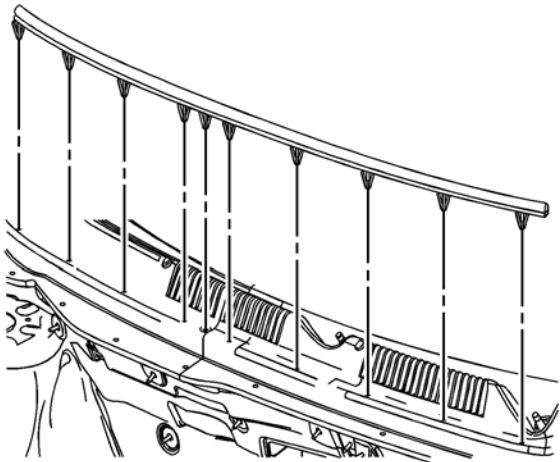


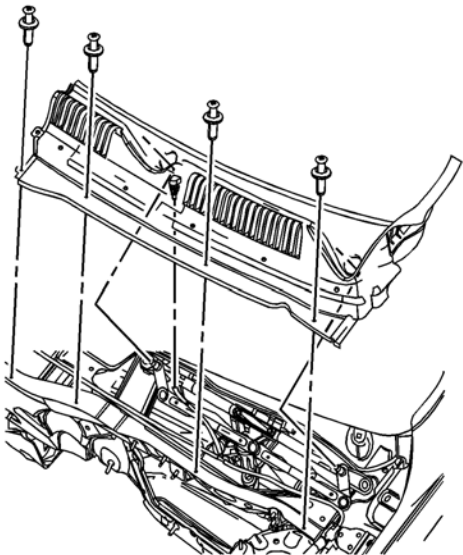
Air Inlet Grille Panel Replacement

Removal Procedure

1. Raise the hood.
2. Remove the wiper arms. Refer to [Wiper Arm Replacement](#) .

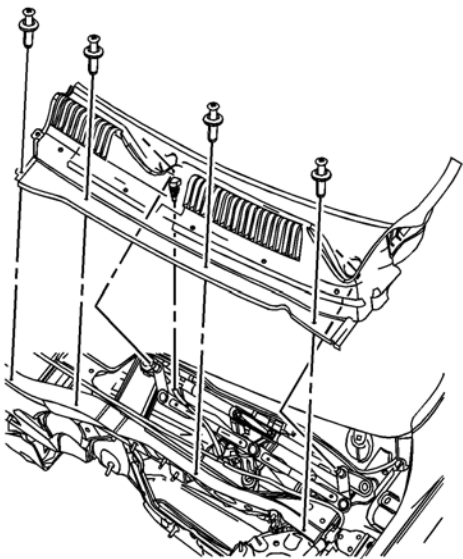


3. Remove the air inlet grille panel sealing strip.

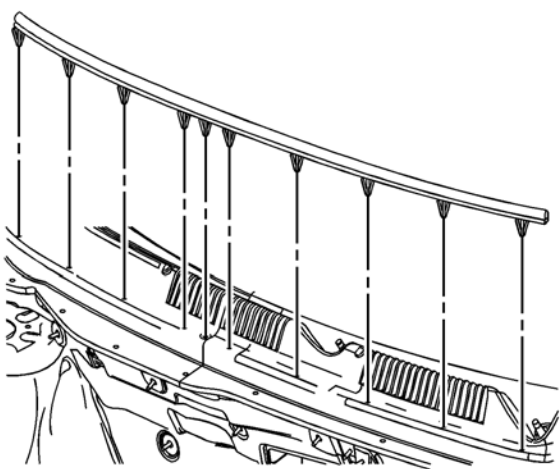


4. Remove the air inlet grille panel retaining clips, and the two-piece grille.

Installation Procedure



1. Install the two-piece grille with the air inlet grille panel retaining clips.



2. Install the air inlet grille panel sealing strip.
3. Install the wiper arms. Refer to [Wiper Arm Replacement](#) .
4. Lower the hood.

Battery Negative Cable Disconnection and Connection

Removal Procedure

Caution: Unless directed otherwise, the ignition and start switch must be in the OFF or LOCK position, and all electrical loads must be OFF before servicing any electrical component. Disconnect the negative battery cable to prevent an electrical spark should a tool or equipment come in contact with an exposed electrical terminal. Failure to follow these precautions may result in personal injury and/or damage to the vehicle or its components.

1. Record all preset and theft codes, (if equipped), from the radio.
2. Turn the ignition switch to the OFF position.
3. Verify that all the electrical components are OFF such as interior lights, all doors are closed, the underhood lamp , etc.
4. Loosen the clamping bolt from the battery negative cable.
5. Remove the battery negative cable from the battery.
6. Position the battery negative cable away from any body ground.

Installation Procedure

1. Verify that all the electrical components are OFF such as interior lights, all doors are closed, the underhood lamp , etc.
2. Clean corrosion from the negative battery cable using a metal brush.
3. Install the battery negative cable to the battery.

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

4. Install the clamping bolt to the negative cable.

Tighten
Tighten the battery negative cable to 4.5 N·m (40 lb in).

5. Reset the radio stations and the clock.

Battery Negative Cable Disconnection and Connection

Removal Procedure

Caution: Unless directed otherwise, the ignition and start switch must be in the OFF or LOCK position, and all electrical loads must be OFF before servicing any electrical component. Disconnect the negative battery cable to prevent an electrical spark should a tool or equipment come in contact with an exposed electrical terminal. Failure to follow these precautions may result in personal injury and/or damage to the vehicle or its components.

1. Record all preset and theft codes, (if equipped), from the radio.
2. Turn the ignition switch to the OFF position.
3. Verify that all the electrical components are OFF such as interior lights, all doors are closed, the underhood lamp , etc.
4. Loosen the clamping bolt from the battery negative cable.
5. Remove the battery negative cable from the battery.
6. Position the battery negative cable away from any body ground.

Installation Procedure

1. Verify that all the electrical components are OFF such as interior lights, all doors are closed, the underhood lamp , etc.
2. Clean corrosion from the negative battery cable using a metal brush.
3. Install the battery negative cable to the battery.

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

4. Install the clamping bolt to the negative cable.

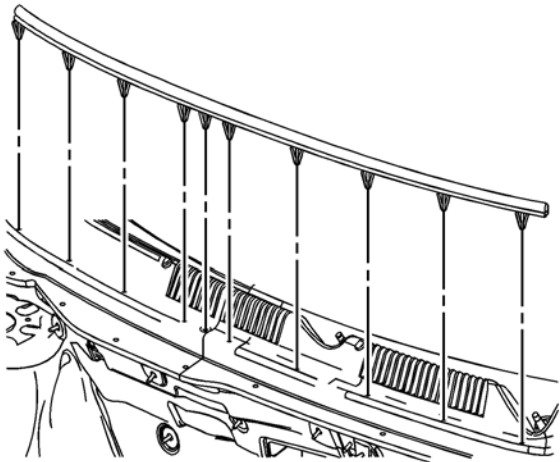
Tighten
Tighten the battery negative cable to 4.5 N·m (40 lb in).

5. Reset the radio stations and the clock.

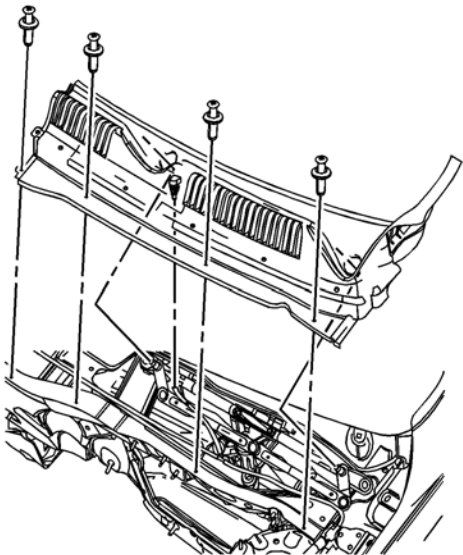
Air Inlet Grille Panel Replacement

Removal Procedure

1. Raise the hood.
2. Remove the wiper arms. Refer to [Wiper Arm Replacement](#) .

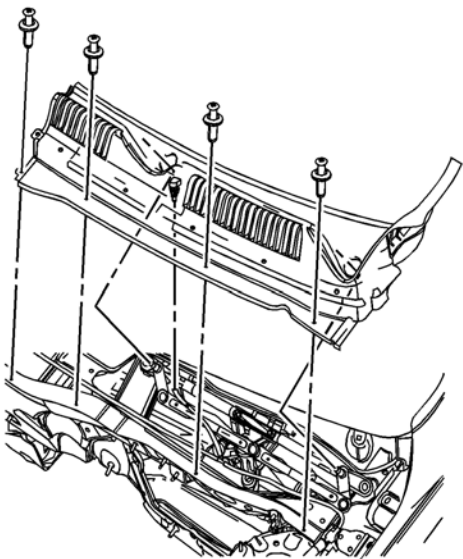


3. Remove the air inlet grille panel sealing strip.

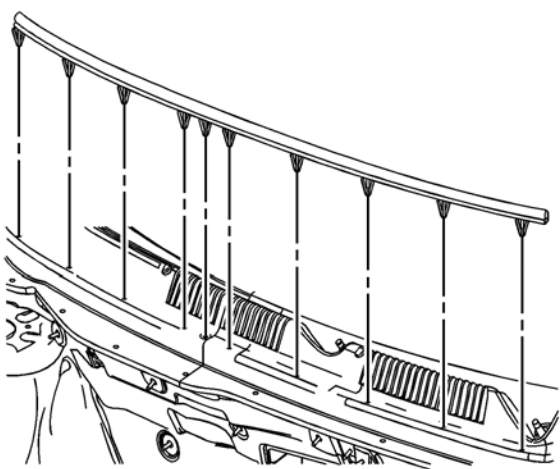


4. Remove the air inlet grille panel retaining clips, and the two-piece grille.

Installation Procedure



1. Install the two-piece grille with the air inlet grille panel retaining clips.



2. Install the air inlet grille panel sealing strip.
3. Install the wiper arms. Refer to [Wiper Arm Replacement](#) .
4. Lower the hood.

Battery Negative Cable Disconnection and Connection

Removal Procedure

Caution: Unless directed otherwise, the ignition and start switch must be in the OFF or LOCK position, and all electrical loads must be OFF before servicing any electrical component. Disconnect the negative battery cable to prevent an electrical spark should a tool or equipment come in contact with an exposed electrical terminal. Failure to follow these precautions may result in personal injury and/or damage to the vehicle or its components.

1. Record all preset and theft codes, (if equipped), from the radio.
2. Turn the ignition switch to the OFF position.
3. Verify that all the electrical components are OFF such as interior lights, all doors are closed, the underhood lamp , etc.
4. Loosen the clamping bolt from the battery negative cable.
5. Remove the battery negative cable from the battery.
6. Position the battery negative cable away from any body ground.

Installation Procedure

1. Verify that all the electrical components are OFF such as interior lights, all doors are closed, the underhood lamp , etc.
2. Clean corrosion from the negative battery cable using a metal brush.
3. Install the battery negative cable to the battery.

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

4. Install the clamping bolt to the negative cable.

Tighten
Tighten the battery negative cable to 4.5 N·m (40 lb in).

5. Reset the radio stations and the clock.

Battery Negative Cable Disconnection and Connection

Removal Procedure

Caution: Unless directed otherwise, the ignition and start switch must be in the OFF or LOCK position, and all electrical loads must be OFF before servicing any electrical component. Disconnect the negative battery cable to prevent an electrical spark should a tool or equipment come in contact with an exposed electrical terminal. Failure to follow these precautions may result in personal injury and/or damage to the vehicle or its components.

1. Record all preset and theft codes, (if equipped), from the radio.
2. Turn the ignition switch to the OFF position.
3. Verify that all the electrical components are OFF such as interior lights, all doors are closed, the underhood lamp , etc.
4. Loosen the clamping bolt from the battery negative cable.
5. Remove the battery negative cable from the battery.
6. Position the battery negative cable away from any body ground.

Installation Procedure

1. Verify that all the electrical components are OFF such as interior lights, all doors are closed, the underhood lamp , etc.
2. Clean corrosion from the negative battery cable using a metal brush.
3. Install the battery negative cable to the battery.

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

4. Install the clamping bolt to the negative cable.

Tighten
Tighten the battery negative cable to 4.5 N·m (40 lb in).

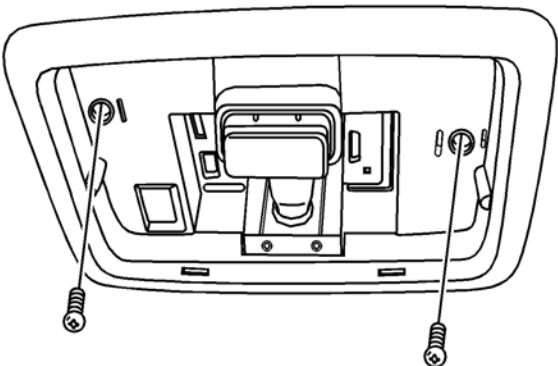
5. Reset the radio stations and the clock.

Dome Lamp Replacement

Removal Procedure

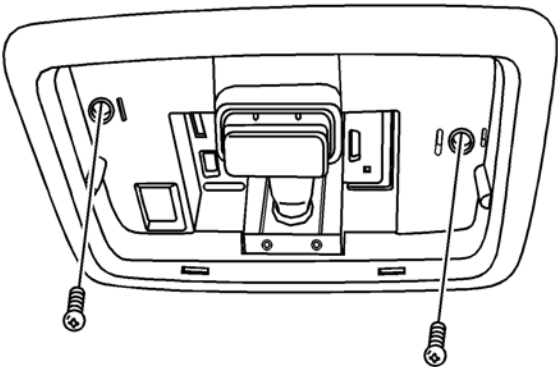
Caution: Refer to [Battery Disconnect Caution](#) in Cautions and Notices.

1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .



2. Pry off the dome lamp lens by inserting a screwdriver into the recess along the edge of the lens.
3. Remove the screws and the dome lamp housing from the headliner.
4. Disconnect the electrical connector.
5. Remove the bulb.

Installation Procedure



1. Install the replacement bulb.
2. Connect the electrical connector.

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.

3. Install the dome lamp housing to the headliner with the screws.

Tighten

Tighten the dome lamp housing screw to 2 N·m (18 lb in).

4. Press the dome lamp lens onto the housing.
5. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#)

Exterior Windnoise

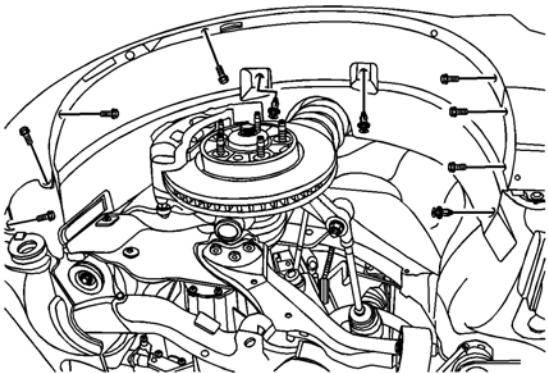
Caution: An assistant should drive the vehicle while the technician checks for the location of the reported condition. Otherwise, personal injury could result.

Exterior windnoise is louder when the vehicle is driven with one or more windows down. Exterior windnoise occurs when air passes over the body panels, the seams, or the openings. Use the following items during the test drive in order to aid in the detection of leaks:

- Mechanic's stethoscope or heater hose
 - Masking tape-51 mm (2 in) width
 - Strip caulk
 - A water soluble marking pencil
 1. While driving, determine the location of the exterior windnoise by lowering one window at a time. If the location corresponds with the condition in step 2, pull over and make a temporary repair with 51 mm (2 in) wide masking tape.
 2. Tape over the gaps and the moldings one at a time. Test between each taping. Taping over the gaps and moldings will correct the condition.
 3. Temporarily repair the condition with masking tape. Adjust the tape when needed.
 4. Continue testing in order to determine if the noise has been eliminated or other leak areas exist.
 5. When all the reported leak conditions are located, make permanent repairs using the proper alignment techniques and the sealing materials.

Fender Liner Replacement

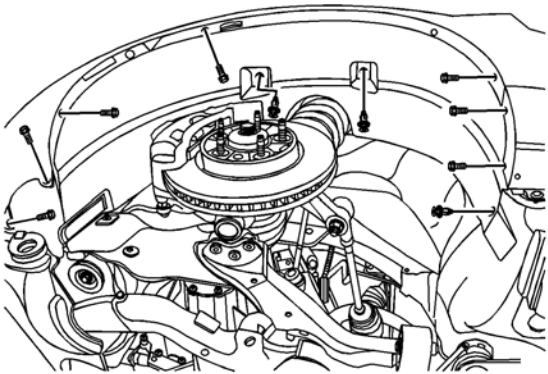
Removal Procedure



1. Raise and suitably support the vehicle. Refer to [Lifting and Jacking the Vehicle](#) .
2. Remove the front wheel. Refer to [Tire and Wheel Removal and Installation](#) .
3. Remove the front mud guard. Refer to [Guard Mud - Rear \(One or Both\) Replacement](#) .
4. Remove the engine protection shield. Refer to [Engine Protection Shield Replacement](#) .
5. Remove the screws and the front fender liner.

Installation Procedure

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



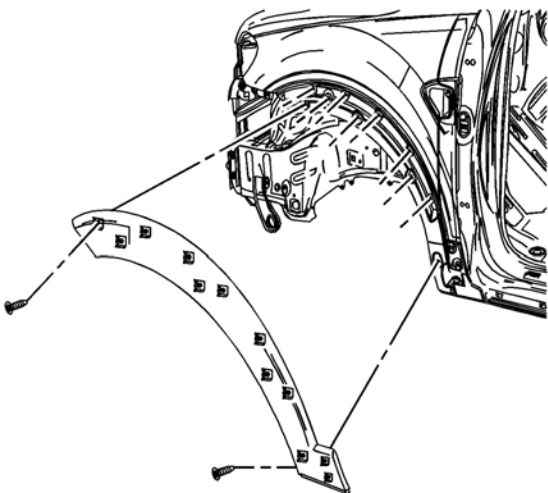
1. Install the screws and the front fender liner.

Tighten
Tighten the front fender liner screws to 4 N·m (35 lb in).

2. Install the engine protection shield. Refer to [Engine Protection Shield Replacement](#) .
3. Install the front mud guard. Refer to [Guard Mud - Rear \(One or Both\) Replacement](#) .
4. Install the front wheel. Refer to [Tire and Wheel Removal and Installation](#) .
5. Lower the vehicle.

Front Fender Wheel Opening Molding Replacement

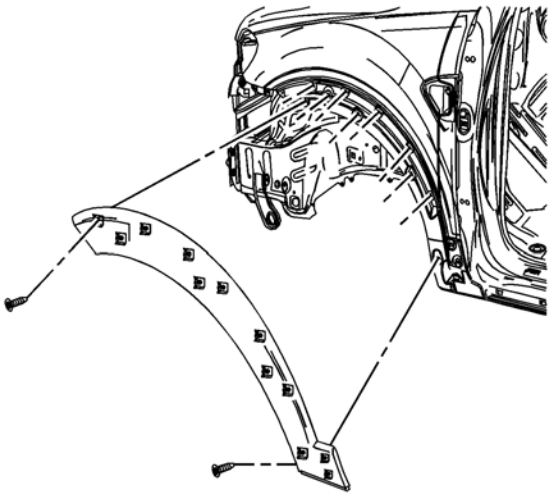
Removal Procedure



1. Remove the front mud guards.
2. Remove the screws and front fender wheel opening molding.

Installation Procedure

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



1. Install the front fender wheel opening molding with the screws.

Tighten
Tighten the front fender wheel opening molding screws to 4 N·m (35 lb in).

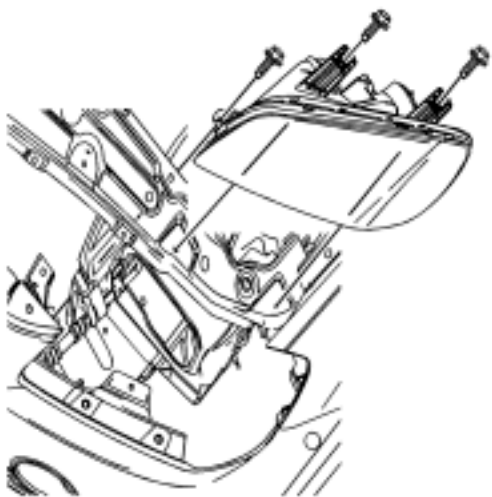
2. Install the front mud guard.

Headlamp Replacement

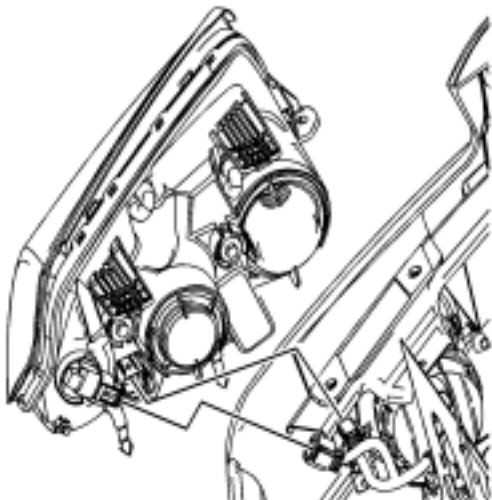
Removal Procedure

Caution: Refer to [Battery Disconnect Caution](#) in Cautions and Notices.

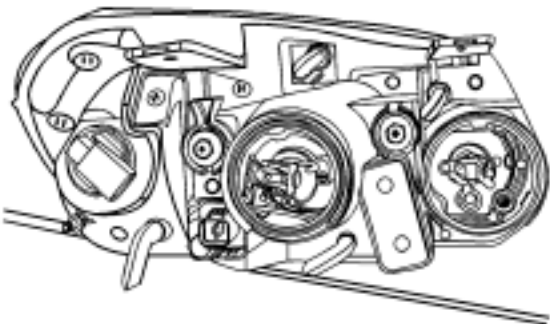
1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .
2. Remove the radiator grille upper cover.



3. Remove the bolts and the headlamp assembly.

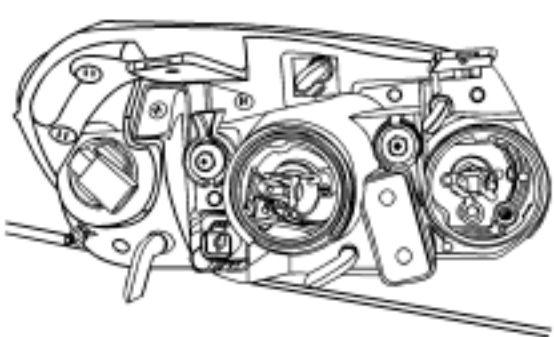


4. Disconnect the headlamp assembly electrical connectors.

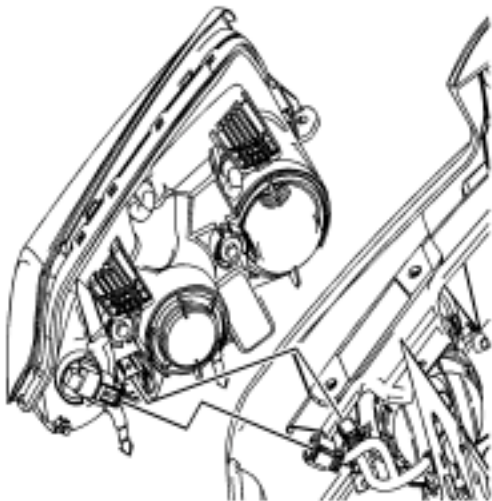


5. Remove the cap that conceals the headlamp bulb.
6. Disconnect the headlamp bulb electrical connectors.
7. Remove the headlamp bulbs.

Installation Procedure

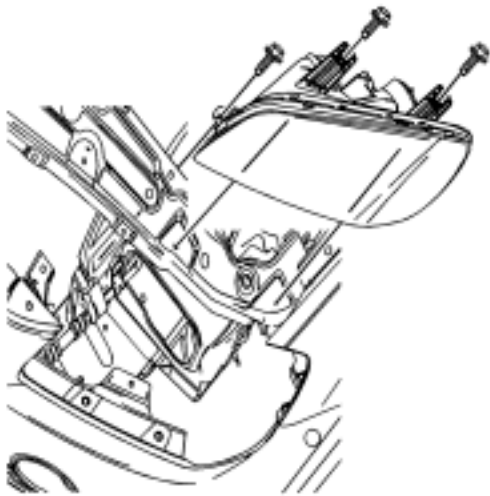


1. Install the headlamp bulbs.
2. Connect the headlamp bulb electrical connectors.
3. Install the cap that conceals the headlamp bulbs.



4. Connect the headlamp assembly electrical connectors.

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



5. Install the headlamp assembly with the bolts.

Tighten

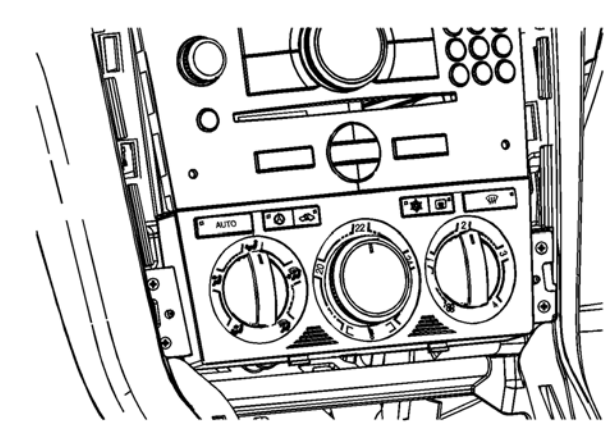
Tighten the headlamp assembly bolts to 7 N·m (62 lb in).

6. Install the radiator grille upper cover.
7. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .

Heater and Air Conditioning Control Replacement (C105/Short Body)

Removal Procedure

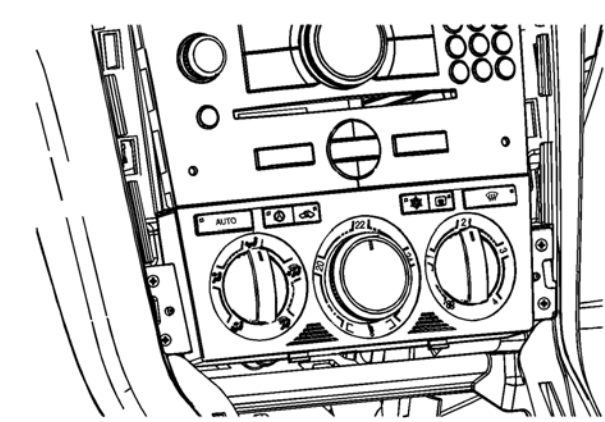
Caution: Refer to [Battery Disconnect Caution](#) in the Preface section.



Important: The left-hand drive is shown. The right-hand drive is similar.

1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .
2. Remove the instrument panel accessory bezel. Refer to [Instrument Panel Accessory Bezel Replacement](#) .
3. Remove the control assembly retaining screws.
4. Pull out the unit to gain access to the rear.
5. Disconnect the electrical connectors.
6. Remove the air inlet tube.
7. Remove the automatic temperature control assembly.

Installation Procedure



1. Connect the air inlet tube.
2. Connect the electrical connectors.

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

3. Position the automatic temperature control assembly and install the retaining screws.

Tighten

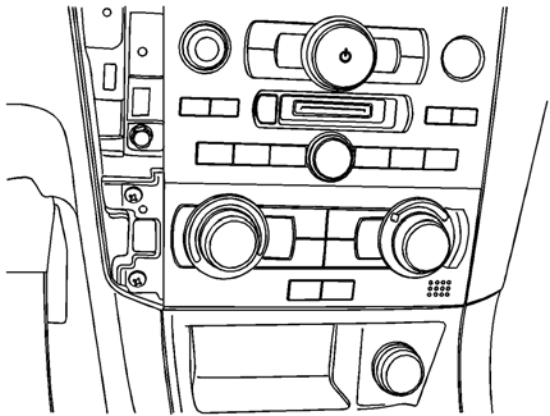
Tighten the control assembly retaining screws to 2.5 N·m (22 lb in).

4. Install the instrument panel accessory bezel. Refer to [Instrument Panel Accessory Bezel Replacement](#) .
5. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .

Heater and Air Conditioning Control Replacement (C100/Long Body)

Removal Procedure

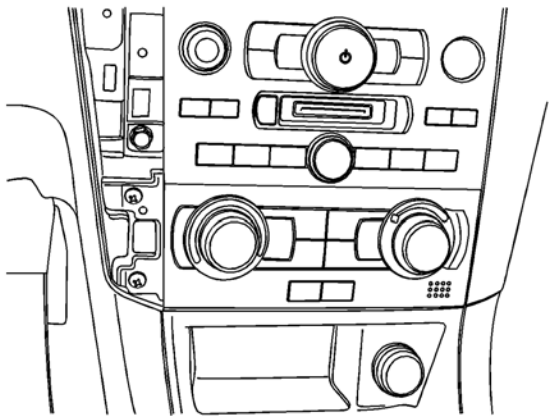
Caution: Refer to [Battery Disconnect Caution](#) in the Preface section.



Important: The left-hand drive is shown. The right-hand drive is similar.

1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .
2. Remove the instrument panel accessory bezel. Refer to [Instrument Panel Accessory Bezel Replacement](#) .
3. Remove the control assembly retaining screws.
4. Pull out the unit to gain access to the rear.
5. Disconnect the electrical connectors.
6. Remove the air inlet tube.
7. Remove the automatic temperature control assembly.

Installation Procedure



1. Connect the air inlet tube.
2. Connect the electrical connectors.

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

3. Position the automatic temperature control assembly and install the retaining screws.

Tighten

Tighten the control assembly retaining screws to 2.5 N·m (22 lb in).

4. Install the instrument panel accessory bezel. Refer to [Instrument Panel Accessory Bezel Replacement](#) .
5. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .

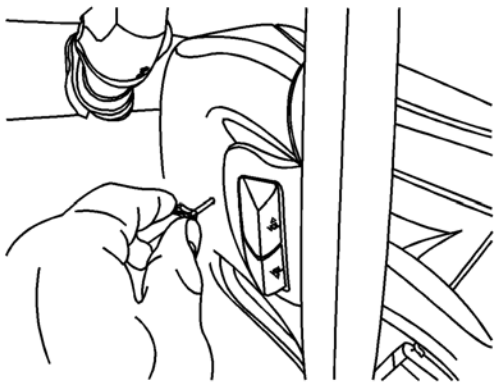


Inflatable Restraint Steering Wheel Module Replacement

Removal Procedure

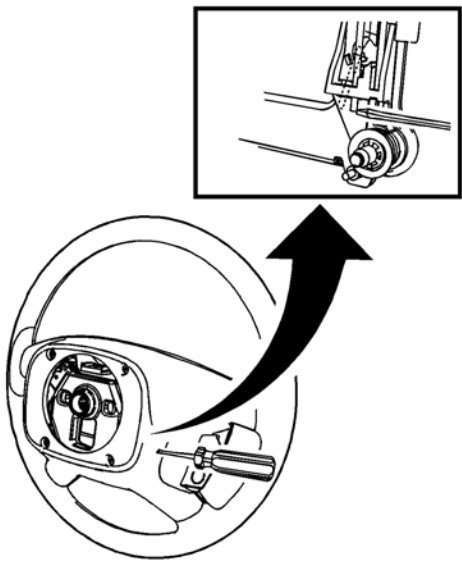
Caution: Refer to [Battery Disconnect Caution](#) in Cautions and Notices.

1. Disable the supplemental inflatable restraints (SIR). Refer to [SIR Disabling and Enabling](#) .
2. Position the steering wheel straight ahead.



Caution: The sensing and the diagnosis module (SDM) can maintain sufficient voltage to deploy the airbags and pretensioners for up to 1 minute after the ignition has been turned OFF and the fuse has been removed. If the airbags and pretensioners are not disconnected, do not begin service until one minute has been passed after disconnecting power to the SDM. Failure to do so may cause personal injury.

3. Insert a small flat-bladed screwdriver in the horizontal position into the hole on the side of the steering wheel.



4. Push the pin of the air bag module bracket to release the lock securing the air bag module to the steering wheel.
5. Remove the connector from the driver air bag module.

Caution: When you are carrying an undeployed inflator module:

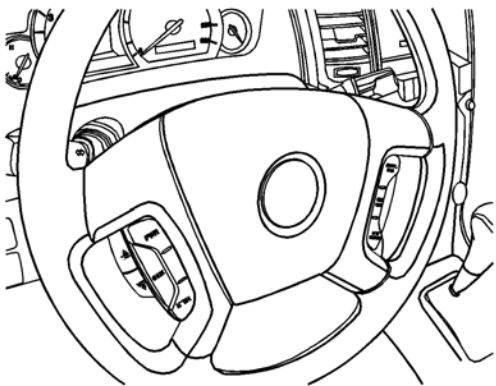
- Do not carry the inflator module by the wires or connector on the inflator module
- Make sure the bag opening points away from you

When you are storing an undeployed inflator module, make sure the bag opening points away from the surface on which the inflator module rests. When you are storing a steering column, do not rest the column with the bag opening facing down and the column vertical. Provide free space for the air bag to expand in case of an accidental deployment. Otherwise, personal injury may result.

6. Remove the driver air bag module.

Installation Procedure



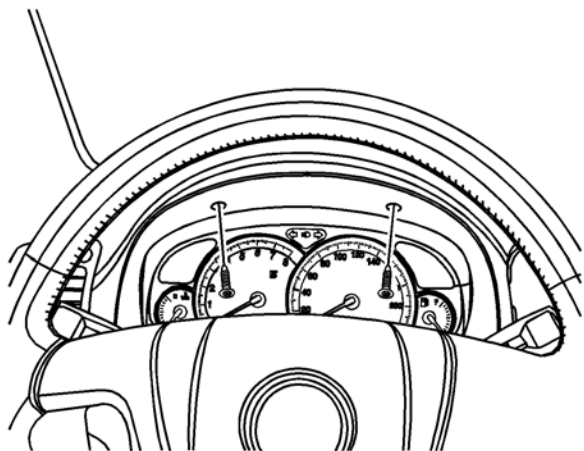


1. Install the connector to the driver air bag module.
2. Align the retaining pins on the driver air bag module with the steering wheel.
3. Push the driver air bag module to secure.
4. Enable the SIR. Refer to [SIR Disabling and Enabling](#) .



Instrument Cluster Replacement (C100/Long Body)

Removal Procedure



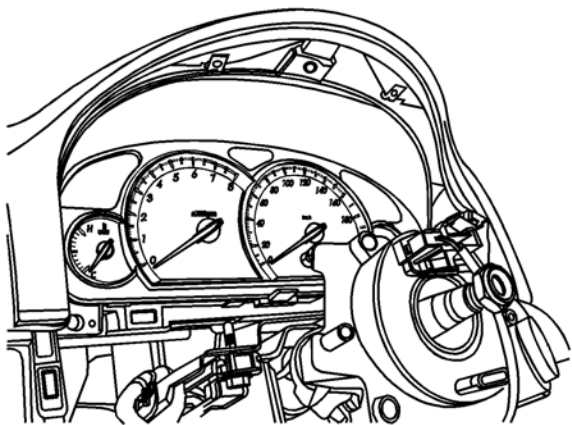
1. Remove the instrument cluster trim panel.

Important: Perform the SPO reprogramming when instrument cluster replaced.

2. Remove the screws and the instrument cluster.

Installation Procedure

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



1. Install the instrument cluster with the screws.

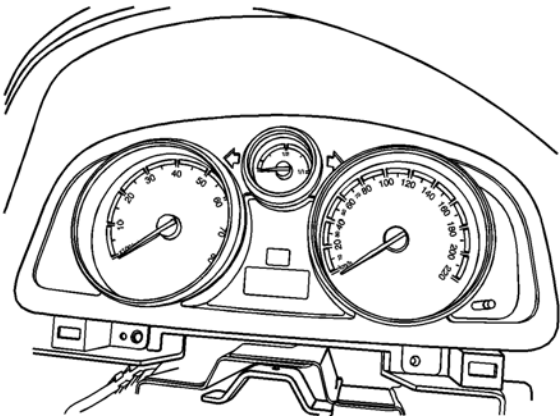
Tighten
Tighten the instrument cluster screws to 2 N·m (18 lb in).

2. Install the instrument cluster trim panel.

Instrument Cluster Replacement (C105/Short Body)

Removal Procedure

1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .
2. Remove the steering column cover. Refer to [Steering Column Trim Covers Replacement](#) .



3. Remove the instrument cluster trim panel.

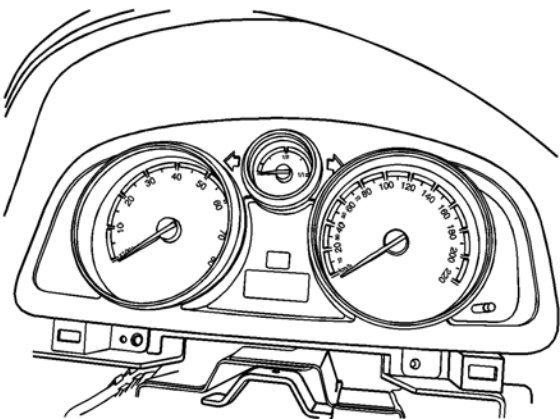
Important: Perform the SPO reprogramming when instrument cluster replaced.

4. Remove the screws and the instrument cluster.
5. Disconnect the electrical connectors.

Installation Procedure

1. Connect the electrical connectors.

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



2. Install the instrument cluster with the screws.

Tighten
Tighten the instrument cluster screws to 2 N·m (18 lb in).

3. Install the instrument cluster trim panel.
4. Install the steering column cover. Refer to [Steering Column Trim Covers Replacement](#) .
5. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .

Lifting and Jacking the Vehicle

Caution: To avoid any vehicle damage, serious personal injury or death when major components are removed from the vehicle and the vehicle is supported by a hoist, support the vehicle with jack stands at the opposite end from which the components are being removed and strap the vehicle to the hoist.

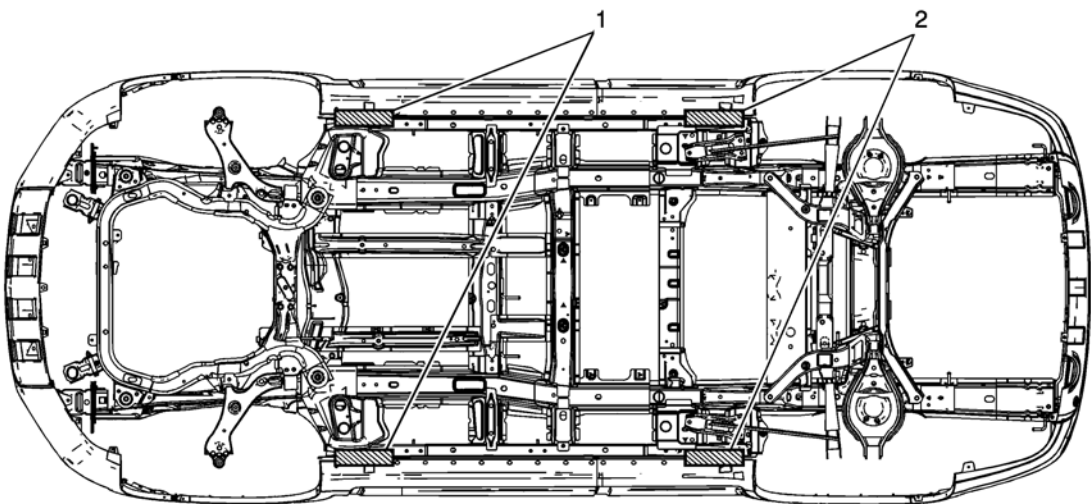
Caution: To avoid any vehicle damage, serious personal injury or death, always use the jackstands to support the vehicle when lifting the vehicle with a jack.

Notice: Perform the following steps before beginning any vehicle lifting or jacking procedure:

- Remove or secure all of the vehicle's contents in order to avoid any shifting or any movement that may occur during the vehicle lifting or jacking procedure.
- The lifting equipment or the jacking equipment weight rating must meet or exceed the weight of the vehicle and any vehicle contents.
- The lifting equipment or the jacking equipment must meet the operational standards of the lifting equipment or jacking equipment's manufacturer.
- Perform the vehicle lifting or jacking procedure on a clean, hard, dry, level surface.
- Perform the vehicle lifting or jacking procedure only at the identified lift points. DO NOT allow the lifting equipment or jacking equipment to contact any other vehicle components.

Failure to perform the previous steps could result in damage to the lifting equipment or the jacking equipment, the vehicle, and/or the vehicle's contents.

Vehicle Lifting Points

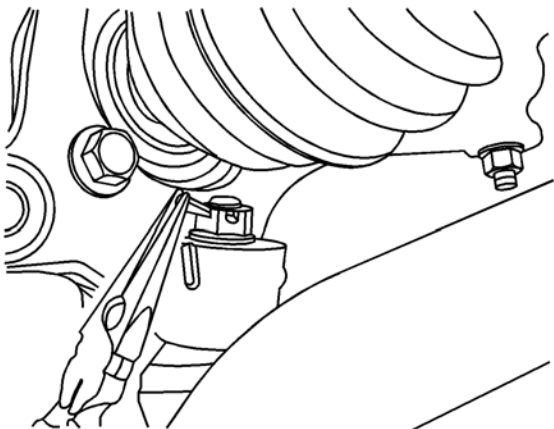


- (1) Frame Contact Lift - Front
- (2) Frame Contact Lift - Rear

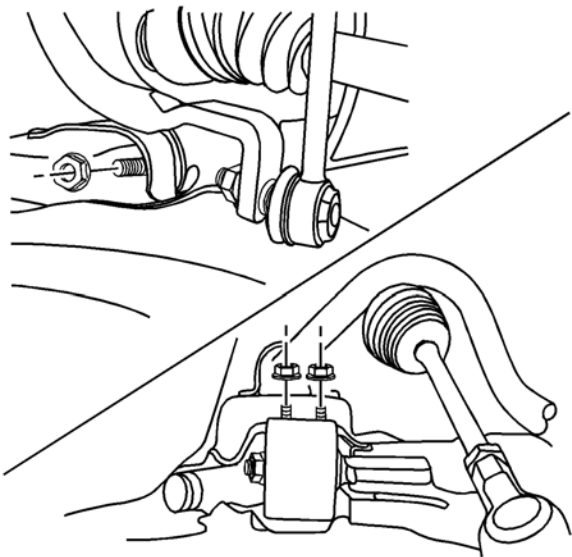
Lower Control Arm Replacement

Removal Procedure

1. Raise and support the vehicle. Refer to [Lifting and Jacking the Vehicle](#) .
2. Remove the front tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#) .



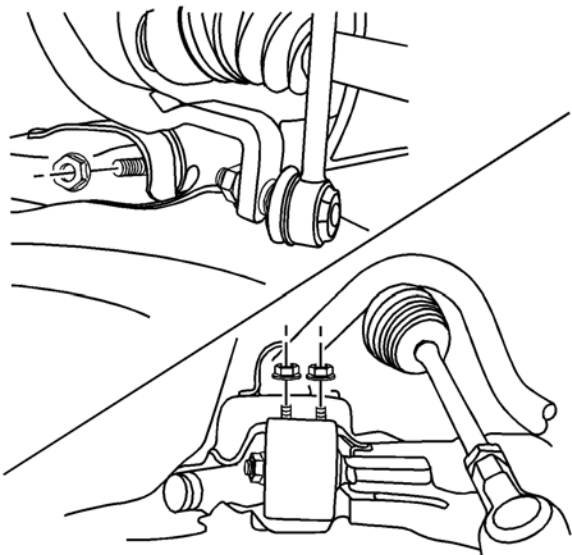
3. Remove the cotter pin and the nut that retains the control arm ball joint to the knuckle.
4. Separate the ball joint from the knuckle assembly.



5. Remove the control arm to cradle bolts and nuts.
6. Remove the control arm.

Installation Procedure

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



1. Install the control arm to cradle front bolt and nut.

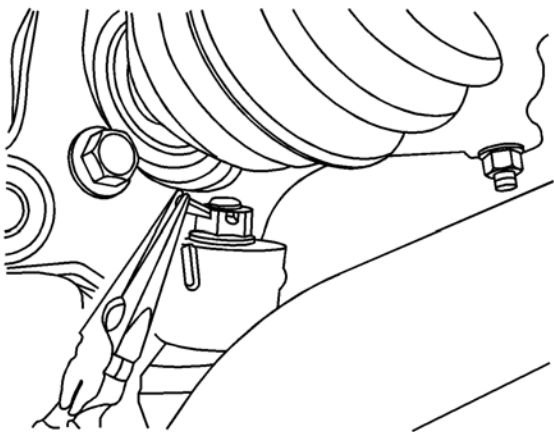
Tighten
Tighten the front bolt and nut to 120 N·m (89 lb ft).

2. Install the control arm to cradle rear bolts and nuts.

2. Install the control arm to cradle rear bolts and nuts.

Tighten

Tighten the rear bolts and nuts to 70 N·m (52 lb ft).



3. Install the control arm ball joint to the knuckle.
4. Install the nut to the ball joint stud.

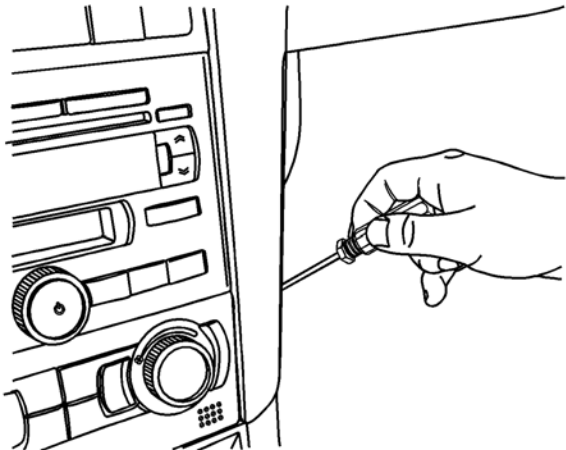
Tighten

Tighten the control arm ball joint nut to 10 N·m (89 lb in).

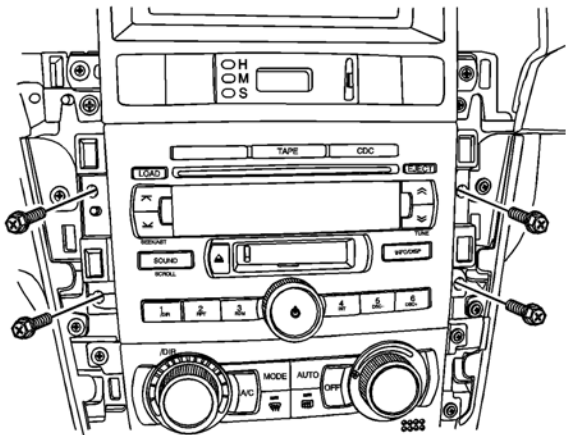
5. Install the cotter pin.
6. Install the front tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#) .
7. Lower the vehicle.

Radio Replacement

Removal Procedure



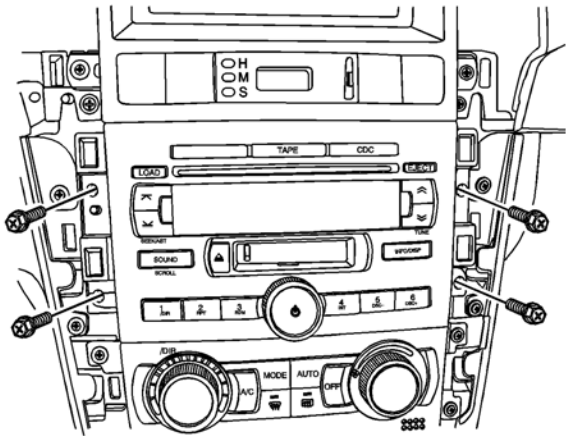
1. Disconnect the negative battery cable.
2. Remove the I/P center trim panel.



3. Remove the screws and the audio system.
4. Disconnect the audio system electrical connectors.

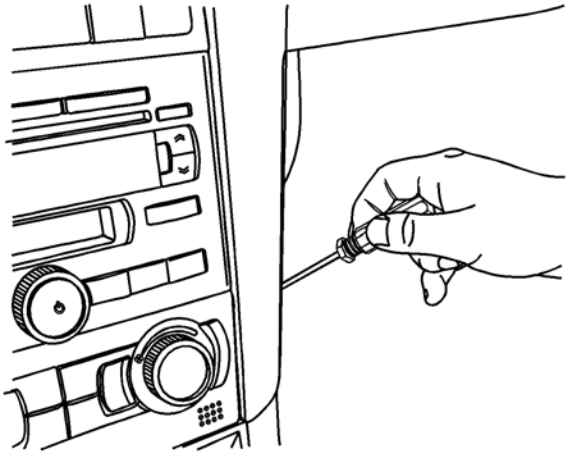
Installation Procedure

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



1. Connect the audio system electrical connectors.
2. Install the audio system with the screws.

Tighten
Tighten the audio system screws to 4 N·m (35 lb in).



- 3. Install the I/P center trim panel.
- 4. Connect the negative battery cable.



Repairs and Inspections Required After a Collision

Caution: Proper operation of the SIR sensing system requires that any repairs to the vehicle structure return the vehicle structure to the original production configuration. Not properly repairing the vehicle structure could cause non-deployment in a collision or deployment for conditions less severe than intended.

- If any supplemental inflatable restraints (SIR) components are damaged, they must be replaced. If SIR components mounting points are damaged, they must be repaired or replaced.
- Never use SIR parts from another vehicle. This does not include remanufactured parts purchased from an authorized source.
- Do not attempt to service the sensing and diagnostic module (SDM), the steering wheel module coil, or other air bag modules. These items must be replaced if they are defective.
- Verify the part number of replaced air bag modules. Some inflator modules look identical but contain different internal components.

Accident with Deployment Component Replacements

All SIR components must be replaced after a frontal crash involving air bag deployment. After deployment, a powdery residue may be on the surface of the air bag. The powder consists primarily of cornstarch, used to lubricate the bag as it inflates, and by-products of the chemical reaction. The sodium hydroxide then quickly reacts with atmospheric moisture and is converted to sodium bicarbonate, also known as baking soda. Therefore, it is unlikely that sodium hydroxide will be present after deployment. Replace the following SIR components.

Caution: Safety precautions must be followed when handling a deployed inflator module (air bag). After deployment, the inflator module (air bag) surface may contain a small amount of sodium hydroxide, a by-product of the deployment reaction, that is irritating to the skin and eyes. Most of the powder on the inflator module (air bag) is harmless. as a precaution, wear gloves and safety glasses when handling a deployed inflator module (air bag), and wash your hands with mild soap and water afterwards.

- The SDM
- Air bag modules (as needed) and pretensioners
- SIR wiring
- Clock spring

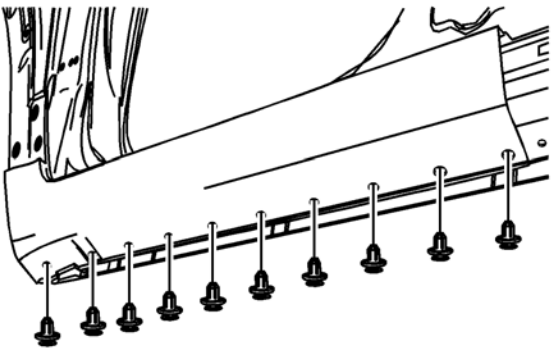
Accident without Deployment Component Inspection

The following inspections must be performed after any crash, whether the air bag has deployed or not:

- The steering column must be dimensionally inspected.
- Inspect the knee bolsters and mounting points for distortion, bending and cracking or other damages.
- Inspect the instrument panel (I/P) and steering column reinforcement plate for distortion, bending and cracking or other damage.
- Inspect the I/P braces for distortion, bending and cracking or other damage.
- Inspect the seat belt and mounting points. Refer to [Seat Belt System Description and Operation](#) .

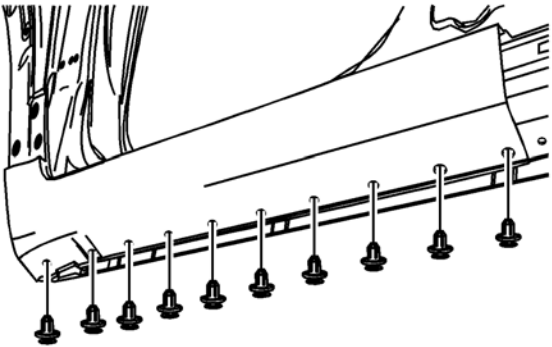
Rocker Panel Molding Replacement

Removal Procedure



1. Remove the front mud guards.
2. Remove the clips and the rocker panel molding.

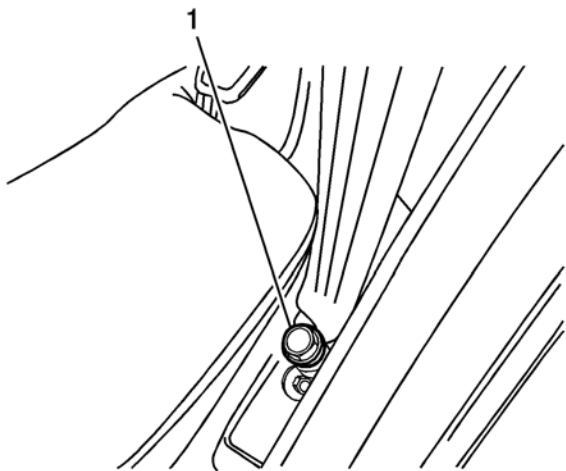
Installation Procedure



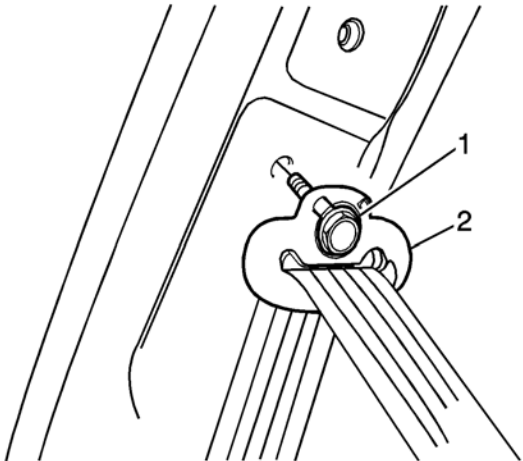
1. Install the rocker panel molding with the clips.
2. Install the front mud guards.

Seat Belt Retractor Replacement - No. 1 Rear

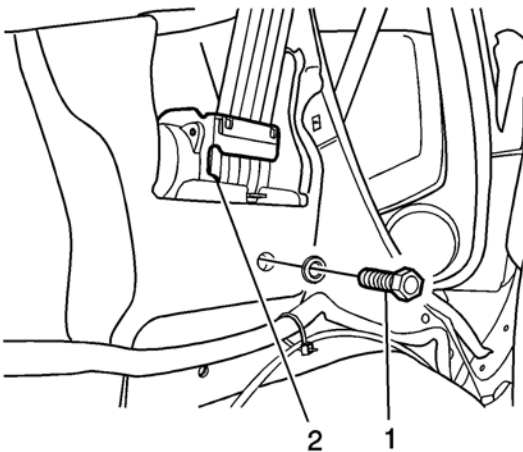
Removal Procedure



- 1. Remove the bolt (1) and the seat belt anchor on the wheelhouse trim panel.
- 2. Remove the quarter window trim panel.
- 3. Remove the wheelhouse trim panel.



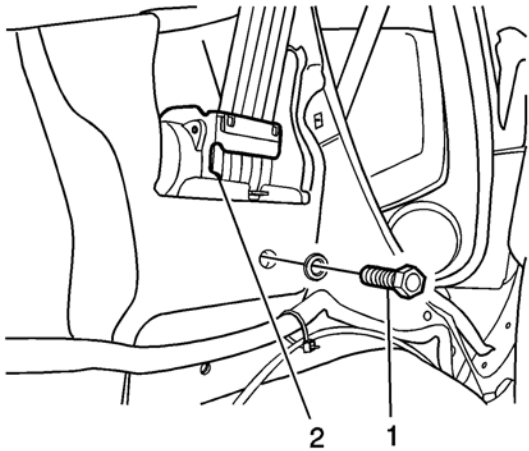
- 4. Remove the bolt (1) and the seat belt anchor (2).



- 5. Remove the bolt (1) and the seat belt retractor (2).

Installation Procedure

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.

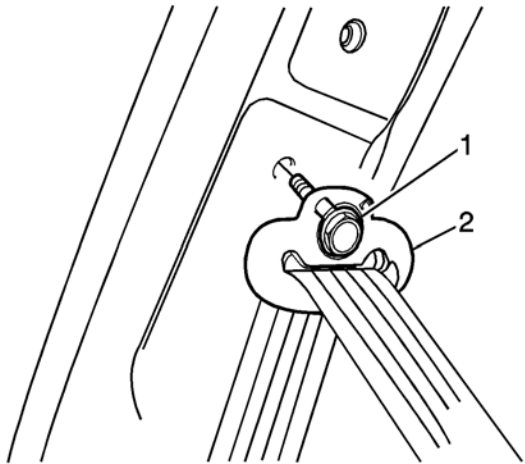


1. Install the seat belt retractor (2) with the bolt (1).

Tighten

Tighten the seat belt retractor bolt to 38 N·m (28 lb ft).

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.

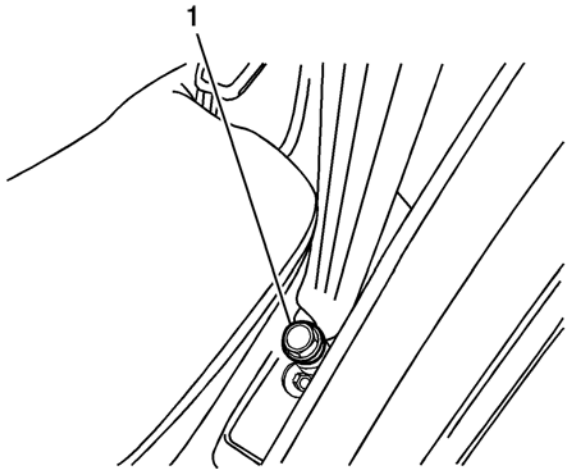


2. Install the seat belt anchor (2) with the bolt (1).

Tighten

Tighten the seat belt anchor bolt to 38 N·m (28 lb ft).

3. Install the wheelhouse trim panel.
4. Install the quarter window trim panel.



5. Install the seat belt anchor with the bolt (1).

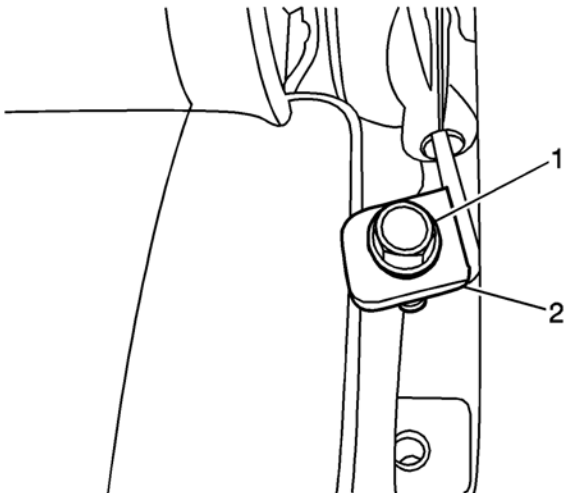
Tighten

Tighten the seat belt anchor bolt to 38 N·m (28 lb ft).

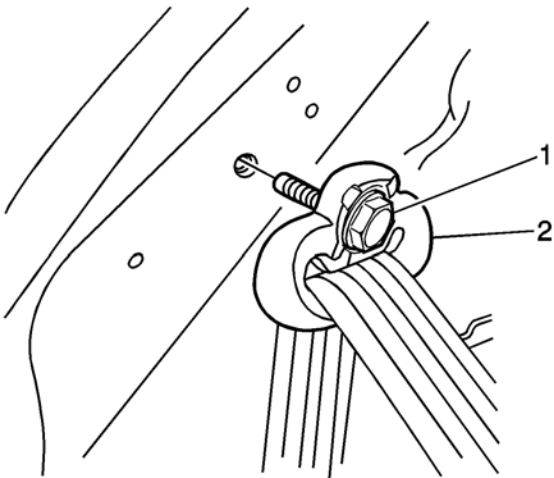


Seat Belt Retractor Replacement - No. 2 Rear

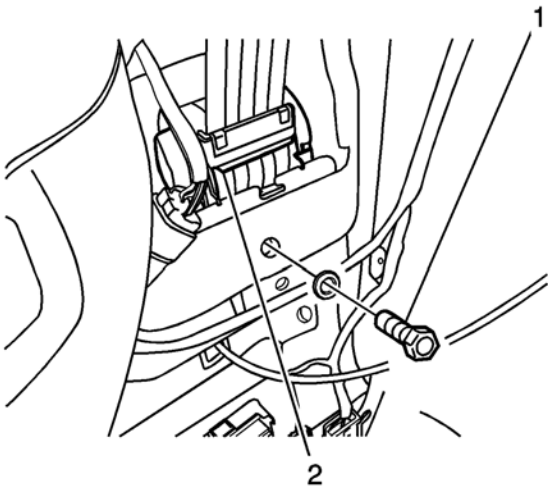
Removal Procedure



1. Remove the bolt (1) and the seat belt anchor (2) on the floor.
2. Remove the quarter window trim panel.
3. Remove the wheelhouse trim panel.



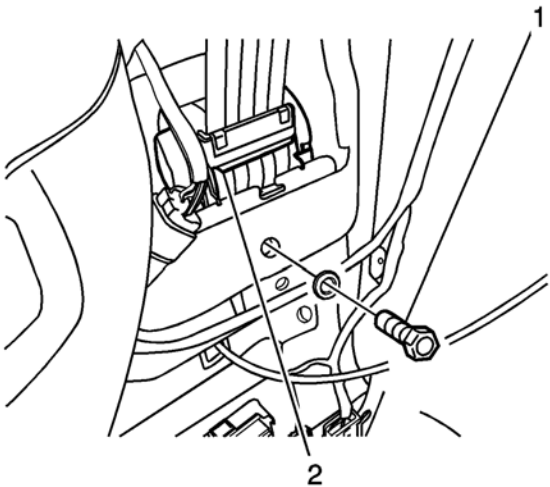
4. Remove the bolt (1) and the seat belt anchor (2).



5. Remove the bolt (1) and the seat belt retractor (2).

Installation Procedure

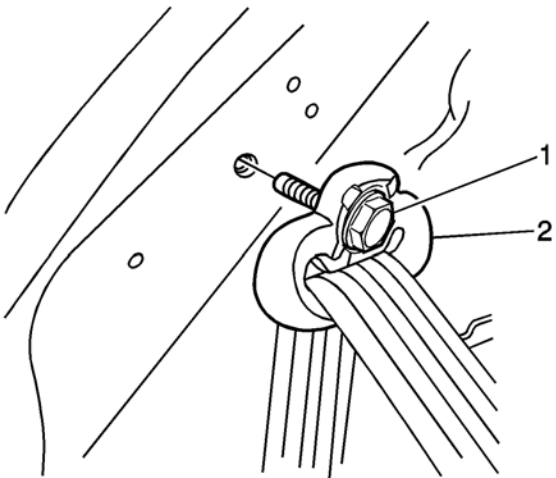
Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



1. Install the seat belt retractor (2) with the bolt (1).

Tighten
Tighten the seat belt retractor bolt to 38 N·m (28 lb ft).

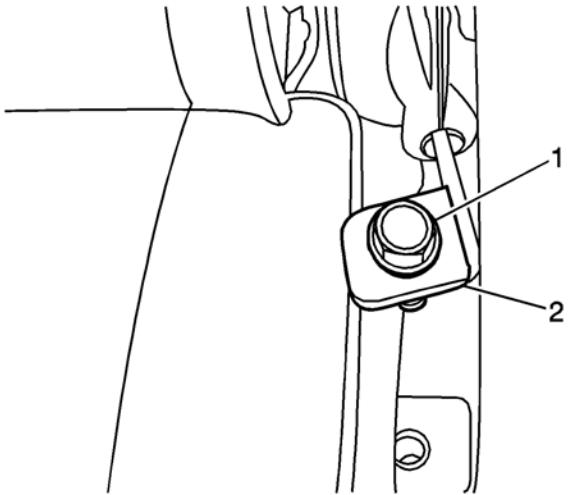
Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



2. Install the seat belt anchor (2) with the bolt (1).

Tighten
Tighten the seat belt anchor bolt to 38 N·m (28 lb ft).

3. Install the wheelhouse trim panel.
4. Install the quarter window trim panel.



5. Install the seat belt anchor with the bolt (1) to the floor.

Tighten
Tighten the seat belt anchor bolt to 38 N·m (28 lb ft).

SIR Disabling and Enabling

SIR component location affects how a vehicle should be serviced. There are parts of the SIR system installed in various locations around a vehicle. To find the location of the SIR components refer to [SIR Identification Views](#) .

There are several reasons for disabling the SIR system, such as repairs to the SIR system or servicing a component near or attached to an SIR component. There are several ways to disable the SIR system depending on what type of service is being performed. The following information covers the proper procedures for disabling/enabling the SIR system.

Condition	Action
If the vehicle was involved in an accident with an air bag deployment.	Disconnect the negative battery cable(s) *. Refer to Repairs and Inspections Required After a Collision .
When performing SIR diagnostics.	Follow the appropriate SIR service manual diagnostic procedure(s) *
When removing or replacing an SIR component or a component attached to an SIR component.	Disconnect the negative battery cable(s) *
If the vehicle is suspected of having shorted electrical wires.	Disconnect the negative battery cable(s) *
When performing electrical diagnosis on components other than the SIR system.	Remove the SIR/Airbag fuse(s) when indicated by the diagnostic procedure to disable the SIR system
* DTCs will be lost when the negative battery cable is disconnected.	

SIR Service Precautions

Caution: When performing service on or near the SIR components or the SIR wiring, the SIR system must be disabled. Failure to observe the correct procedure could cause deployment of the SIR components. Serious injury can occur. Failure to observe the correct procedure could also result in unnecessary SIR system repairs.

The inflatable restraint sensing and diagnostic module (SDM) maintains a reserved energy supply. The reserved energy supply provides deployment power for the air bags if the SDM loses battery power during a collision. Deployment power is available for as much as 1 minute after disconnecting the vehicle power. Waiting 1 minute before working on the system after disabling the SIR system prevents deployment of the air bags from the reserved energy supply.

General Service Instructions

The following are general service instructions which must be followed in order to properly repair the vehicle and return it to its original integrity:

- Do not expose inflator modules to temperatures above 65°C (150°F).
- Verify the correct replacement part number. Do not substitute a component from a different vehicle.
- Use only original GM replacement parts available from your authorized GM dealer. Do not use salvaged parts for repairs to the SIR system.

Discard any of the following components if it has been dropped from a height of 91 cm (3 feet) or greater:

- Inflatable restraint sensing and diagnostic module (SDM)
- Any Inflatable restraint air bag module
- Inflatable restraint steering wheel module coil
- Any Inflatable restraint sensor
- Inflatable restraint seat belt pretensioners
- Inflatable restraint Passenger Presence System (PPS) module or sensor

Disabling Procedure - Air Bag Fuse

- Turn the steering wheel so that the vehicles wheels are pointing straight ahead.
- Place the ignition in the OFF position.

Important: The SDM may have more than one fused power input. To ensure there is no unwanted SIR deployment, personal injury, or unnecessary SIR system repairs, remove all fuses supplying power to the SDM. With all SDM fuses removed and the ignition switch in the ON position, the AIR BAG warning indicator illuminates. This is normal operation, and does not indicate a SIR system malfunction.

- Locate and remove the fuse(s) supplying power to the SDM. Refer to [SIR Schematics](#) or [Electrical Center Identification Views](#) .
- Wait 1 minute before working on the system.

Enabling Procedure - Air Bag Fuse

- Place the ignition in the OFF position.
- Install the fuse(s) supplying power to the SDM. Refer to [SIR Schematics](#) or [Electrical Center Identification Views](#) .
- Turn the ignition switch to the ON position. The AIR BAG indicator will flash then turn OFF.
- Perform the Diagnostic System Check - Vehicle if the AIR BAG warning indicator does not operate as described. Refer to [Diagnostic System Check - Vehicle](#) .

Disabling Procedure - Negative Battery Cable

- Turn the steering wheel so that the vehicles wheels are pointing straight ahead.
- Place the ignition in the OFF position.
- Disconnect the negative battery cable from the battery. Refer to [Battery Negative Cable Disconnect/Connect Procedure](#) .
- Wait 1 minute before working on system.

Enabling Procedure - Negative Battery Cable

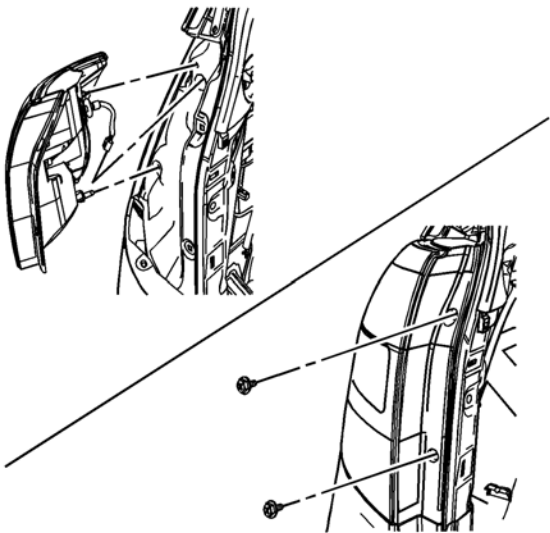
- Place the ignition in the OFF position.
- Connect the negative battery cable to the battery. Refer to [Battery Negative Cable Disconnect/Connect Procedure](#) .
- Turn the ignition switch to the ON position. The AIR BAG indicator will flash then turn OFF.
- Perform the Diagnostic System Check - Vehicle if the AIR BAG warning indicator does not operate as described. Refer to [Diagnostic System Check - Vehicle](#) .

Tail Lamp Replacement

Removal Procedure

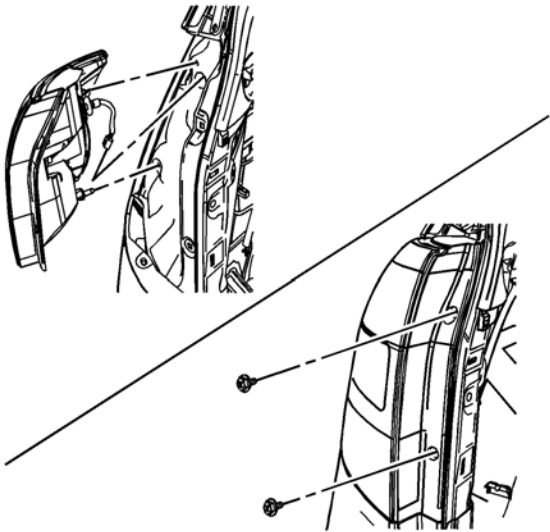
Caution: Refer to [Battery Disconnect Caution](#) in Cautions and Notices.

1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .



2. Disconnect the electrical connectors.
3. Remove the nuts and the lamp assembly.
4. Remove any inoperative bulb.

Installation Procedure



1. Install the replacement bulbs.

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.

2. Install the lamp assembly with the nuts.

Tighten

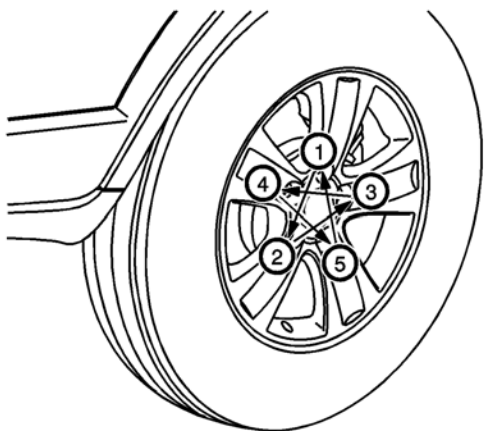
Tighten the rear combination lamp assembly nuts to 2.5 N·m (22 lb in).

3. Connect the electrical connectors.
4. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .



Tire and Wheel Removal and Installation

Removal Procedure



1. Remove the wheel cover, if equipped.
2. Use paint or a felt tipped pen in order to mark the relationship of the wheel to the hub.
3. Loosen the wheel nuts.
4. Raise and support the vehicle. Refer to [Lifting and Jacking the Vehicle](#) .
5. Remove the wheel nuts.

Caution: If penetrating oil gets on the vertical surfaces between the wheel and the rotor or drum it could cause the wheel to work loose as the vehicle is driven, resulting in loss of control and an injury accident.

Notice: Removing the wheel may be difficult because of foreign materials or a tight fit between the wheel and the hub/rotor. Slightly tap the tire side wall with a rubber mallet in order to remove the wheel. Failure to follow these instructions may result in damage to the wheel.

6. If the tire and wheel assembly is difficult to remove, perform the following steps:
 - 6.1. Install the wheel nuts.
 - 6.2. Loosen each wheel nut 2 revolutions.
 - 6.3. Lower the vehicle.
 - 6.4. Rock the vehicle from side to side.
 - 6.5. Start the engine.
 - 6.6. Drive the vehicle forward slightly.
 - 6.7. Apply the brakes quickly and firmly.
 - 6.8. Drive the vehicle backward slightly.
 - 6.9. Apply the brakes quickly and firmly.
 - 6.10. Remove the wheel nuts.
 - 6.11. Repeat this procedure if necessary.
7. Remove the tire and wheel assembly from the vehicle.

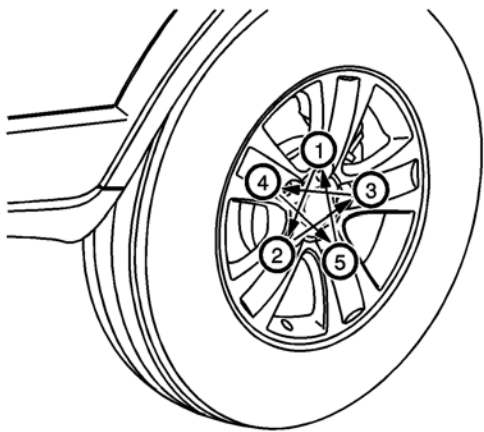
Installation Procedure

Caution: Before installing the wheels, remove any buildup of corrosion on the wheel mounting surface and brake drum or disc mounting surface by scraping and wire brushing. Installing wheels with poor metal-to-metal contact at the mounting surfaces can cause wheel nuts to loosen. This can cause a wheel to come off when the vehicle is moving, causing loss of control and possibly personal injury.

1. Remove any corrosion or foreign material from the wheel and the hub. Clean the following surfaces:
 - The hub mounting surface.
 - The brake rotor mounting surface.
 - The wheel mounting surface.
 - The threads on the studs.
 - The threads on the wheel nuts.
2. Verify the nuts turn freely on the stud.
3. Replace any nut that does not turn freely on the stud.
4. If a NEW nut does not turn freely on the stud, replace the 5 studs on the hub. Refer to [Wheel Stud Replacement](#) in order to replace the front wheel studs. Refer to [Wheel Stud Replacement](#) in order to replace the rear wheel studs.

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5. Align the match marks and install the tire and wheel assembly to the hub.

Caution: Never use oil or grease on studs or nuts. Tighten the wheel nuts with your fingers until they are snug. Then, tighten the nuts (in the sequence shown) to the fastener tightening specification shown in Specifications in this Section. Improperly tightened wheel nuts could eventually allow the wheel to come off while the vehicle is moving, possibly causing loss of control, personal injury, and property damage.

Notice: Improperly tightened wheel nuts can lead to brake pulsation and rotor damage. In order to avoid expensive brake repairs, evenly tighten the wheel nuts to the proper torque specification.

6. Install the wheel nuts in the sequence shown. Do not tighten the wheel nuts.
7. Lower the vehicle.

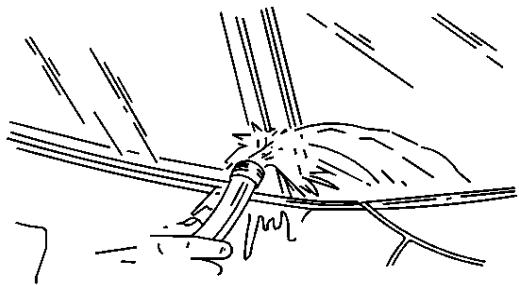
Notice: Refer to [Fastener Notice](#) in Cautions and Notices.

8. Tighten the wheel nuts in the sequence shown.

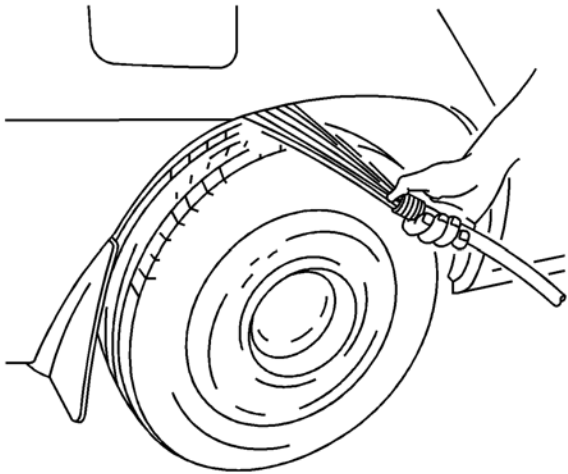
Tighten
Tighten the wheel nuts to 125 N·m (92 lb ft).

9. Install the wheel cover, if equipped.

Water Hose Test



1. Place another person inside the vehicle in order to detect the location of the leak.
2. Use a water hose without a nozzle.



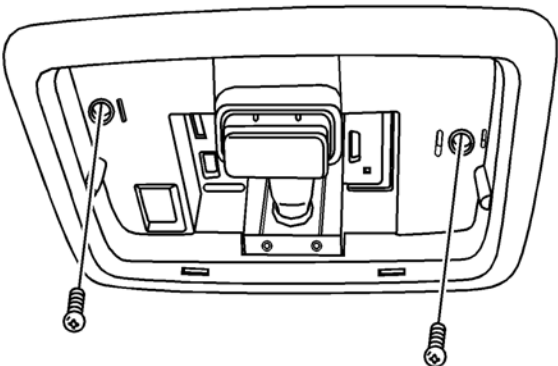
3. Begin spraying the water at the base of the suspected leak area. Continue spraying the water upward until the leak is found.

Dome Lamp Replacement

Removal Procedure

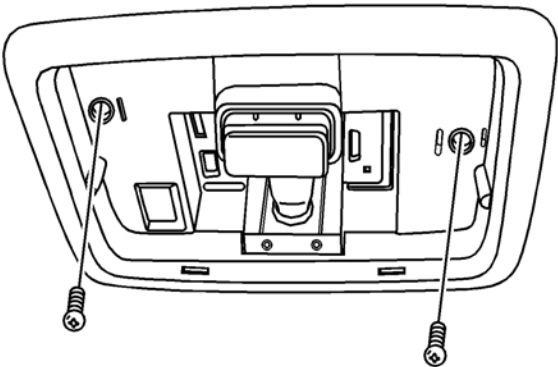
Caution: Refer to [Battery Disconnect Caution](#) in Cautions and Notices.

1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .



2. Pry off the dome lamp lens by inserting a screwdriver into the recess along the edge of the lens.
3. Remove the screws and the dome lamp housing from the headliner.
4. Disconnect the electrical connector.
5. Remove the bulb.

Installation Procedure



1. Install the replacement bulb.
2. Connect the electrical connector.

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.

3. Install the dome lamp housing to the headliner with the screws.

Tighten

Tighten the dome lamp housing screw to 2 N·m (18 lb in).

4. Press the dome lamp lens onto the housing.
5. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#)

Exterior Windnoise

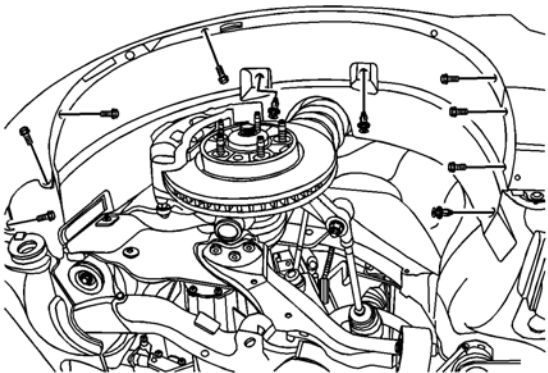
Caution: An assistant should drive the vehicle while the technician checks for the location of the reported condition. Otherwise, personal injury could result.

Exterior windnoise is louder when the vehicle is driven with one or more windows down. Exterior windnoise occurs when air passes over the body panels, the seams, or the openings. Use the following items during the test drive in order to aid in the detection of leaks:

- Mechanic's stethoscope or heater hose
 - Masking tape-51 mm (2 in) width
 - Strip caulk
 - A water soluble marking pencil
-
1. While driving, determine the location of the exterior windnoise by lowering one window at a time. If the location corresponds with the condition in step 2, pull over and make a temporary repair with 51 mm (2 in) wide masking tape.
 2. Tape over the gaps and the moldings one at a time. Test between each taping. Taping over the gaps and moldings will correct the condition.
 3. Temporarily repair the condition with masking tape. Adjust the tape when needed.
 4. Continue testing in order to determine if the noise has been eliminated or other leak areas exist.
 5. When all the reported leak conditions are located, make permanent repairs using the proper alignment techniques and the sealing materials.

Fender Liner Replacement

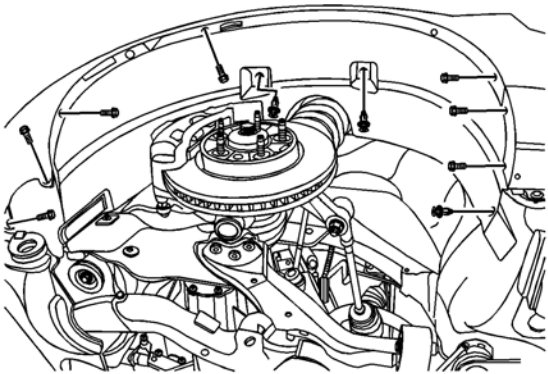
Removal Procedure



1. Raise and suitably support the vehicle. Refer to [Lifting and Jacking the Vehicle](#) .
2. Remove the front wheel. Refer to [Tire and Wheel Removal and Installation](#) .
3. Remove the front mud guard. Refer to [Guard Mud - Rear \(One or Both\) Replacement](#) .
4. Remove the engine protection shield. Refer to [Engine Protection Shield Replacement](#) .
5. Remove the screws and the front fender liner.

Installation Procedure

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



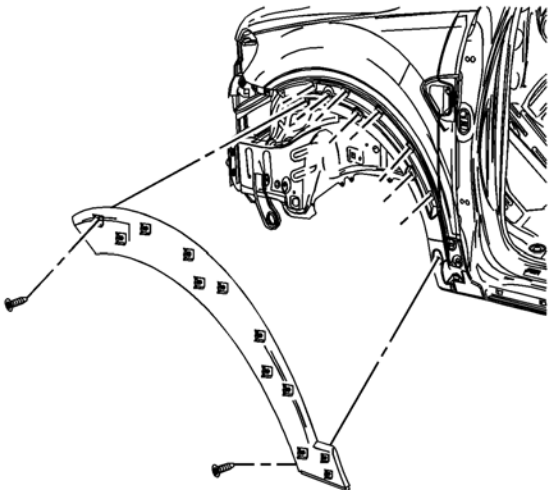
1. Install the screws and the front fender liner.

Tighten
Tighten the front fender liner screws to 4 N·m (35 lb in).

2. Install the engine protection shield. Refer to [Engine Protection Shield Replacement](#) .
3. Install the front mud guard. Refer to [Guard Mud - Rear \(One or Both\) Replacement](#) .
4. Install the front wheel. Refer to [Tire and Wheel Removal and Installation](#) .
5. Lower the vehicle.

Front Fender Wheel Opening Molding Replacement

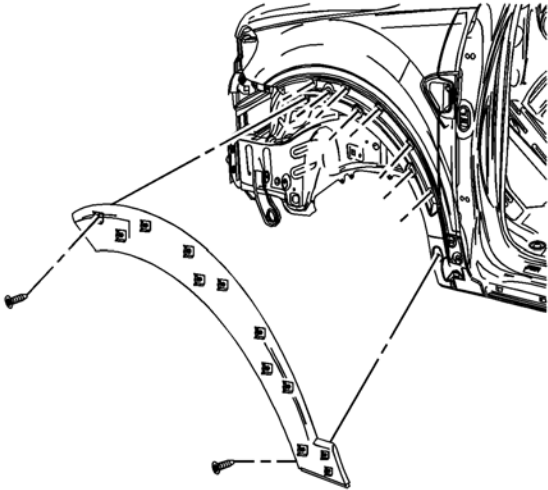
Removal Procedure



1. Remove the front mud guards.
2. Remove the screws and front fender wheel opening molding.

Installation Procedure

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



1. Install the front fender wheel opening molding with the screws.

Tighten

Tighten the front fender wheel opening molding screws to 4 N·m (35 lb in).

2. Install the front mud guard.

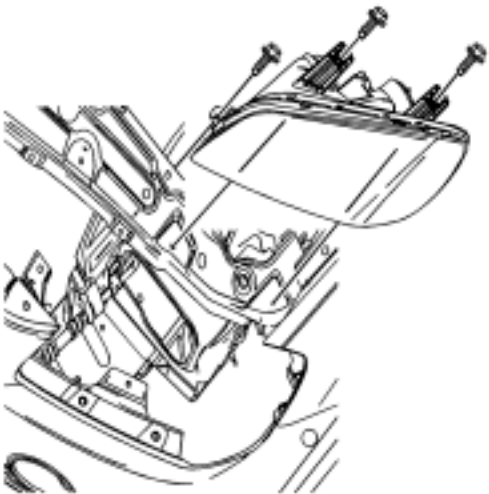


Headlamp Replacement

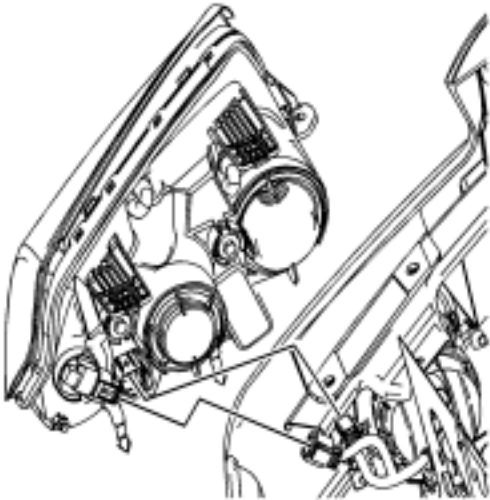
Removal Procedure

Caution: Refer to [Battery Disconnect Caution](#) in Cautions and Notices.

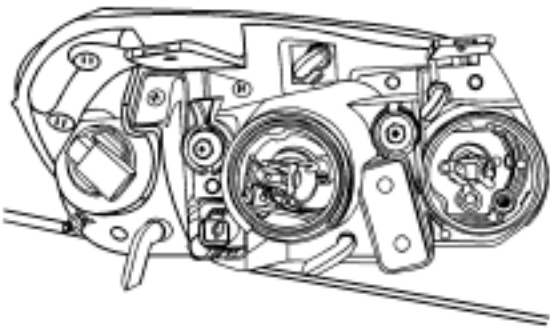
- 1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .
- 2. Remove the radiator grille upper cover.



- 3. Remove the bolts and the headlamp assembly.



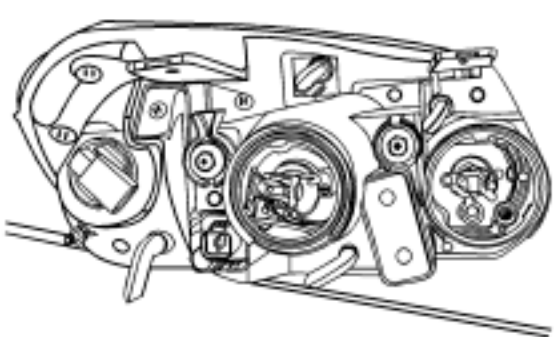
- 4. Disconnect the headlamp assembly electrical connectors.



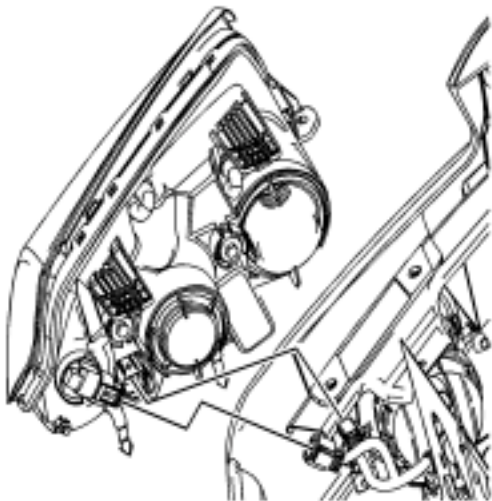
- 5. Remove the cap that conceals the headlamp bulb.
- 6. Disconnect the headlamp bulb electrical connectors.
- 7. Remove the headlamp bulbs.

Installation Procedure



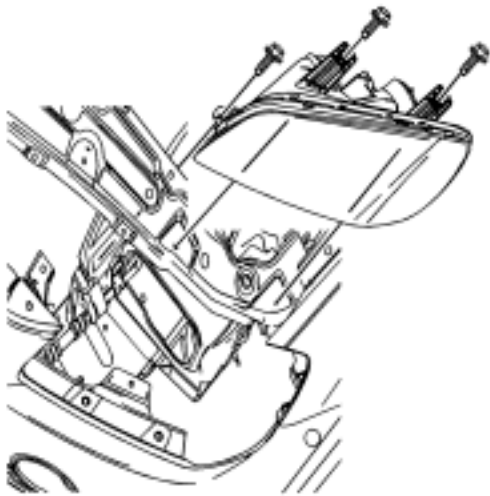


1. Install the headlamp bulbs.
2. Connect the headlamp bulb electrical connectors.
3. Install the cap that conceals the headlamp bulbs.



4. Connect the headlamp assembly electrical connectors.

Notice: Refer to [Fastener Notice](#) in Cautions and Notices.



5. Install the headlamp assembly with the bolts.

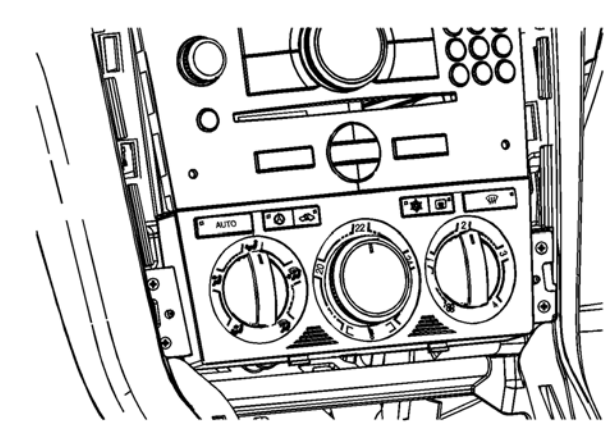
Tighten
Tighten the headlamp assembly bolts to 7 N·m (62 lb in).

6. Install the radiator grille upper cover.
7. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .

Heater and Air Conditioning Control Replacement (C105/Short Body)

Removal Procedure

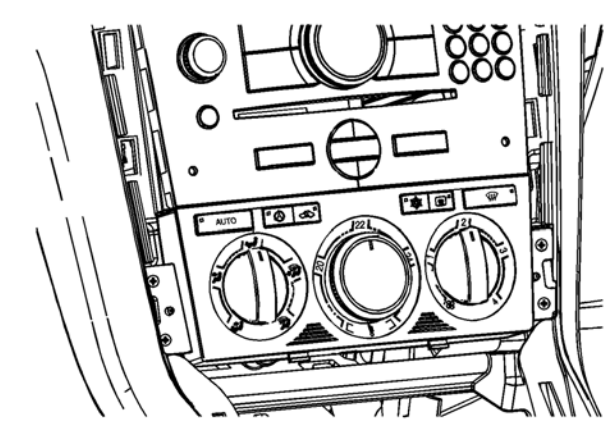
Caution: Refer to [Battery Disconnect Caution](#) in the Preface section.



Important: The left-hand drive is shown. The right-hand drive is similar.

1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .
2. Remove the instrument panel accessory bezel. Refer to [Instrument Panel Accessory Bezel Replacement](#) .
3. Remove the control assembly retaining screws.
4. Pull out the unit to gain access to the rear.
5. Disconnect the electrical connectors.
6. Remove the air inlet tube.
7. Remove the automatic temperature control assembly.

Installation Procedure



1. Connect the air inlet tube.
2. Connect the electrical connectors.

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

3. Position the automatic temperature control assembly and install the retaining screws.

Tighten

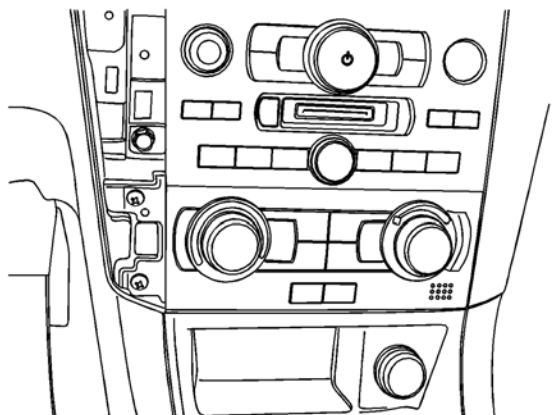
Tighten the control assembly retaining screws to 2.5 N·m (22 lb in).

4. Install the instrument panel accessory bezel. Refer to [Instrument Panel Accessory Bezel Replacement](#) .
5. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .

Heater and Air Conditioning Control Replacement (C100/Long Body)

Removal Procedure

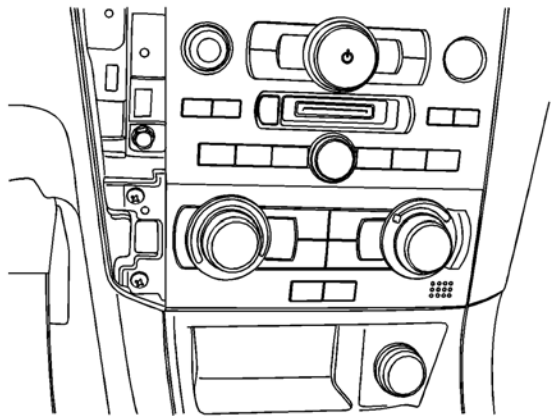
Caution: Refer to [Battery Disconnect Caution](#) in the Preface section.



Important: The left-hand drive is shown. The right-hand drive is similar.

1. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .
2. Remove the instrument panel accessory bezel. Refer to [Instrument Panel Accessory Bezel Replacement](#) .
3. Remove the control assembly retaining screws.
4. Pull out the unit to gain access to the rear.
5. Disconnect the electrical connectors.
6. Remove the air inlet tube.
7. Remove the automatic temperature control assembly.

Installation Procedure



1. Connect the air inlet tube.
2. Connect the electrical connectors.

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

3. Position the automatic temperature control assembly and install the retaining screws.

Tighten

Tighten the control assembly retaining screws to 2.5 N·m (22 lb in).

4. Install the instrument panel accessory bezel. Refer to [Instrument Panel Accessory Bezel Replacement](#) .
5. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) .