Bolted Exterior Body Panels and Closures

Specifications

Fastener Tightening Specifications

Application	Specification	
	Metric	English
Front Bumper Impact Bar Bolt	100 N•m	74 lb in
Front End Upper Tie Bar Bolt	9 N•m	80 lb in
Front End Upper Tie Bar Lower Bolt	22 N•m	16 lb in
Front Fender Bolts	9 N•m	80 lb in
Front Fender Nut	9 N•m	80 lb in
Front Side Door Check Link Bolt to Body	22 N•m	16 lb in
Front Side Door Check Link Nut	9 N•m	80 lb in
Front Side Door Lower Hinge to Body Bolt	32 N•m	24 lb ft
Front Side Door Lower Hinge to Door Bolt	25 N•m	18 lb ft
Front Side Door Upper Hinge to Body Bolt	32 N•m	24 lb ft
Front Side Door Upper Hinge to Door Bolt	25 N•m	18 lb ft
Hood Hinge Bolts	22 N•m	16 lb ft
Hood Hinge Nuts	22 N•m	16 lb ft
Hood Primary and Secondary Latch Bolts	22 N•m	16 lb ft
Liftgate Hinge Bolts	22 N•m	16 lb ft
Liftgate Hinge Nuts	43 N•m	32 lb ft
Radiator Opening Upper Cover Bolts	4 N•m	36 lb in
Rear Compartment Lid Bolt	9 N•m	80 lb ft
Rear Compartment Lid Rear Hinge Bolt	9 N•m	80 lb in
Rear Side Door Check Link Bolt to Body	22 N•m	16 lb in
Rear Side Door Check Link Nut	9 N•m	80 lb in
Rear Side Door Lower Hinge to Body Bolts	32 N•m	24 lb ft
Rear Side Door Lower Hinge to Door Bolts	25 N•m	18 lb ft
Rear Side Door Upper Hinge to Body Bolts	32 N•m	24 lb ft
Rear Side Door Upper Hinge to Door Bolts	25 N•m	18 lb ft

Diagnostic Information and Procedures

DTC B3006

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

DTC Descriptors

DTC B3006 01: Hood Ajar Circuit Short to Battery
DTC B3006 02: Hood Ajar Circuit Short to Ground
DTC B3006 04: Hood Ajar Circuit Open

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Signal	B3006 02	B3006 04	B3006 01	—
Ground	—	B3006 04	—	—

Circuit/System Description

The Body Control Module (BCM) applies B+ to the hood ajar signal circuit and monitors the voltage to determine the position of the hood. When the hood is closed, the switch is open and voltage remains high. When the hood is open, the switch is closed and the voltage is pulled low.

Conditions for Running the DTC

The BCM continuously monitors for this DTC

Conditions for Setting the DTC

B3006 01

The BCM detects that the hood ajar switch signal circuit is shorted to battery.

B3006 02

The BCM detects that the hood ajar switch signal circuit is shorted to ground.

B3006 04

The BCM detects that the hood ajar switch signal circuit is open.

Action Taken When the DTC Sets

- The hood ajar switch input will be ignored as a content theft deterrent trigger.
- Remote vehicle start will be disabled.

Conditions for Clearing the DTC

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

Reference Information

Schematic Reference

Immobilizer Schematics on page 13-4

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

Keyless Entry System Description and Operation on page 13-44

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*
- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the scan tool Hood Ajar Switch parameter is Open when the hood is open and Closed when the hood is closed.

⇒ **If the parameter does not change**

Refer to Circuit/System Testing.

⇓ **If the parameter changes**

3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the B55 Hood Ajar Switch. It may take up to two minutes for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal C and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition ON.
4. Test for greater than 11.5 V between the signal circuit terminal B and ground.

⇒ **If 11.5 V or less**

4.1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.

4.2. Test for infinite resistance between the signal circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If Infinite resistance.

4.3. Test for less than 2 Ω in the signal circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇓ **If greater than 11.5 V**

5. Ignition OFF, disconnect the X4 and X7 harness connector at the K9 Body Control Module, ignition ON.
6. Test for less than 1 V between the signal circuit terminal B and ground.

⇒ **If 1 V or greater**

Repair the short to voltage on the circuit.

⇓ **If less than 1 V**

7. Test or replace the B55 Hood Ajar Switch.

Component Testing

1. Ignition OFF, disconnect the harness connector at the B55 Hood Ajar Switch.
2. Test for 2738–3350 Ω between the signal terminal A and the signal terminal B with the hood latch in the closed position.

⇒ **If not between 2738–3350 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 2738–3350 Ω**

3. Test for 658–806 Ω between the signal terminal A and the ground terminal C with the hood latch in the closed position.

⇒ **If not between 658–806 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 658–806 Ω**

4. Test for 2080–2545 Ω between the signal terminal B and the ground terminal C with the hood latch in the closed position.

⇒ **If not between 2080–2545 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 2080–2545 Ω**

5. Test for 2738–3350 Ω between the signal terminal A and the signal terminal B with the hood latch in the open position.

⇒ **If not between 2738–3350 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 2738–3350 Ω**

6. Test for 2080–2545 Ω between the signal terminal A and the ground terminal C with the hood latch in the open position.

⇒ **If not between 2080–2545 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 2080–2545 Ω**

7. Test for 658–806 Ω between the signal terminal B and the ground terminal C with the hood latch in the open position.

⇒ **If not between 658–806 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 658–806 Ω**

8. All OK.

Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Hood Primary and Secondary Latch Replacement on page 3-27*
- *Control Module References on page 6-3* for Body Control Module replacement, programming, and setup

Symptoms - Bolted Exterior Body Panels and Closures

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

1. Perform the *Diagnostic System Check - Vehicle on page 6-66* 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 on page 3-49*.

Visual/Physical Inspection

- Inspect for aftermarket devices which could affect the operation of the systems. Refer to *Checking Aftermarket Accessories on page 11-525*.
- 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 on page 11-531*.

Symptom List

Refer to *Hood Ajar Indicator/Message Malfunction on page 3-6* in order to diagnose the symptom.

Hood Ajar Indicator/Message Malfunction

Diagnostic Instructions

- Perform the *Diagnostic System Check - Vehicle on page 6-66* prior to using this diagnostic procedure.
- Review *Strategy Based Diagnosis on page 6-58* for an overview of the diagnostic approach.
- *Diagnostic Procedure Instructions on page 6-59* provides an overview of each diagnostic category.

DTC Descriptors

DTC B3006 01: Hood Ajar Circuit Short to Battery
DTC B3006 02: Hood Ajar Circuit Short to Ground
DTC B3006 04: Hood Ajar Circuit Open

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Signal	B3006 02	B3006 04	B3006 01	—
Ground	—	B3006 04	—	—

Circuit/System Description

The Body Control Module (BCM) applies B+ to the hood ajar signal circuit and monitors the voltage to determine the position of the hood. When the hood is closed, the switch is open and voltage remains high. When the hood is open, the switch is closed and the voltage is pulled low.

Conditions for Running the DTC

The BCM continuously monitors for this DTC

Conditions for Setting the DTC

B3006 01

The BCM detects that the hood ajar switch signal circuit is shorted to battery.

B3006 02

The BCM detects that the hood ajar switch signal circuit is shorted to ground.

B3006 04

The BCM detects that the hood ajar switch signal circuit is open.

Action Taken When the DTC Sets

- The hood ajar switch input will be ignored as a content theft deterrent trigger.
- Remote vehicle start will be disabled.

Conditions for Clearing the DTC

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

Reference Information

Schematic Reference

Immobilizer Schematics on page 13-4

Connector End View Reference

Component Connector End Views on page 11-269

Description and Operation

Keyless Entry System Description and Operation on page 13-44

Electrical Information Reference

- *Circuit Testing on page 11-526*
- *Connector Repairs on page 11-548*

- *Testing for Intermittent Conditions and Poor Connections on page 11-531*
- *Wiring Repairs on page 11-537*

Scan Tool Reference

Control Module References on page 6-3 for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the scan tool Hood Ajar Switch parameter is Open when the hood is open and Closed when the hood is closed.

⇒ **If the parameter does not change**

Refer to Circuit/System Testing.

⇓ **If the parameter changes**

3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the B55 Hood Ajar Switch. It may take up to two minutes for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal C and ground.

⇒ **If 10 Ω or greater**

2.1. Ignition OFF

2.2. Test for less than 2 Ω in the ground circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, repair the open/high resistance in the ground connection.

⇓ **If less than 10 Ω**

3. Ignition ON.
4. Test for greater than 11.5 V between the signal circuit terminal B and ground.

⇒ **If 11.5 V or less**

4.1. Ignition OFF, disconnect the harness connector at the K9 Body Control Module.

4.2. Test for infinite resistance between the signal circuit and ground.

⇒ If less than infinite resistance, repair the short to ground on the circuit.

⇓ If Infinite resistance.

4.3. Test for less than 2 Ω in the signal circuit end to end.

⇒ If 2 Ω or greater, repair the open/high resistance in the circuit.

⇒ If less than 2 Ω, replace the K9 Body Control Module.

⇓ **If greater than 11.5 V**

5. Ignition OFF, disconnect the X4 and X7 harness connector at the K9 Body Control Module, ignition ON.
6. Test for less than 1 V between the signal circuit terminal B and ground.

⇒ **If 1 V or greater**

Repair the short to voltage on the circuit.

⇓ **If less than 1 V**

7. Test or replace the B55 Hood Ajar Switch.

Component Testing

1. Ignition OFF, disconnect the harness connector at the B55 Hood Ajar Switch.
2. Test for 2738–3350 Ω between the signal terminal A and the signal terminal B with the hood latch in the closed position.

⇒ **If not between 2738–3350 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 2738–3350 Ω**

3. Test for 658–806 Ω between the signal terminal A and the ground terminal C with the hood latch in the closed position.

⇒ **If not between 658–806 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 658–806 Ω**

4. Test for 2080–2545 Ω between the signal terminal B and the ground terminal C with the hood latch in the closed position.

⇒ **If not between 2080–2545 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 2080–2545 Ω**

5. Test for 2738–3350 Ω between the signal terminal A and the signal terminal B with the hood latch in the open position.

⇒ **If not between 2738–3350 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 2738–3350 Ω**

6. Test for 2080–2545 Ω between the signal terminal A and the ground terminal C with the hood latch in the open position.

⇒ **If not between 2080–2545 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 2080–2545 Ω**

7. Test for 658–806 Ω between the signal terminal B and the ground terminal C with the hood latch in the open position.

⇒ **If not between 658–806 Ω**

Replace the B55 Hood Ajar Switch.

⇓ **If between 658–806 Ω**

8. All OK.

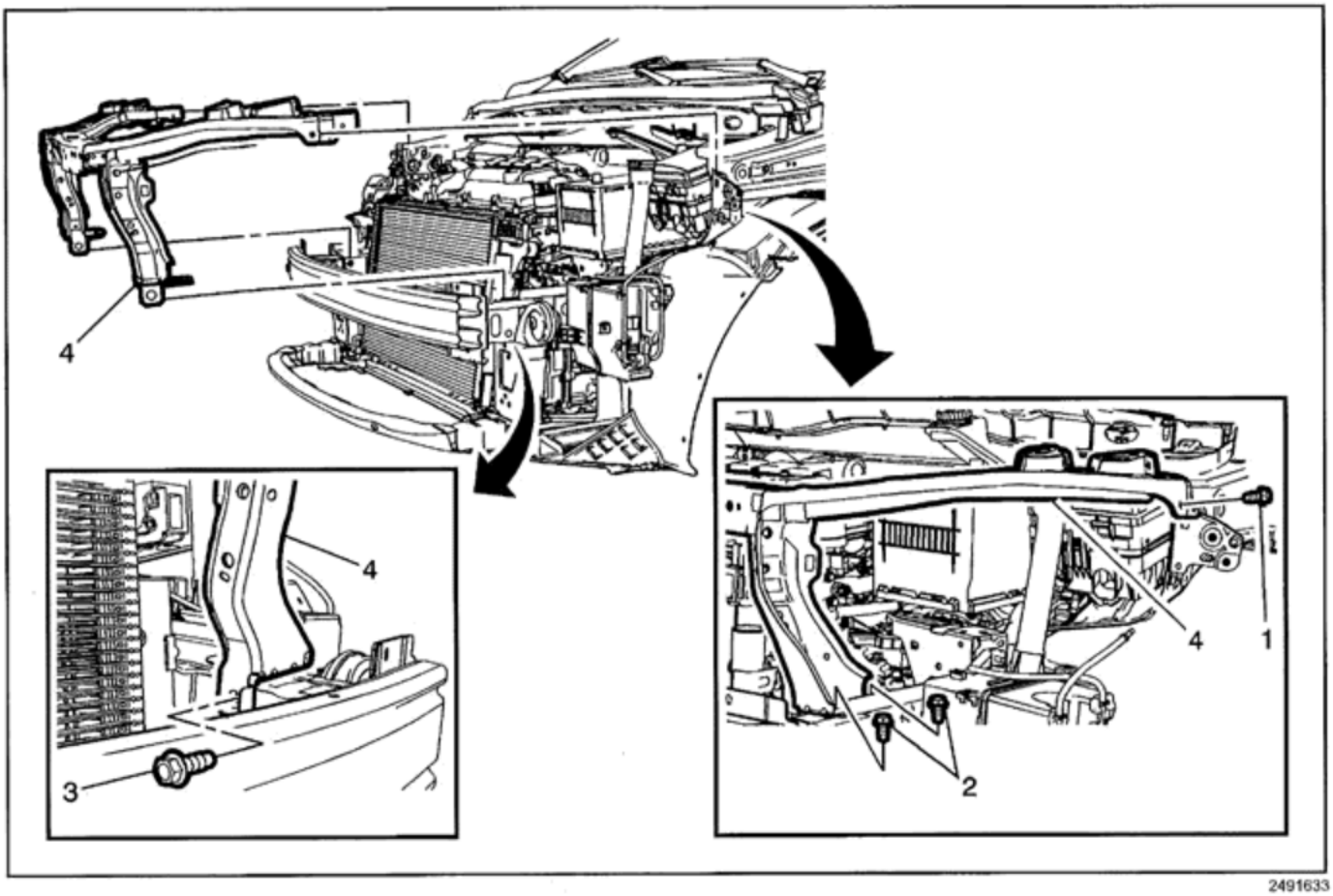
Repair Instructions

Perform the *Diagnostic Repair Verification on page 6-92* after completing the repair.

- *Hood Primary and Secondary Latch Replacement on page 3-27*
- *Control Module References on page 6-3* for Body Control Module replacement, programming, and setup

Repair Instructions

Front End Upper Tie Bar Replacement



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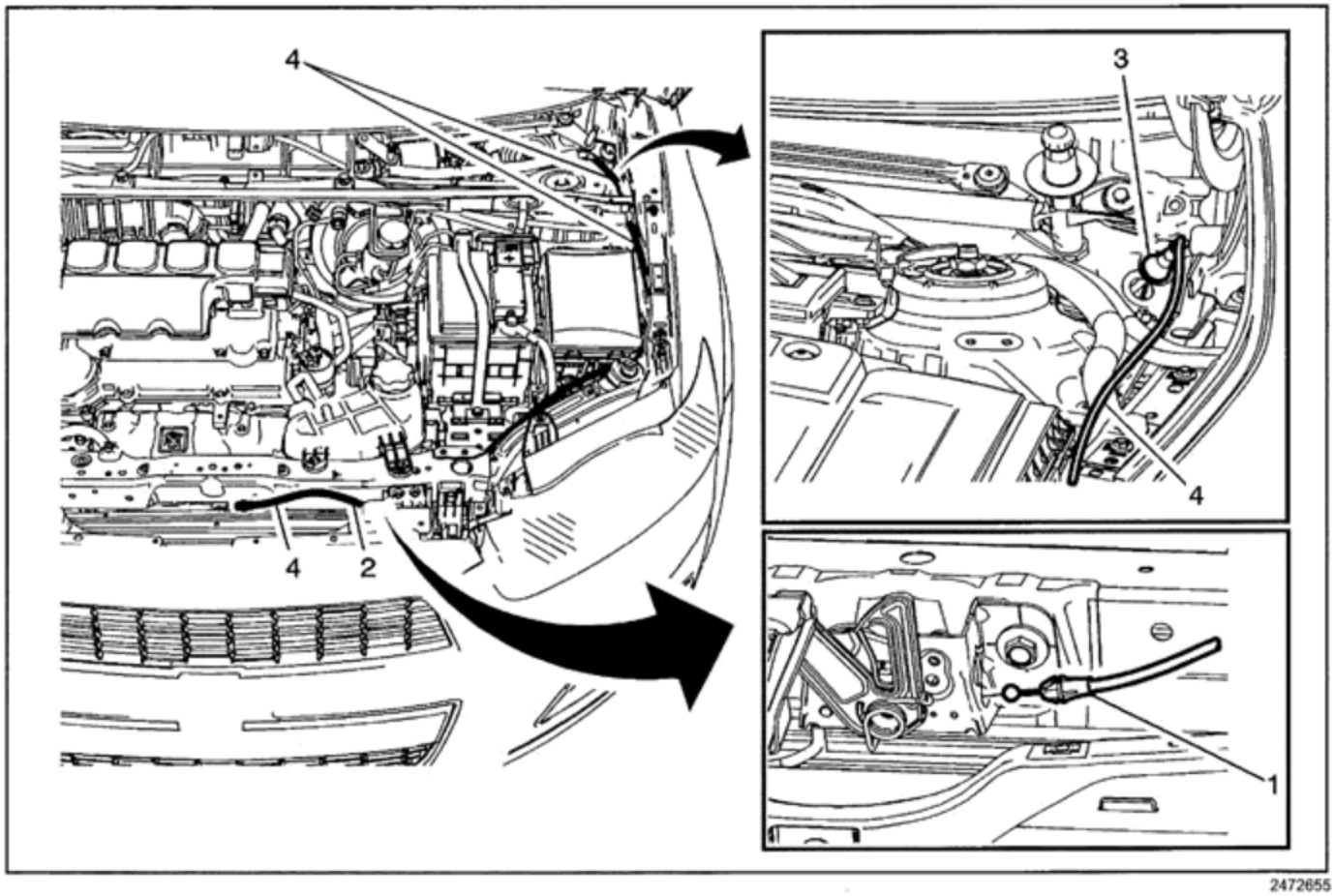
Front End Upper Tie Bar Replacement

Callout	Component Name
Preliminary Procedures 1. Disable the SIR system. Refer to *SIR Disabling and Enabling on page 13-112.* 2. Remove the front fascia. Refer to *Front Bumper Fascia Replacement on page 3-55.* 3. Remove the headlamps. Refer to *Headlamp Replacement on page 4-193.* 4. Remove the front fenders. Refer to *Front Fender Replacement on page 3-14.* 5. Reposition the radiator with the A/C condenser from the upper tie bar. Refer to *Radiator Replacement (LUV) on page 9-675* or *Radiator Replacement (LDE LUW) on page 9-678.* 6. Remove the hood primary and secondary latch. Refer to *Hood Primary and Secondary Latch Replacement on page 3-27.* 7. Remove the front end inflatable restraint discriminating sensor. Refer to *Front End Inflatable Restraint Discriminating Sensor Replacement on page 13-115.*	
1	Front End Upper Tie Bar Bolt (Qty: 2) **Caution:** Refer to *Fastener Caution on page 0-8.* **Tighten** 9 N•m (80 lb in)
2	Front End Upper Tie Bar Lower Bolt (Qty: 4) **Tighten** 22 N•m (16 lb ft)
3	Front Bumper Impact Bar Bolt (Qty: 2) **Tighten** 100 N•m (74 lb ft)

Front End Upper Tie Bar Replacement (cont'd)

Callout	Component Name
4	Front End Upper Tie Bar **Procedure** 1. Disconnect the electrical connectors/harnesses as needed. 2. Disconnect the hood latch cable from the tie bar. 3. Transfer any parts as needed.

Hood Primary Latch Release Cable Replacement

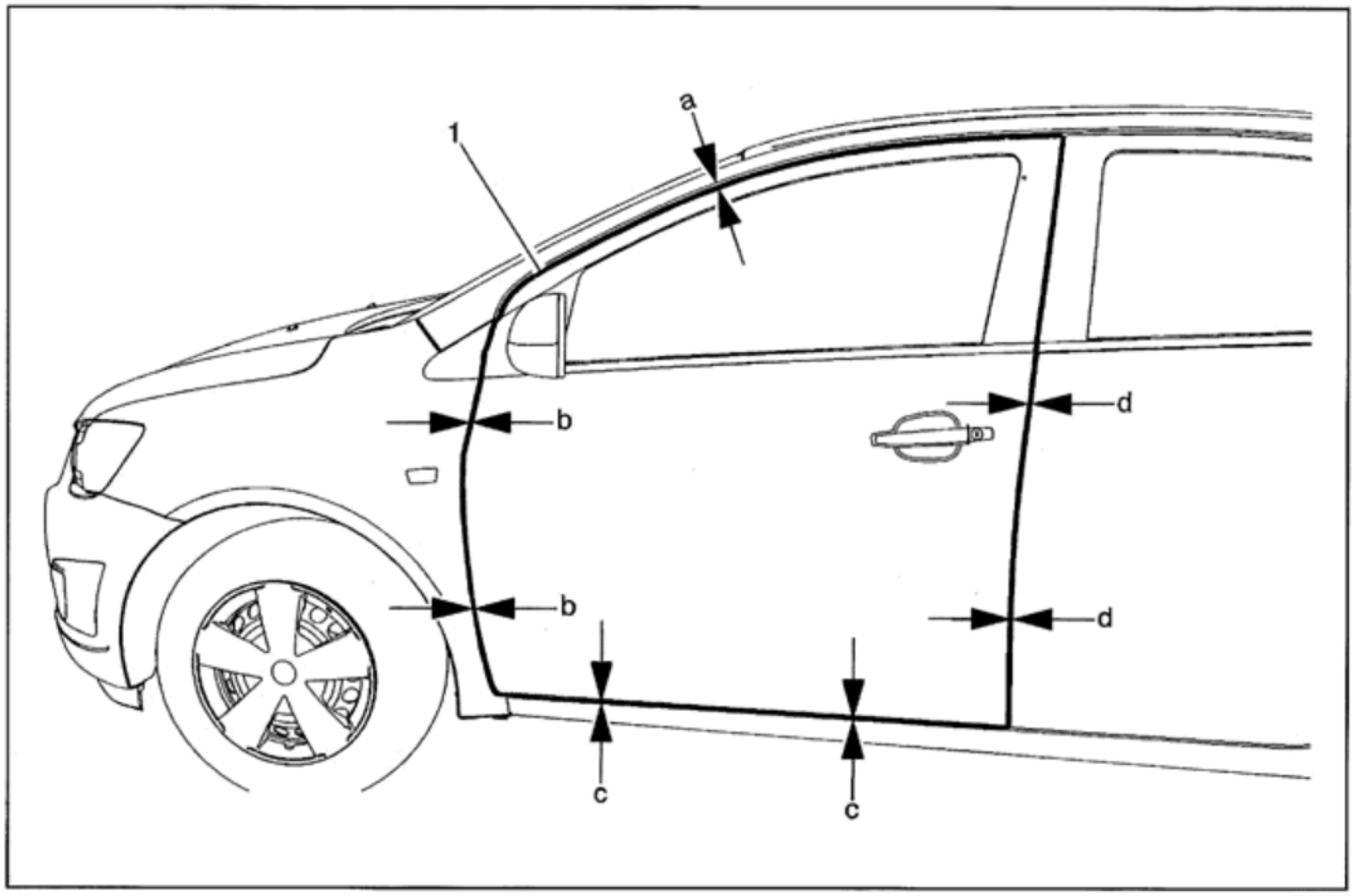


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Hood Primary Latch Release Cable Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the radiator opening upper cover. Refer to *Front Opening Upper Cover Replacement on page 3-40*. 2. Remove the air inlet grille. Refer to *Air Inlet Grille Panel Replacement on page 4-374*.	
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 **Procedure** Disconnect the hood release cable retainers from the hood release cable.
3	Hood Primary Latch Release Cable Grommet
4	Hood Primary Latch Release Cable **Procedure** Disconnect the hood primary latch release cable handle from the hood latch cable. Refer to *Hood Primary Latch Release Cable Handle Replacement on page 3-18*.

Front Side Door Adjustment

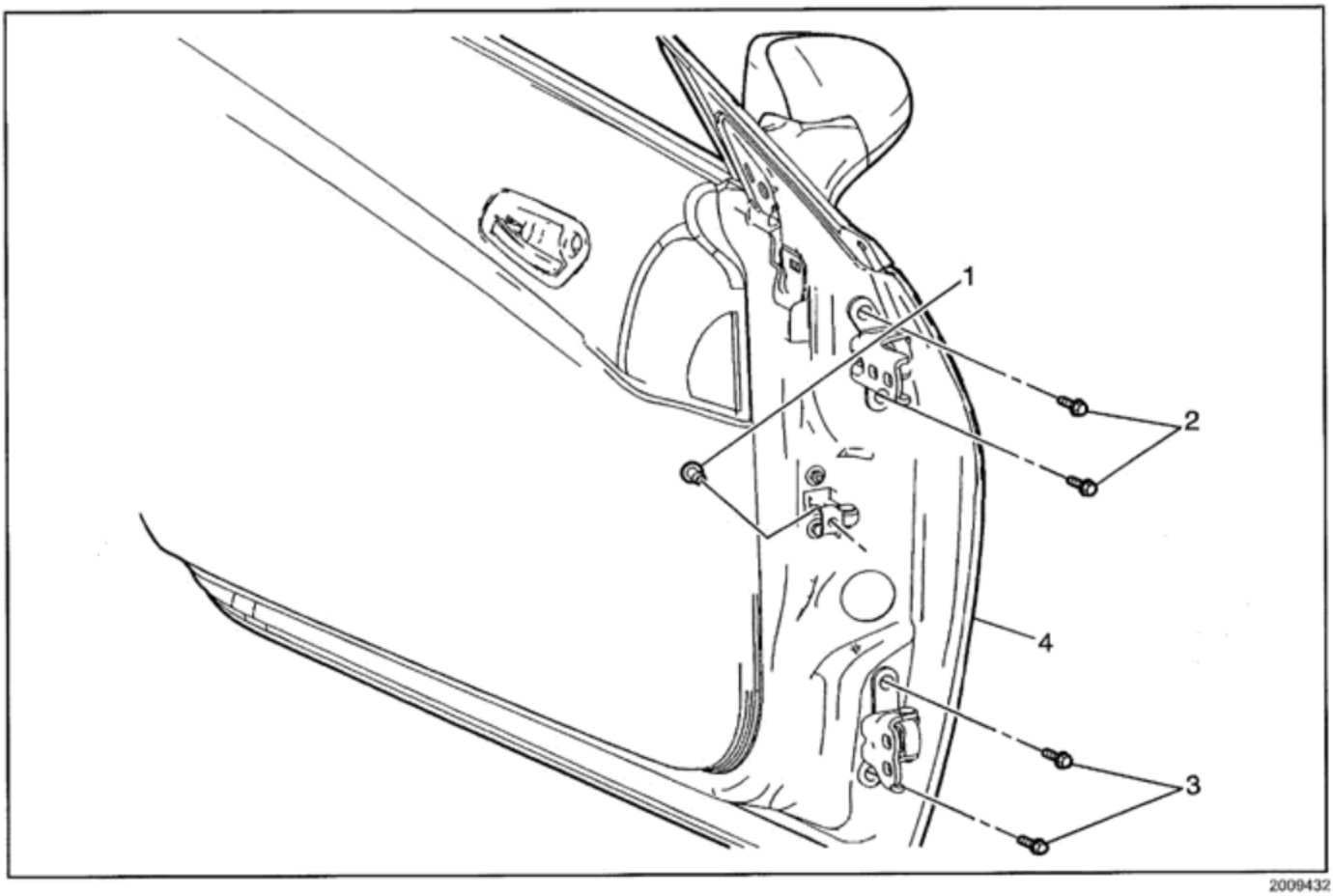


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Front Side Door Adjustment

Callout	Component Name
Preliminary Procedure Remove the front wheelhouse liner. Refer to *Front Wheelhouse Liner Replacement (Rear) on page 3-151* or *Front Wheelhouse Liner Replacement (Front) on page 3-150*.	
1	Front Side Door **Caution:** Refer to *Fastener Caution on page 0-8*. **Procedure** 1. Loosen the front side door hinge bolt (Qty: 4) to adjust the front side door. 2. Adjust the front side door in order to obtain an even gap between the front side door and the roof, the rear door, the rocker panel and the front fender and so that the front side door is flush with the roof, the rear door, the rocker panel and the front fender. **Adjustment** • Front side door to roof (a) 4.5 mm ± 1.0 mm (0.18 in ± 0.04 in) • Front side door to rear door (b) 3.5 mm ± 0.75 mm (0.14 in ± 0.03 in) • Front side door to rocker panel (c) 5.0 mm ± 1.0 mm (0.20 in ± 0.04 in) • Front side door to front fender (d) 3.5 mm ± 0.75 mm (0.14 in ± 0.03 in) **Tighten** 25 N•m (19 lb ft)

Front Side Door Replacement



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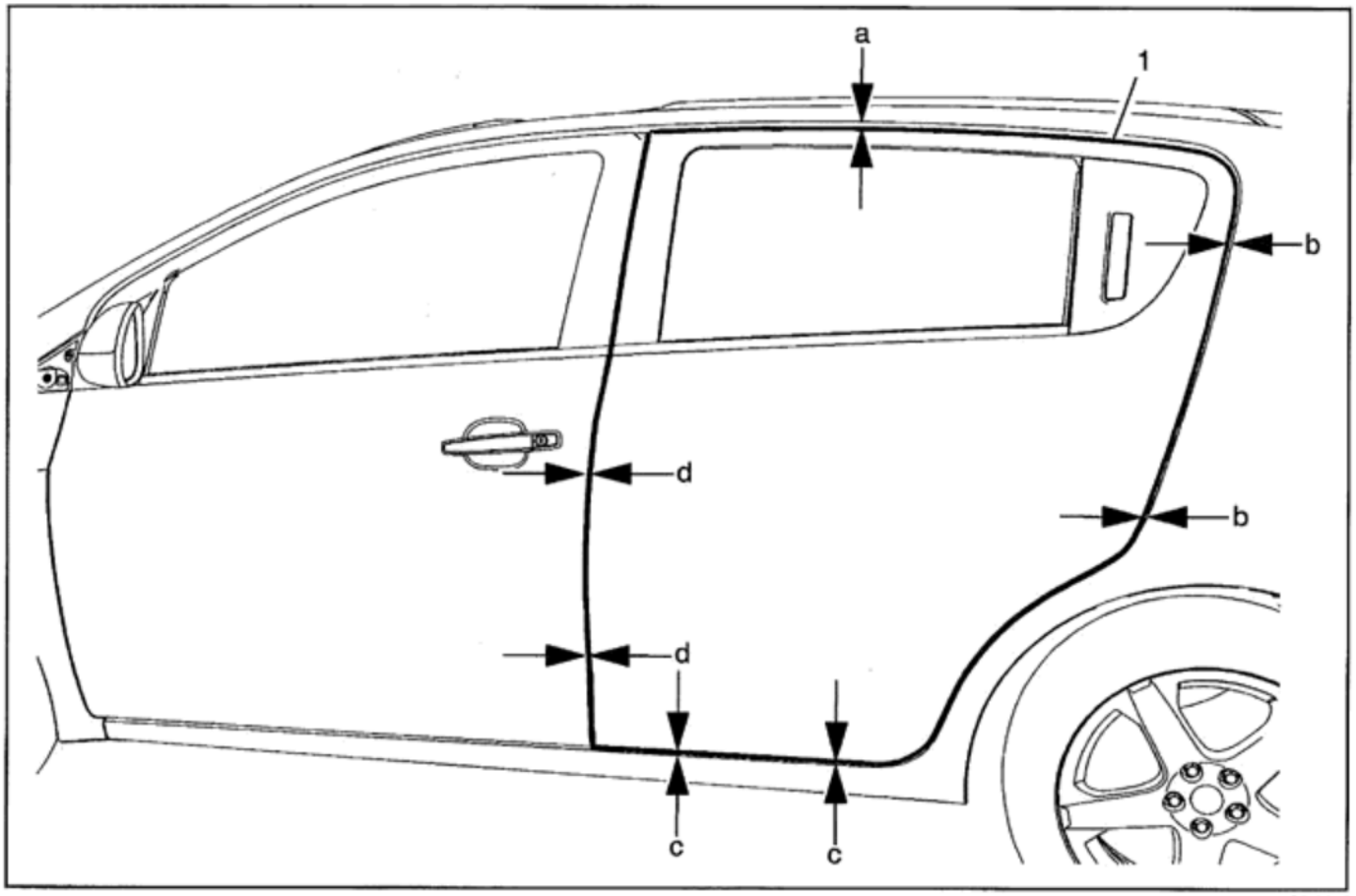
Front Side Door Replacement

Callout	Component Name
Warning: Refer to SIR Warning on page 0-7. **Preliminary Procedures** 1. Mark the location of the hinge before removing the bolts with a grease pencil. 2. Remove the front door trim panel. Refer to *Front Side Door Trim Replacement on page 2-67*.	
1	Front Side Door Check Link Bolt to Body **Caution:** Refer to *Fastener Caution on page 0-8*. **Procedure** 1. Remove the water deflector. 2. Disconnect the door electrical connector. 3. Support the door before removing the hinge bolts. 4. With an assistant, remove the door. 5. After the door has been removed, ensure that the dome lamp is off. If the dome lamp is on remove the fuse. **Tighten** 22 N•m (16 lb ft)
2	Front Side Door Upper Hinge Bolt to Door (Qty: 2) **Tighten** 25 N•m (18 lb ft)
3	Front Side Door Lower Hinge Bolt to Door (Qty: 2) **Tighten** 25 N•m (18 lb ft)

Front Side Door Replacement (cont'd)

Callout	Component Name
4	Front Side Door Assembly **Procedure** 1. When replacing the door it is necessary to transfer all of the internal components. 2. If the door striker needs adjust. Refer to *Front Side Door Lock Striker Adjustment on page 4-314*. 3. Front door adjustment. Refer to *Front Side Door Adjustment on page 3-10*.

Rear Side Door Adjustment (4 Door Notch Back 69)



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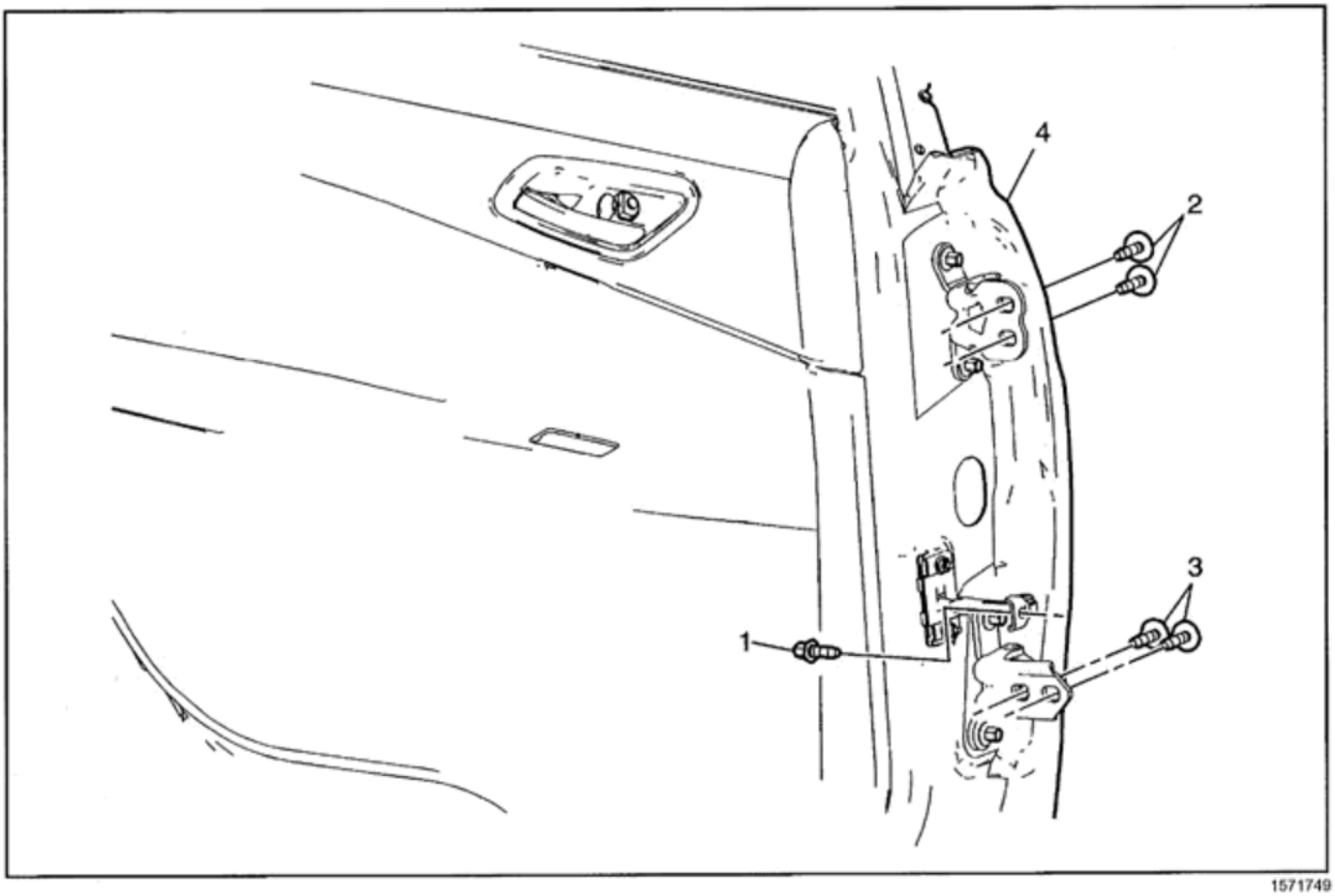
Rear Side Door Adjustment (4 Door Notch Back 69)

Callout	Component Name
1	Rear Side Door **Caution:** Refer to *Fastener Caution on page 0-8*. **Procedure** 1. Loosen the rear door hinge bolt (Qty: 4) to adjust the rear door. 2. Adjust the rear door in order to obtain an even gap between the rear door and the roof, the quarter outer panel, the rocker panel and the front side door and so that the rear door is flush with the roof, the quarter outer panel, the rocker panel and the front side door.

Rear Side Door Adjustment (4 Door Notch Back 69) (cont'd)

Callout	Component Name
	Adjustment • Rear side door to roof (a) 4.5 mm ± 1.0 mm (0.18 in ± 0.04 in) • Rear side door to quarter outer panel (b) 3.8 mm ± 0.75 mm (0.15 in ± 0.03 in) • Rear side door to rocker panel (c) 5.0 mm ± 1.0 mm (0.20 in ± 0.04 in) • Rear side door to front side door (d) 3.5 mm ± 0.75 mm (0.14 in ± 0.03 in) **Tighten** 25 N•m (19 lb ft)

Rear Side Door Replacement



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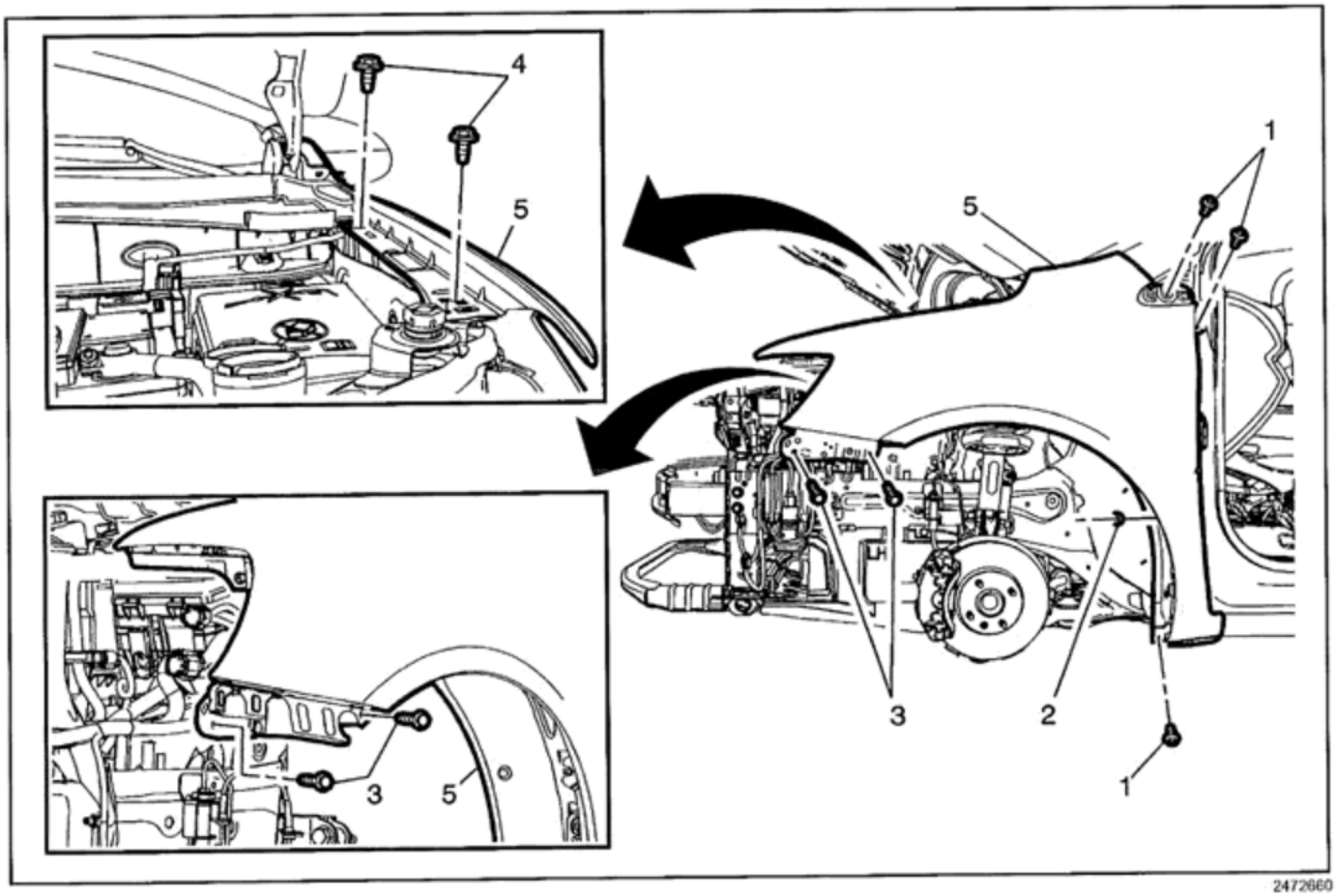
Rear Side Door Replacement

Callout	Component Name
	Warning: Refer to SIR Warning on page 0-7.
	Preliminary Procedures 1. Mark the location of the hinge before removing the bolts with a grease pencil. 2. Remove the rear door trim panel. Refer to *Rear Side Door Trim Replacement (Sedan) on page 2-84* or *Rear Side Door Trim Replacement (Hatchback) on page 2-83*.

Rear Side Door Replacement (cont'd)

Callout	Component Name
1	Rear Side Door Check Link Bolt to Body **Caution:** Refer to *Fastener Caution on page 0-8.* **Procedure** 1. Remove the water deflector. 2. Disconnect the door electrical connector. 3. Support the door before removing the hinge bolts. 4. With an assistant, remove the door. 5. After the door has been removed, ensure that the dome lamp is off. If the dome lamp is on remove the fuse. **Tighten** 22 N•m (16 lb ft)
2	Rear Side Door Hinge Bolt to Door (Qty: 2) **Tighten** 32 N•m (24 lb ft)
3	Rear Side Door Hinge Bolt to Door (Qty: 2) **Tighten** 32 N•m (24 lb ft)
4	Rear Side Door Assembly **Procedure** 1. When replacing the door it is necessary to transfer all of the internal components. 2. If the door striker needs adjust. Refer to *Rear Side Door Lock Striker Adjustment on page 4-318.* 3. Rear door adjustment. Refer to *Rear Side Door Adjustment (4 Door Notch Back 69) on page 3-12.*

Front Fender Replacement

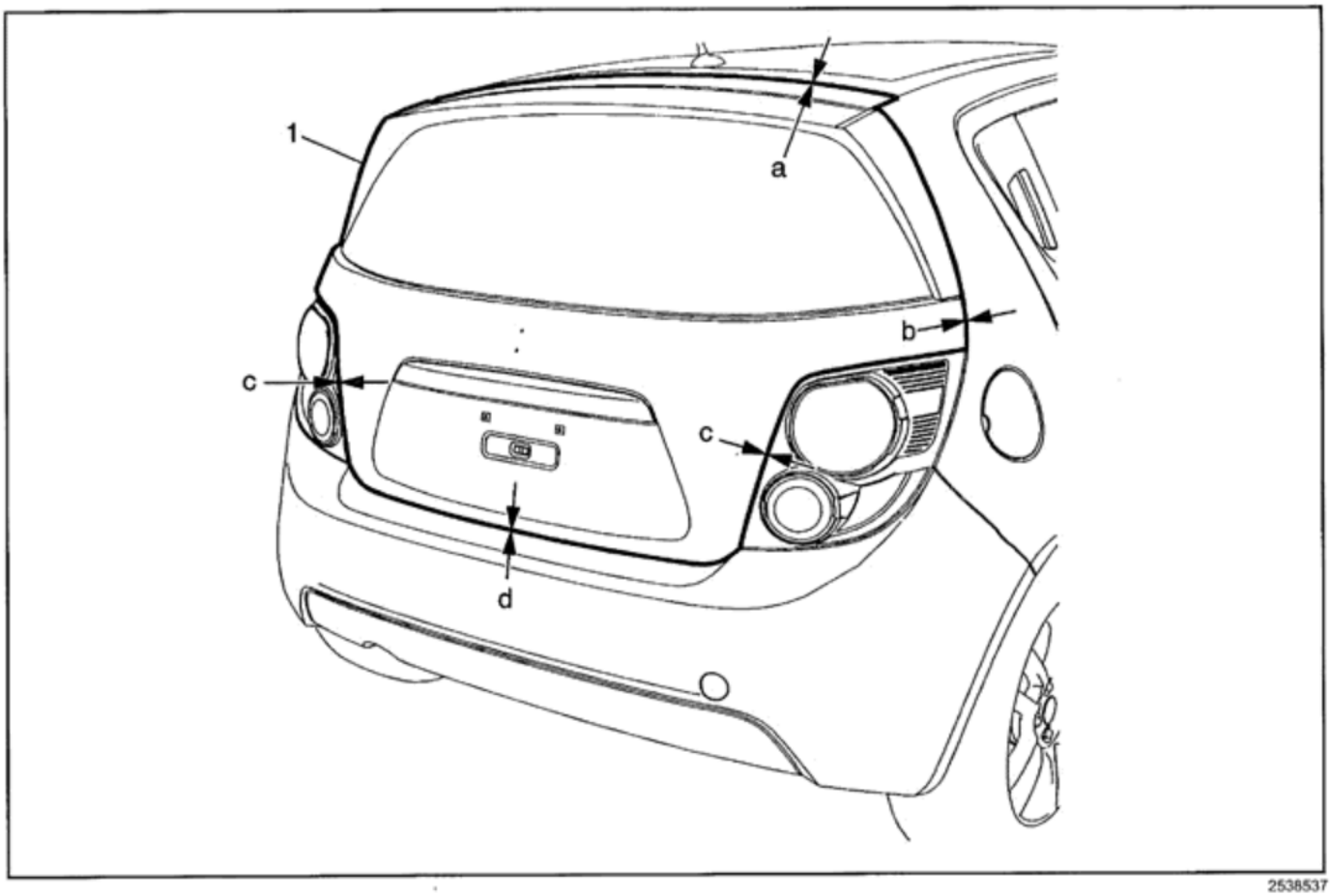


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Front Fender Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the front bumper fascia. Refer to *Front Bumper Fascia Replacement on page 3-55.* 2. Remove the headlamp. Refer to *Headlamp Replacement on page 4-193.* 3. Remove the front wheelhouse liner front and rear. Refer to *Front Wheelhouse Liner Replacement (Rear) on page 3-151* or *Front Wheelhouse Liner Replacement (Front) on page 3-150.* 4. Remove the body side upper front applique. Refer to *Body Side Upper Front Applique Replacement on page 2-4.* 5. Remove the front bumper fascia guide. Refer to *Front Bumper Fascia Guide Replacement on page 3-56.*	
1	Front Fender Bolt (Qty: 3) **Caution:** Refer to *Fastener Caution on page 0-8.* **Tighten** 9 N•m (80 lb in)
2	Front Fender Nut **Tighten** 9 N•m (80 lb in)
3	Front Fender Bolt (Qty: 2) **Tighten** 9 N•m (80 lb in)
4	Front Fender Bolt (Qty: 2) **Tighten** 9 N•m (80 lb in)
5	Front Fender **Procedure** 1. Disconnect the electrical connectors. 2. Transfer parts as needed.

Liftgate Adjustment

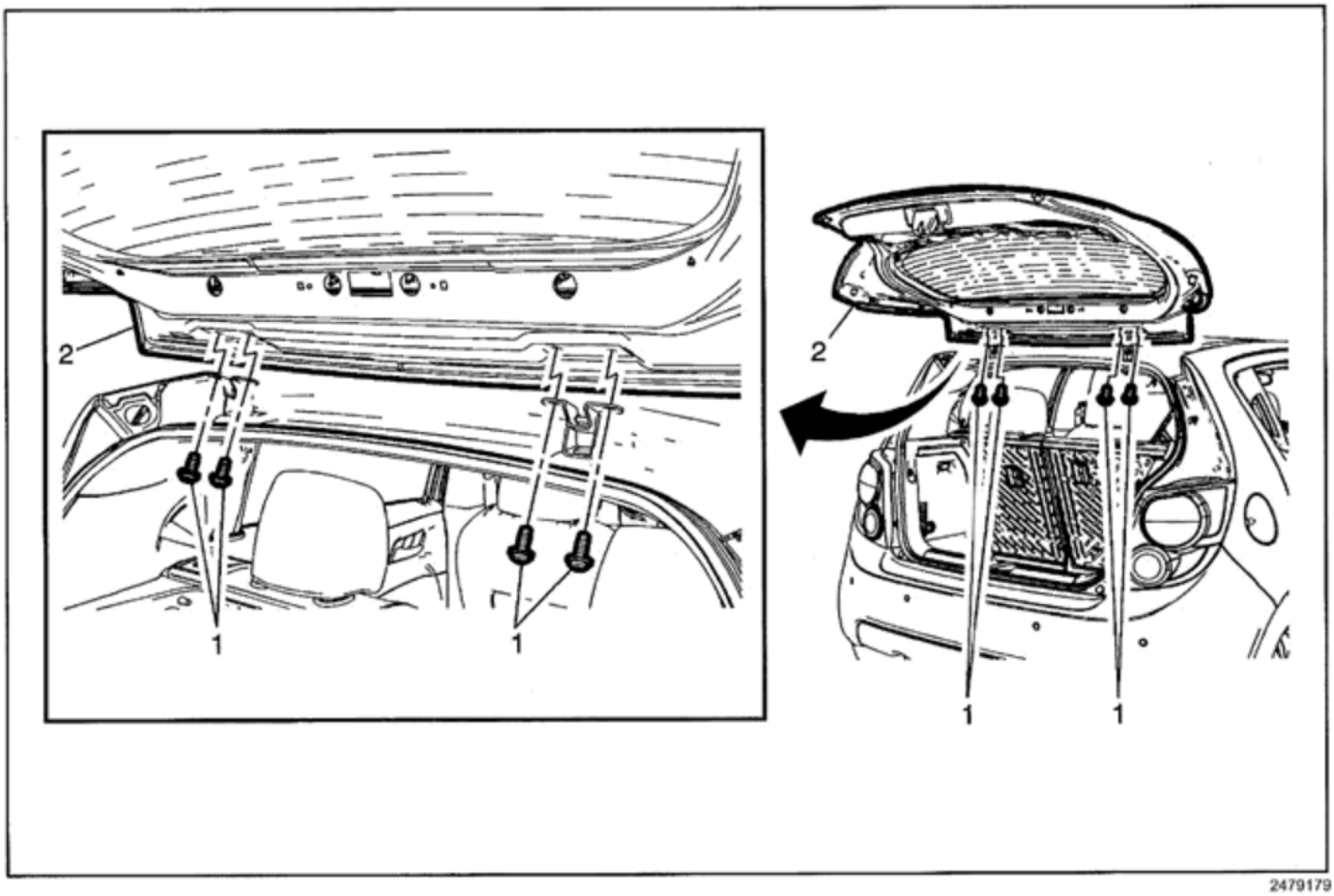


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Liftgate Adjustment

Callout	Component Name
1	Liftgate **Caution:** Refer to *Fastener Caution on page 0-8*. **Procedure** 1. Loosen the 4 liftgate hinge bolts to adjust the liftgate. 2. Adjust the liftgate in order to obtain an even gap between the liftgate and the roof, the quarter outer panel, the tail lamp and rear bumper fascia and so that the liftgate is flush with the roof, the quarter outer panel, the tail lamp and rear bumper fascia. **Adjustment:** • Liftgate to roof (a) 5.5 mm ± 1.0 mm (0.22 in ± 0.04 in) • Liftgate to quarter outer panel (b) 4.0 mm ± 1.0 mm (0.16 in ± 0.04 in) • Liftgate to tail lamp (c) 3.5 mm ± 1.0 mm (0.14 in ± 0.04 in) • Liftgate to rear bumper fascia (d) 5.0 mm ± 1.0 mm (0.20 in ± 0.04 in) **Tighten** 22 N•m (16 lb ft)

Liftgate Replacement

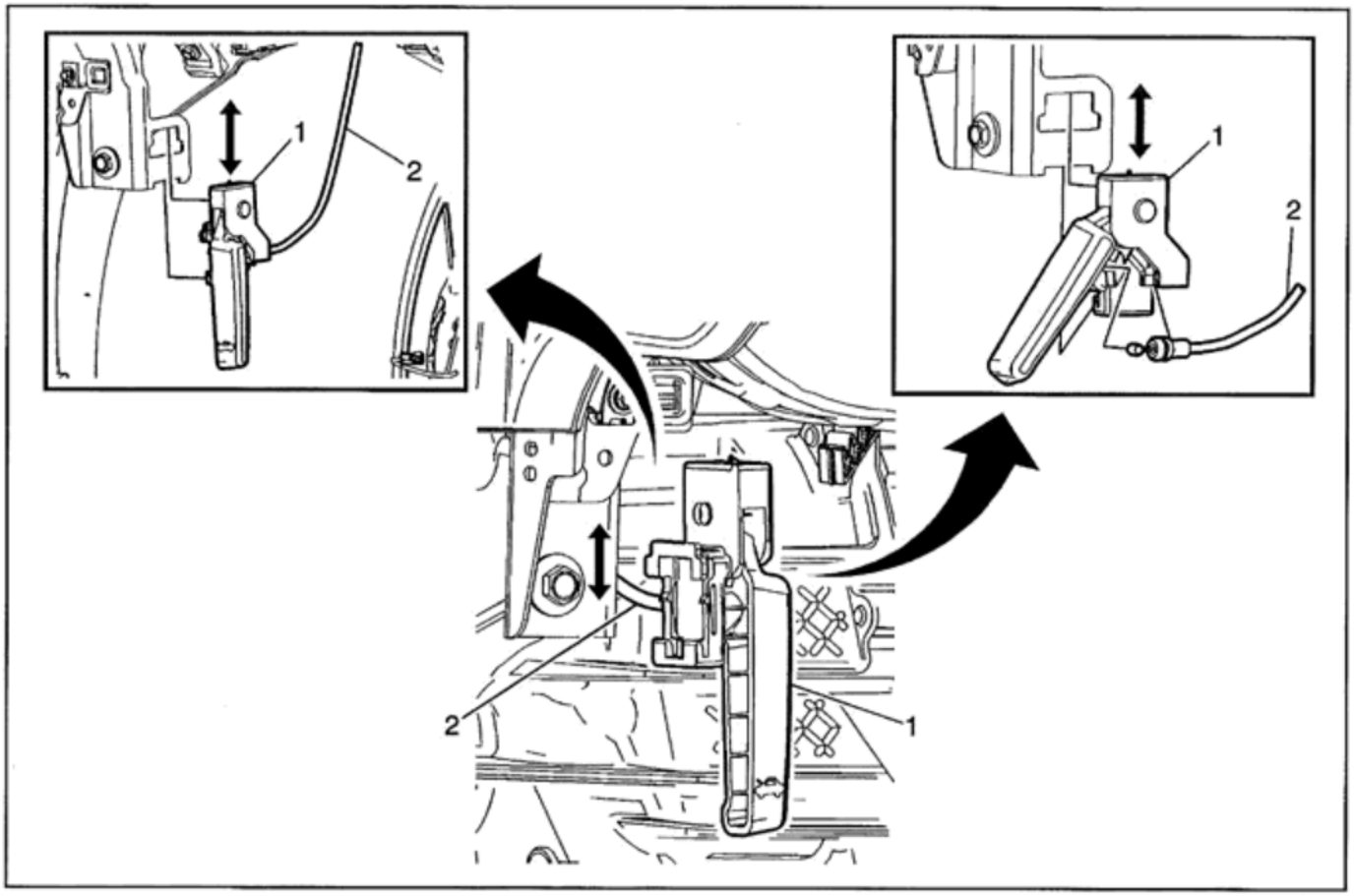


2479179

Liftgate Replacement

Callout	Component Name
Preliminary Procedures 1. Disconnect the electrical connectors. 2. Disconnect the liftgate struts. Refer to *Liftgate Strut Replacement on page 3-41*. 3. Remove the body lock pillar upper trim. Refer to *Body Lock Pillar Upper Trim Panel Replacement (Hatchback) on page 2-77* or *Body Lock Pillar Upper Trim Panel Replacement (Sedan) on page 2-78*.	
1	Liftgate Hinge Bolt (Qty: 4) **Caution:** Refer to *Fastener Caution on page 0-8*. **Tighten** 22 N•m (16 lb ft)
2	Liftgate **Procedure** 1. Transfer parts as needed. 2. Adjust the liftgate if needed. Refer to *Liftgate Adjustment on page 3-16*.

Hood Primary Latch Release Cable Handle Replacement

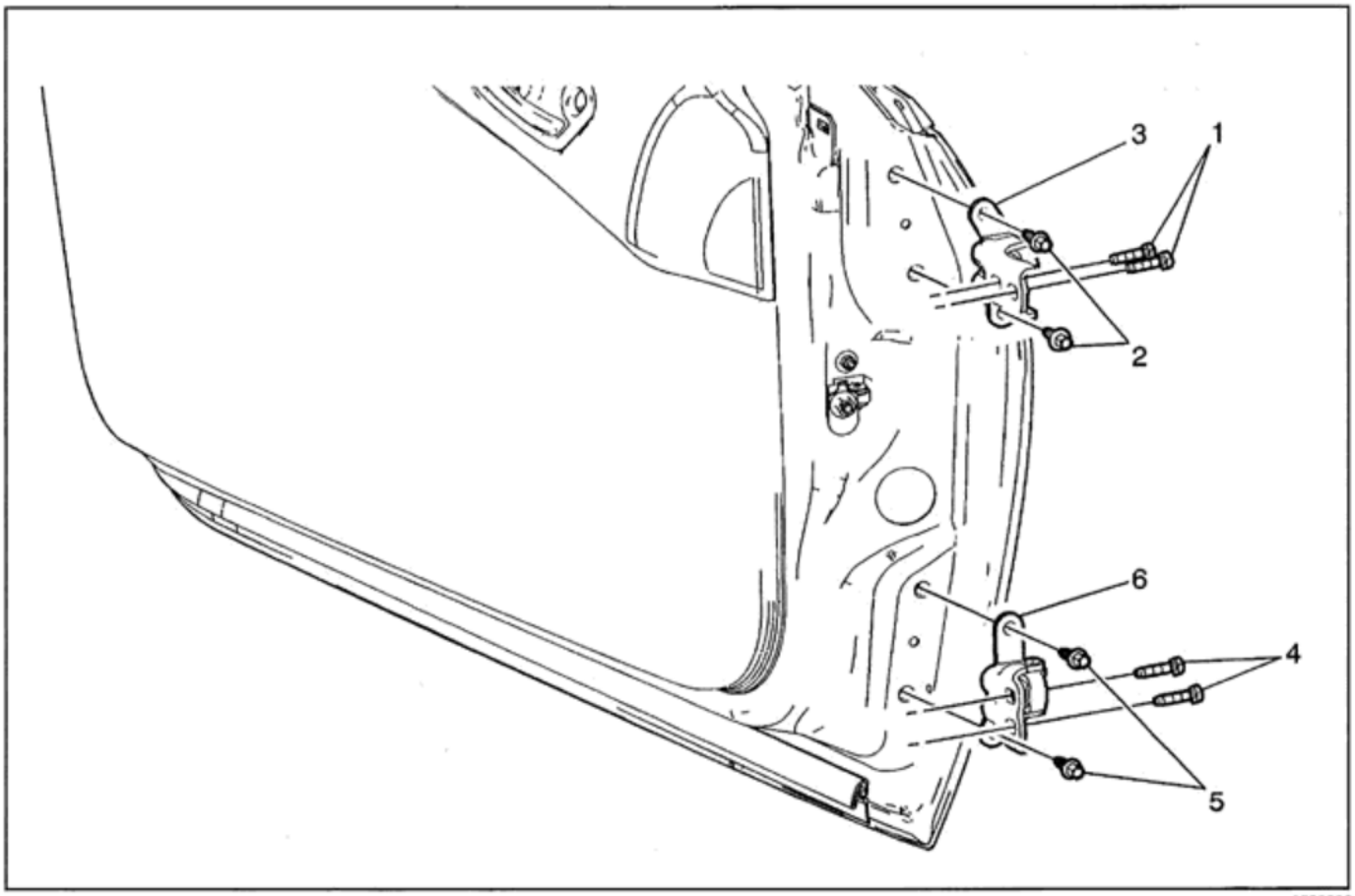


2407263

Hood Primary Latch Release Cable Handle Replacement

Callout	Component Name
Preliminary Procedure Remove the front side door opening floor carpet retainer. Refer to *Front Side Door Opening Floor Carpet Retainer Replacement on page 2-20*.	
1	Hood Primary Latch Release Cable Handle **Procedure** Press the release cable handle upward to release the retainers from the instrument panel bracket.
2	Hood Primary Latch Release Cable **Procedure** Disconnect the hood release cable from the hood release handle.

Front Side Door Upper Hinge and Lower Hinge Replacement



1563330

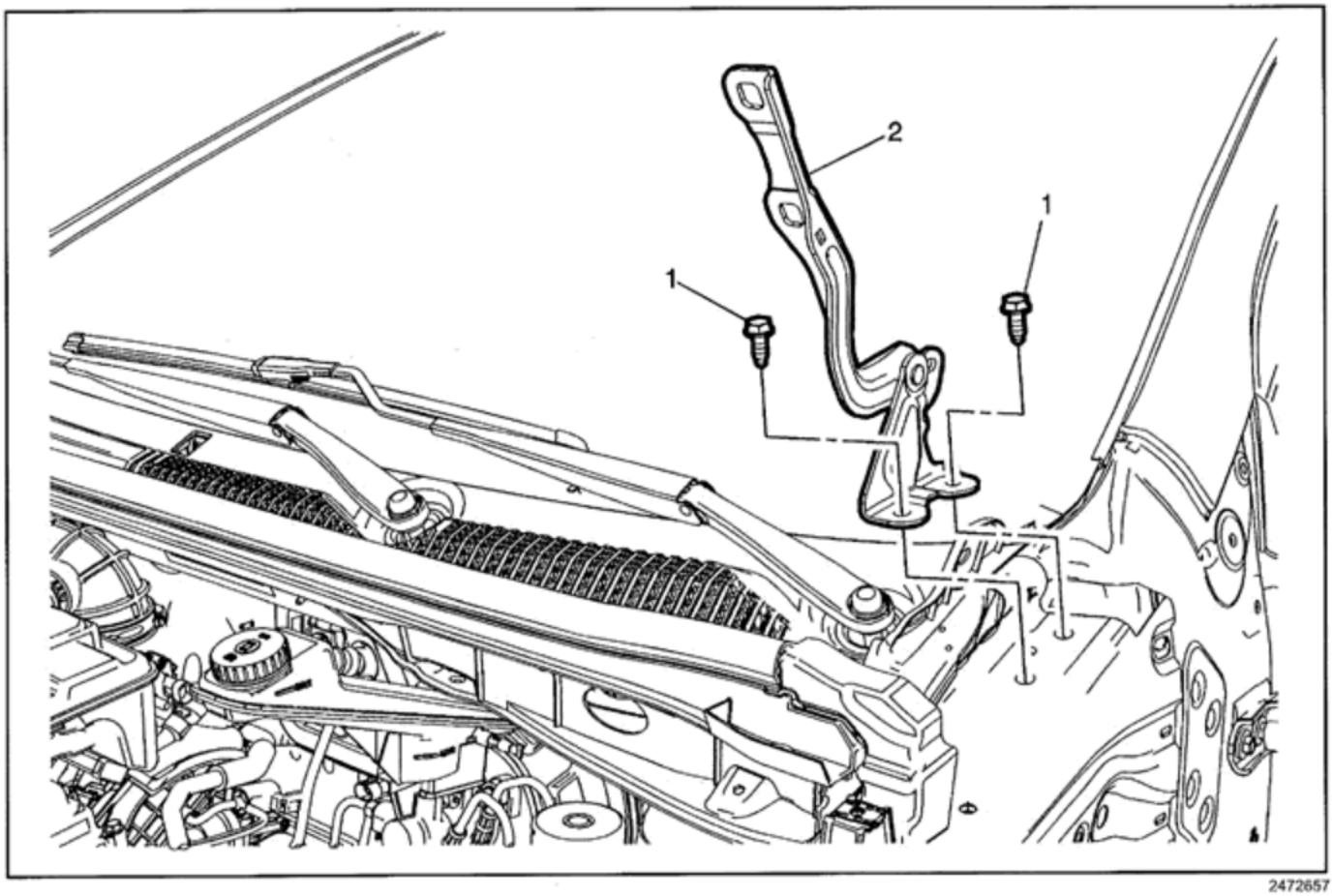
Front Side Door Upper Hinge and Lower Hinge Replacement

Callout	Component Name
1	Front Side Door Upper Hinge to Body Bolt (Qty: 2) **Caution:** Refer to *Fastener Caution on page 0-8*. **Procedures** 1. Before removing the door, apply a double layer of masking tape around the perimeter of the painted surfaces. 2. Mark the location of the hinge being removed. 3. Remove the front wheelhouse liner. Refer to *Front Wheelhouse Liner Replacement (Rear) on page 3-151* or *Front Wheelhouse Liner Replacement (Front) on page 3-150*. 4. Support the door before removing the hinge bolts. **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)

Front Side Door Upper Hinge and Lower Hinge Replacement (cont'd)

Callout	Component Name
6	Front Side Door Lower Hinge **Procedure** If the door striker needs adjust. Refer to *Front Side Door Lock Striker Adjustment on page 4-314.*

Hood Hinge Replacement

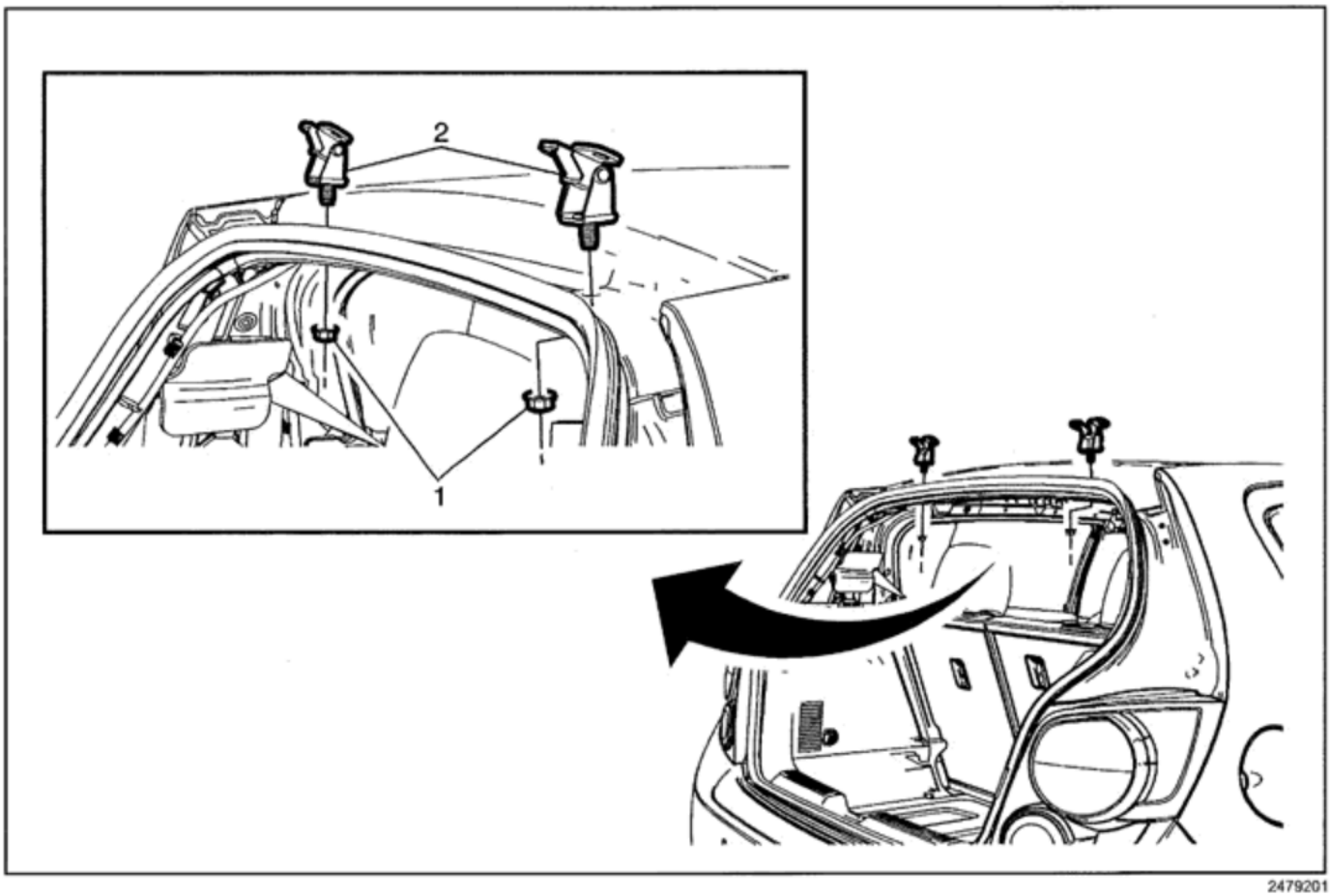


2472657

Hood Hinge Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the hood. Refer to *Hood Replacement on page 3-25.* 2. Remove the front fender. Refer to *Front Fender Replacement on page 3-14.*	
1	Hood Hinge Bolt (Qty: 2) **Caution:** Refer to *Fastener Caution on page 0-8.* **Tighten** 22 N•m (16 lb ft)
2	Hood Hinge **Procedure** Adjust the hood and hinge if needed. Refer to *Hood Adjustment on page 3-24.*

Liftgate Hinge Replacement

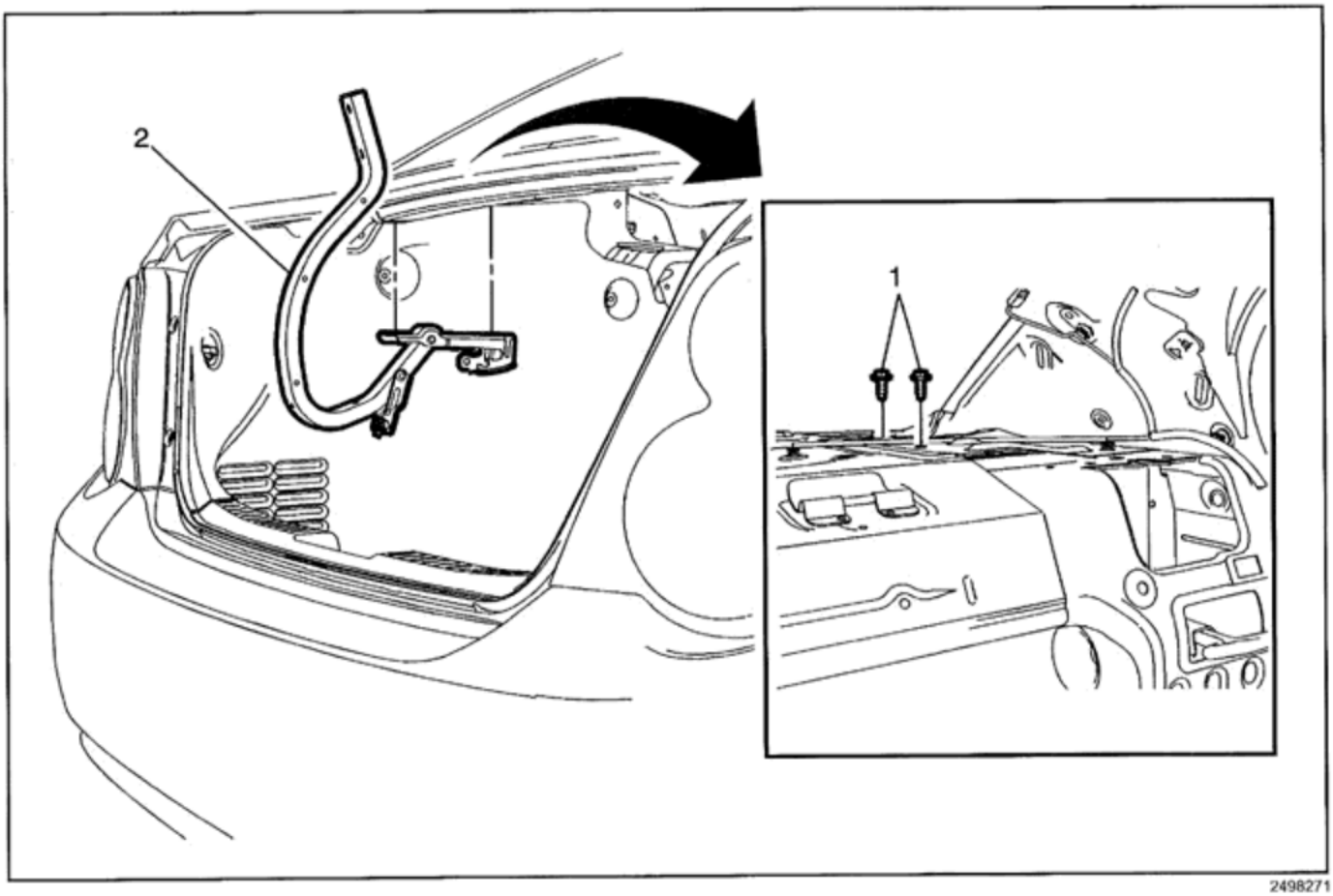


2479201

Liftgate Hinge Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the liftgate. Refer to *Liftgate Replacement on page 3-17*. 2. Lower the rear of the headliner to access the inner bolts. Refer to *Headlining Trim Panel Replacement (Sedan with Sunroof) on page 2-26* or *Headlining Trim Panel Replacement (Hatchback with Sunroof) on page 2-24* or *Headlining Trim Panel Replacement (Hatchback without Sunroof) on page 2-25* or *Headlining Trim Panel Replacement (Sedan without Sunroof) on page 2-27*. 3. Use a grease pencil to mark the liftgate hinge position to the body prior to removal.	
1	Liftgate Hinge Nut (Qty: 2) **Caution:** Refer to *Fastener Caution on page 0-8*. **Tighten** 43 N•m (32 lb ft)
2	Liftgate Hinge (Qty: 2) **Procedure** Adjust the liftgate if needed.

Rear Compartment Lid Rear Hinge Replacement

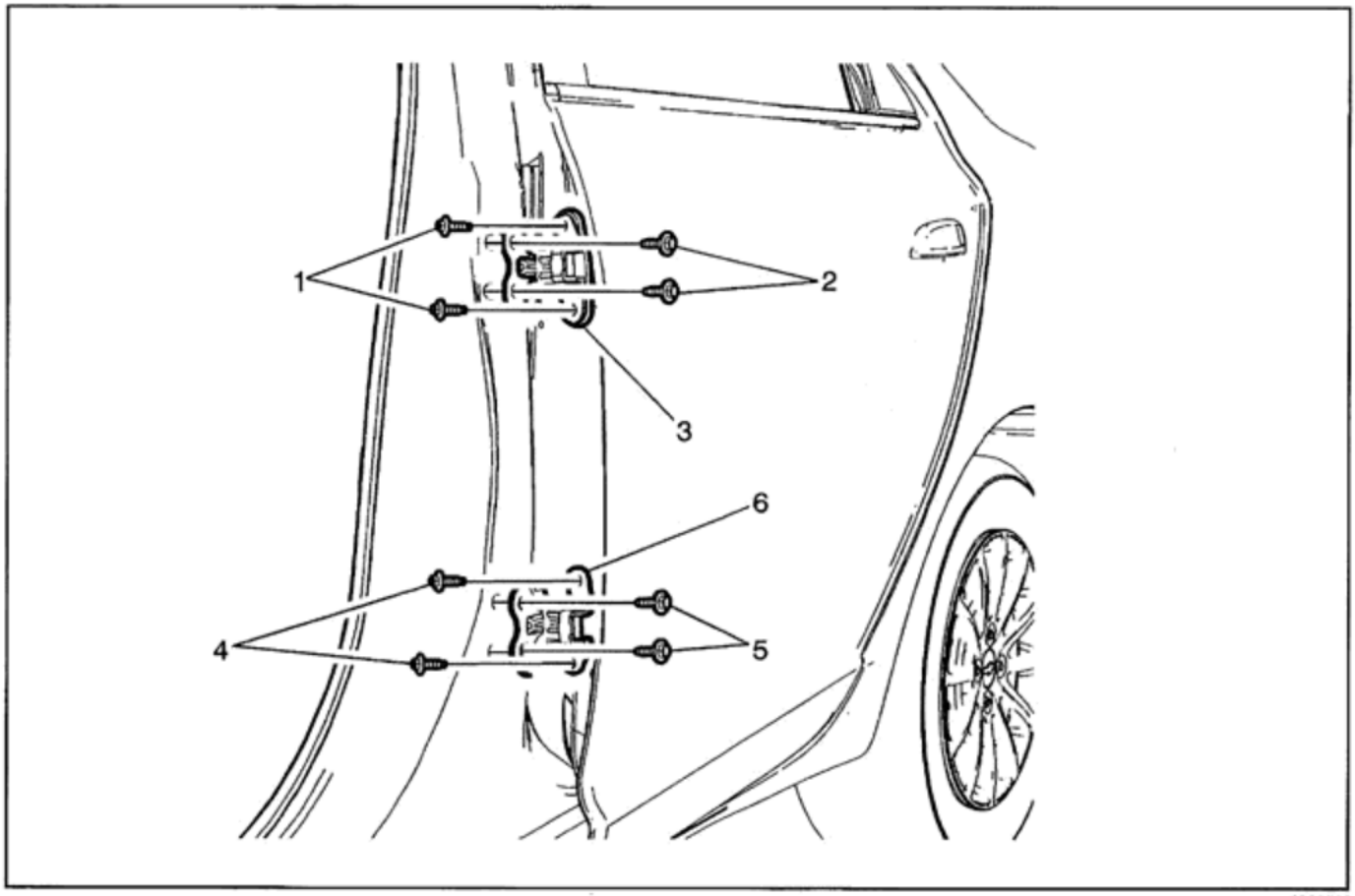


2498271

Rear Compartment Lid Rear Hinge Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the rear window trim panel. Refer to *Rear Window Panel Trim Replacement on page 2-81*. 2. Remove the rear compartment lid. Refer to *Rear Compartment Lid Replacement on page 3-29*. 3. Disconnect the rear compartment lid hinge torque rods. Refer to *Rear Compartment Lid Hinge Torque Rod Replacement on page 3-35*.	
1	Rear Compartment Lid Rear Hinge Bolt (Qty: 2) **Caution:** Refer to *Fastener Caution on page 0-8*. **Tighten** 9 N•m (80 lb in)
2	Rear Compartment Lid Rear Hinge **Procedures** 1. Transfer parts as needed. 2. Adjust the rear compartment lid if needed. Refer to *Rear Compartment Lid Adjustment on page 3-28*.

Rear Side Door Upper Hinge and Lower Hinge Replacement

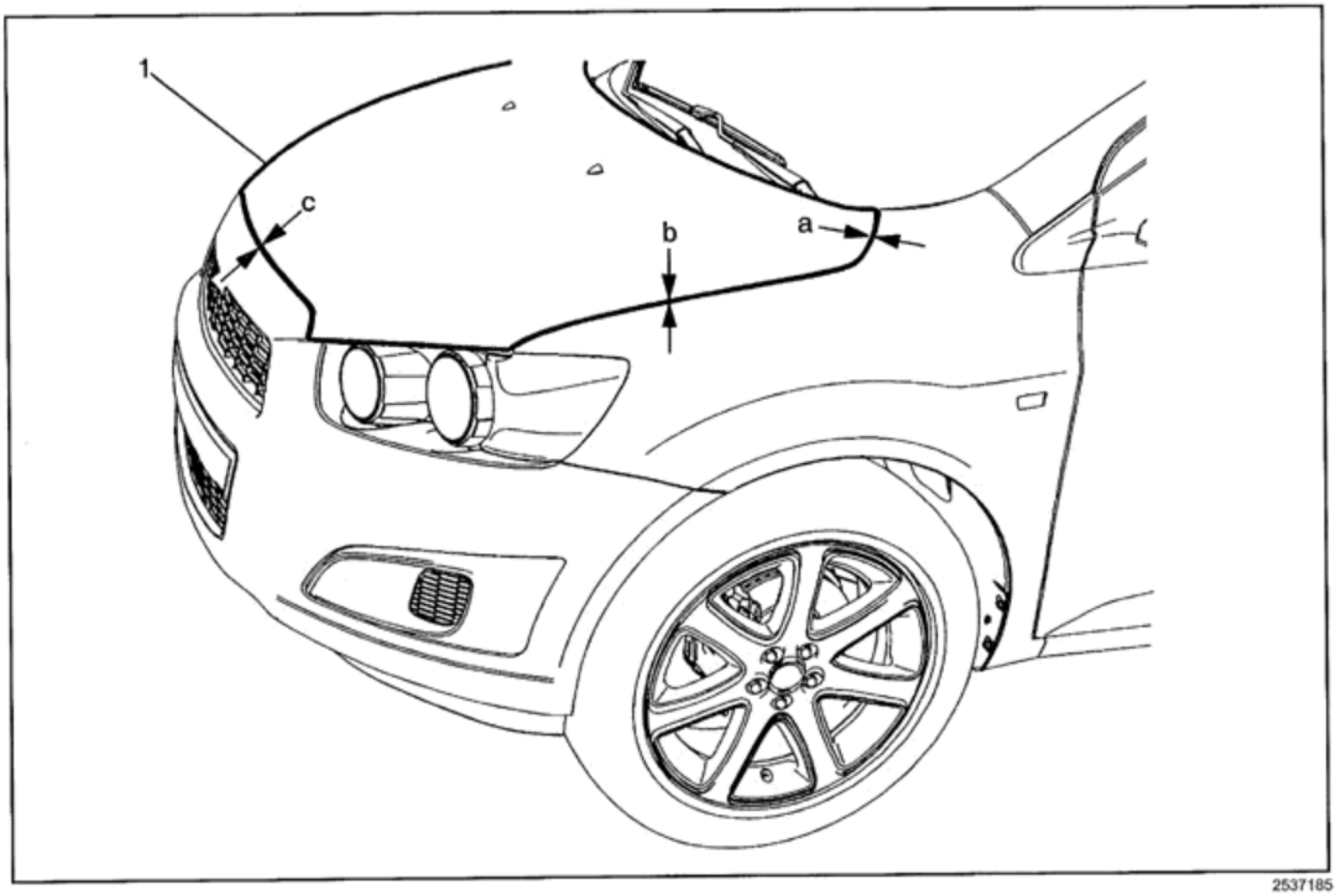


2908569

Rear Side Door Upper Hinge and Lower Hinge Replacement

Callout	Component Name
1	Rear Side Door Upper Hinge to Body Bolts (Qty: 2) **Caution:** Refer to *Fastener Caution on page 0-8.* **Procedures** 1. Before removing the door, apply a double layer of masking tape around the perimeter of the painted surfaces. 2. Mark the location of the hinge being removed. 3. Support the door before removing the hinge bolts. **Tighten** 32 N•m (24 lb ft)
2	Rear Side Door Upper Hinge to Door Bolts (Qty: 2) **Tighten** 25 N•m (18 lb ft)
3	Rear Side Door Upper Hinge
4	Rear Side Door Lower Hinge to Body Bolts (Qty: 2) **Tighten** 32 N•m (24 lb ft)
5	Rear Side Door Lower Hinge to Door Bolts (Qty: 2) **Tighten** 25 N•m (18 lb ft)
6	Rear Side Door Lower Hinge **Procedure** If the door striker needs adjust. Refer to *Rear Side Door Lock Striker Adjustment on page 4-318.*

Hood Adjustment

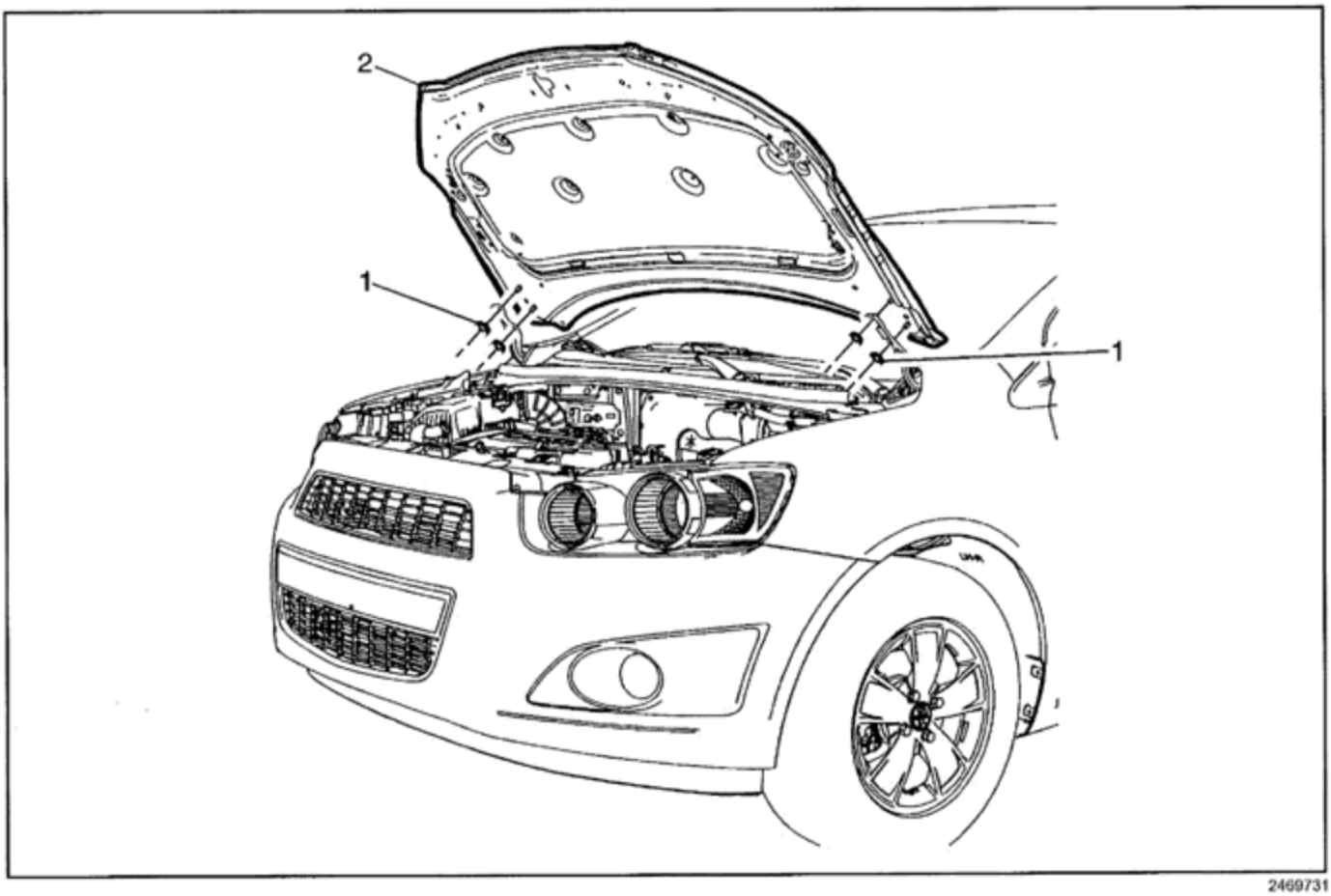


2537185

Hood Adjustment

Callout	Component Name
1	Hood **Caution:** Refer to *Fastener Caution on page 0-8*. **Procedure** 1. Loosen the 4 hood hinge nuts. 2. Adjust the hood in order to obtain an even gap on both sides between the hood and the fenders, the headlamps and the front bumper fascia and so that the hood is flush with both fenders on the front edge, the front bumper fascia and the headlamps. **Adjustment:** • Hood to front fender (a) 3.0 mm ± 0.75 mm (0.12 in ± 0.03 in) • Hood to headlamp (b) 3.0 mm ± 1.0 mm (0.12 in ± 0.04 in) • Hood to front bumper fascia (c) 3.0 mm ± 1.0 mm (0.12 in ± 0.04 in) **Tighten** 22 N•m (16 lb ft)

Hood Replacement

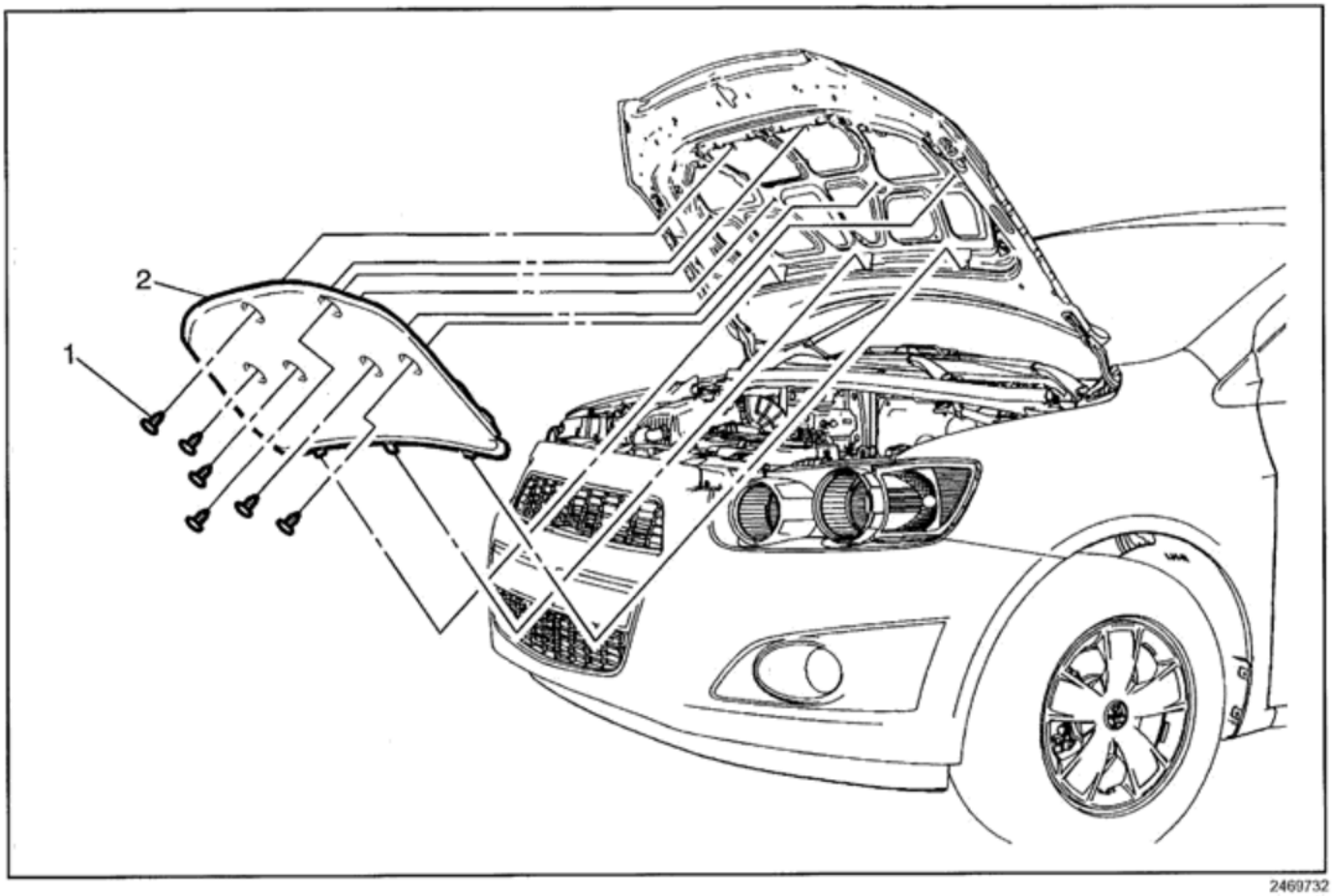


2469731

Hood Replacement

Callout	Component Name
Preliminary Procedure Disconnect the windshield washer nozzle hose.	
1	Hood Hinge Nut (Qty: 4) **Caution:** Refer to *Fastener Caution on page 0-8.* **Procedure** Mark the location of the hinge to the hood with a grease pencil to aid in alignment. **Tighten** 22 N•m (16 lb ft)
2	Hood **Procedure** 1. Transfer parts as needed. 2. Adjust the hood if needed. Refer to *Hood Adjustment on page 3-24.*

Hood Insulator Replacement

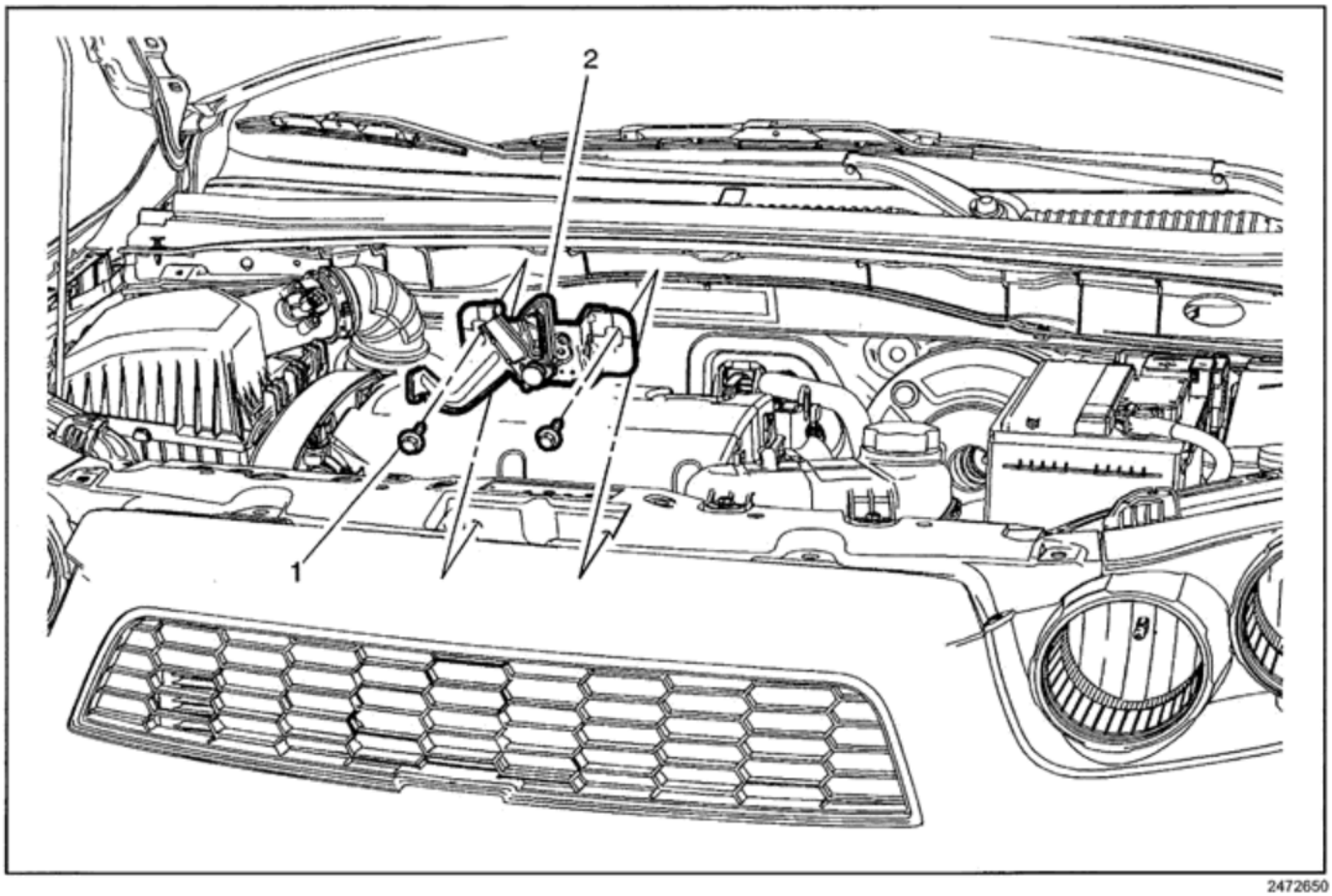


2469732

Hood Insulator Replacement

Callout	Component Name
1	Hood Insulator Plastic Retainer (Qty: 6)
2	Hood Insulator **Procedure** Ensure the 3 integral tabs are secured to the hood.

Hood Primary and Secondary Latch Replacement

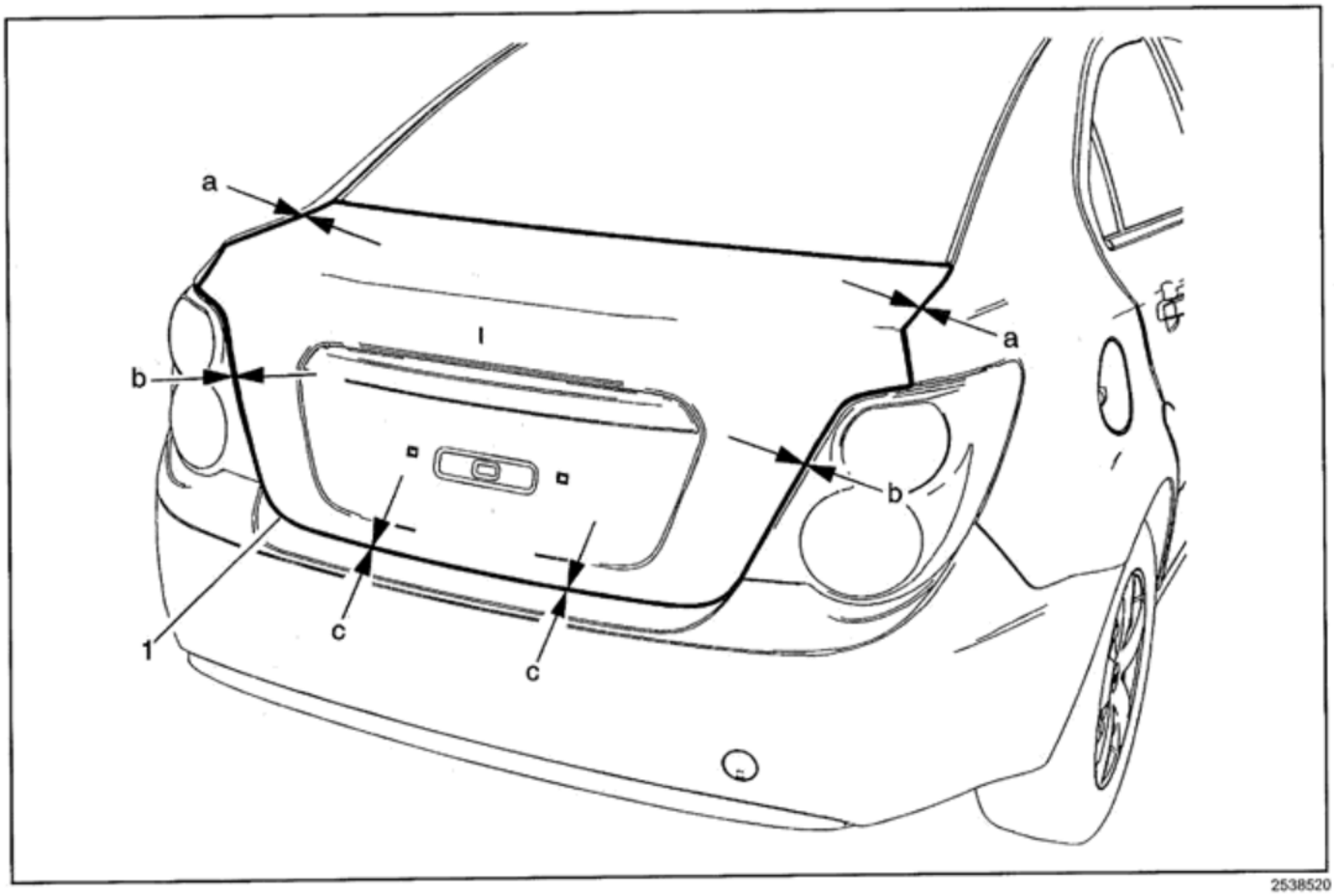


2472650

Hood Primary and Secondary Latch Replacement

Callout	Component Name
1	Hood Primary and Secondary Latch Bolt (Qty: 2) **Caution:** Refer to *Fastener Caution on page 0-8.* **Tighten** 22 N•m (16 lb ft)
2	Hood Primary and Secondary Latch **Procedure** Disconnect the release cable from the hood primary latch.

Rear Compartment Lid Adjustment

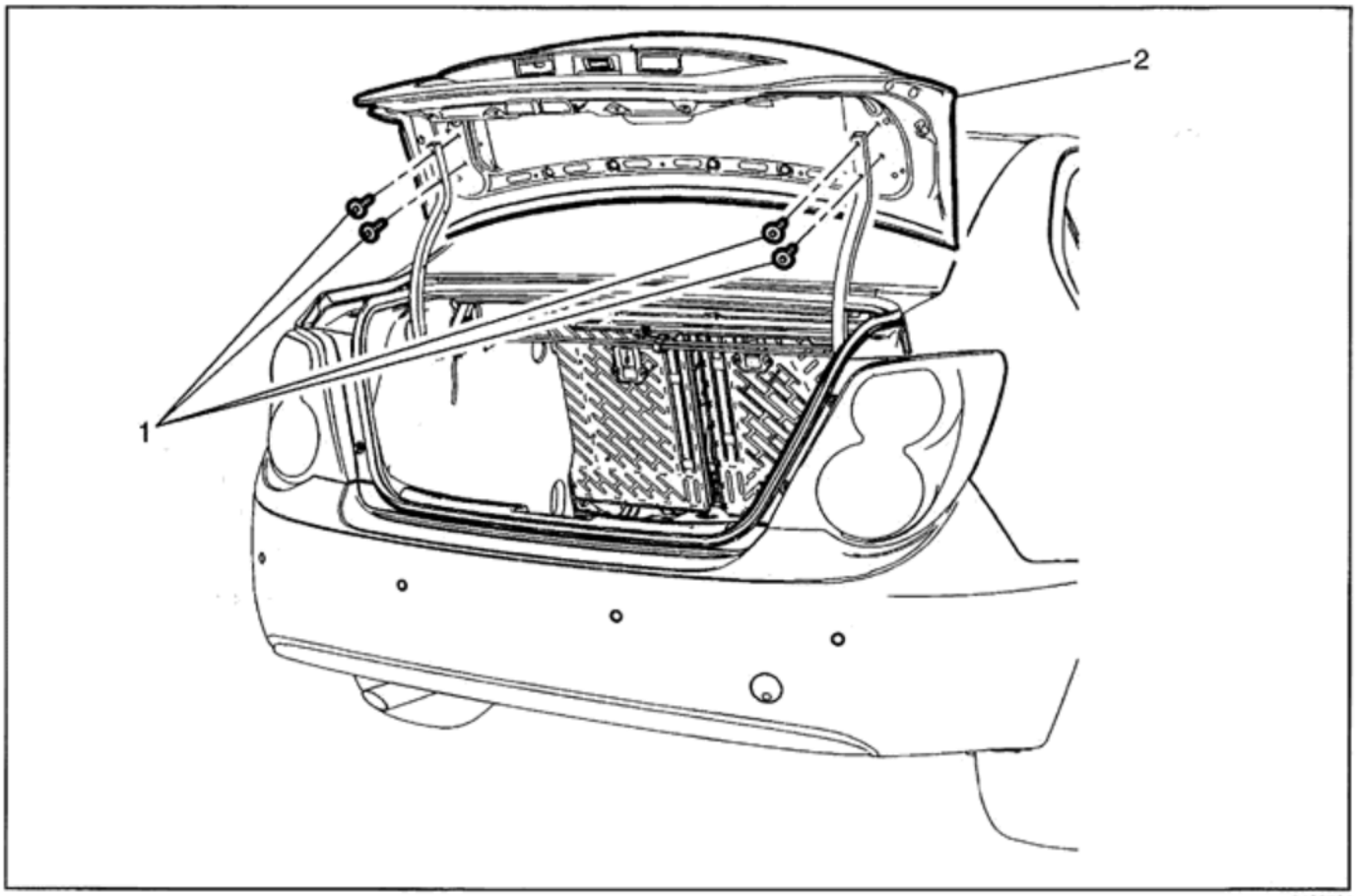


2538520

Rear Compartment Lid Adjustment

Callout	Component Name
1	Rear Compartment Lid **Caution:** Refer to *Fastener Caution on page 0-8* **Procedure** 1. Loosen the rear compartment lid hinge bolts (Qty: 4) to adjust the rear compartment lid. 2. Adjust the rear compartment lid in order to obtain an even gap between the rear compartment lid and the quarter outer pan the rear fog lamp and the rear bumper fascia and so that the rear compartment lid is flush with the quarter outer panel, the rear fog lamp and the rear bumper fascia. **Adjustment** • Rear compartment lid to quarter outer panel (a) 3.0 mm ± 0.75 mm (0.12 in ± 0.03 in) • Tail lamp to rear compartment lid (b) 3.0 mm ± 1.0 mm (0.12 in ± 0.04 in) • Rear compartment lid to rear bumper fascia (c) 5.5 mm ± 1.5 mm (0.22 in ± 0.06 in) **Tighten** 22 N•m (16 lb ft)

Rear Compartment Lid Replacement

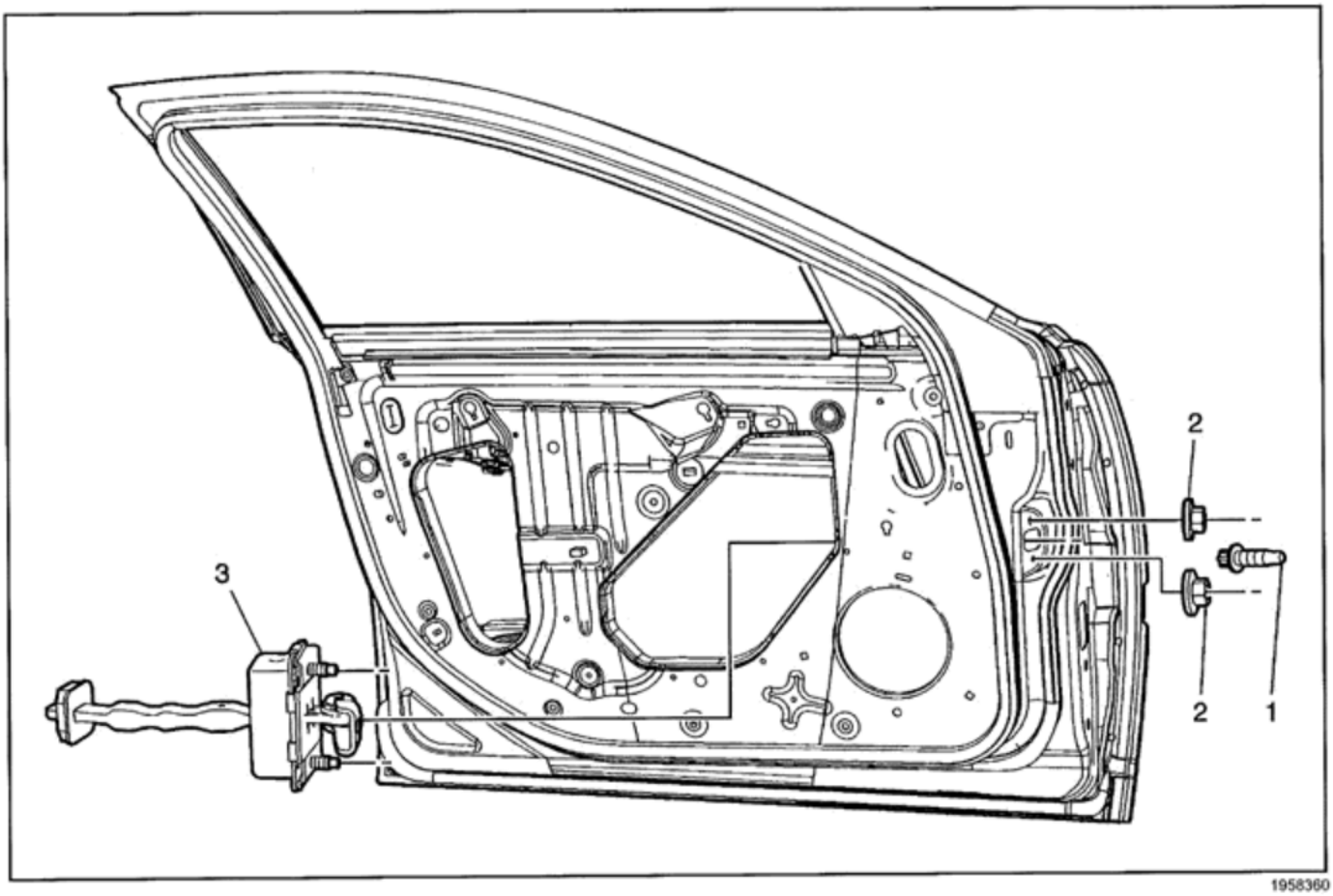


2469724

Rear Compartment Lid Replacement

Callout	Component Name
Preliminary Procedure Remove the rear compartment lid inner panel trim. Refer to *Rear Compartment Lid Inner Panel Trim Replacement (Sedan) on page 2-88*.	
1	Rear Compartment Lid Bolt (Qty: 4) **Caution:** Refer to *Fastener Caution on page 0-8*. **Tighten** 9 N•m (80 lb ft)
2	Rear Compartment Lid **Procedure** 1. Disconnect the electrical connector. 2. Adjust the rear compartment lid as needed. Refer to *Rear Compartment Lid Adjustment on page 3-28*. 3. Transfer components as necessary.

Front Side Door Check Link Replacement

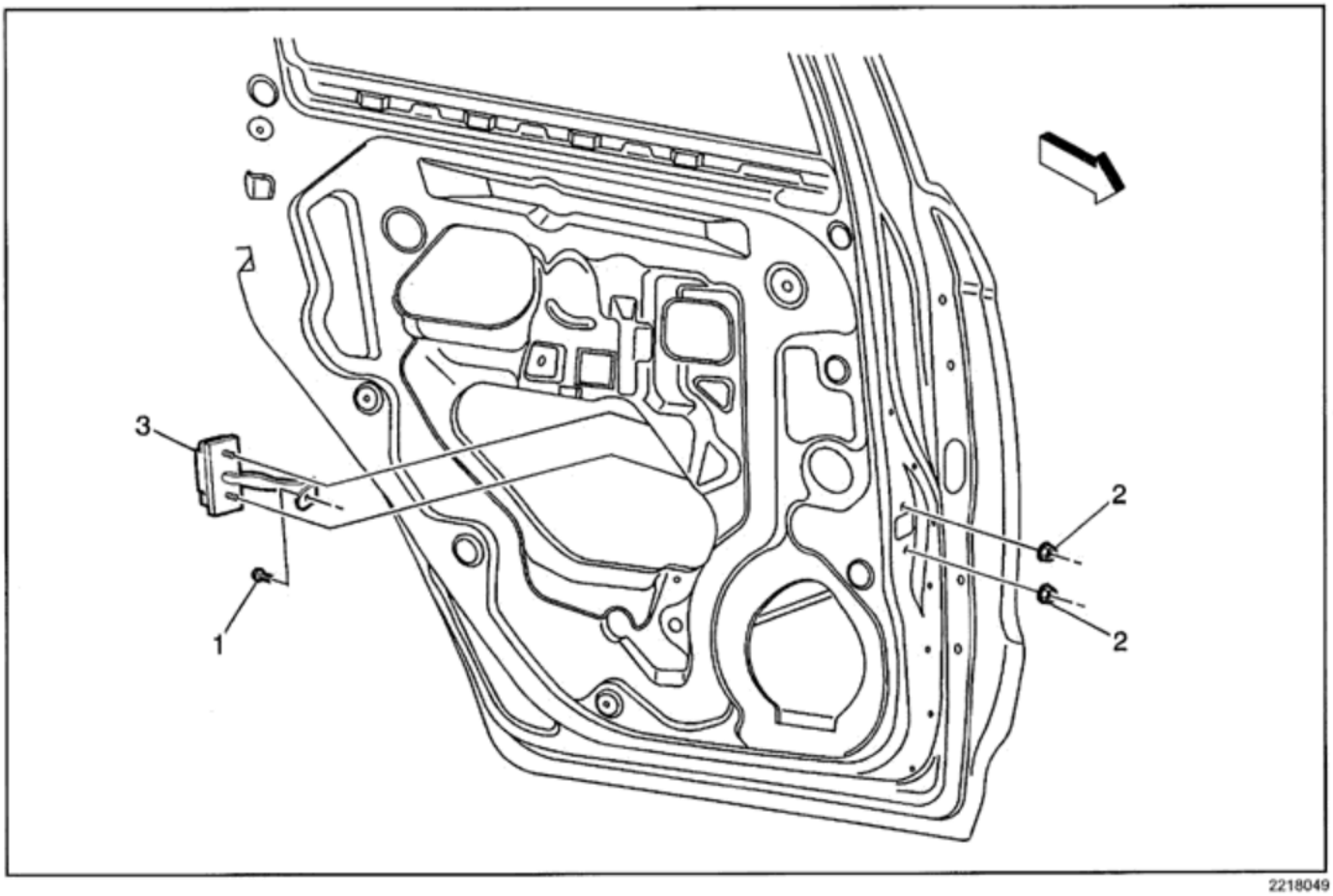


1958360

Front Side Door Check Link Replacement

Callout	Component Name
Preliminary Procedure Remove the front side door trim panel. Refer to *Front Side Door Trim Replacement on page 2-67*.	
1	Front Side Door Check Link Bolt to Body **Caution:** Refer to *Fastener Caution on page 0-8*. **Note:** Place the door window in the full open position. **Tighten** 22 N•m (16 lb ft)
2	Front Side Door Check Link Nut (Qty: 2) **Procedure** Remove the water deflector. **Tighten** 9 N•m (80 lb in)
3	Front Side Door Check Link

Rear Side Door Check Link Replacement

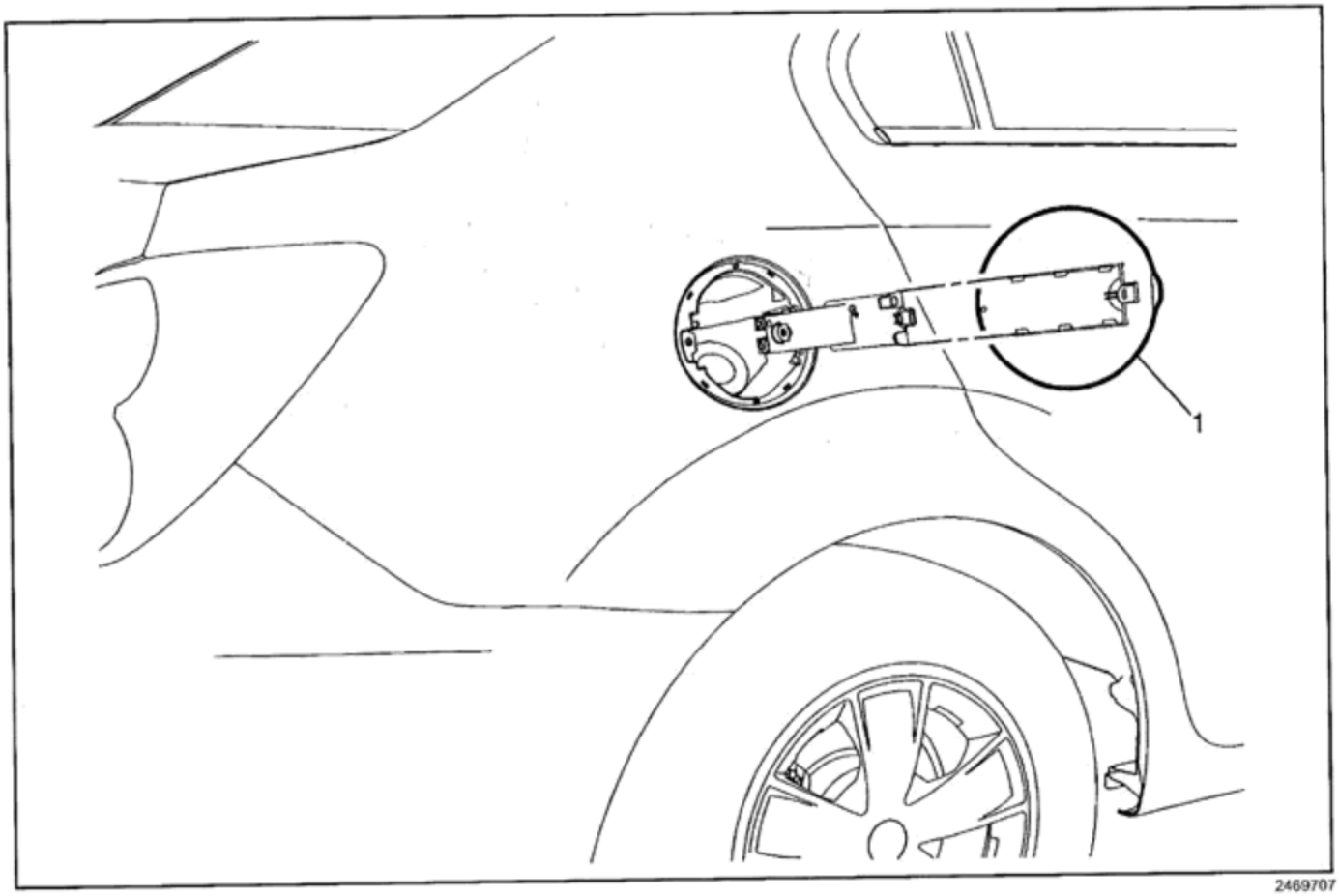


2218049

Rear Side Door Check Link Replacement

Callout	Component Name
Preliminary Procedures 1. Move the window to the full up position. 2. Remove the rear side door trim panel. Refer to *Rear Side Door Trim Replacement (Sedan) on page 2-84* or *Rear Side Door Trim Replacement (Hatchback) on page 2-83*	
1	Rear Side Door Check Link Bolt to Body **Caution:** Refer to *Fastener Caution on page 0-8* **Tighten** 22 N•m (16 lb ft)
2	Rear Side Door Check Link Nut (Qty: 2) **Procedure** Remove the water deflector. **Tighten** 9 N•m (80 lb in)
3	Rear Side Door Check Link Assembly

Fuel Tank Filler Door Replacement

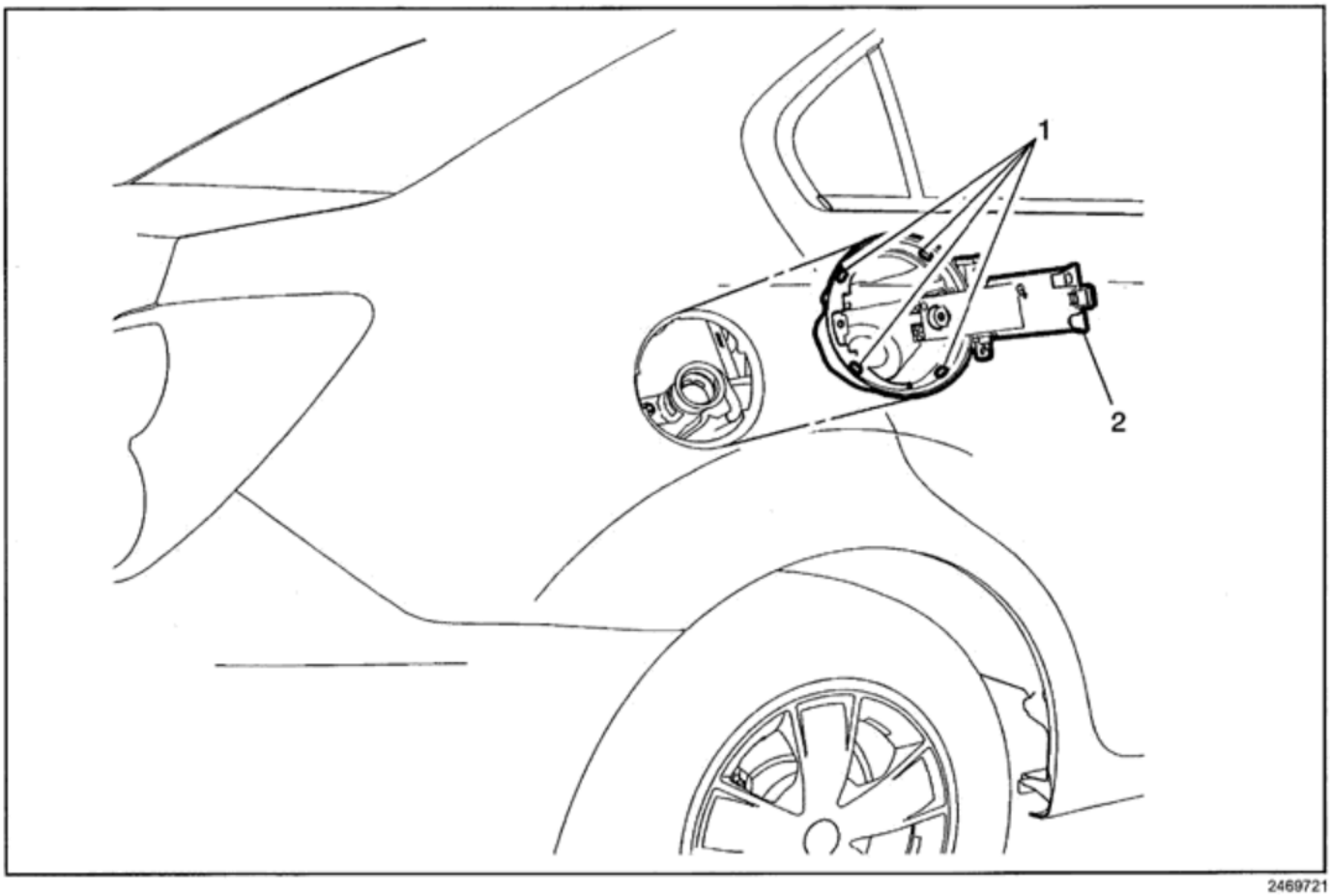


2469707

Fuel Tank Filler Door Replacement

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 Door Latch Housing Replacement

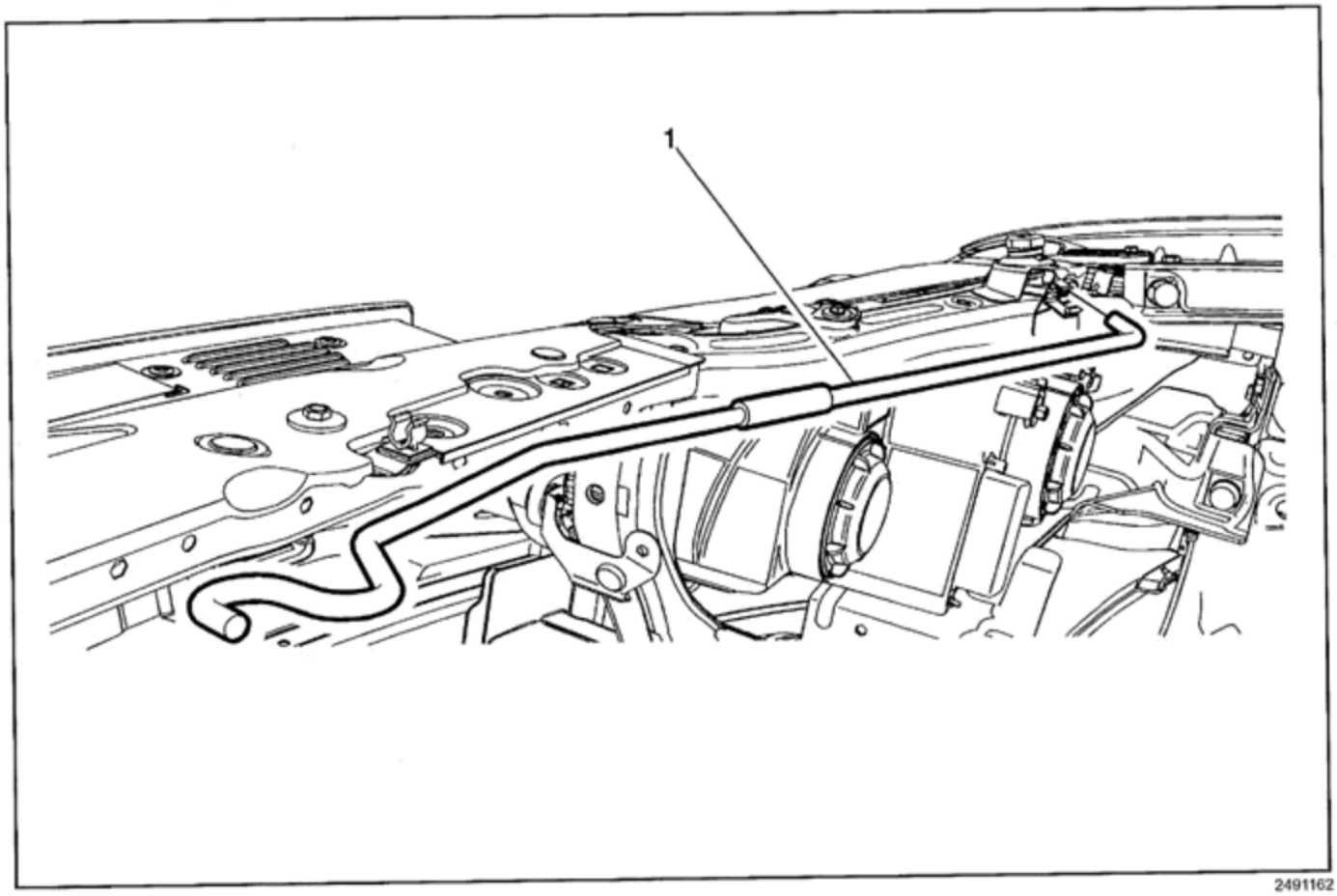


2469721

Fuel Tank Filler Door Latch Housing Replacement

Callout	Component Name
Preliminary Procedures 1. Remove the rear wheelhouse panel liner. Refer to *Rear Wheelhouse Liner Replacement (Hatchback - Right) on page 3-152* or *Rear Wheelhouse Liner Replacement (Sedan - Left) on page 3-153* or *Rear Wheelhouse Liner Replacement (Hatchback - Left) on page 3-154* or *Rear Wheelhouse Liner Replacement (Sedan - Right) on page 3-155*. 2. Remove the fuel tank filler door. Refer to *Fuel Tank Filler Door Replacement on page 3-32*.	
1	Fuel Tank Filler Door Latch Housing Retainer (Qty: 4) **Procedure** Release the 4 filler door latch housing retainers on the back of the housing.
2	Fuel Tank Filler Door Latch Housing **Procedure** Press the fuel tank filler housing outward from the fuel filler pipe and the quarter panel.

Hood Hold-Open Rod Replacement

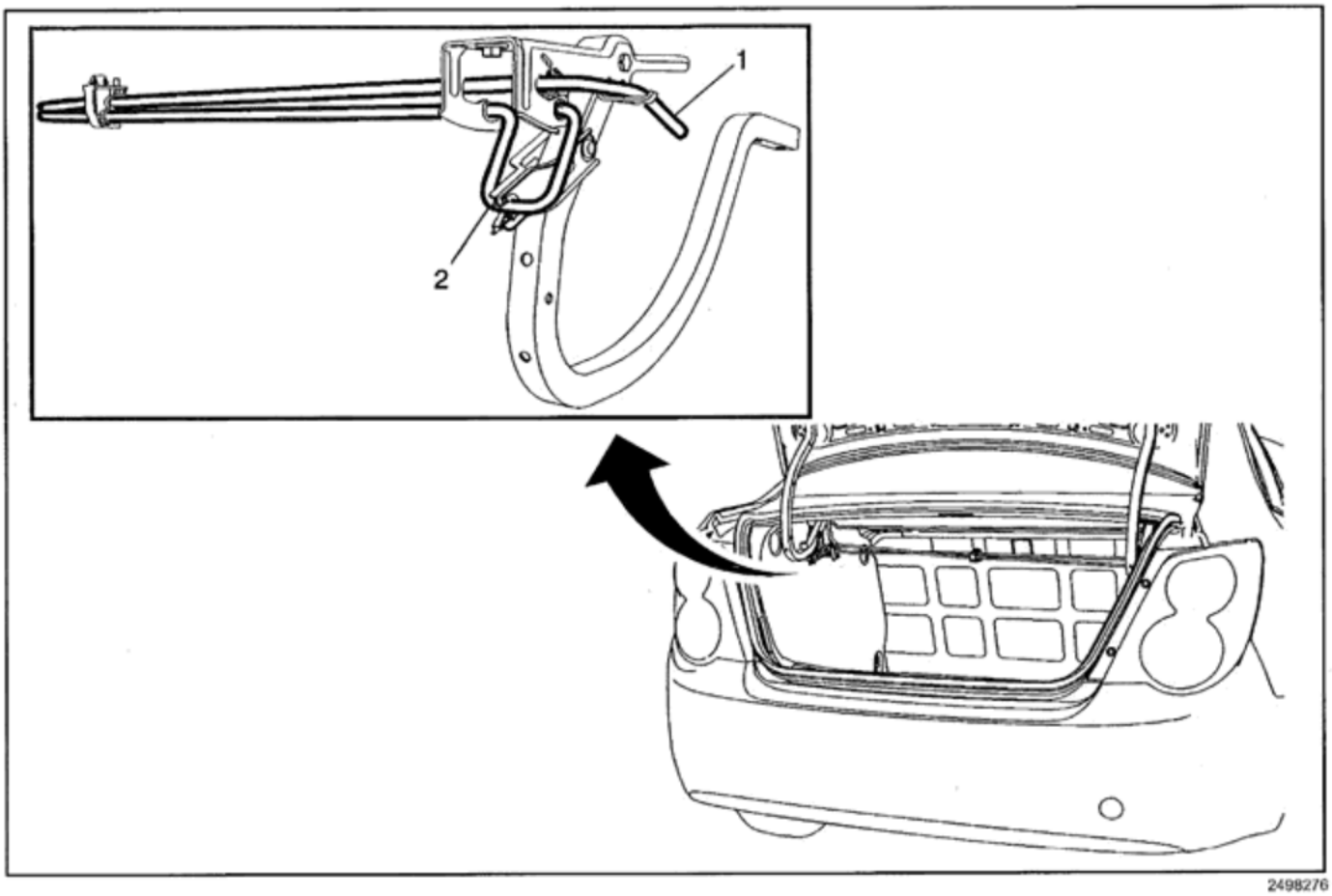


2491162

Hood Hold-Open Rod Replacement

Callout	Component Name
1	Hood Hold-Open Rod ***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.*** **Procedure** Open the retainer and remove the hood hold-open rod.

Rear Compartment Lid Hinge Torque Rod Replacement

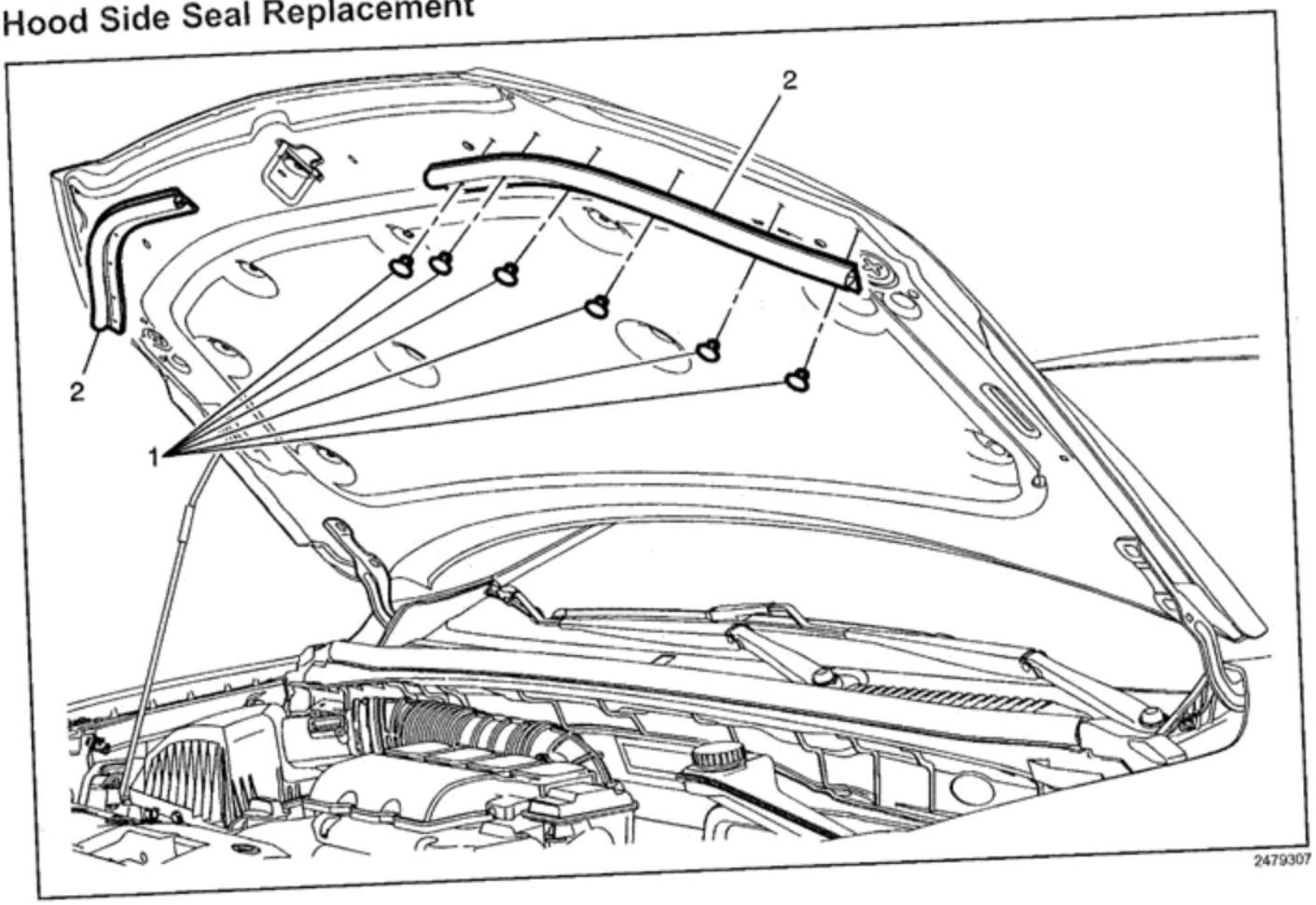


2498276

Rear Compartment Lid Hinge Torque Rod Replacement

Callout	Component Name
Warning: Refer to Hood Hold-Open Device Warning on page 0-5.	
Preliminary Procedure Open and support the rear compartment lid. **Special Tools** *BO-125* Torque Rod Lifter For equivalent regional tools, refer to *Special Tools on page 3-49*.	
1	Rear Compartment Lid Hinge Torque Rod– Right Side **Note:** Only use the special tool to remove and install the rear compartment lid hinge torque rod.
2	Rear Compartment Lid Hinge Torque Rod– Left Side **Note:** Only use the special tool to remove and install the rear compartment lid hinge torque rod.

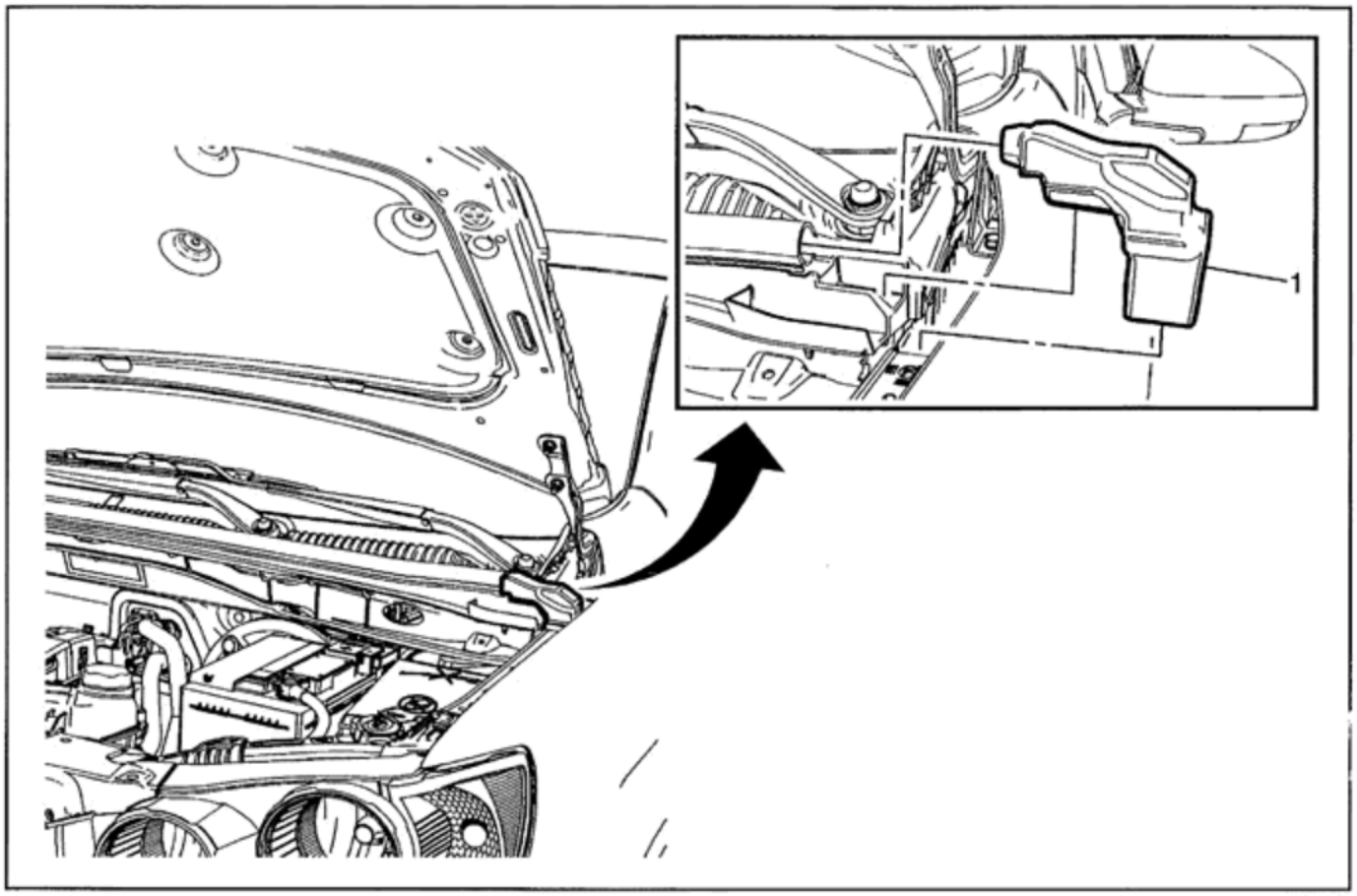
Hood Side Seal Replacement



Hood Side Seal Replacement

Callout	Component Name
1	Hood Side Seal Push-In Retainer (Qty: 6)
2	Hood Side Seal

Hood Rear Seal Replacement

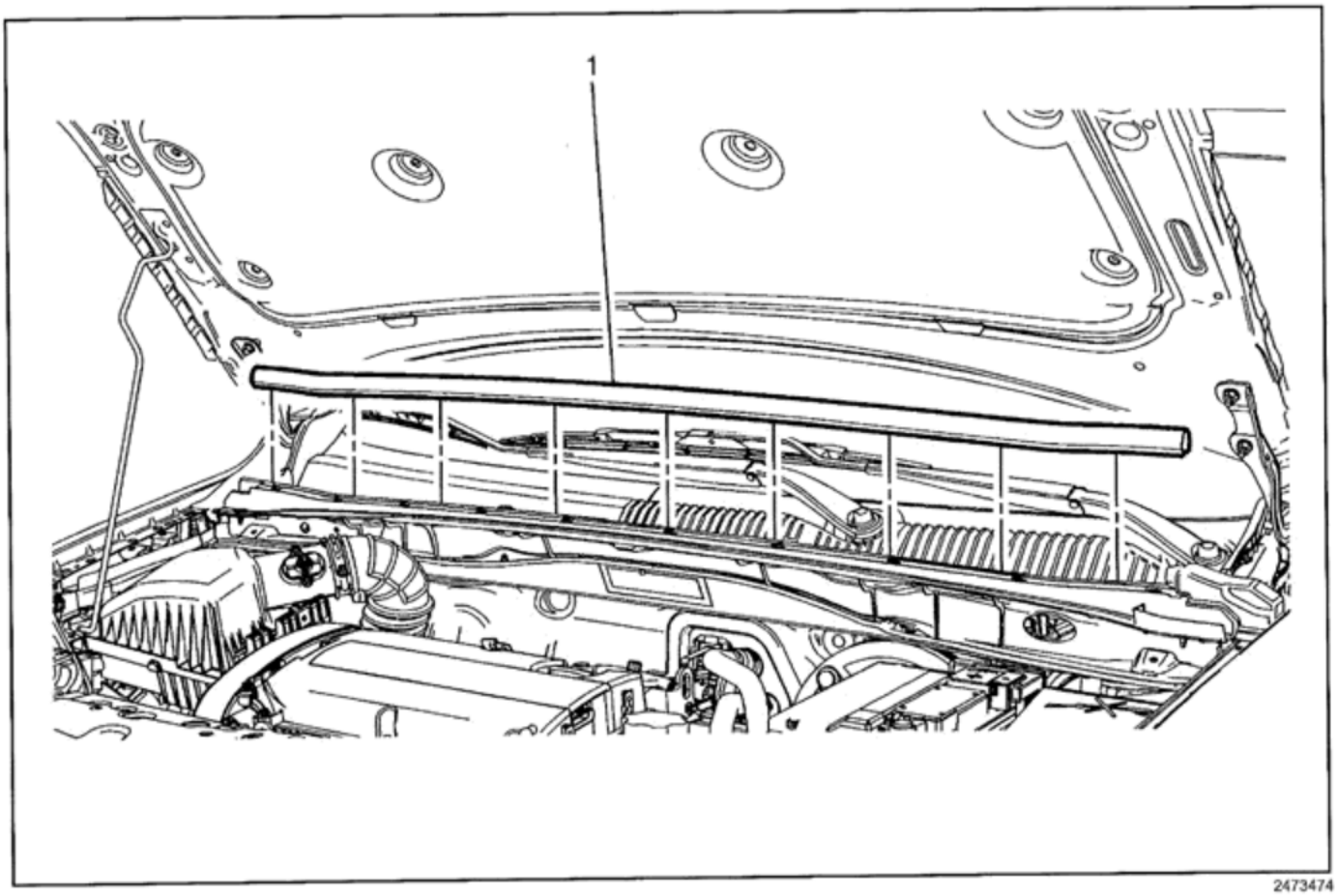


2473413

Hood Rear Seal Replacement

Callout	Component Name
1	Hood Rear Seal **Procedure** 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 air inlet panel using a 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. 4. Position the end of the seal into the end of the hood rear weatherstrip.

Hood Rear Weatherstrip Replacement

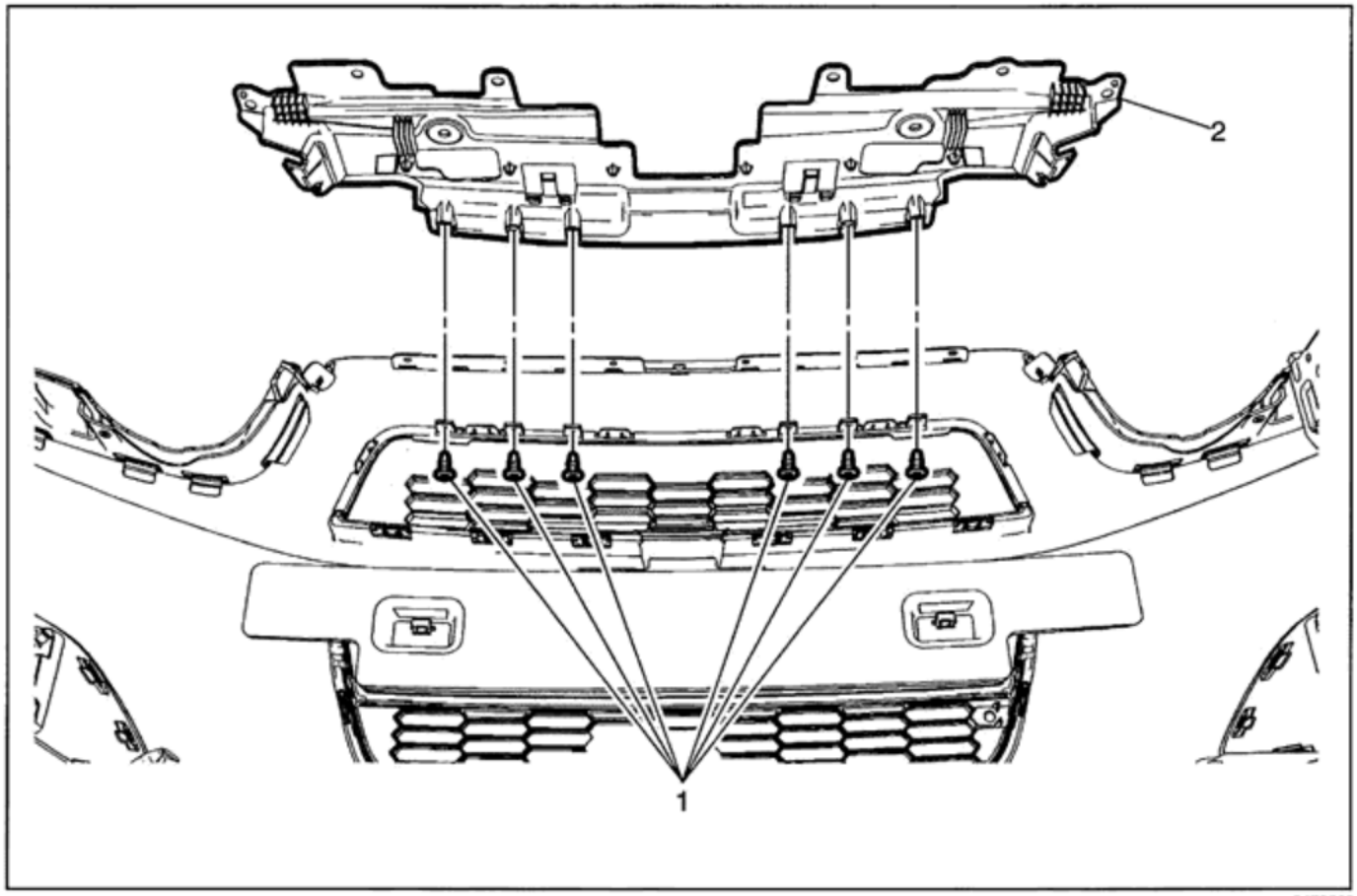


2473474

Hood Rear Weatherstrip Replacement

Callout	Component Name
1	Hood Rear Weatherstrip **Procedure** The hood rear weatherstrip is held in place with 10 plastic retainers that are part of the air inlet grille. Carefully pull the weatherstrip to the right/left to release from the retainers on the air inlet grille.

Radiator Grille Bumper Replacement

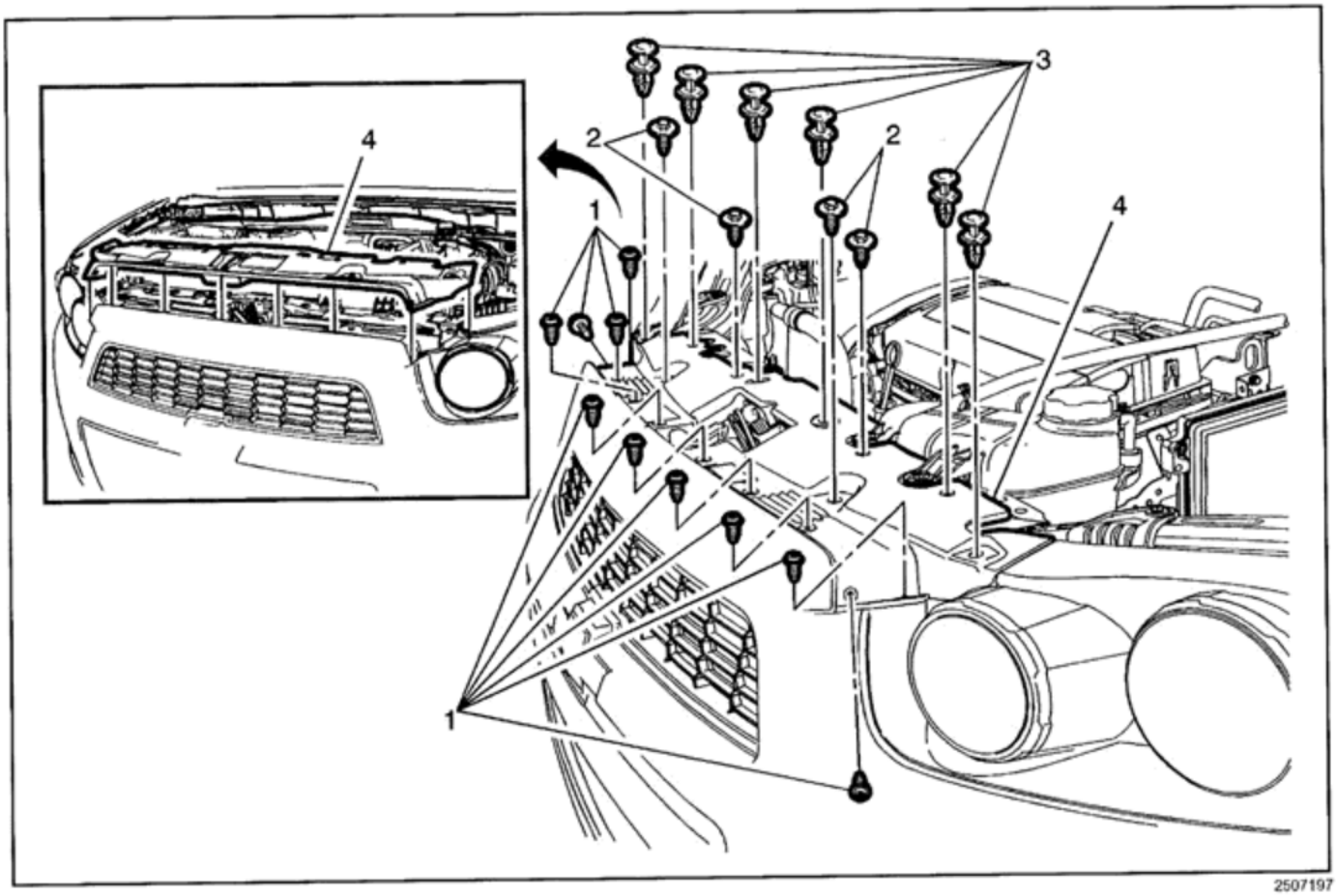


2479283

Radiator Grille Bumper Replacement

Callout	Component Name
Preliminary Procedure Remove the front bumper fascia. Refer to *Front Bumper Fascia Replacement on page 3-55*.	
1	Radiator Grille Bumper Screw (Qty: 6) **Caution:** Refer to *Fastener Caution on page 0-8*.
2	Radiator Grille Bumper **Procedure** Pull gently on each side of the radiator grille bumper to disengage from the front bumper fascia.

Front Opening Upper Cover Replacement

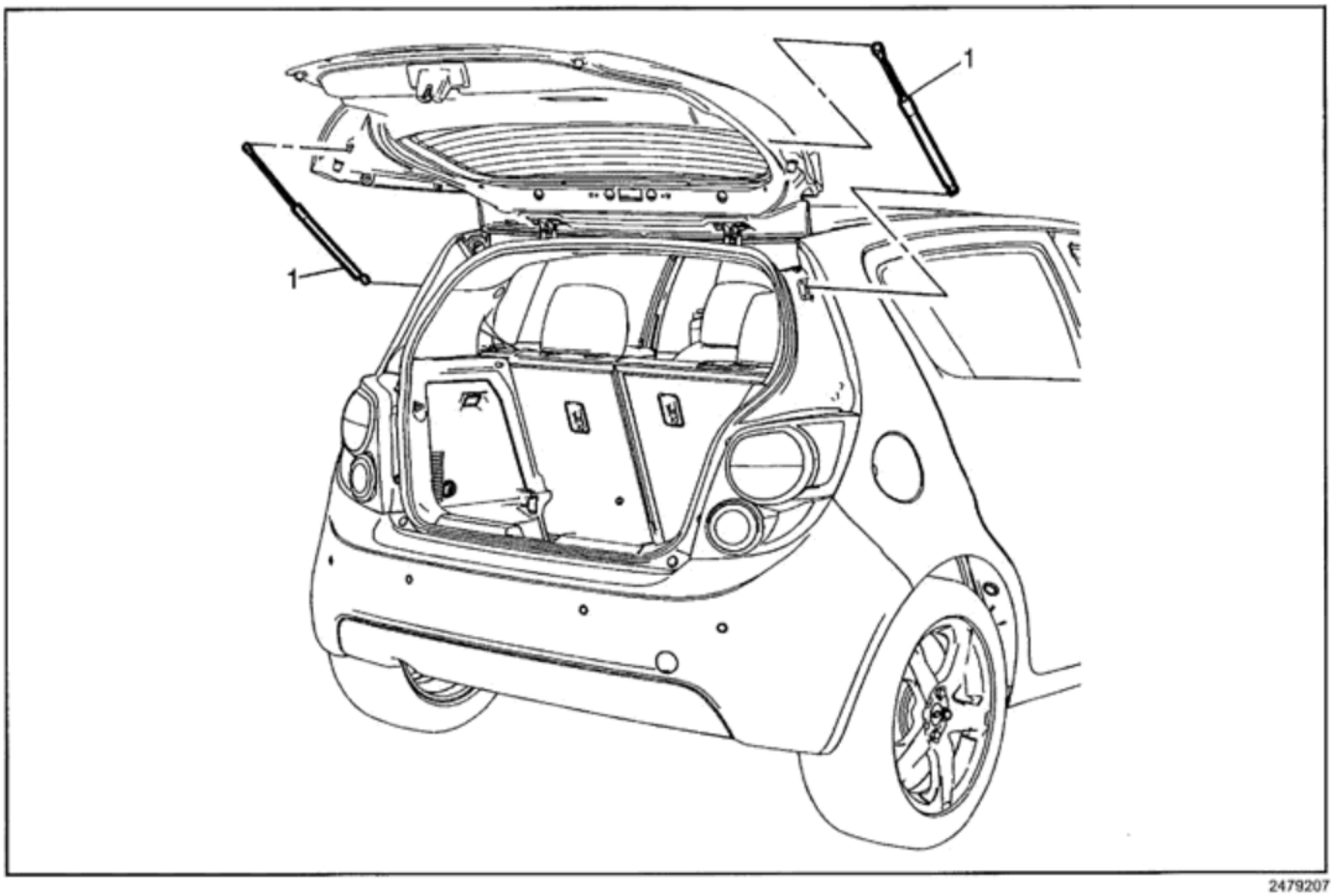


2507197

Front Opening Upper Cover Replacement

Callout	Component Name
1	Radiator Opening Upper Cover Screw (Qty: 10) **Caution:** Refer to *Fastener Caution on page 0-8*.
2	Radiator Opening Upper Cover Bolt (Qty: 4) **Tighten** 4 N•m (36 lb in)
3	Radiator Opening Upper Cover Push-In Retainer (Qty: 6)
4	Radiator Opening Upper Cover

Liftgate Strut Replacement

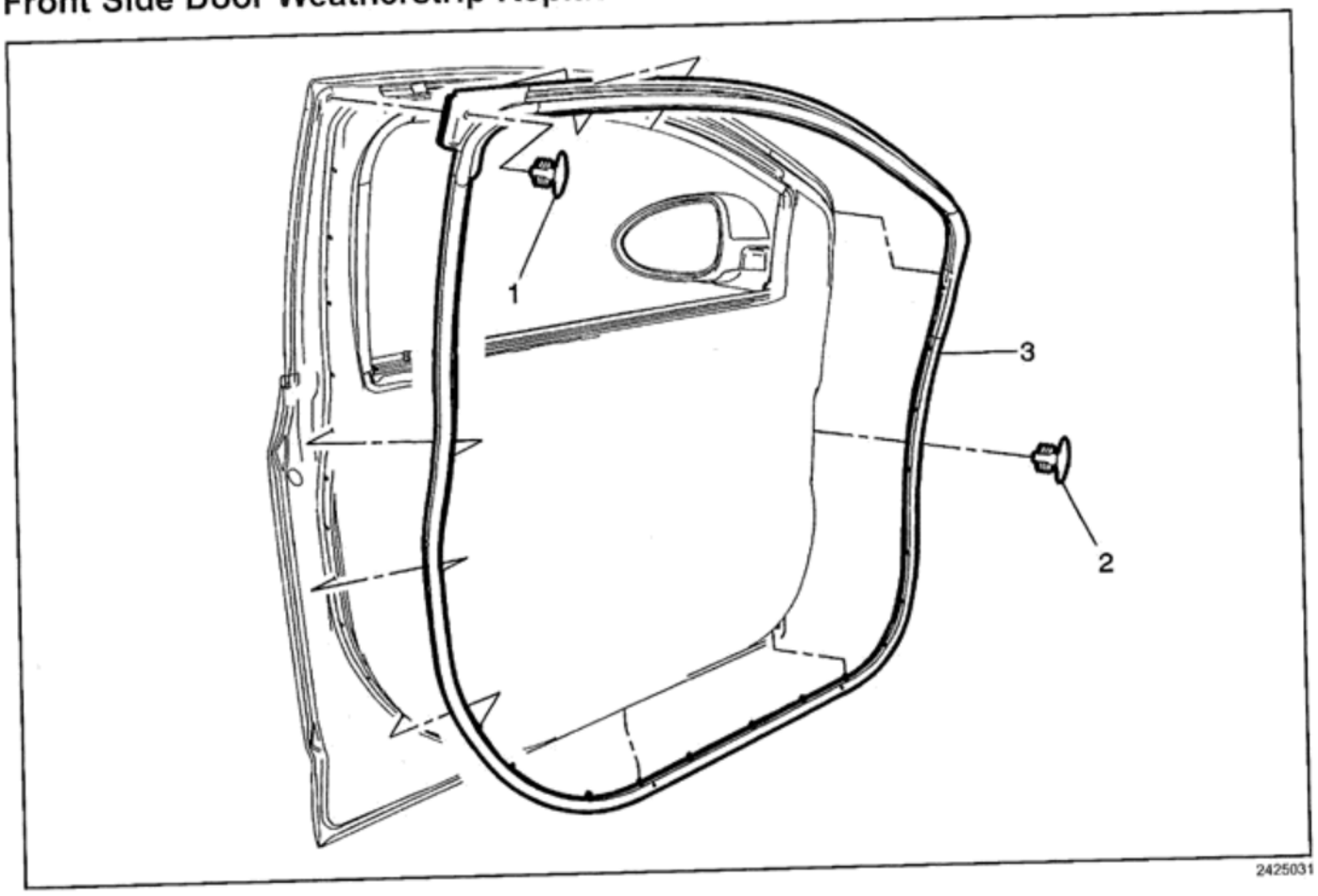


2479207

Liftgate Strut Replacement

Callout	Component Name
1	Liftgate Strut ***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.*** **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. **Procedure** 1. Release the locking tabs on the strut. 2. Ensure the clip is fully seated when the strut is reinstalled. If the clip cannot be fully seated, a new strut should be installed.

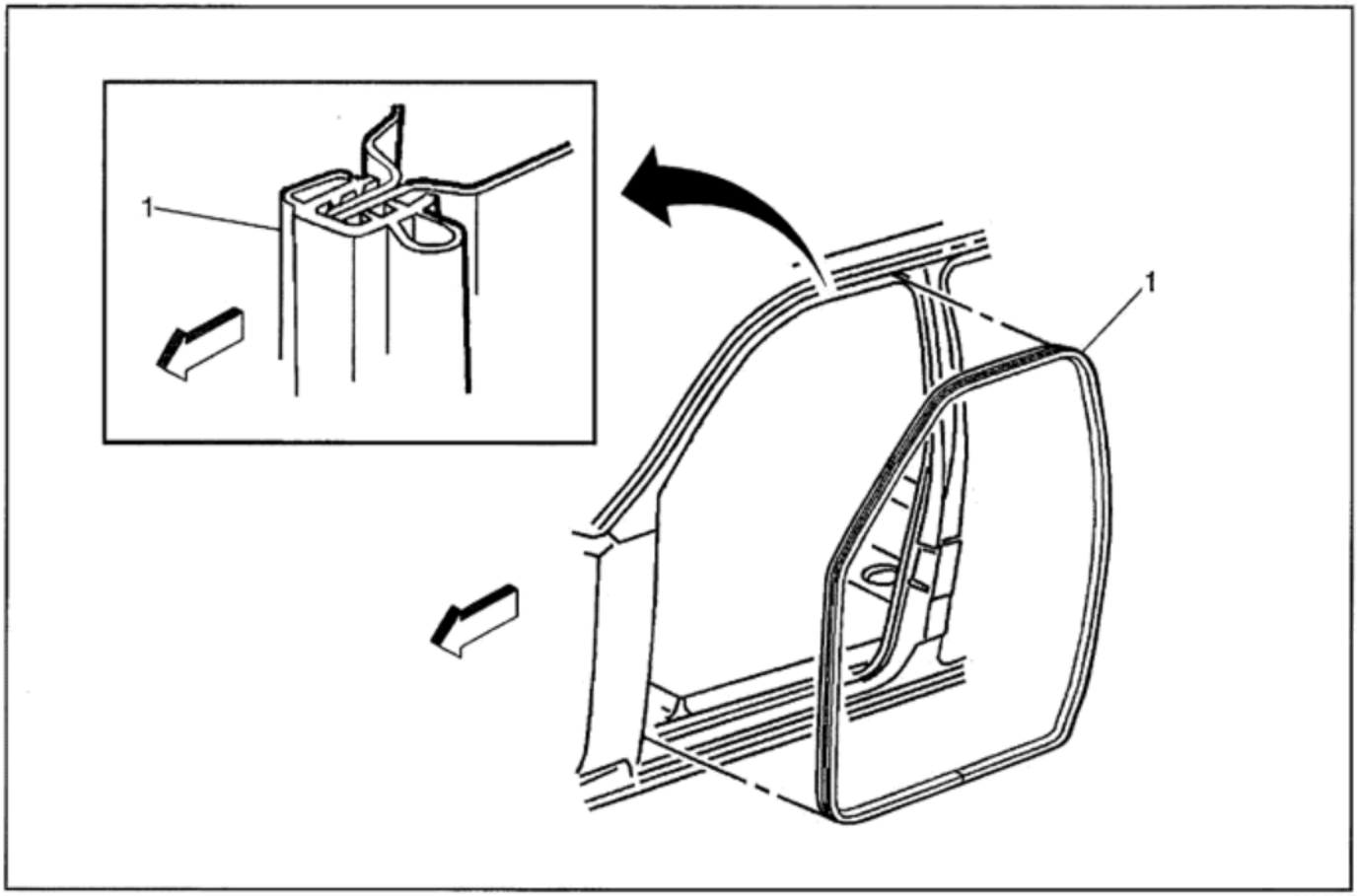
Front Side Door Weatherstrip Replacement - Door Side



Front Side Door Weatherstrip Replacement - Door Side

Callout	Component Name
1	Front Side Door Weatherstrip Upper Retainer **Procedure** 1. Open the front side door to the fully open position. 2. Remove the front side door check link bolt from the body side only . Refer to *Front Side Door Check Link Replacement on page 3-30*. 3. Use a suitable tool, remove the push-in retainer from the upper rear corner of the door. 4. Pull the weatherstrip out of the door retainer.
2	Front Side Door Weatherstrip Retainers (Qty :21)
3	Front Side Door Weatherstrip **Procedure** 1. Ensure that the weatherstrip is fully seated in the door frame retainer. 2. Verify proper door operation.

Front Side Door Weatherstrip Replacement - Body Side

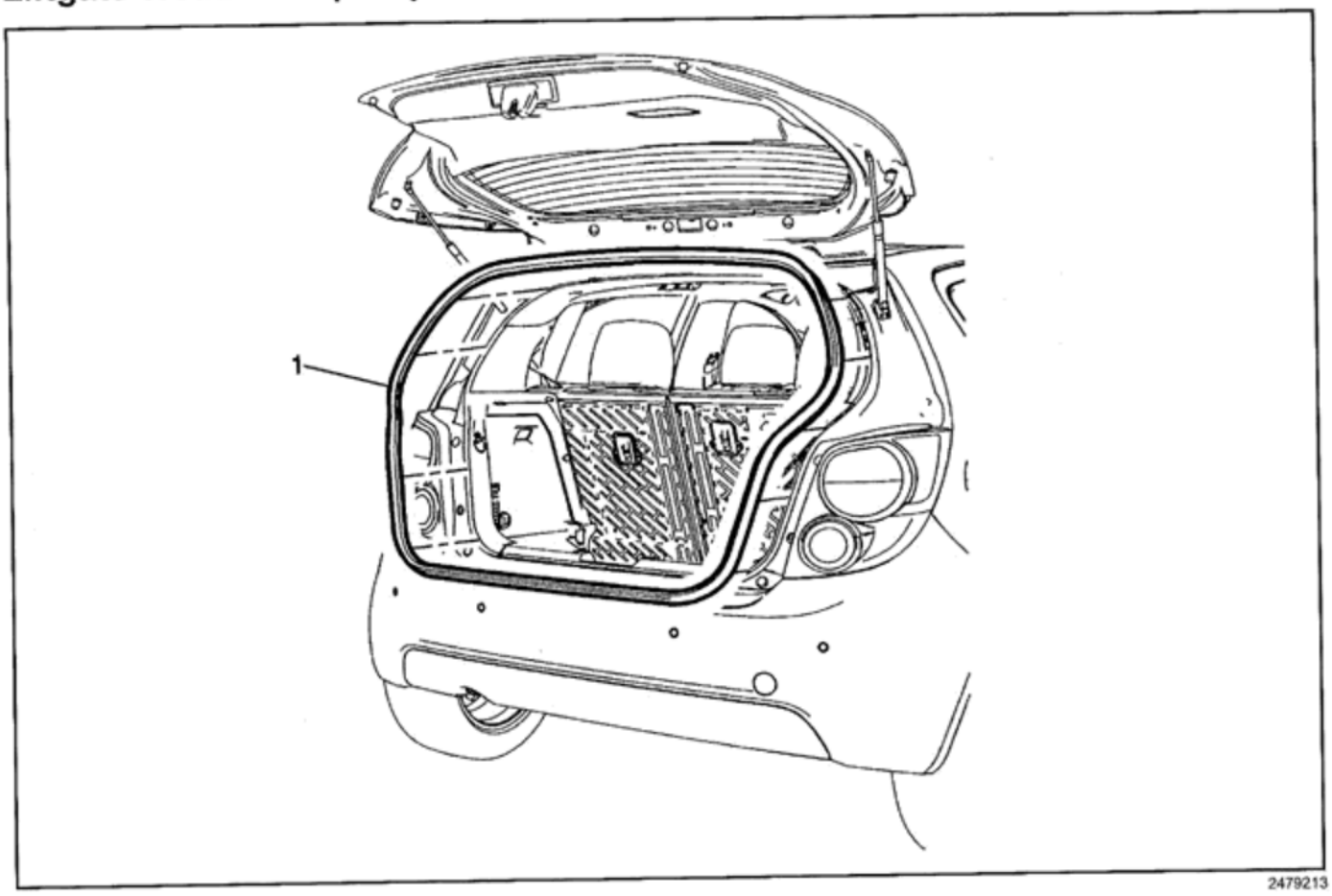


2234097

Front Side Door Weatherstrip Replacement - Body Side

Callout	Component Name
Preliminary Procedure 1. Remove the upper center pillar trim. Refer to *Center Pillar Upper Trim Panel Replacement on page 2-75.* 2. Remove the lower center pillar trim. Refer to *Center Pillar Lower Trim Panel Replacement on page 2-76* 3. Remove the carpet retainer. Refer to *Front Side Door Opening Floor Carpet Retainer Replacement on page 2-20.*	
1	Front Side Door Weatherstrip Body Side **Preliminary Procedure** 1. Starting in the center bottom of the weatherstrip, pull the weatherstrip upward and away from the pinch-weld flange. 2. Start in the center bottom of the pinch-weld flange. 3. Ensure that the weatherstrip and retainers are fully seated on the flange before installing the front carpet retainer. 4. Inspect the door for proper operation.

Liftgate Weatherstrip Replacement

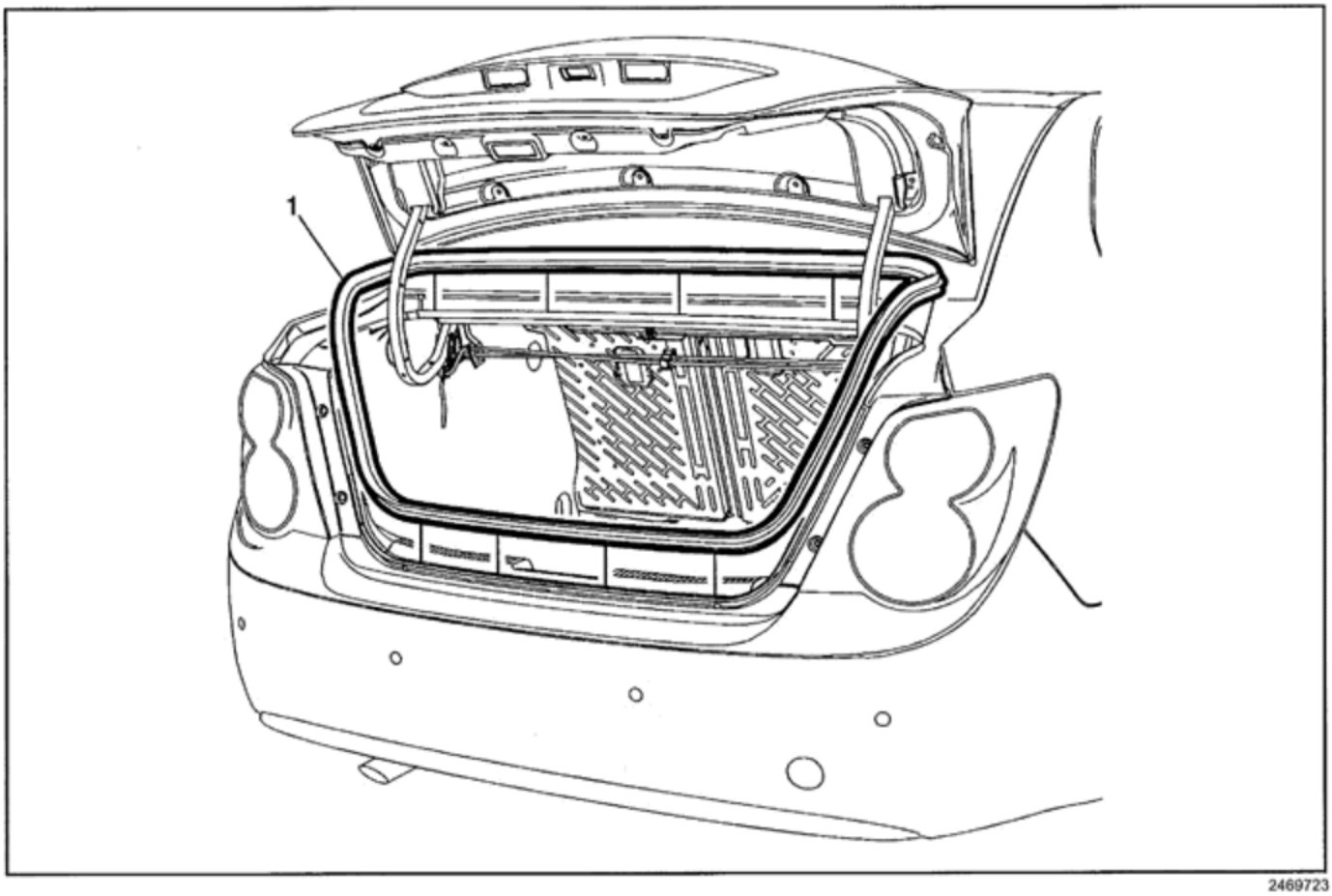


2479213

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 Compartment Lid Weatherstrip Replacement

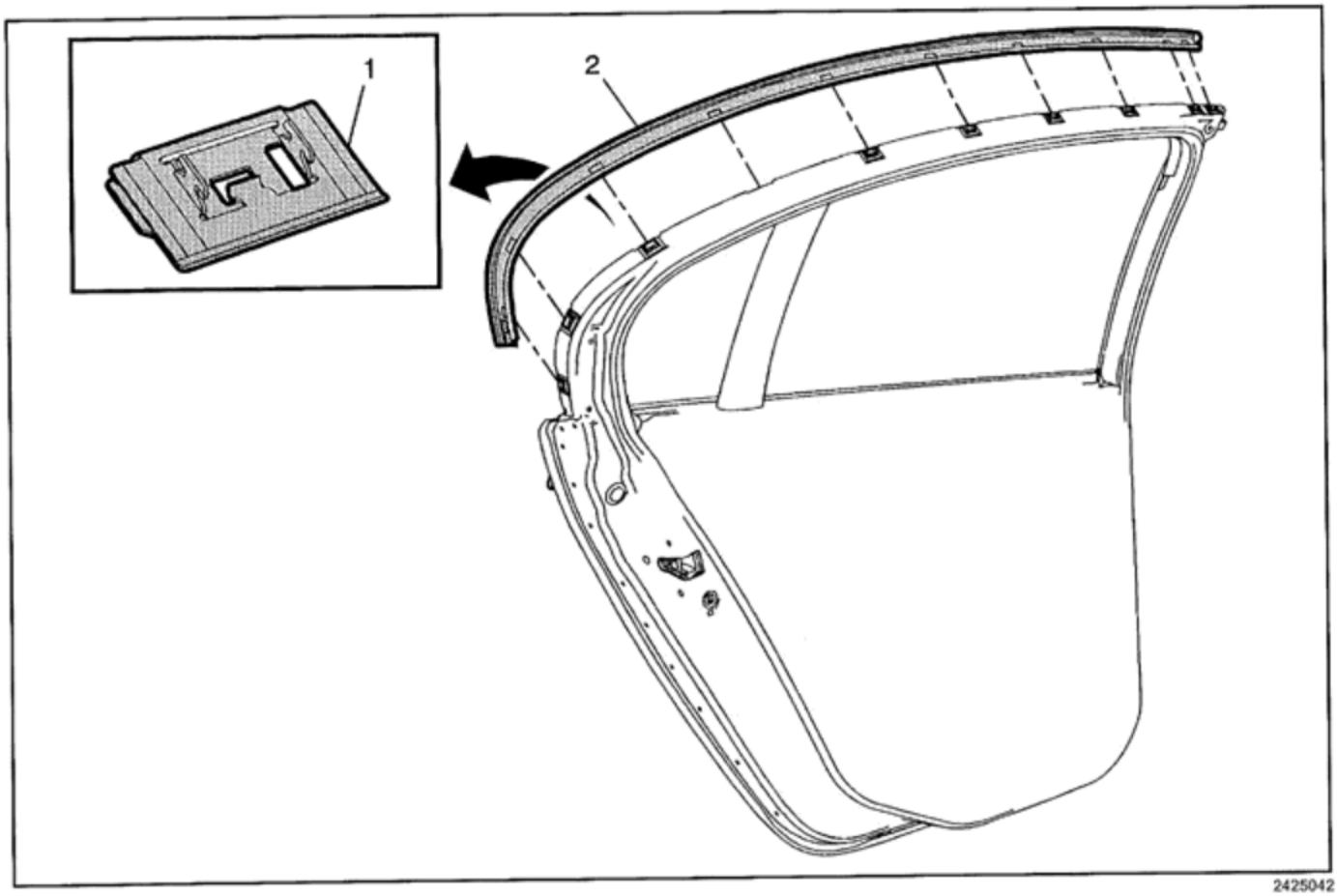


2469723

Rear Compartment Lid Weatherstrip Replacement

Callout	Component Name
1	Rear Compartment Lid Weatherstrip **Procedure** 1. Disconnect any electrical connector. 2. 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 Upper Front Auxiliary Weatherstrip Retainer Replacement

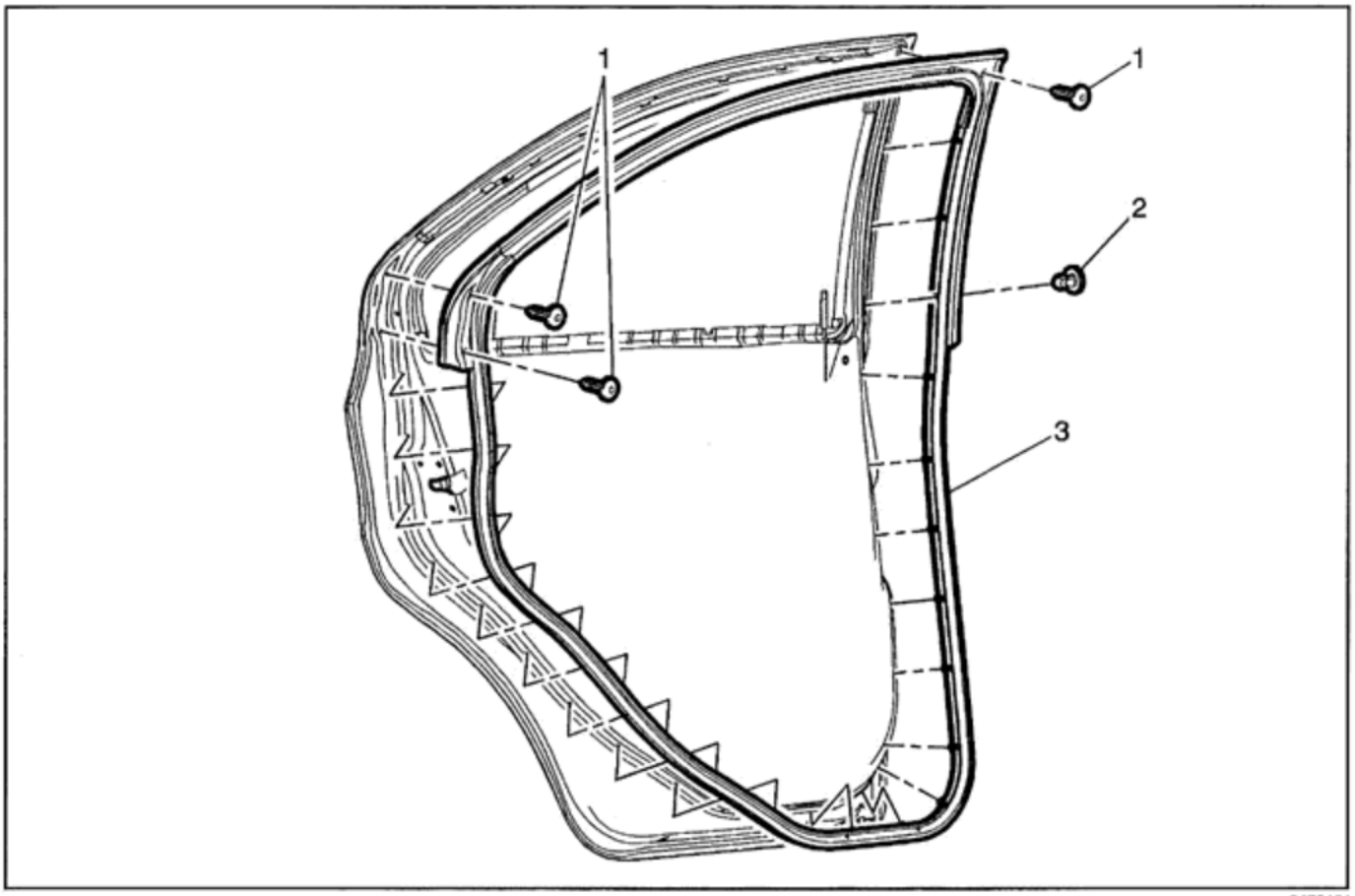


2425042

Rear Side Door Upper Front Auxiliary Weatherstrip Retainer Replacement

Callout	Component Name
1	Front Side Door Upper Front Auxiliary Weatherstrip Retainer (Qty: 10) **Note:** If the retainers are damaged when removing they must be replaced.
2	Front Side Door Upper Front Auxiliary Weatherstrip Retainer **Procedure** 1. Rear side door weatherstrip door side. Refer to *Rear Side Door Weatherstrip Replacement - Door Side on page 3-47*. It is only necessary to remove the upper second of the weatherstrip from the door to replace the weatherstrip retainer. 2. Starting in the center top of the weatherstrip, pull the weatherstrip upward and away from the door retainer. 3. Inspect the door for proper operation and sealing.

Rear Side Door Weatherstrip Replacement - Door Side

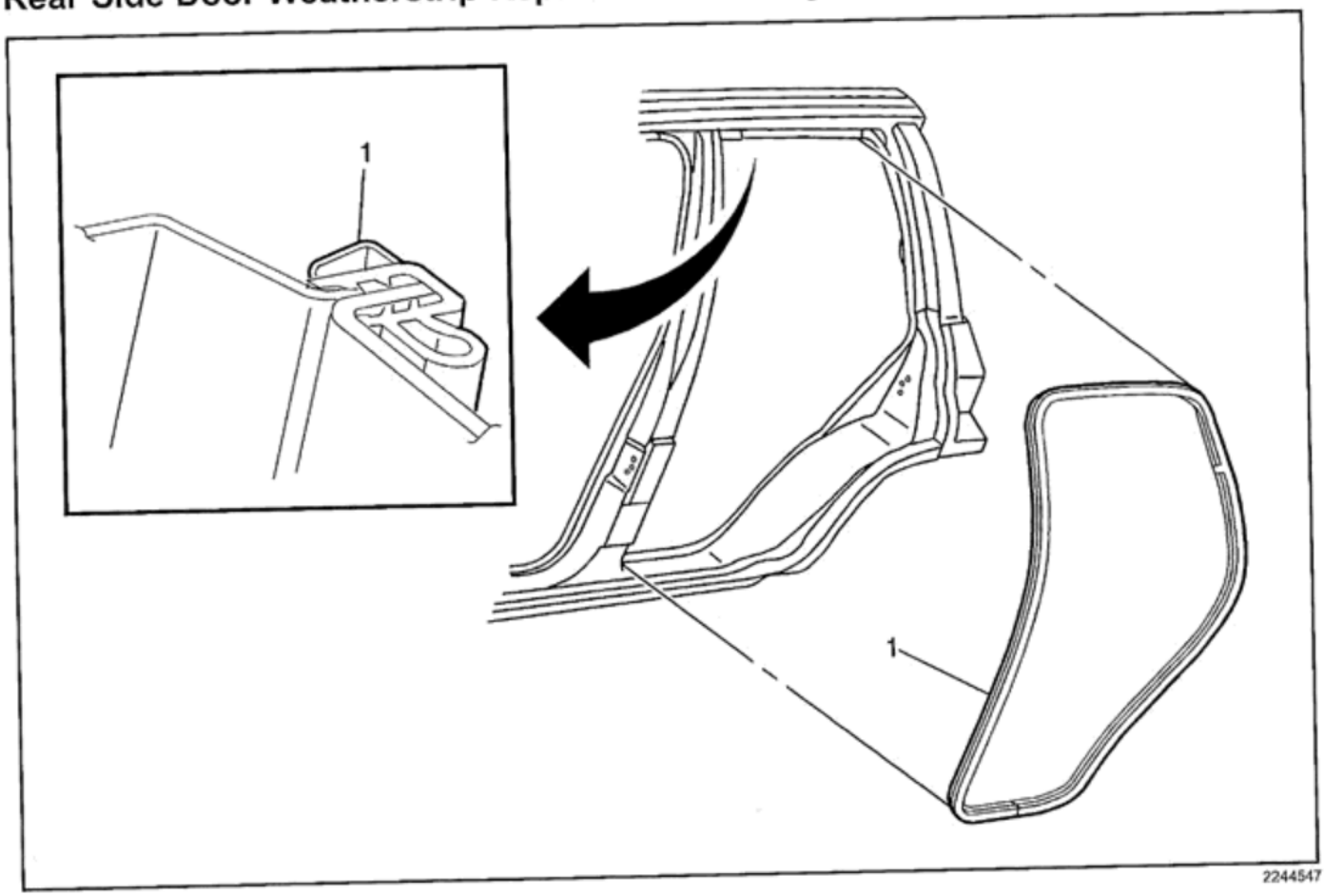


2476191

Rear Side Door Weatherstrip Replacement - Door Side

Callout	Component Name
1	Rear Side Door Weatherstrip Upper Retainers (Qty :3) **Procedure** 1. Open the front side door to the fully open position. 2. Remove the front side door check link bolt from the body side only . Refer to *Front Side Door Check Link Replacement on page 3-30*. 3. Use a suitable tool, remove the push-in retainers from the corners of the door. 4. Pull the weatherstrip out of the door retainer.
2	Rear Side Door Weatherstrip Retainers (Qty :21)
3	Rear Side Door Weatherstrip **Procedure** 1. Ensure that the weatherstrip is fully seated in the door frame retainer. 2. Verify proper door operation.

Rear Side Door Weatherstrip Replacement - Body Side



Rear Side Door Weatherstrip Replacement - Body Side

Callout	Component Name
Preliminary Procedures 1. Remove the upper center pillar trim. Refer to *Center Pillar Upper Trim Panel Replacement on page 2-75.* 2. Remove the lower center pillar trim. Refer to *Center Pillar Lower Trim Panel Replacement on page 2-76* 3. Remove the carpet retainer. Refer to *Rear Side Door Opening Floor Carpet Retainer Replacement on page 2-21.*	
1	Rear Side Door Weatherstrip Body Side **Preliminary Procedure** 1. Starting in the center bottom of the weatherstrip, pull the weatherstrip upward and away from the pinch-weld flange. 2. Start in the center bottom of the pinch-weld flange. 3. Ensure that the weatherstrip and retainers are fully seated on the flange before installing the front carpet retainer. 4. Inspect the door for proper operation.

Description and Operation

Hood Ajar Indicator Description and Operation

Hood Ajar Switch

The body control module (BCM) applies B+ to the hood ajar signal circuit and monitors the voltage to determine the position of the hood. When the hood is closed, the switch is open and voltage remains high. When the hood is open, the switch is closed and the voltage is pulled low.

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 DIC or the hood ajar indicator will be illuminated.

Special Tools and Equipment

Illustration	Tool Number/ Description
 2027391	BO-125 KM-125 Torque Rod Lifter