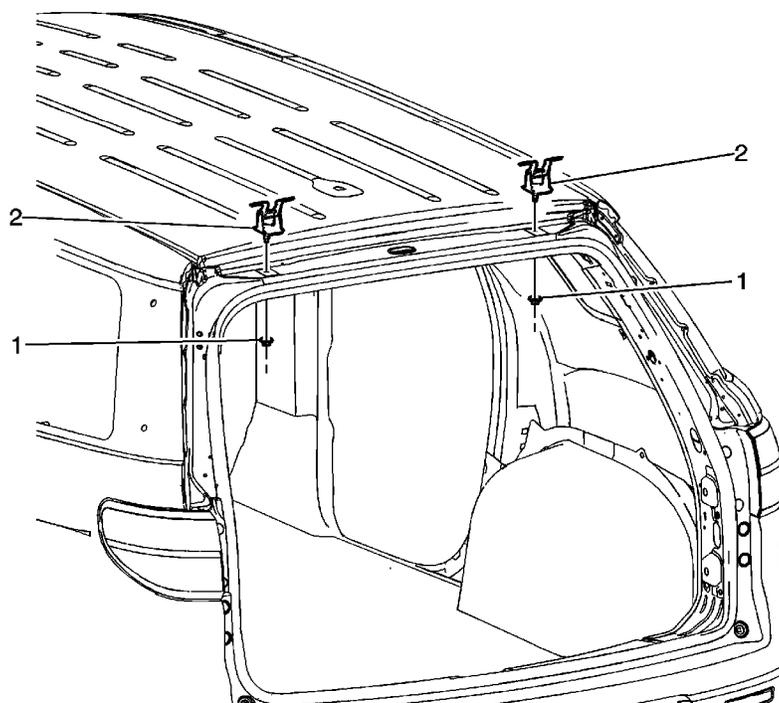
	25 N·m (18 lb ft)
3	<p>Front Side Door Hinge Lower Bolt</p> <p>Tip After installation of the replacement upper hinge, from the underside of the hinge, remove the temporary keeper pivot bolt and replace with longer permanent bolt.</p> <p>Tighten 25 N·m (18 lb ft)</p>
4	<p>Front Side Door Hinge Lower Bolt (Qty: 3)</p> <p>Tighten 25 N·m (18 lb ft)</p>
5	<p>Front Side Door Hinge Lower Bolt (Qty: 4)</p> <p>Tighten 25 N·m (18 lb ft)</p>

Hood Hinge Replacement



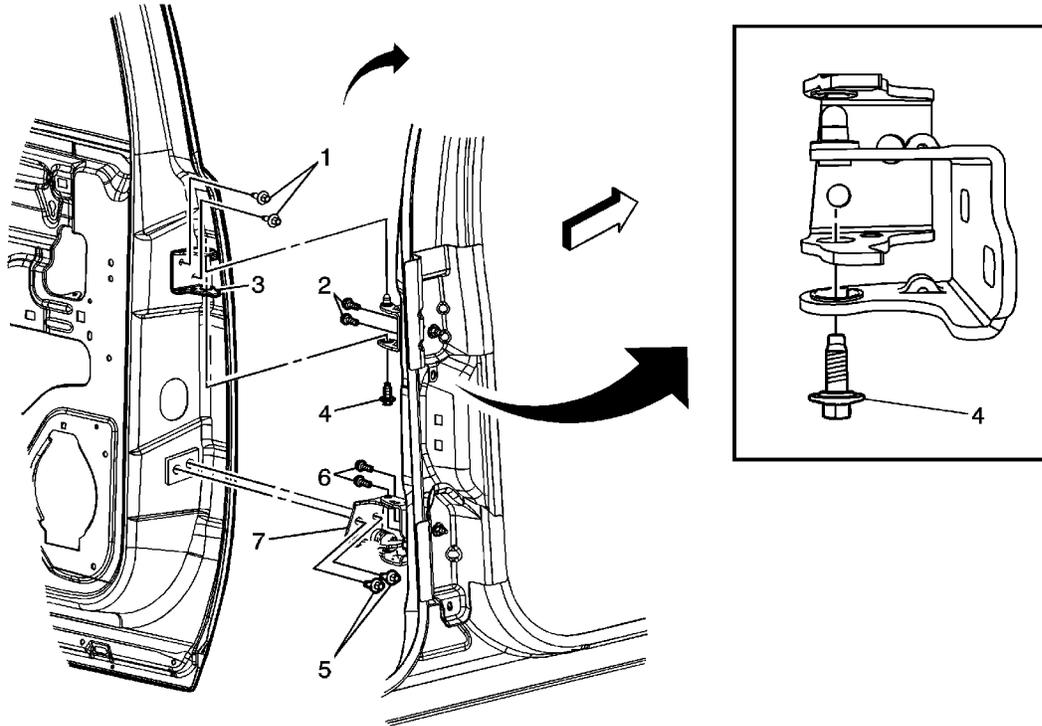
Callout	Component Name
Preliminary Procedure	
Remove the hood. Refer to Hood Replacement .	
1	Hood Hinge Bolt (Qty: 4) Caution: Refer to Fastener Caution in the Preface section. Tighten 25 N·m (19 lb ft).
2	Hood Hinge Procedure Adjust the hood hinge if needed. Refer to Hood Adjustment .

Liftgate Hinge Replacement



Callout	Component Name
<p>Preliminary Procedure</p> <ol style="list-style-type: none"> 1. Remove the liftgate. Refer to Liftgate Replacement. 2. Drop the rear of the headliner to access the bolts. Refer to Headliner Replacement Headlining Trim Panel Replacement 3. Use a grease pencil to mark the liftgate hinge position to the body prior to removal. 	
1	<p>Liftgate Hinge Nut (Qty: 2)</p> <p>Caution: Refer to Fastener Caution in the Preface section.</p> <p>Tighten 25 N·m (18 lb ft)</p>
2	<p>Liftgate Hinge</p> <p>Procedure</p> <ul style="list-style-type: none"> • Adjust the liftgate if needed. Refer to Liftgate Adjustment. • Inspect the hinge gasket and replace if damaged or torn.

Rear Side Door Upper Hinge and Lower Hinge Replacement

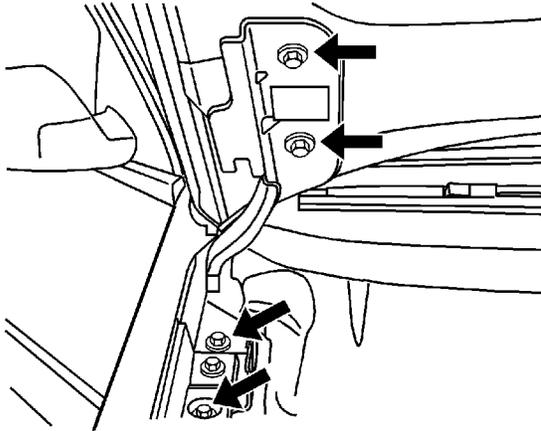


Callout	Component Name
1	Rear Side Door Hinge Upper Bolt (Qty: 2) Caution: Refer to Fastener Caution in the Preface section. Tighten 25 N·m (18 lb ft)
2	Rear Side Door Hinge Upper Bolt (Qty: 2) Tighten 25 N·m (18 lb ft)
3	Rear Side Door Upper Hinge Tip Check the door for proper alignment, then adjust as necessary.
	Rear Side Door Hinge Lower Bolt Tip After installation of the replacement upper hinge, from the underside of the hinge,

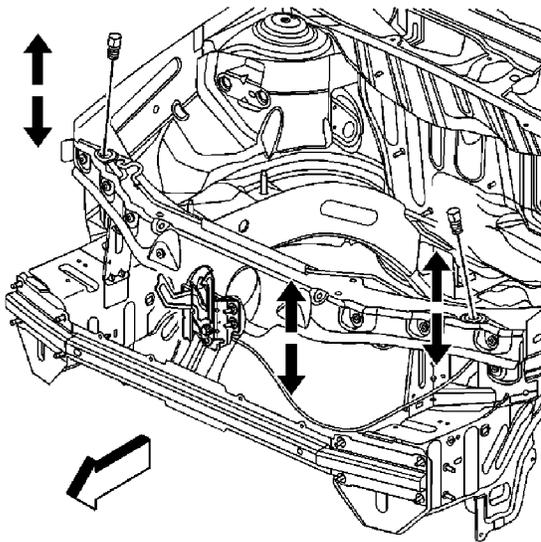
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4	remove the temporary keeper pivot bolt and replace with longer permanent bolt. Tighten 25 N·m (18 lb ft)
5	Rear Side Door Hinge Lower Bolt (Qty: 2) Tighten 25 N·m (18 lb ft)
6	Rear Side Door Hinge Lower Bolt (Qty: 2) Tighten 25 N·m (18 lb ft)
7	Rear Side Door Lower Hinge Tip Check the door for proper alignment, then adjust as necessary.

Hood Adjustment



1. Loosen the hinge-to-body bolts to adjust the hood fore and aft, and cross-vehicle. Position the hood as needed.



2. Adjust the hood latch and hood bumpers to adjust the hood up and down at the front of the hood.

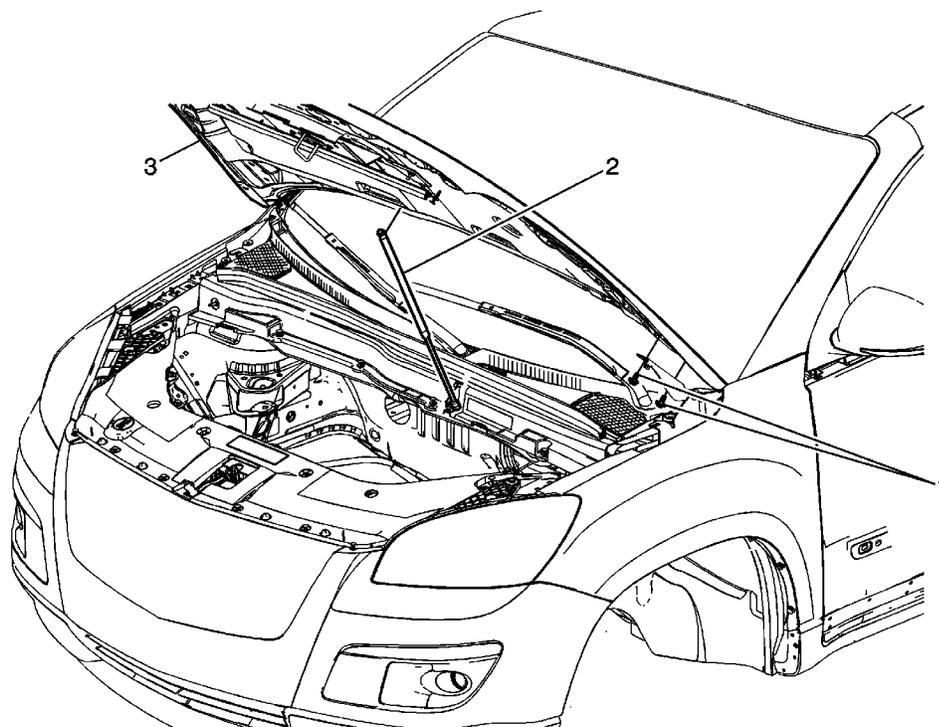
Caution: Refer to [Fastener Caution](#) in the Preface section.

3. Tighten the hinge and latch bolts.

Tighten

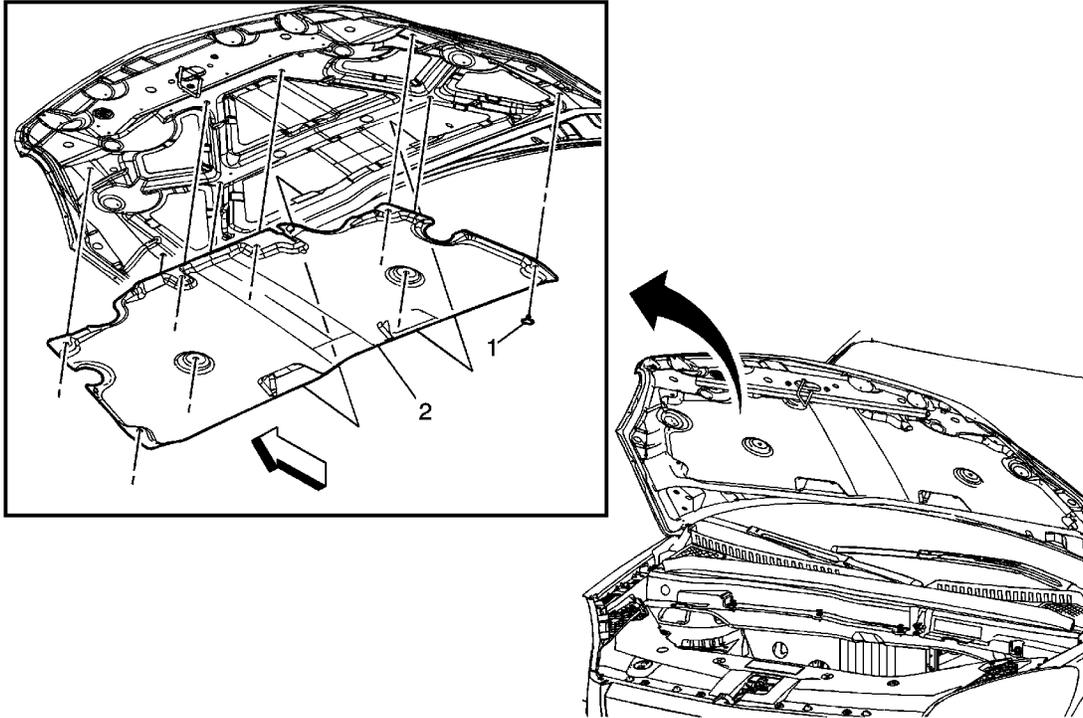
- Tighten the hinge-to-hood bolts to 25 N·m (18 lb ft).
- Tighten the hinge-to-body bolts to 25 N·m (18 lb ft).
- Tighten the hood latch fastener to 25 N·m (18 lb ft).

Hood Replacement



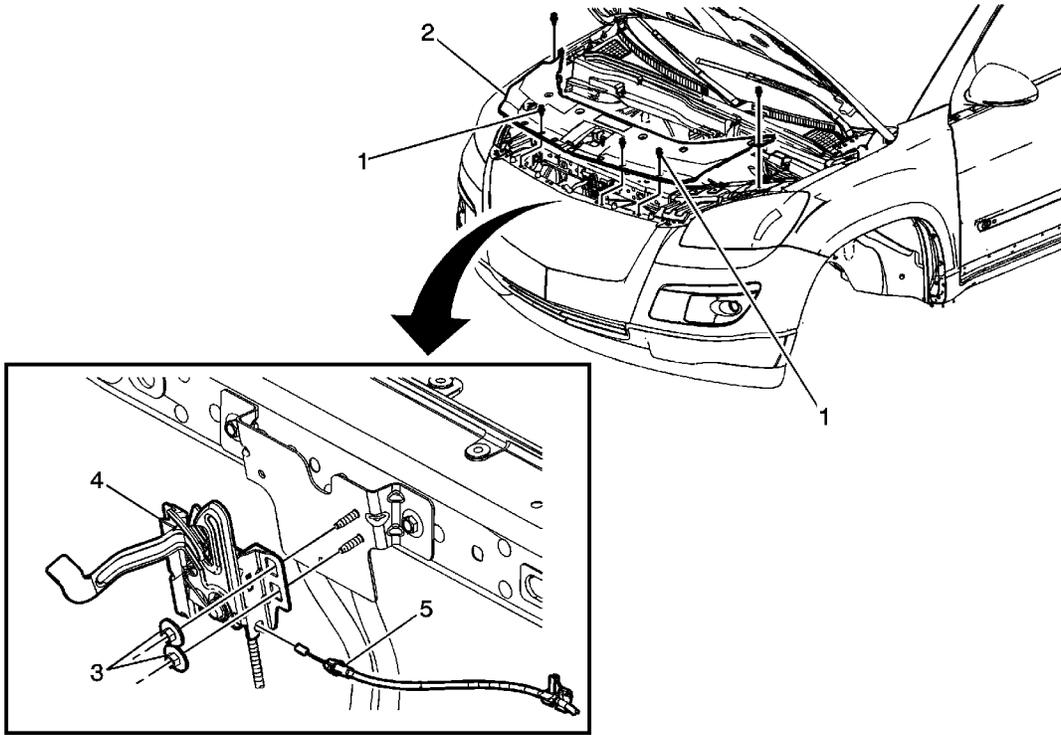
Callout	Component Name
<p>Warning: When a hood hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury.</p>	
<p>Preliminary Procedure</p>	
<p>Disconnect the hood strut rod. Refer to Hood Strut Replacement.</p>	
<p>1</p>	<p>Hood Hinge Pivot Bolt (Qty: 2)</p> <p>Caution: Refer to Fastener Caution in the Preface section.</p> <p>Tighten 25 N·m (18 lb ft)</p>
<p>2</p>	<p>Hood Strut</p> <p>Tip</p> <ul style="list-style-type: none"> • Disconnect windshield washer hose. • Transfer any parts as needed.
<p>3</p>	<p>Hood</p>

Hood Insulator Replacement (Acadia, Enclave, and OUTLOOK)



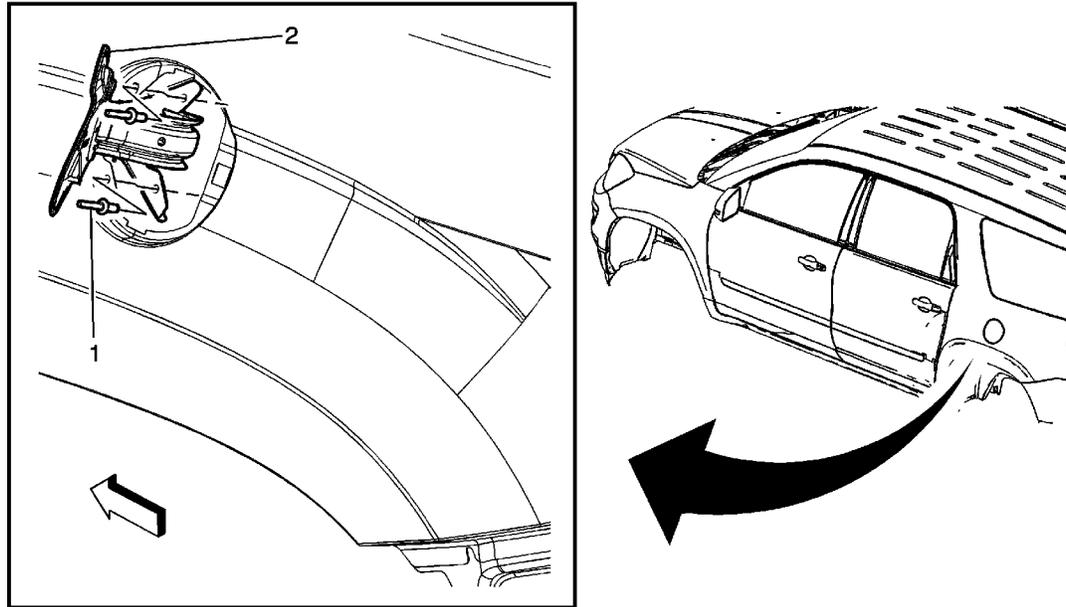
Callout	Component Name
1	Hood Insulator Plastic Retainer (Qty: 8)
2	Hood Insulator

Hood Primary and Secondary Latch Replacement



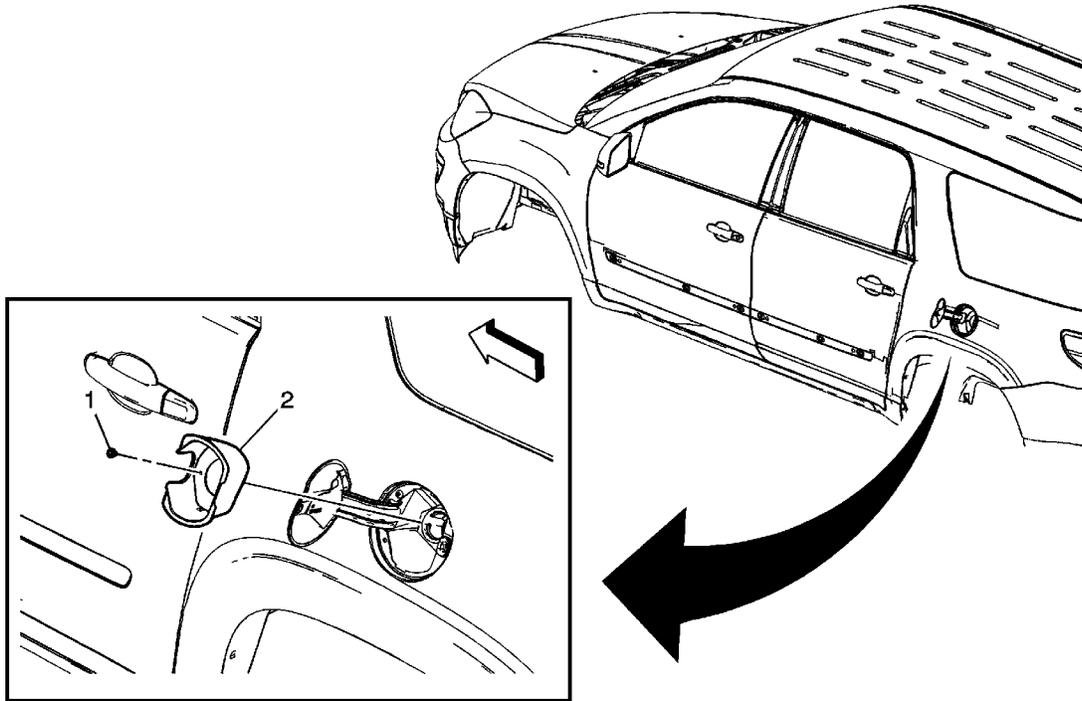
Callout	Component Name
1	Sight Shield Push Pin (Qty: 8)
2	Sight Shield
3	Hood Latch Mounting Nut (Qty: 3) Caution: Refer to Fastener Caution in the Preface section. Tighten 10 N·m (89 lb in)
4	Hood Latch Assembly
5	Hood Release Cable Procedure 1. Disconnect the remote start electrical connector, if equipped. 2. Disconnect the release cable from the hood latch by squeezing the cable retainer.

Fuel Tank Filler Door Replacement



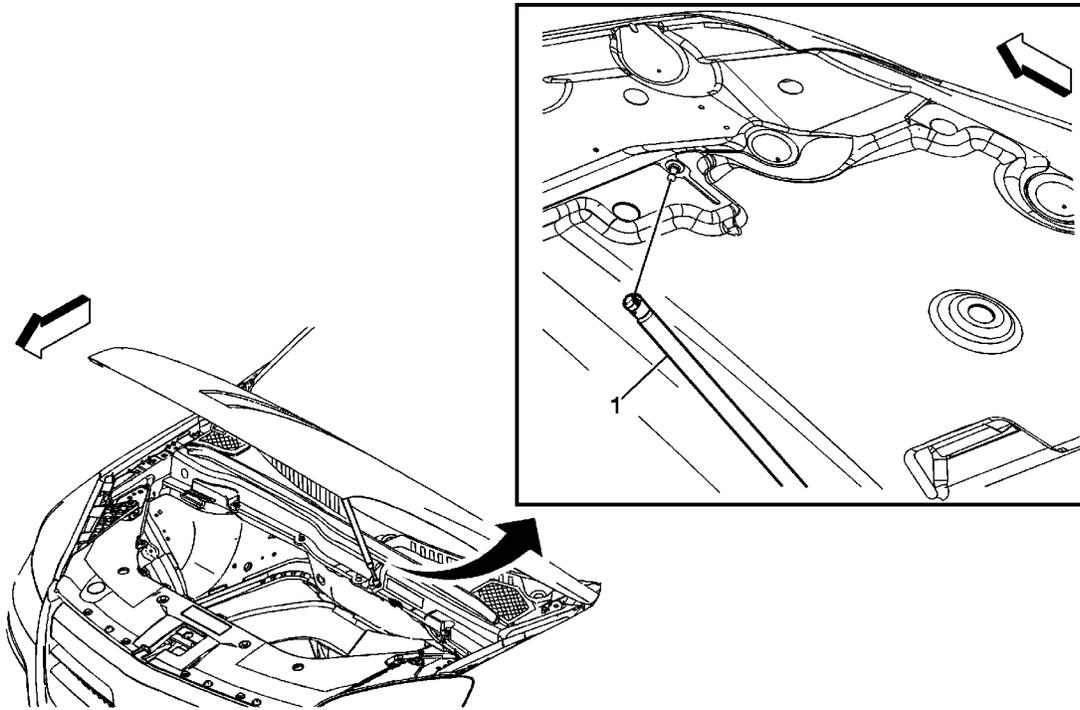
Callout	Component Name
1	Fuel Tank Filler Door Rivets (Qty: 2)
2	Fuel Tank Filler Door

Fuel Tank Filler Pipe Housing Replacement



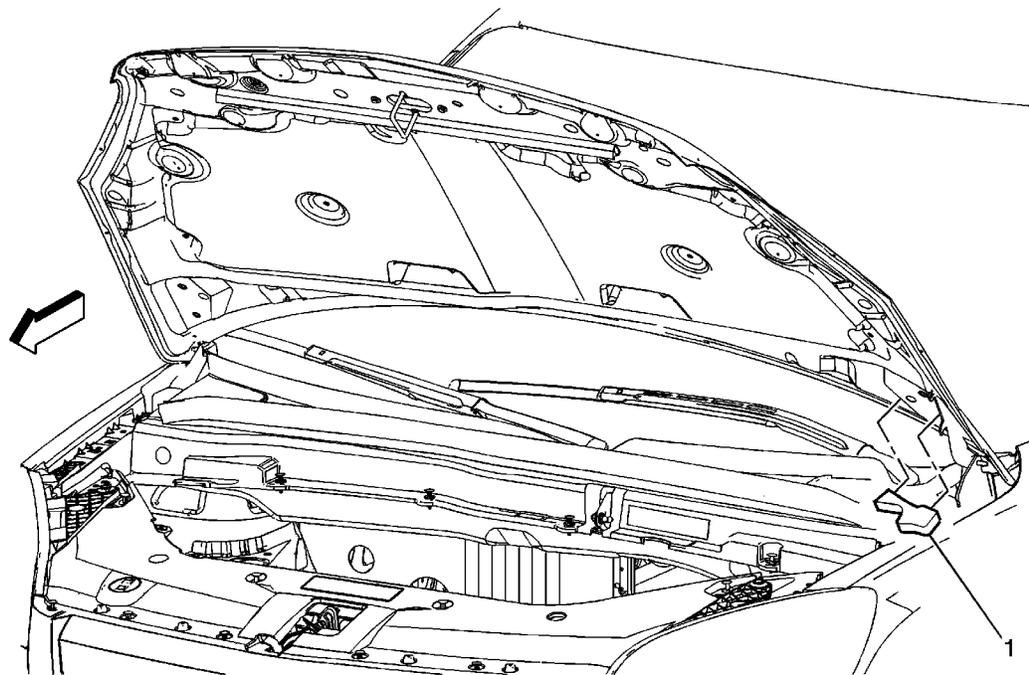
Callout	Component Name
1	Fuel Tank Filler Pipe Bolts (Qty: 3) Caution: Refer to Fastener Caution in the Preface section. Tighten 2 N·m (18 lb in)
2	Fuel Tank Filler Pipe Housing

Hood Strut Replacement



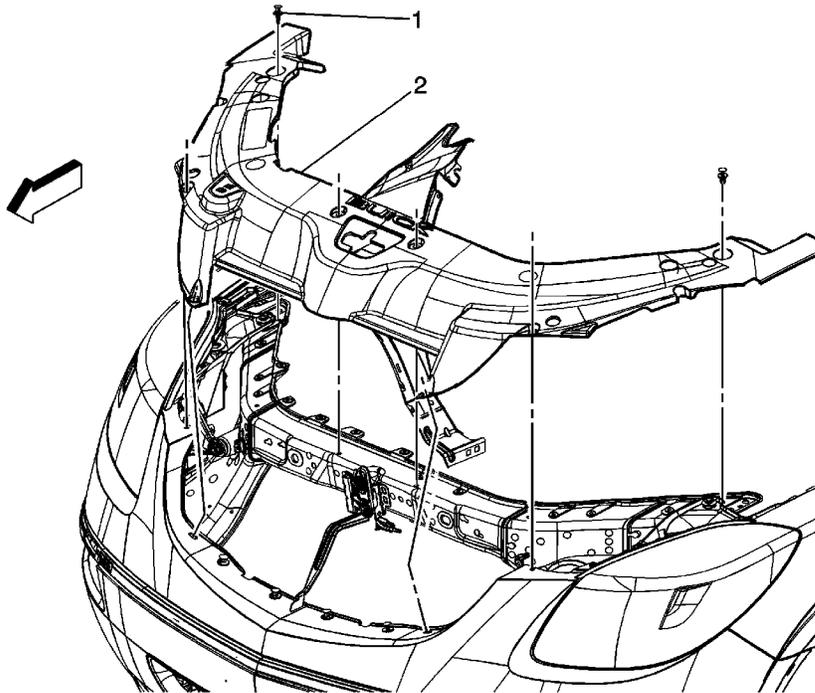
Callout	Component Name
1	<p>Hood Strut</p> <p>Warning: When a hood hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury.</p> <p>Procedure</p> <p>Use a flat-bladed tool to release the hood strut retaining clips.</p>

Hood Rear Outer Seal Replacement



Callout	Component Name
1	<p>Hood Rear Outer Seal</p> <p>Procedure</p> <ol style="list-style-type: none"> 1. Clean the area where the seal will be mounted. Use a suitable solvent with a mixture of 50 percent isopropyl alcohol and 50 percent water by volume, or high-flash naphtha. 2. Warm the hood panel using J 25070 Heat Gun, to a minimum, prior to the hood rear outer seal installation. 3. Do NOT touch the adhesive surface when tape is removed. Peel the tape liner off and install the outer rear hood seal. <p>Special Tools</p> <p>J 25070 Heat Gun</p>

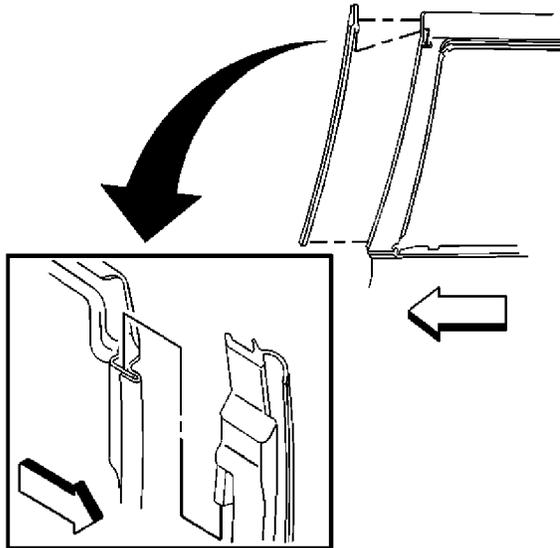
Front Compartment Sight Shields Replacement (Enclave)



Callout	Component Name
1	Front Compartment Sight Shield Plastic Retainers (Qty: 8)
2	Front Compartment Sight Shield

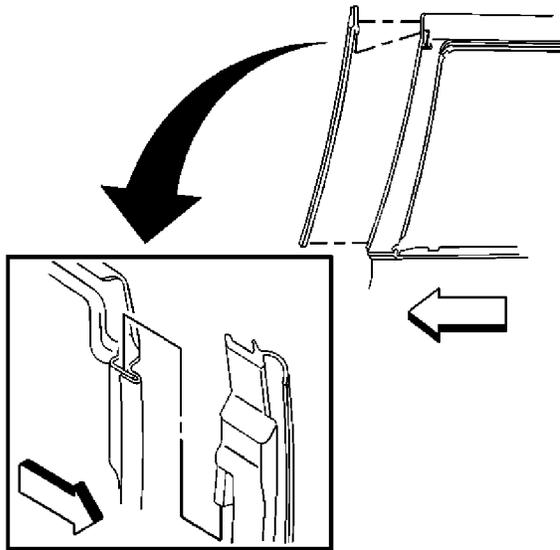
Rear Door Upper Sealing Strip Replacement

Removal Procedure



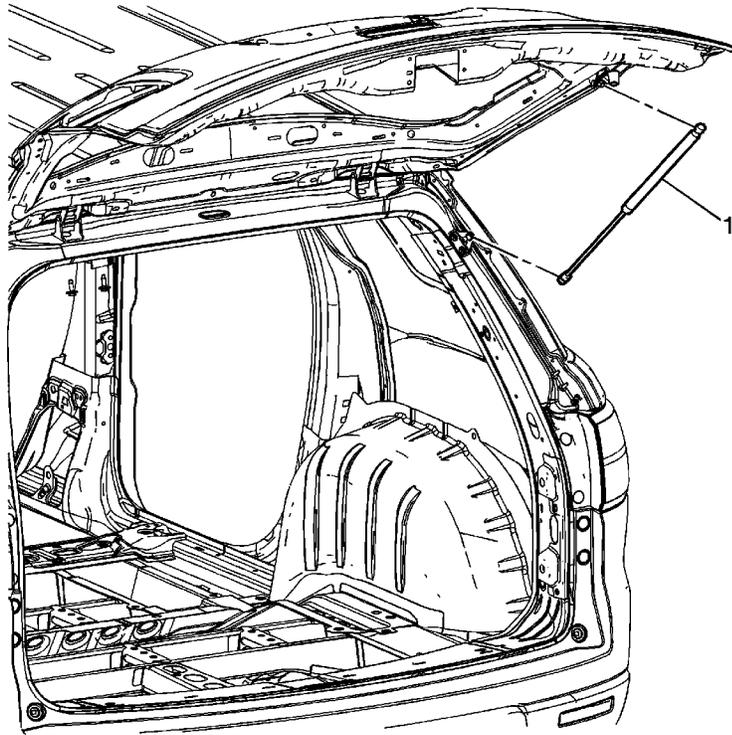
1. Starting at the bottom of the sealing strip, pull the sealing strip away from the door pinch-weld flange.
2. Lift upward in order to remove the upper portion of the sealing strip from the door pinch-weld flange.
3. Remove the sealing strip from the door.

Installation Procedure



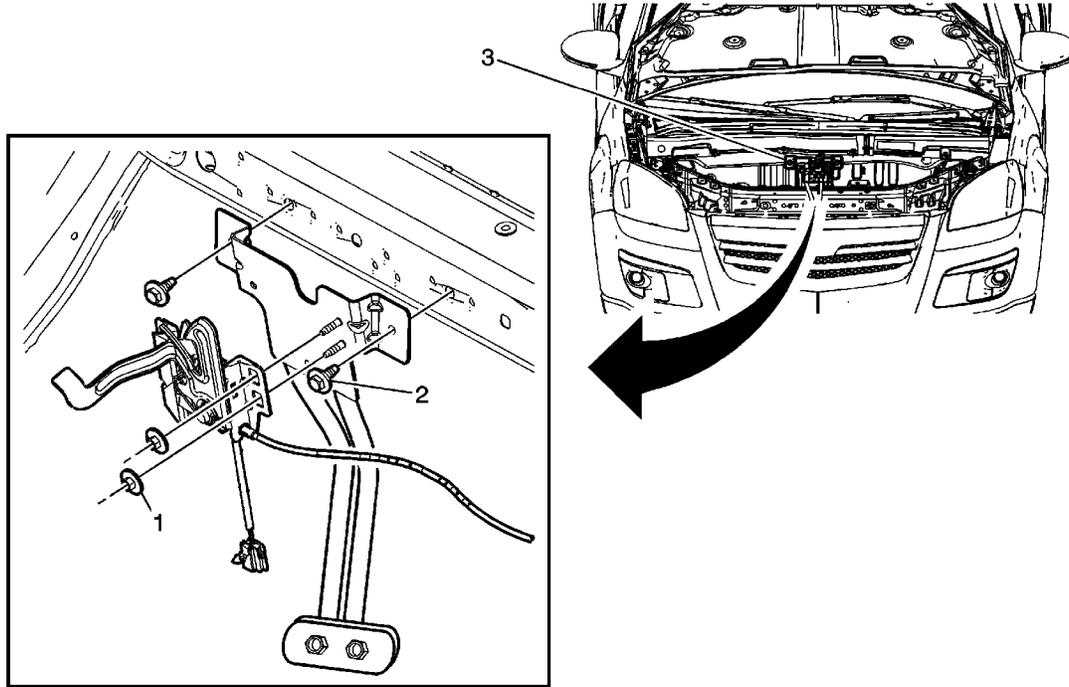
1. Starting at the top of the sealing strip, insert the sealing strip tab into the door sheet metal.
2. Position the sealing strip to the door pinch-weld flange and apply pressure in order to seat the sealing strip.
3. Ensure that the sealing strip is fully seated against the pinch-weld flange.

Liftgate Strut Replacement



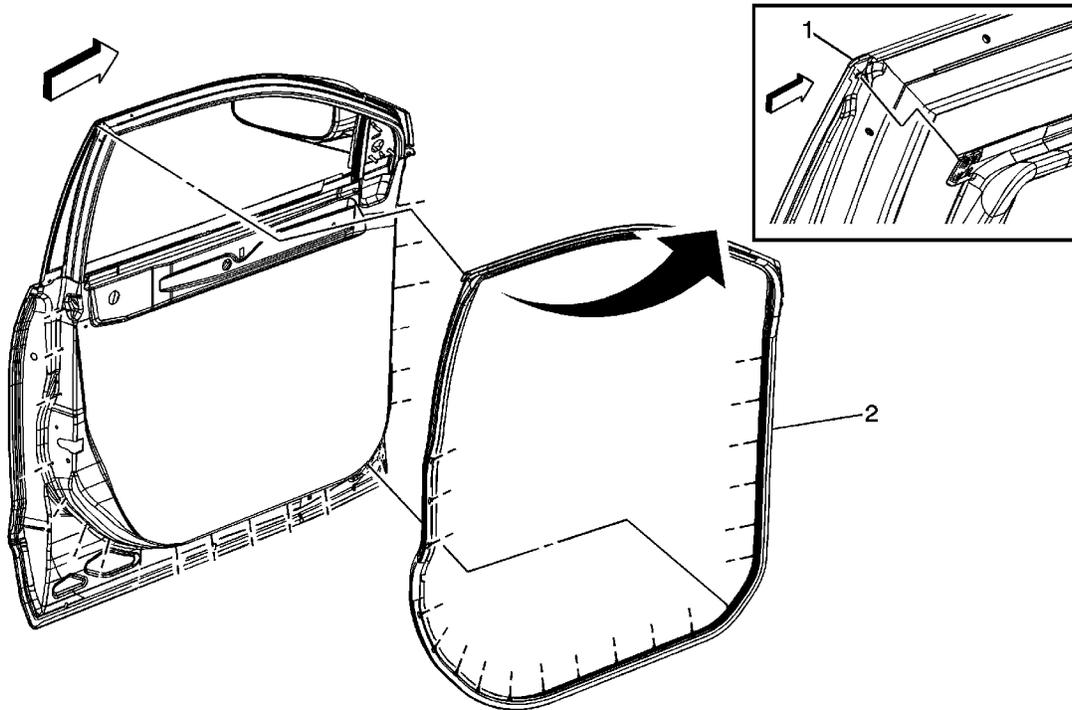
Callout	Component Name
1	<p>Liftgate Strut</p> <p>Warning: When a lift gate hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury.</p> <p>Caution: Apply pressure only at the end of the liftgate/hood assist rod that you are removing or attaching. Do NOT apply pressure to the middle of the rod because damage or bending will result.</p> <p>Procedure</p> <ul style="list-style-type: none"> • Release the locking tabs on the strut. • Ensure the clip is fully seated when rod is reinstalled. If the clip cannot be fully seated, a new rod should be installed.

Hood Latch Support Replacement



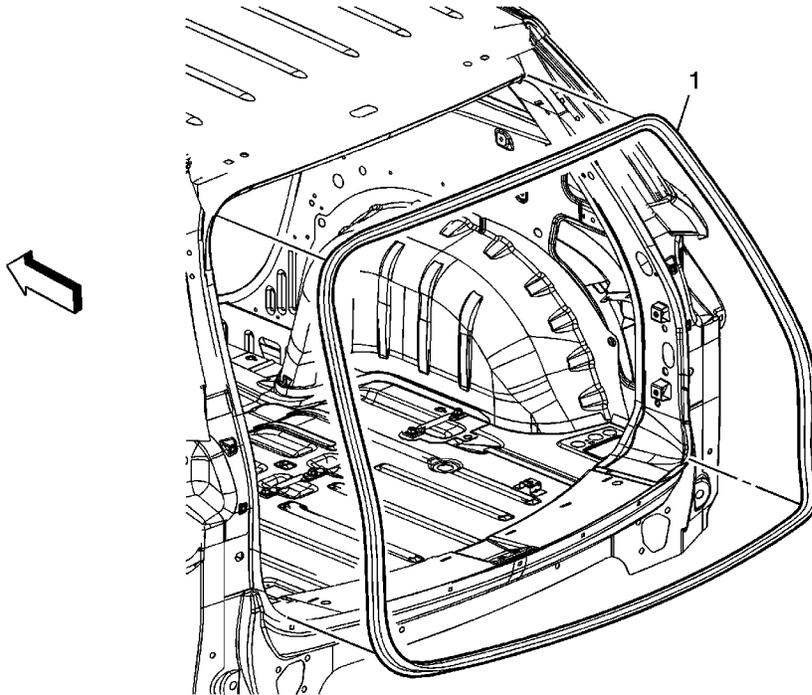
Callout	Component Name
Preliminary Procedure	
Remove hood latch. Refer to Hood Primary and Secondary Latch Replacement .	
1	Hood Latch Support Nut (Qty: 2)
2	Hood Latch Bolt (Qty: 2) Caution: Refer to Fastener Caution in the Preface section. Tighten 10 N·m (89 lb in)
3	Hood Latch Support

Front Side Door Weatherstrip Replacement



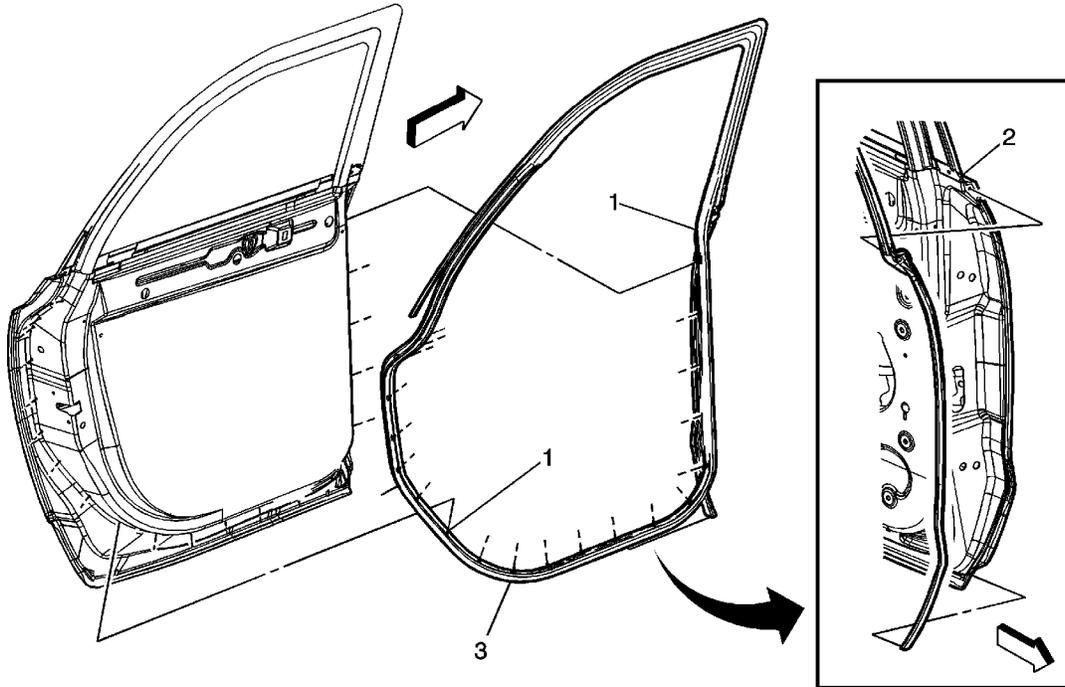
Callout	Component Name
1	Front Side Door Weatherstrip Cap Tip Lift upward on the weatherstrip to release.
2	Front Side Door Weatherstrip Tip Using a flat-bladed tool, release the weatherstrip retainering clips located around the doors edge.

Liftgate Weatherstrip Replacement



Callout	Component Name
1	Liftgate Weatherstrip Procedure Clean the area where the seal will be mounted. Use a suitable solvent with a mixture of 50 percent isopropyl alcohol and 50 percent water by volume, or high-flash naphtha.

Rear Side Door Weatherstrip Replacement

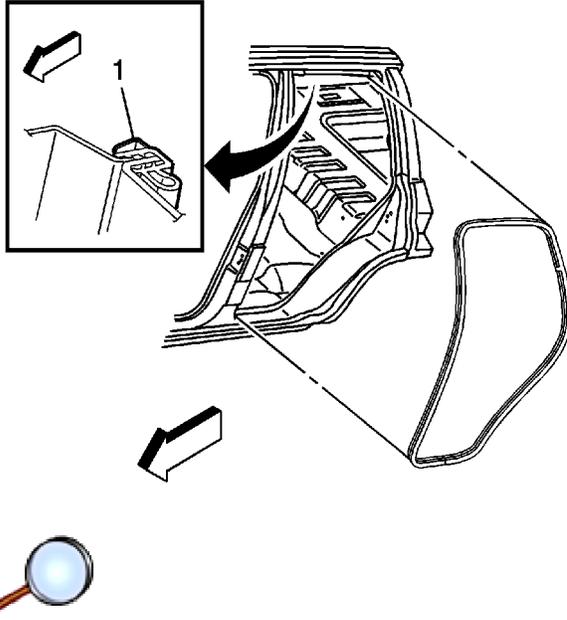


Callout	Component Name
1	Rear Side Door Weatherstrip Retainers (Qty: 16)
2	Rear Side Door Weatherstrip Retainers (Qty: 1)
3	Rear Side Door Weatherstrip Tip Using a flat-bladed tool, remove the weatherstrip retainers located on the weatherstrip from the locating hole in the door.

Rear Door Opening Weatherstrip Replacement

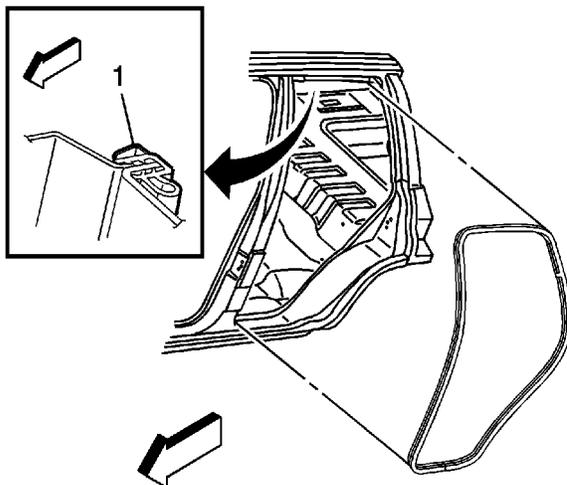
Removal Procedure

1. Remove the rear door sill plate. Refer to [Rear Side Door Sill Plate Replacement](#) .



2. Remove the weatherstrip (1) from the pinch-weld flange.

Installation Procedure





1. Align the weatherstrip (1) to the door opening with the bond joint positioned at the lower center of the door opening.
2. Install the weatherstrip to the pinch-weld flange. Ensure the weatherstrip is fully seated.
3. Install the rear door sill plate. Refer to [Rear Side Door Sill Plate Replacement](#) .