

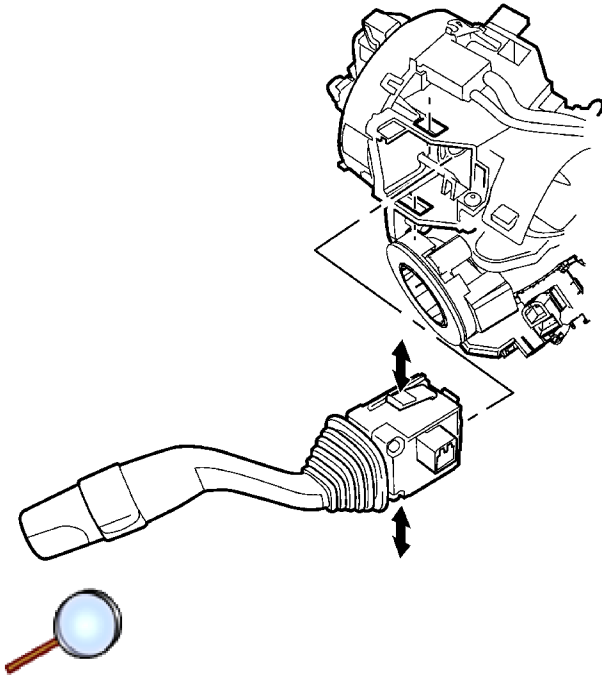
Fastener Tightening Specifications

Application	Specification	
	Metric	English
Wiper Motor Module to Bulk Head Retaining Bolts	8 N·m	71 lb in
Wiper Arm to Pivot Stud Retaining Nut	35 N·m	26 lb ft
Washer Solvent Container to Front End Module Support Retaining Bolts	5 N·m	44 lb in
Washer Solvent Container Filler Neck to Front End Module Bracket Retaining Bolt and Nut	5 N·m	44 lb in
Washer Solvent Container Filler Neck to Front End Module Bracket Retaining Torx Screw	4 N·m	35 lb in
Air Inlet Grille Brace to Air Inlet Grille Retaining Torx Screws	2 N·m	18 lb in

Windshield Wiper and Washer Switch Replacement

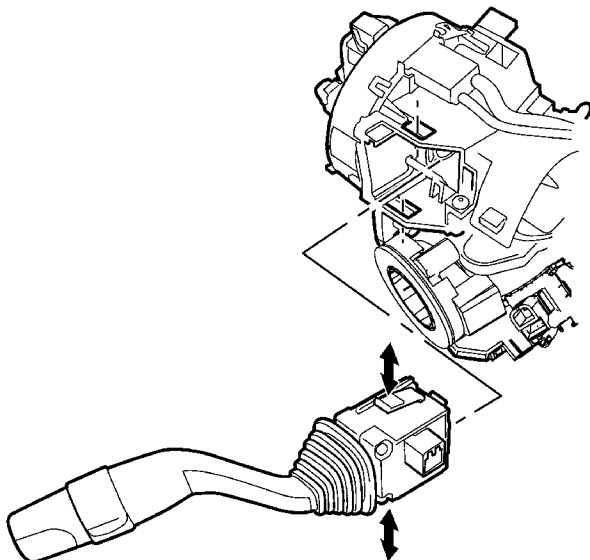
Removal Procedure

1. Remove the steering column trim covers. Refer to [Steering Column Trim Covers Replacement](#).



2. Press top and bottom tabs in and Pull the wiper/washer switch out of the column assembly.
3. Disconnect the wiper/washer switch electrical connector.

Installation Procedure



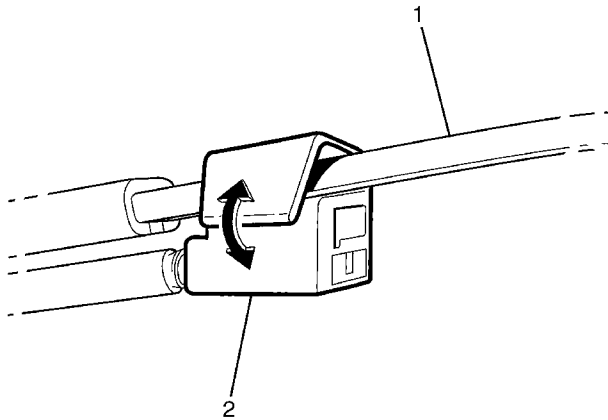
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1. Install the Wipers/Washer signal switch to the steering column. Listen for an audible click to confirm fitting.
2. Connect the wiper/washer switch electrical connector.
3. Install the steering column trim covers. Refer to [Steering Column Trim Covers Replacement](#).
4. Test wiper and washer system for correct operation.

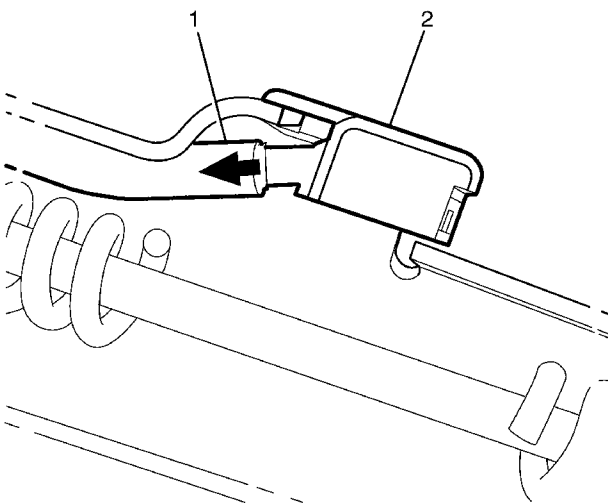
Washer Nozzle Replacement

Removal Procedure



Important: Exercise gentle force with fragile washer nozzle clips.

1. Unclip the washer nozzle (2) from the wiper arm (1).

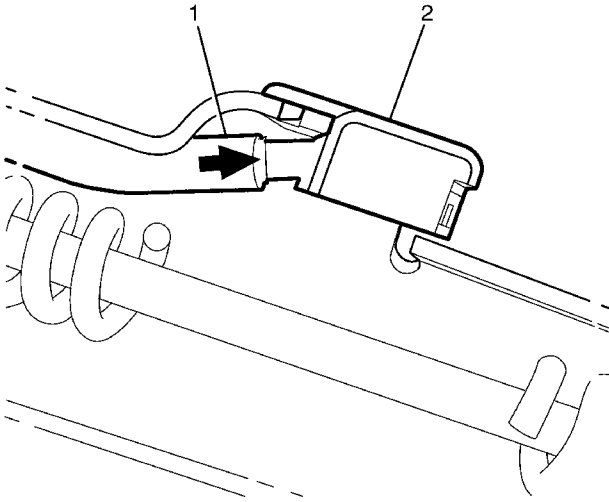


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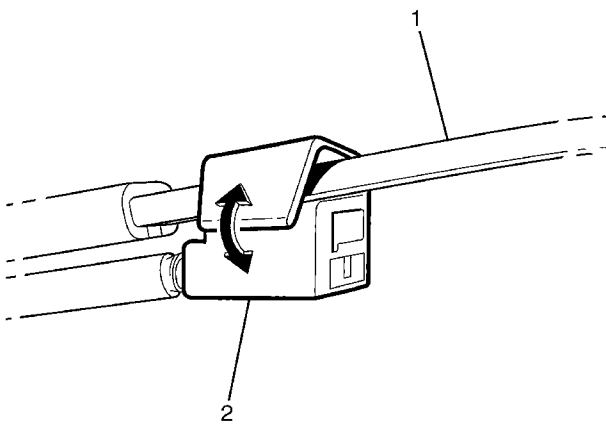
Important: Take care not to pierce the washer hose.

- Using a suitable tool disconnect the washer hose (1) from the washer nozzle (2).

Installation Procedure



- Connect the washer hose (1) onto the washer nozzle (2).

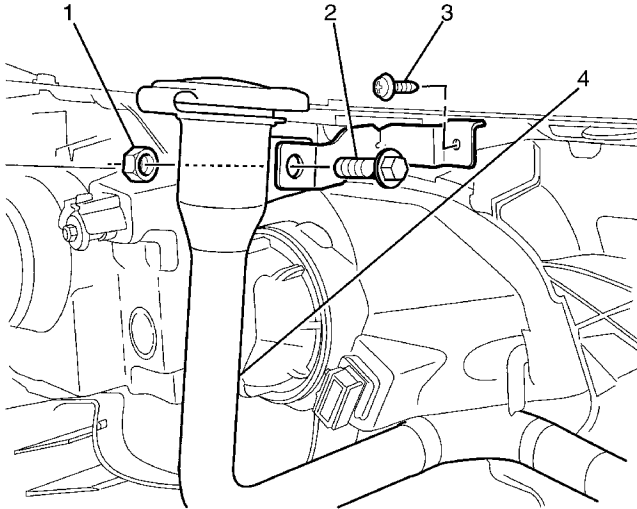


- Press the washer nozzle (2) onto the wiper arm (1) clipping it firmly into place. Listen for an audible click to confirm fitting.
- Test washer nozzle for correct operation.

Windshield Washer Solvent Container Filler Tube Replacement

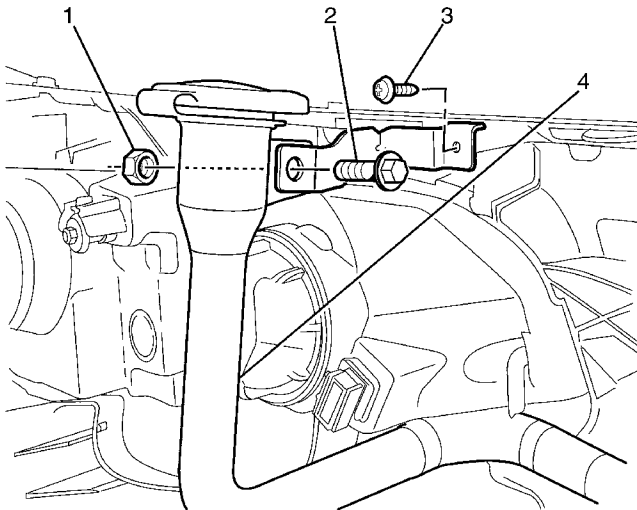
Removal Procedure

1. Remove the radiator air baffle and deflector. Refer to [Radiator Air Upper Baffle and Deflector Replacement](#).



2. Remove the washer solvent container filler neck (4) to front end module bracket retaining bolt (2) and nut (1).
3. Remove the washer solvent container filler neck (4) to front end module bracket retaining torx screw (3).
4. Remove the washer solvent container filler neck (4) from the washer solvent container.

Installation Procedure



1. Install the washer solvent container filler neck (4) into the washer solvent container.

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

2. Install the washer solvent container filler neck (4) to front end module bracket retaining bolt (2) and nut (1).

Tighten

Tighten the washer solvent container filler neck retaining bolt to 5.0 N·m (44 lb in).

3. Install the washer solvent container filler neck (4) to front end module bracket retaining torx screw (3).

Tighten

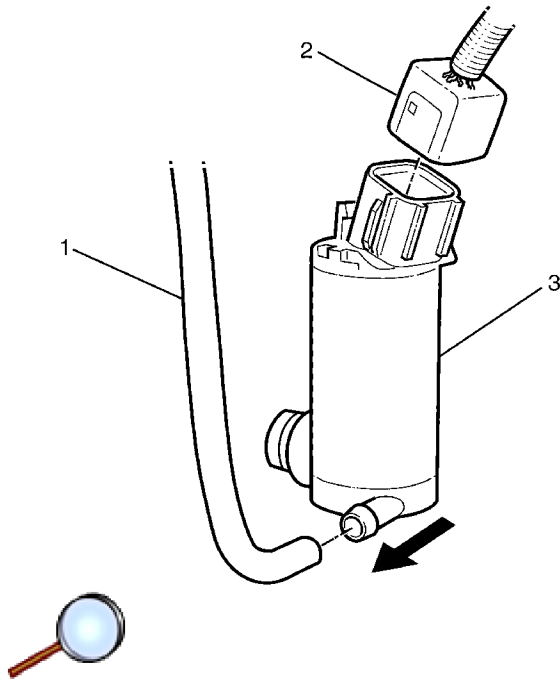
Tighten the retaining torx screw to (4.0 N·m (35 lb in).

4. Install the radiator air baffle and deflector. Refer to [Radiator Air Upper Baffle and Deflector Replacement](#).

Windshield Washer Solvent Container Replacement

Removal Procedure

1. Remove the radiator assembly. Refer to [Radiator Replacement](#).
2. Remove the washer solvent container filler neck. Refer to [Windshield Washer Solvent Container Filler Tube Replacement](#).



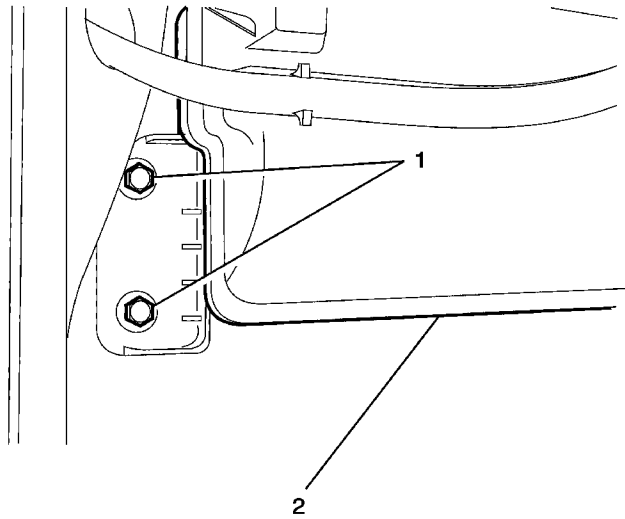
3. If fitted, remove the headlamp washer hose from the headlamp washer pump.

Disconnect the washer pump electrical connector (2).

4. Place a suitable container under the washer pump (3).
5. Remove the washer pump (3) from the washer solvent container.
6. Drain the washer solvent by directing the flow out of the solvent container into the suitable container.

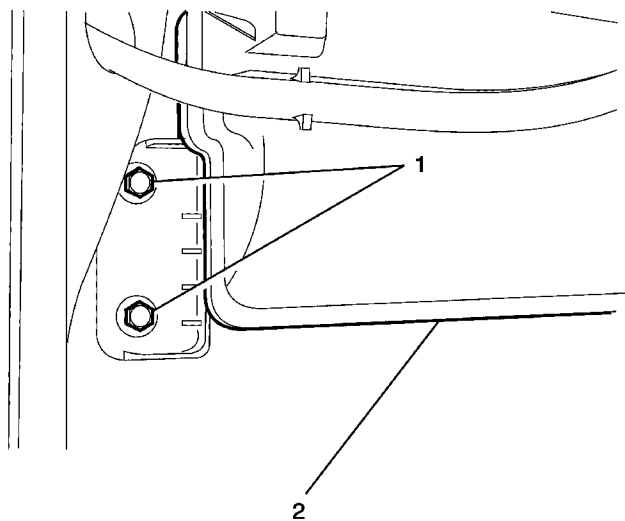
Important: Inspect the rubber seal for damage, due to perishing and replace as necessary.

7. Use a suitable tool to separate the washer hose (1) from the washer pump (3).



8. Remove the washer solvent container (2) to front end module support retaining bolts (1). Carry out the same procedure for opposite side.
9. Remove the solvent washer container (2).

Installation Procedure

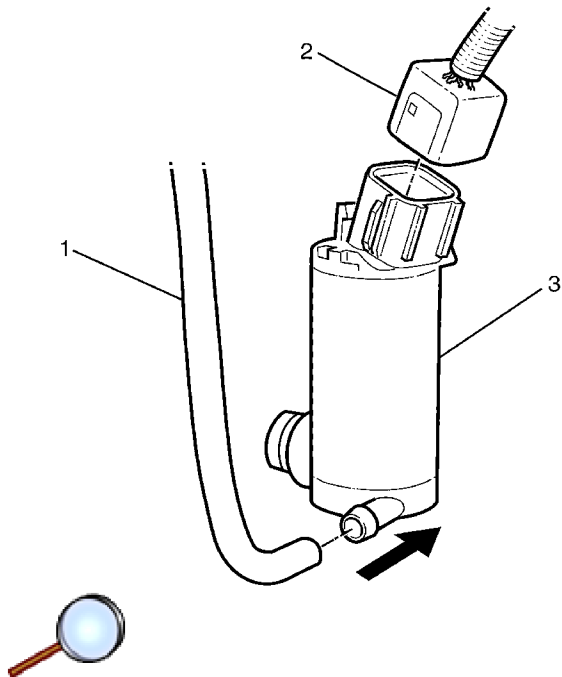


1. Install the washer solvent container (2) to the front end module support.
2. Install the washer solvent container (2) to the front end module support retaining bolts (1).

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

Tighten

Tighten the bolts (1) to (5) N·m (44 lb in).



3. If fitted, install the headlamp washer hose.

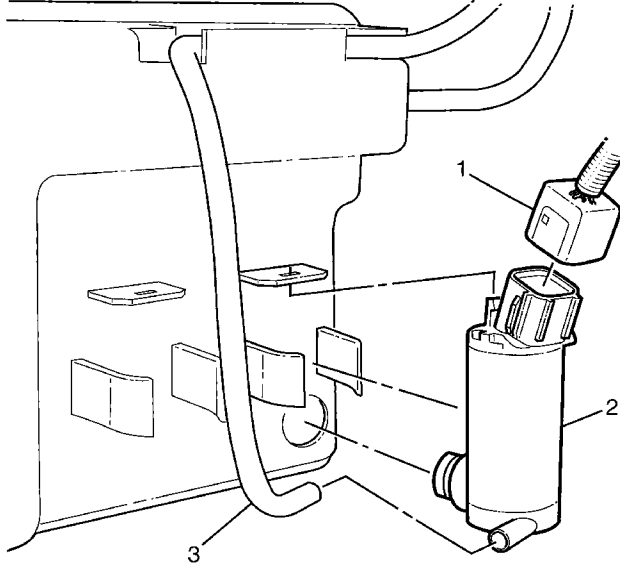
Connect the washer pump electrical connector (2).

4. Connect the washer pump hose (1) to the washer pump (3)
5. Install the washer solvent container filler neck. Refer to [Windshield Washer Solvent Container Filler Tube Replacement](#).
6. Fill the washer solvent container with washer solvent.
7. Install the radiator assembly. Refer to [Radiator Replacement](#).
8. Test the washer pump for the correct operation.

Washer Pump Replacement

Removal Procedure

1. Remove the radiator assembly. Refer to [Radiator Replacement](#).



2. Disconnect the washer pump electrical connector (1).
3. Place a suitable container under the washer pump (2).

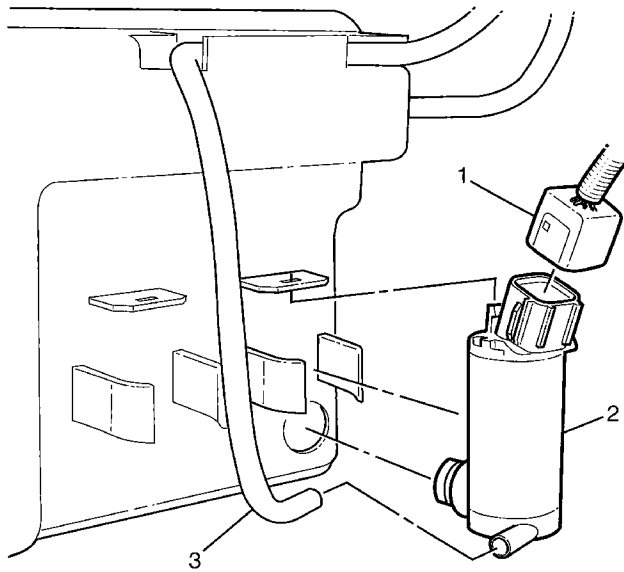
Important: Take care not to pierce the washer hose.

4. Remove the washer pump hose (3).

Important: Inspect the rubber seal for damage, due to perishing and replace as necessary.

5. Remove the washer pump (2).

Installation Procedure



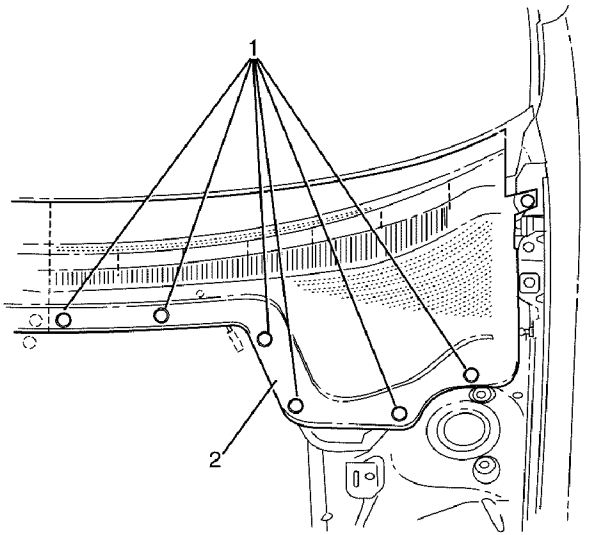
1. Position the seal to the washer pump (2) pressing in the washer pump until fully seated.
2. Connect the washer pump electrical connector (1).
3. Connect the washer pump hose (3).
4. Fill the washer solvent container with washer solvent.
5. Test the washer pump for correct operation.
6. Install the radiator assembly. Refer to [Radiator Replacement](#).

Air Inlet Grille Panel Replacement

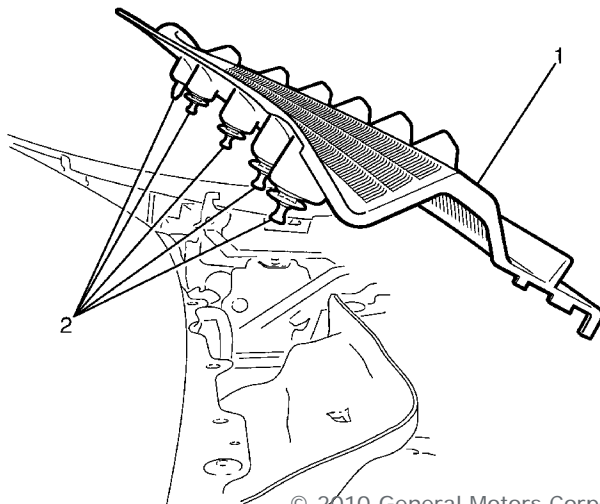
Removal Procedure

Important: When a suitable hold open device is being removed or installed, provide alternate support to avoid the possibility of damage to the vehicle or personal injury.

1. Install a suitable hood brace to the vehicle.
2. Remove the windshield wiper arms. Refer to [Windshield Wiper Arm Replacement](#).
3. Remove the hood rear seal. Refer to [Hood Rear Seal Replacement](#).



4. Remove the passenger side air inlet grille panel to air inlet grille panel lower retaining screws (1).



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Important: The outer rear edges of the air inlet grille panels are positioned around the rear of the hood hinges and are tucked under the front hood assist rods.

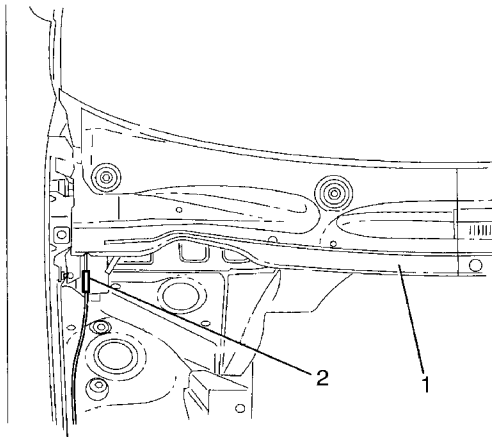
Important: The air inlet grille panel retaining grommets are single use parts. They must be discarded after removal.

5. Lift the air inlet grille panel upper (1) on the passenger side and pull upwards and inwards from the outboard of the vehicle, working towards the centre, to disengage the retaining clips (2) from the air inlet grille panel lower and discard the retaining clips.

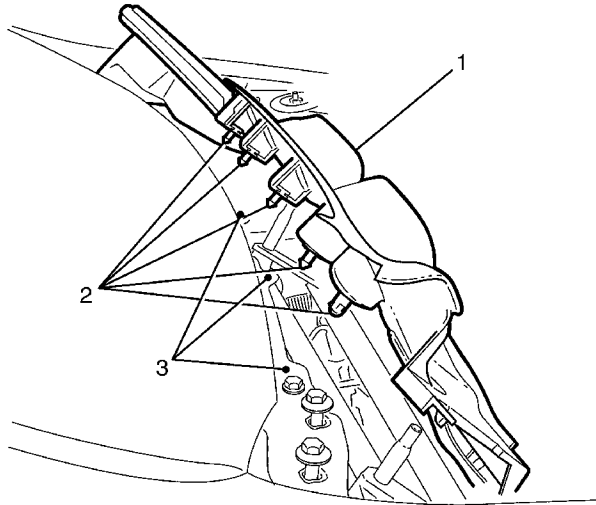
Discard the clips.

6. Remove the air inlet grille panel upper retaining grommets (3) from the air inlet grille panel lower (1).

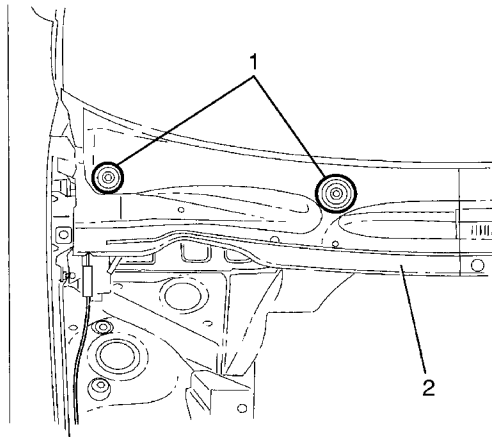
Discard the grommets.



7. Disconnect the washer jet feed line (2) from the driver side air inlet grille panel lower (1).

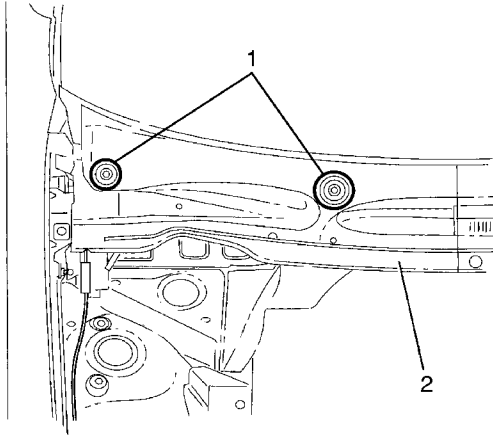


8. Lift the air inlet grille panel lower (1) on the driver side and pull upwards and inwards from the outboard of the vehicle, working towards the centre to disengage the retaining clips (2).

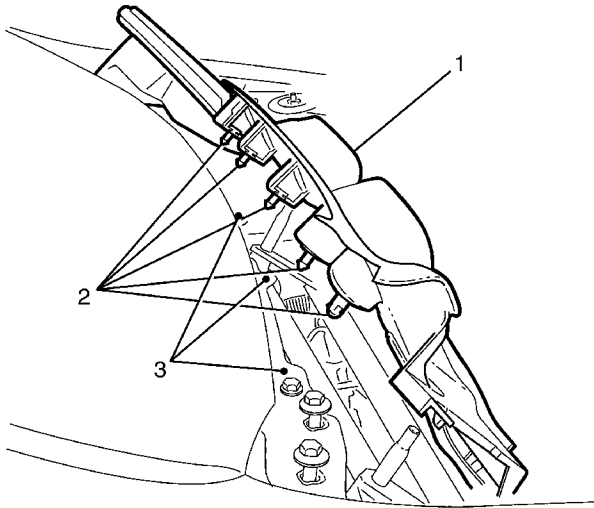


9. Lift the remaining air inlet grille panel (2) over the wiper arm drive spindles (1).
10. Remove the driver side air inlet grille panel from the vehicle.

Installation Procedure

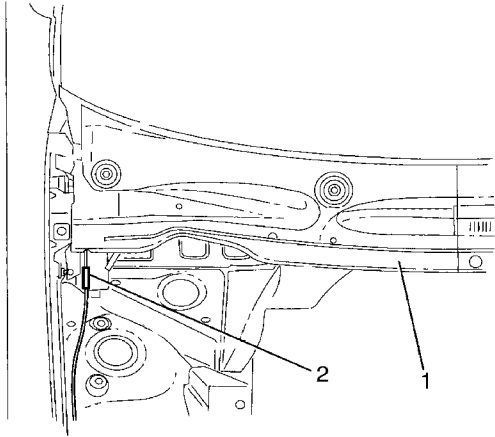


1. Position the driver side air inlet grille panel (2) to the vehicle, over the wiper arm drive spindles (1) and in behind the hood hinge.

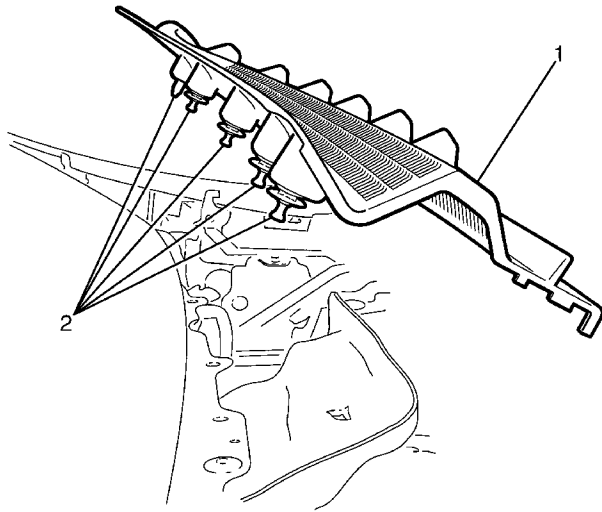


Important: Make sure that the retaining pins are not damaged during installation.

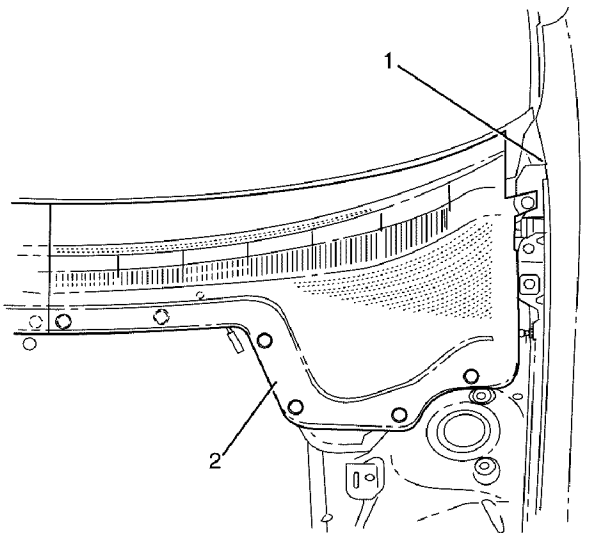
2. Locate the air inlet grille panel (1) to cowl panel retaining pins (2).
3. Firmly press the cowl panel retaining pins to secure the air inlet grille panel to the retaining grommets (3).



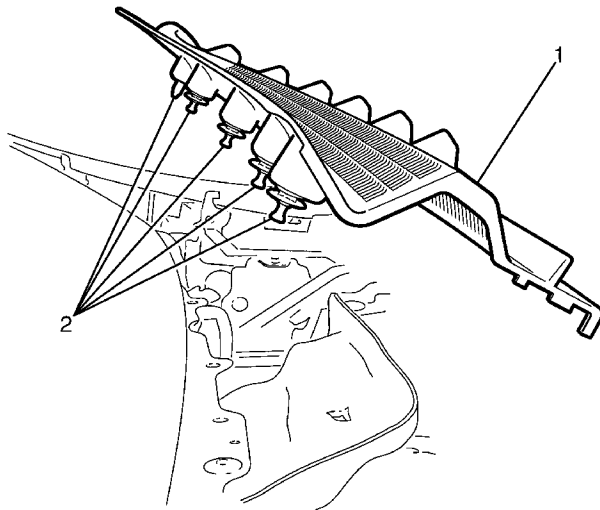
4. Connect the washer jet feed line (2) to the driver side air inlet grille panel (1).



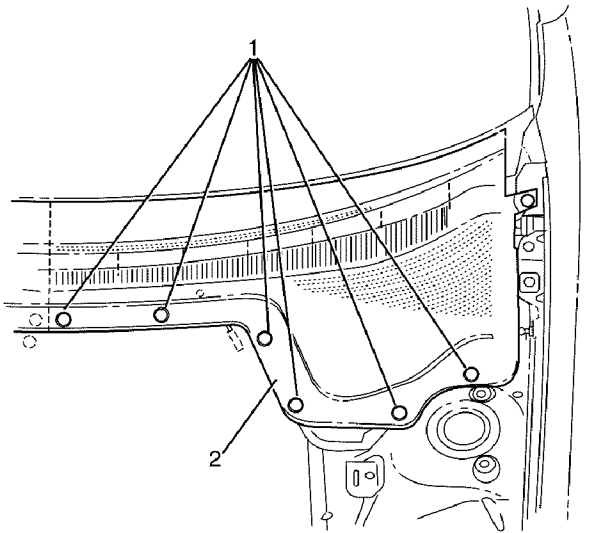
5. Install new retaining pins (2) to the air inlet grille upper panel (1).



6. Position the passenger side air inlet grille panel (2) around the hood hinge (1) and under the front hood assist rod.



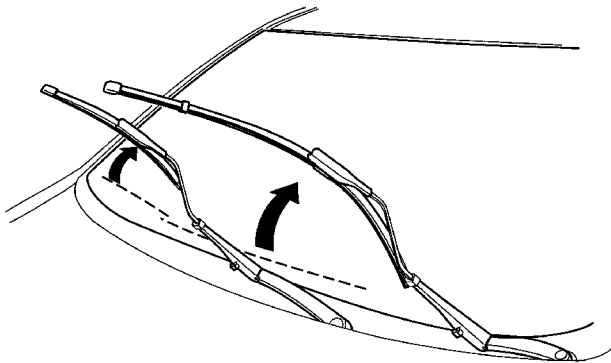
7. Make sure the retaining pins (1) align with the retaining grommets during installation.
8. Engage the outboard retaining pin and work towards the centre of the vehicle.
9. Make sure that the air inlet grille seal is positioned on the lower edge of the windshield.



10. Install the passenger side air inlet grille panel to cowl panel retaining scrivenets (1).
11. Install the hood rear seal to the flange on the air inlet grille panel. Refer to [Hood Rear Seal Replacement](#).
12. Apply pressure to the seal to secure.
13. Install the windshield wiper arms. Refer to [Windshield Wiper Arm Replacement](#).
14. Remove the suitable hood brace from the vehicle.

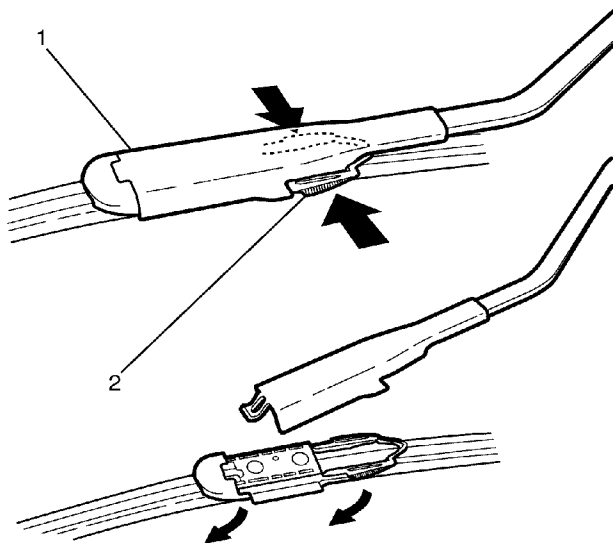
Windshield Wiper Arm Replacement

Removal Procedure



Important: Make sure that the wiper arms (2) DO NOT interfere with the hood (3) while being moved away from the windshield (1).

1. Lift the wiper arms (2) away from the windshield (1) to the upright position.

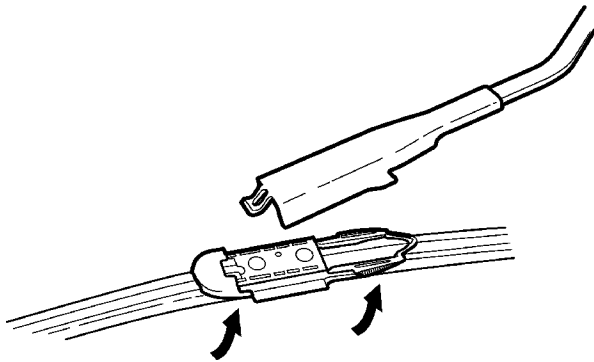


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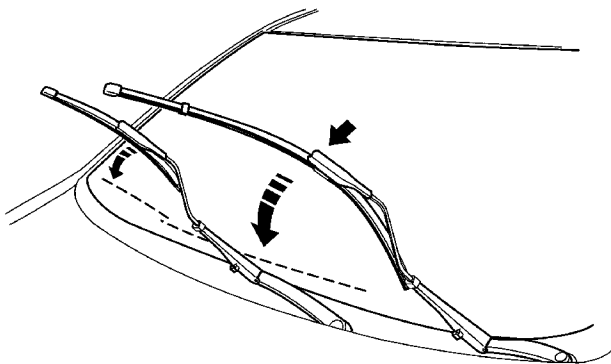
Important: Make sure that the wiper arms (1) remain at rest and DO NOT spring back onto the windscreen.

2. Press in the wiper arm blade side clip (2) and unclip the wiper arm blade (3).
3. Remove the wiper arm blade (3) from the wiper arm (1).

Installation Procedure



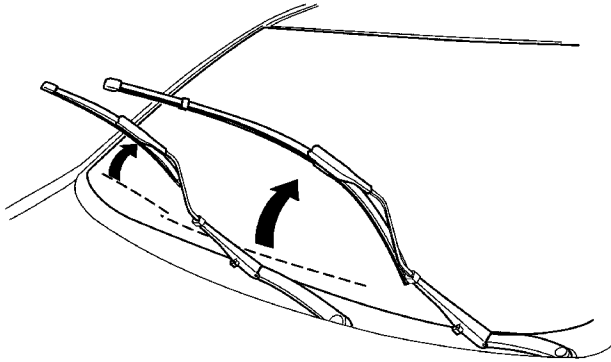
1. Clip the wiper arm blade connector (1) onto the wiper arm (2). Listen for an audible click to confirm fitting.



2. Move the wiper arms (1) back to the parked position.
3. Test the windshield wipers and washers for correct operation.

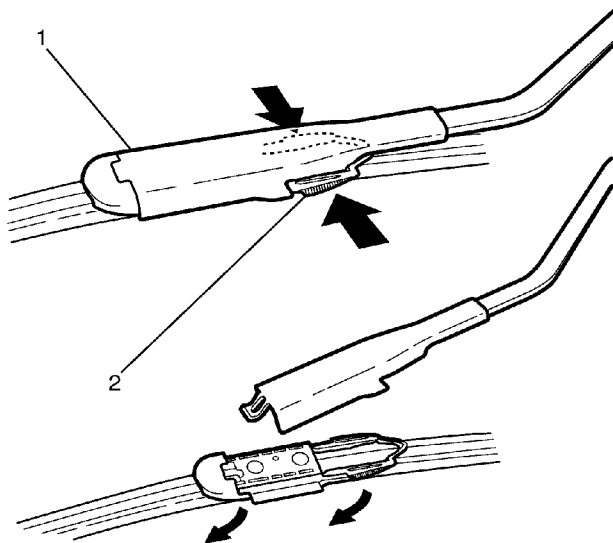
Windshield Wiper Blade Replacement

Removal Procedure



Important: Ensure that the wiper arms do not interfere with the hood while being moved away from the windshield.

1. Lift the wiper arms (1) away from the windshield to the upright position.

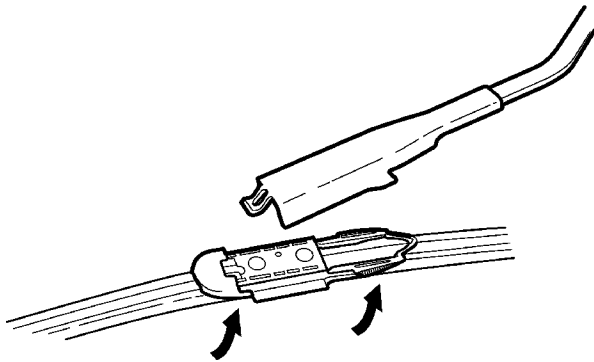


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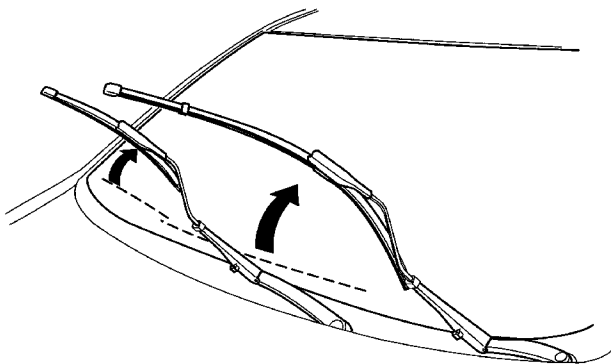
Important: Ensure that the wiper arms remain at rest and Do Not spring back onto the windscreen.

2. Press the wiper arm blade side clip (2) in and unclip the wiper arm (1) blade.
3. Remove the wiper arm blade from the wiper arm (1).

Installation Procedure



1. Clip the wiper arm blade connector onto the wiper arm. Listen for an audible click to confirm fitting.

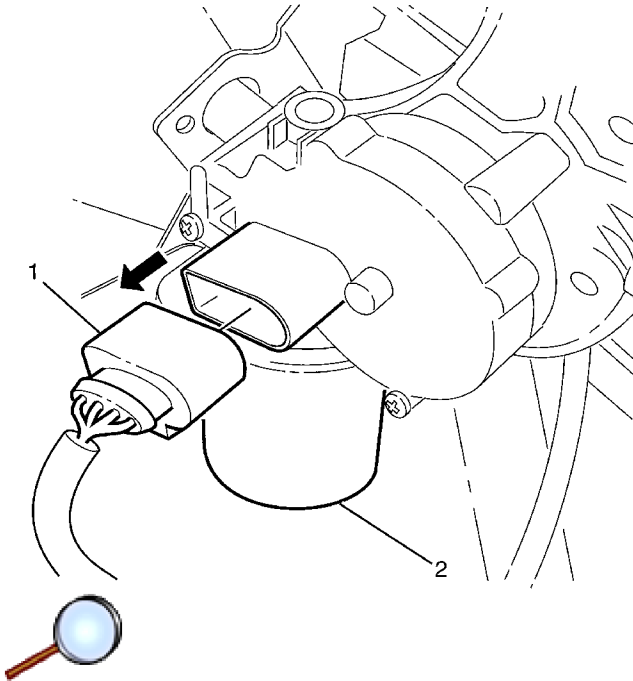


2. Move the wiper arm back to the parked position.
3. Test the windshield wipers and washers for correct operation.

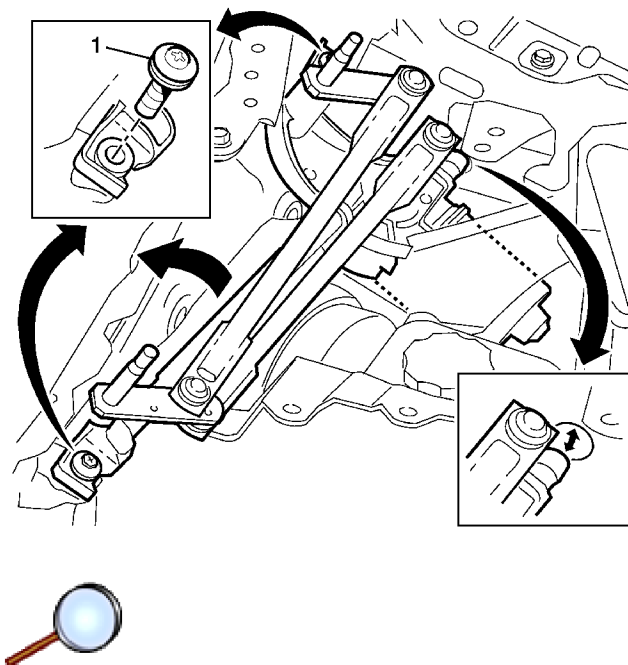
Windshield Wiper System Module Replacement

Removal Procedure

1. Remove the wiper arms. Refer to [Windshield Wiper Arm Replacement](#).
2. Remove the air inlet grille. Refer to [Air Inlet Grille Panel Replacement](#).



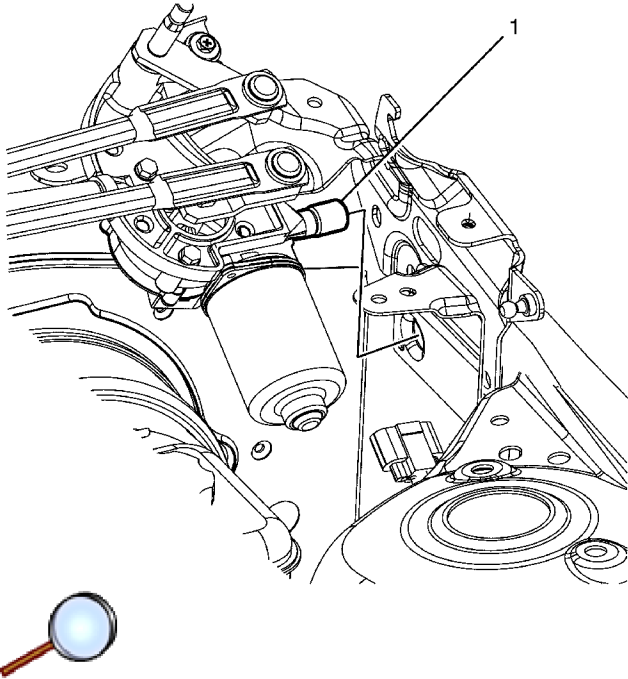
3. Disconnect the electrical connector (1) from the wiper motor (2).



4. Remove the wiper motor module to bulk head retaining bolts (1).
5. Remove the wiper motor module from the bulkhead.

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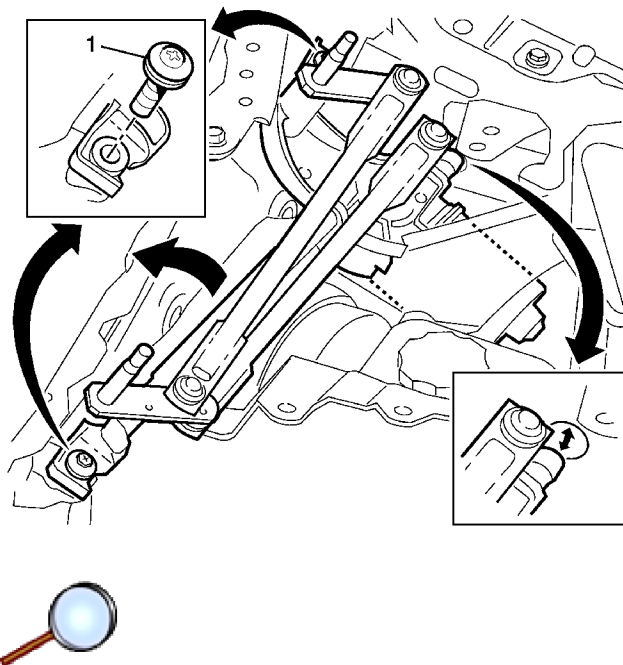
Installation Procedure



Important: Ensure that the locator lug (1) is inserted before attempting to fasten the retaining bolts.

1. Install the wiper motor module onto the bulkhead.

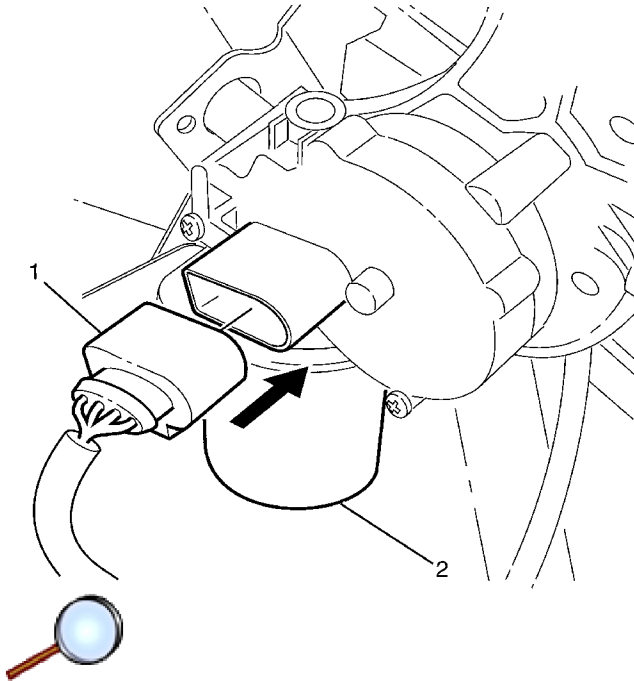
Notice: Refer to [Fastener Notice](#) in the Preface section.



2. Install the wiper motor module to bulk head retaining bolts (1).

Tighten

Tighten the bolts to 8 N·m (71 lb in).



3. Connect the electrical connector (1) to the wiper motor (2).
4. To ensure the wiper motor module is in the correct position :
 - Turn the ignition ON and wait for the wiper motor module to assume the park position.
 - Turn the ignition OFF.
 - Install the air inlet grille. Refer to [Air Inlet Grille Panel Replacement](#) .
 - Install the wiper arms. Refer to [Windshield Wiper Arm Replacement](#) .
 - Test the wiper and washer system for correct operation.

Windshield Glass Cleaning

Important: The cleaner should not harm the paint finish or scratch the glass. The glass is clean when the water no longer beads, but sheets across the entire glass surface.

Clean the windshield with windshield cleaner, Optikleen P/N 92140004 or equivalent.