

# SECTION : 9R

## BODY FRONT END

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## SPECIFICATIONS

### FASTENER TIGHTENING SPECIFICATIONS

Application	N•m	Lb-Ft	Lb-In
A-Pillar Fender Bolt	8	–	71
Cowl Vent Grille Screws	4	–	35
Fender Bolt (Front of Fascia)	4	–	35
Front Bumper Fascia-to-Fender Bolt	1.5	–	13
Hinge Bolts	27	20	–
Hood-to-Hinge Bolts	27	20	–
Hood Latch Bolts	8	–	71
Hood Release Handle Nuts	4	–	35
Lower Fender Bolt	8	–	71
Radiator Grille Nuts	4	–	35
Splash Shield Bolts	1.5	–	13
Upper Fender Bolts	8	–	71

# MAINTENANCE AND REPAIR

## ON-VEHICLE SERVICE

### LUBRICATION

The hood hinges and the locking mechanisms require periodic lubrication for proper operation. Refer to *Section 0B, General Information* for the specific types and intervals of lubrication.

### FASTENERS

**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

Many aluminum components are used on current models. Aluminum in contact with steel may corrode rapidly if it is not protected by special finishes or isolators.

The fasteners used have a special finish which provides adequate protection from corrosion. These special fasteners differ in color in order to easily identify them from the standard metric fasteners, which are medium blue.

When replacing fasteners, avoid substituting otherwise similar fasteners in the same location.

### ANTICORROSION MATERIALS

In order to provide rust resistance, anticorrosion materials have been applied to the interior surfaces of most of the metal panels. When you service these panels, properly re-coat them with a service-type anticorrosion material if any of the original material has been disturbed.

### FRONT END SEALING

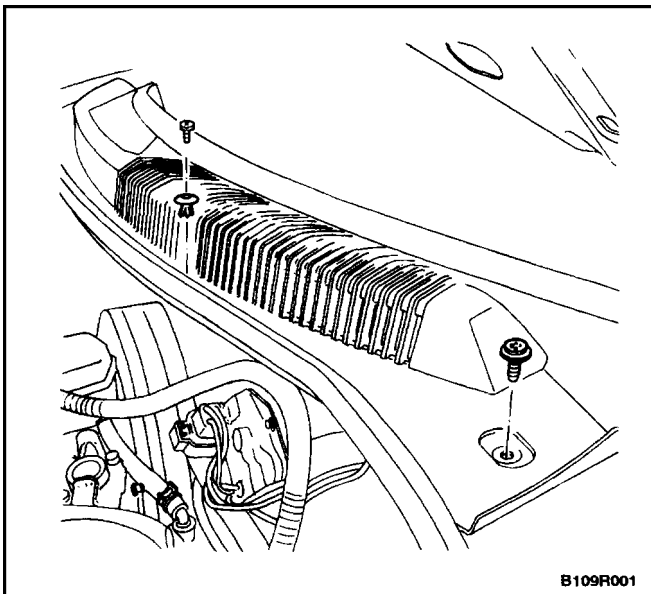
All locations where waterleaks may occur are sealed during production with high quality, durable sealers. If it becomes necessary to reseal specific areas, use a high-quality sealer of medium-bodied consistency which will retain its flexible characteristics after curing and can be painted, if necessary.

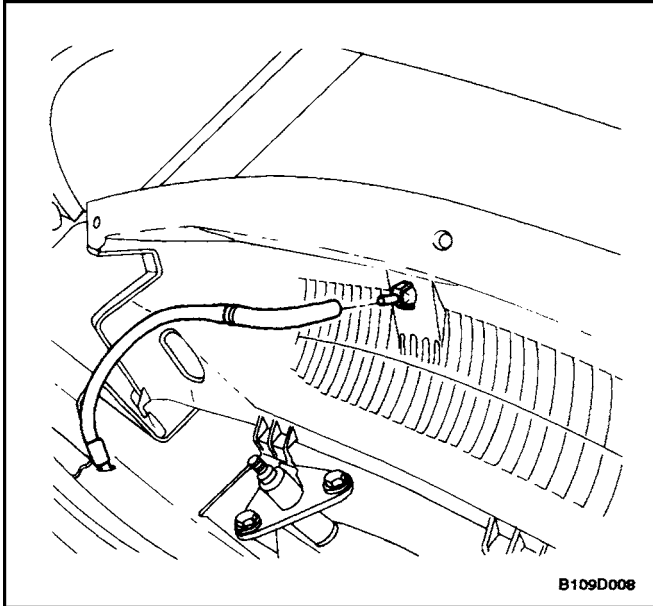
### COWL VENT GRILLE

**(Left-Hand Drive Shown, Right-Hand Drive Similar)**

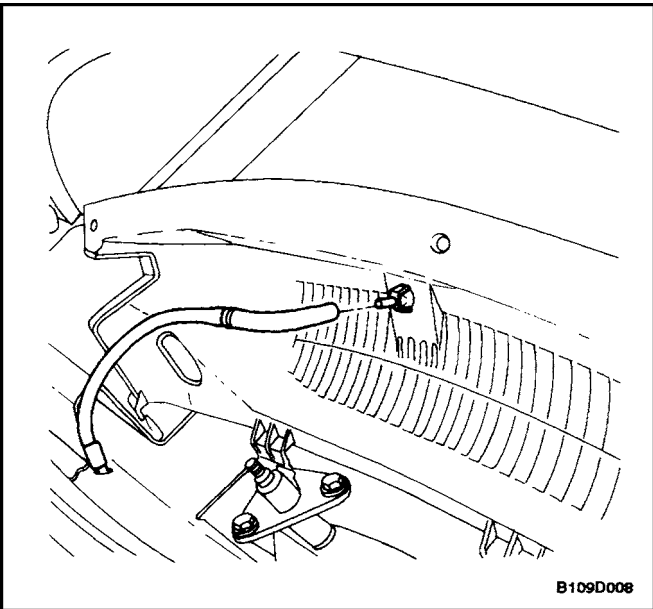
#### Removal Procedure

1. Raise the hood and support it with the hood prop.
2. Remove the wiper arms. Refer to *Section 9D, Wipers/ Washer Systems*.
3. Remove the cowl vent grille screws and the two-piece grille.



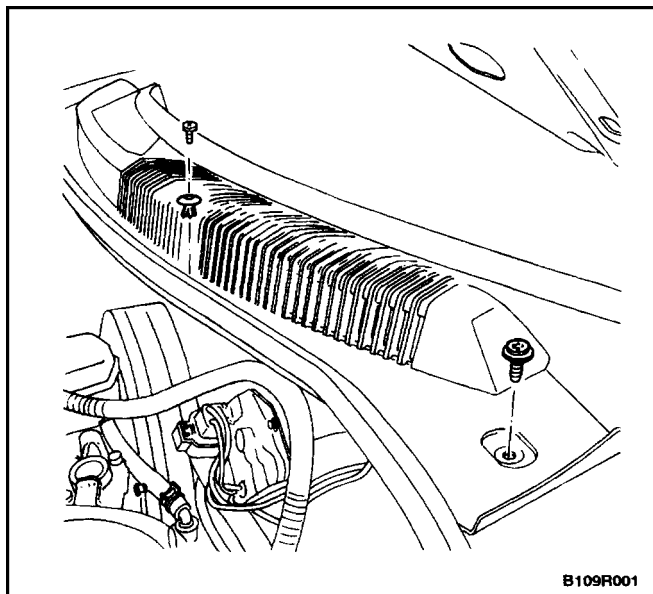


4. Disconnect the washer hoses.



### Installation Procedure

1. Connect the washer hoses.



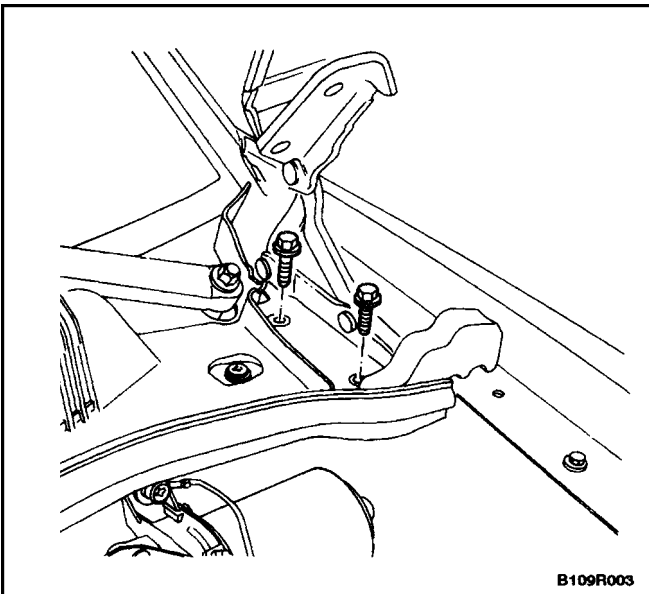
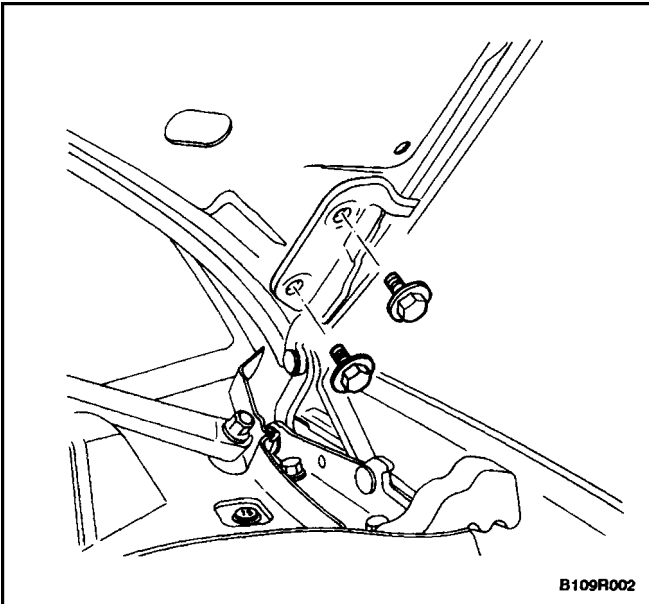
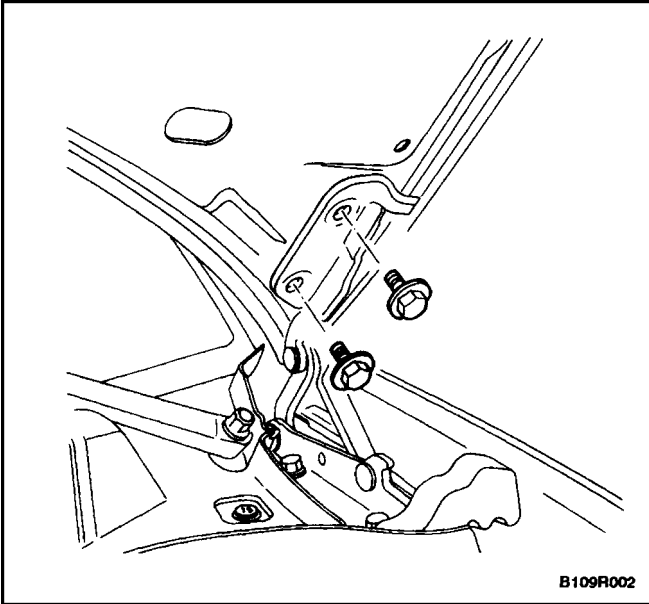
**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

2. Install the two-piece grille and the cowl vent grille screws.

### Tighten

Tighten the cowl vent grille screws to 4 N•m (35 lbin).

3. Install the wiper arms. Refer to *Section 9D, Wipers/Washer Systems*.



## HOOD

### Removal Procedure

**Notice :** Install protective coverings over the fenders and the windshield in order to prevent damage to the paint, the glass and the moldings when you are removing and installing the hood.

1. Raise and support the hood.
2. Mark the position of the hinge to the hood to facilitate alignment during installation.
3. Remove the bolts that retain the hood to both hinges.
4. With the aid of another technician, remove the hood from the hinges.

### Installation Procedure

1. With the aid of another technician, position the hood in the location marked during removal.

**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

2. Install the two bolts securing the hood to each hinge.

#### **Tighten**

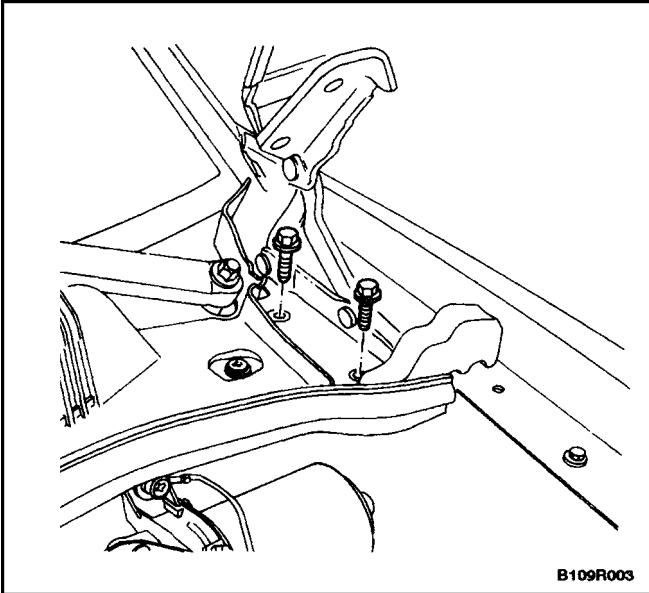
Tighten the hood-to-hinge bolts to 27 N•m (20 lb–ft).

3. Inspect the hood for proper alignment.

## HOOD HINGES

### Removal Procedure

1. Remove the hood. Refer to "Hood" in this section.
2. Remove the bolts and the hinge.



### Installation Procedure

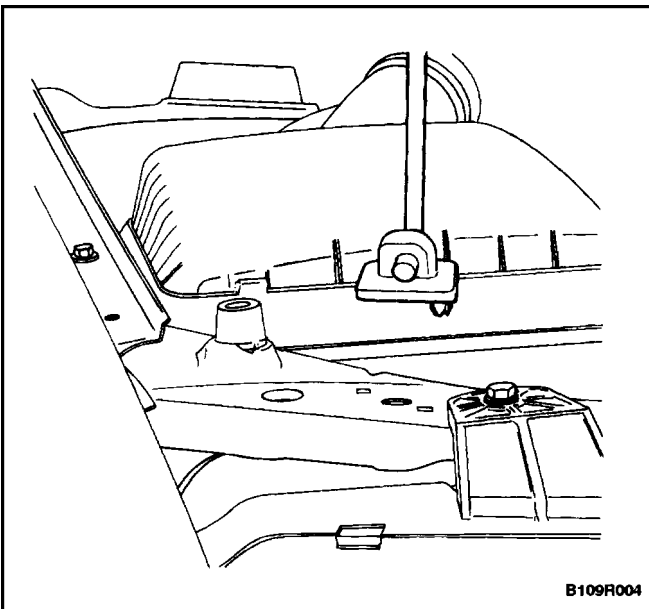
**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

1. Install the hinge with the bolts.

### Tighten

Tighten the hinge bolts to 27 N•m (20 lb–ft).

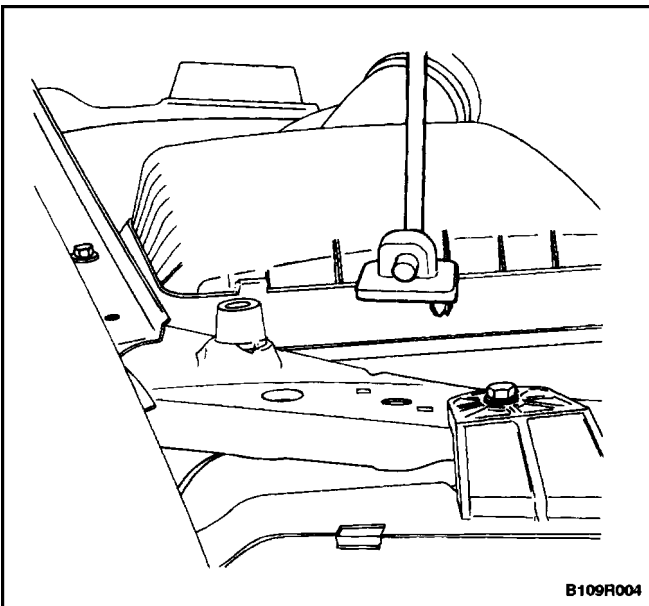
2. Install the hood. Refer to "Hood" in this section.



### HOOD PROP ROD

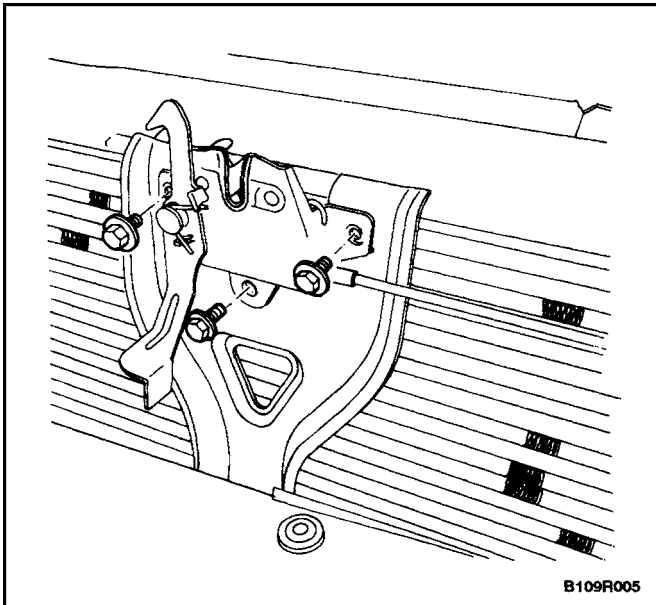
#### Removal Procedure

1. Support the hood in the open position.
2. Remove the hood prop rod by gently prying the base from the radiator support.



#### Installation Procedure

1. Install the hood prop rod by snapping the base back into the radiator support.

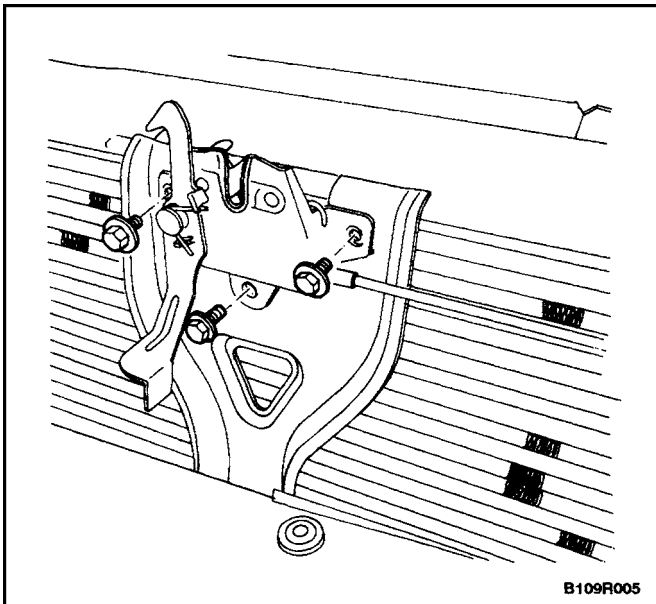


## HOOD SECONDARY LATCH

(Left-Hand Drive Shown, Right-Hand Drive Similar)

### Removal Procedure

1. Open the hood.
2. Mark the position of the hood latch on the radiator support to facilitate alignment during installation.
3. Remove the bolts and the hood latch.
4. Disconnect the hood release cable.



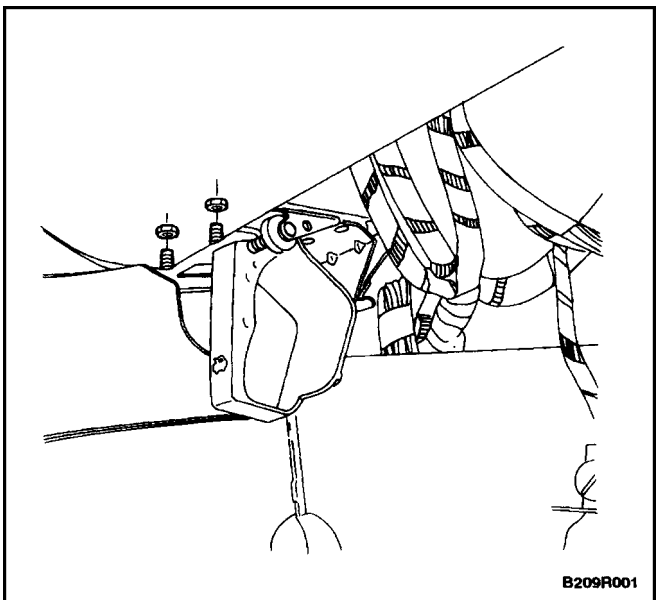
### Installation Procedure

**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

1. Connect the hood release cable to the latch.
2. Position the hood latch in the location marked during removal.
3. Install the hood latch with the bolts.

### Tighten

Tighten the hood latch bolts to 8 N•m (71 lb-in).

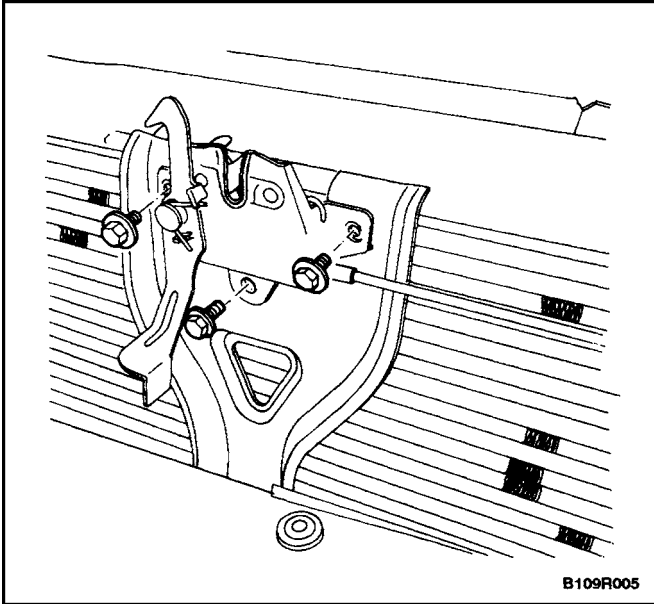


## HOOD LATCH RELEASE CABLE

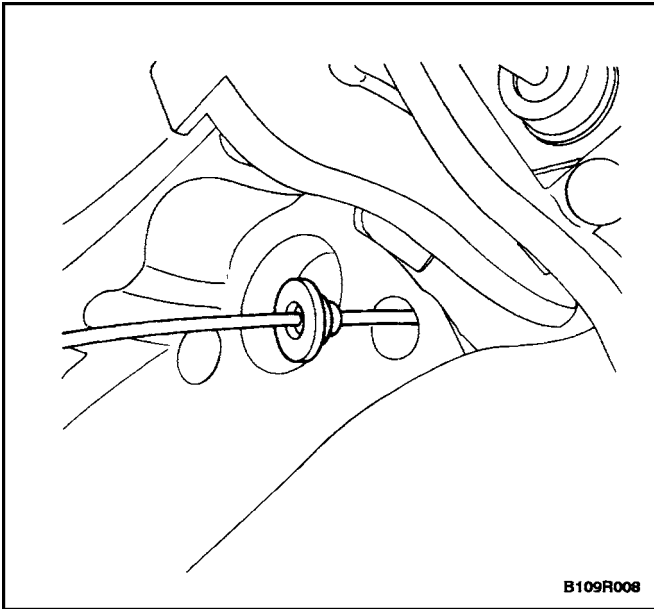
(Left-Hand Drive Shown, Right-Hand Drive Similar)

### Removal Procedure

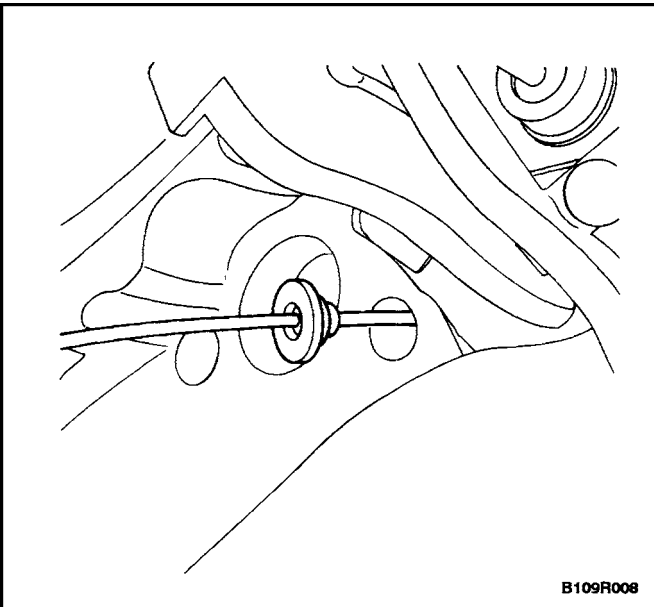
1. Remove the nuts and the hood release handle from the instrument panel.



2. Open the hood.
3. Remove the bolts and the hood latch release.
4. Remove the cable from the hood latch release assembly.



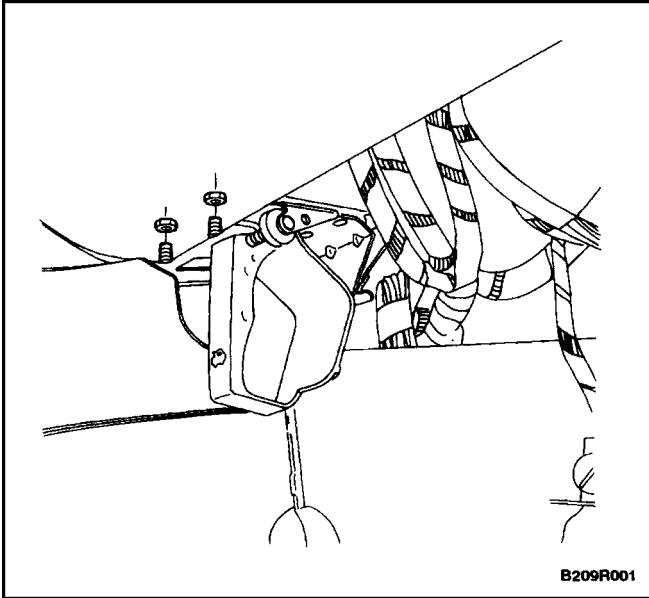
5. Remove the cable and the grommet from inside the vehicle.



### Installation Procedure

**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

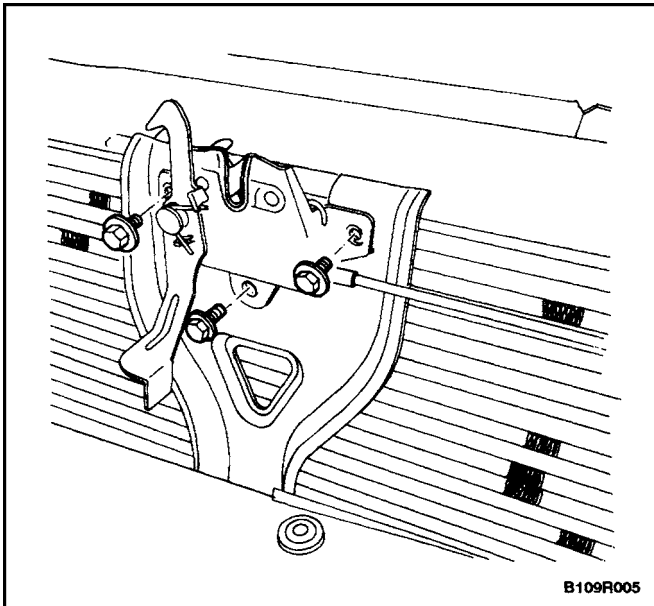
1. Install the cable through the engine compartment.
2. Install the cable into the hood latch release handle.
3. Install the grommet in the fire wall.



4. Install the hood release handle on the instrument panel with the nuts.

**Tighten**

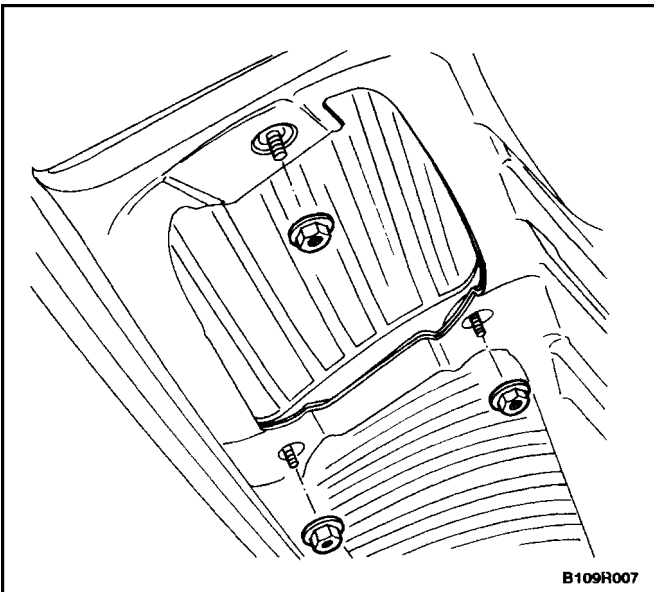
Tighten the hood latch bolts to 8 N•m (71 lb-in).



5. Install the cable to the hood latch release assembly.
6. Install the hood latch release assembly with the bolts.

**Tighten**

Tighten the hood latch bolts to 8 N•m (71 lb-in).

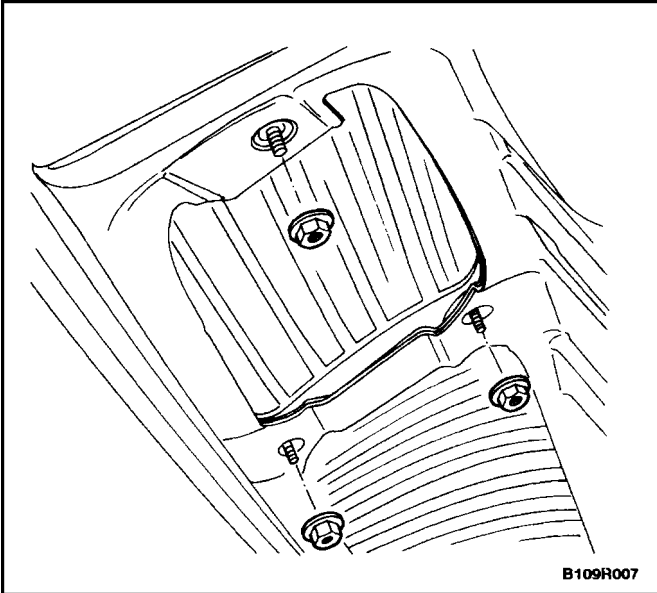


## RADIATOR GRILLE

### Removal Procedure

1. Open the hood.
2. Remove the nuts and the radiator grille.





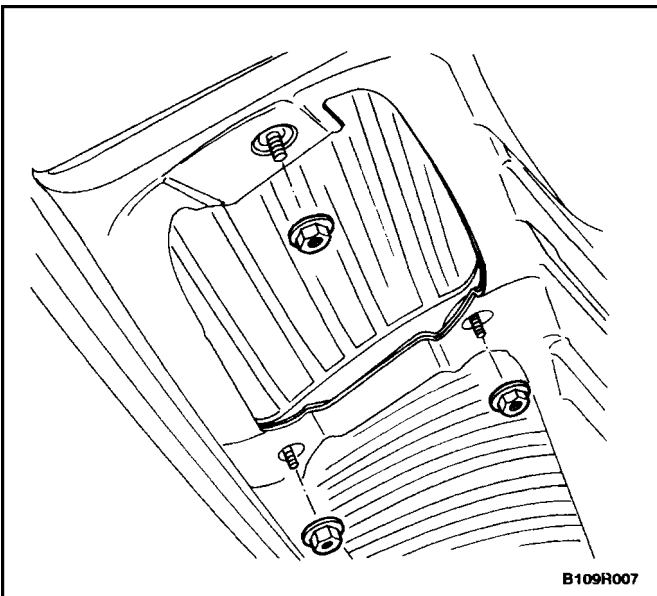
### Installation Procedure

**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

1. Install the radiator grille with the nuts.

### Tighten

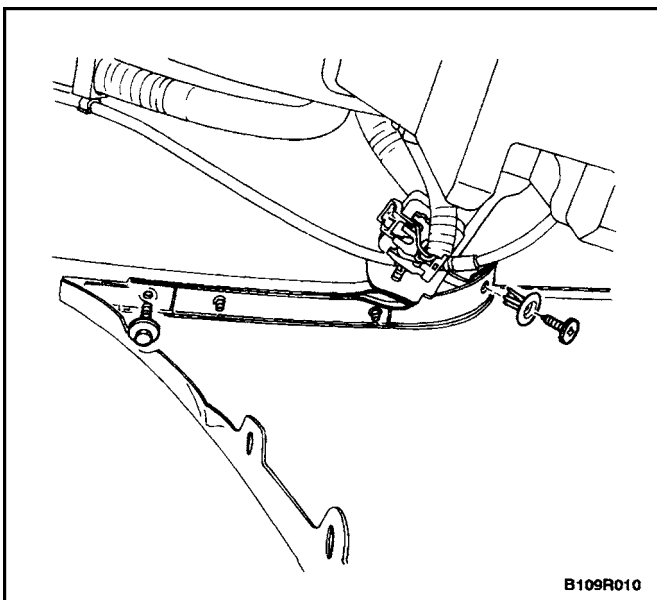
Tighten the radiator grille nuts to 4 N•m (35 lb-in).

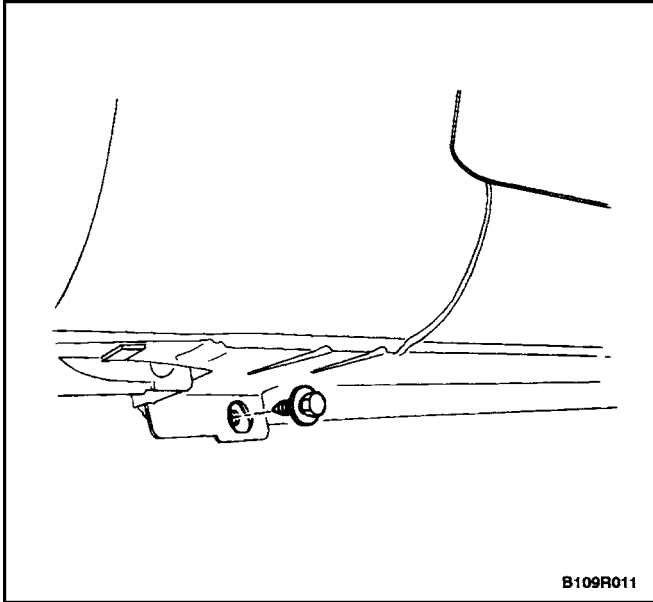


## FENDER

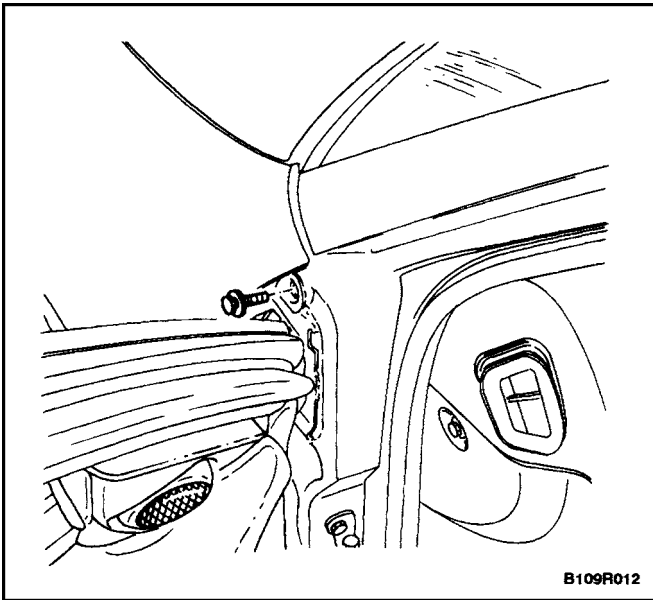
### Removal Procedure

1. Raise and suitably support the vehicle.
2. Remove the front wheel. Refer to *Section 2E, Tires and Wheels*.
3. Remove the screws, the bolts, and the front wheel well splash shield.
4. Remove the side turn signal lamp. Refer to *Section 9B, Lighting Systems*.
5. Remove the screw and the bolt that secure the front bumper fascia to the fender.

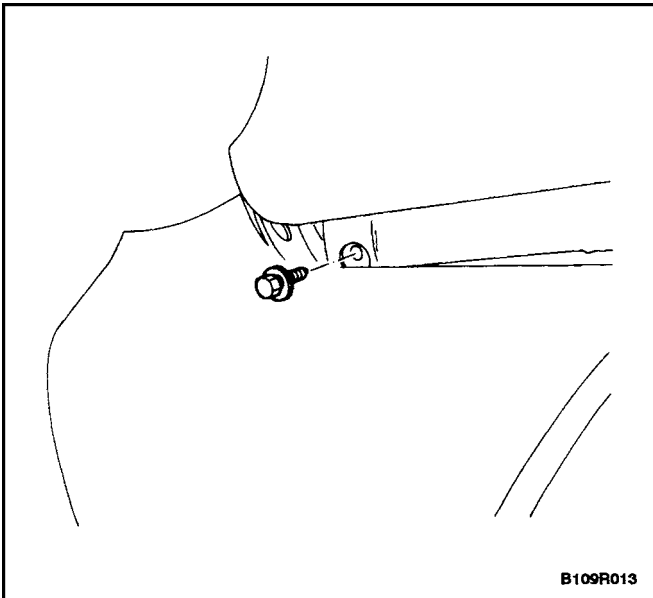




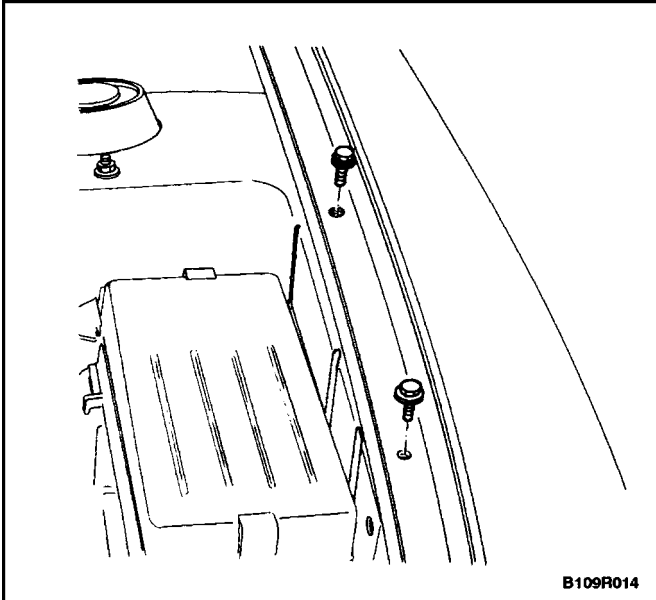
6. Remove the bolt at the base of the fender.



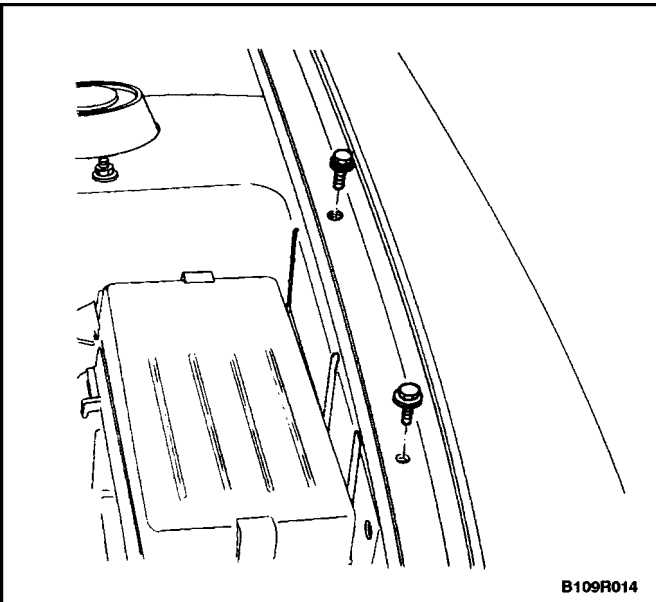
7. Open the front door.
8. Remove the bolt at the base of the A-pillar.



9. Open the hood.
10. Remove the headlamp. Refer to *Section 9B, Lighting Systems*.
11. Remove the bolt between the bumper fascia and the fender.



12. Remove the bolts along the top of the fender.
13. Remove the fender.



### Installation Procedure

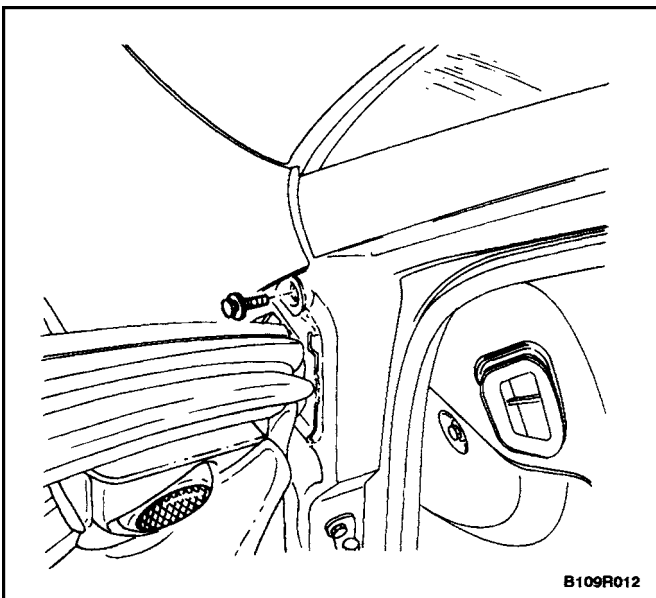
1. Install the headlamp. Refer to *Section 9B, Lighting Systems*.
2. Install the fender.

**Notice :** Dissimilar metals in direct contact with each other may corrode rapidly. Make sure to use the correct fasteners to prevent premature corrosion.

3. Install the bolts along the top of the fender.

#### Tighten

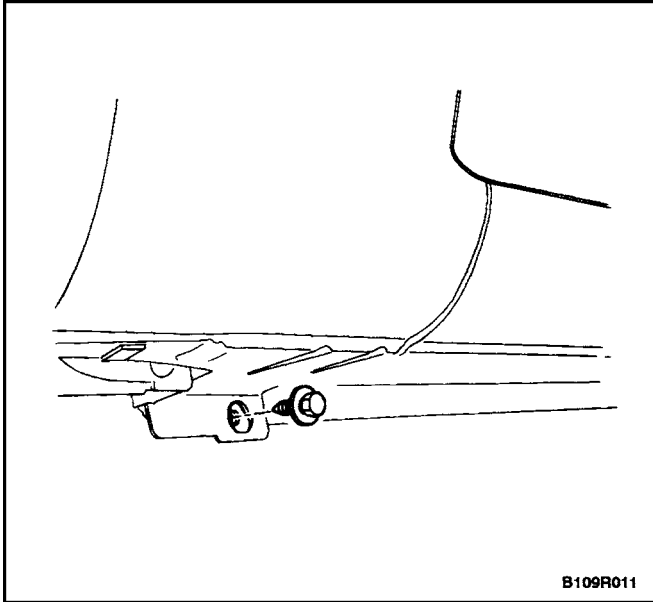
Tighten the upper fender bolts to 8 N•m (71 lb-in).



4. Install the bolt at the base of the A-pillar.

#### Tighten

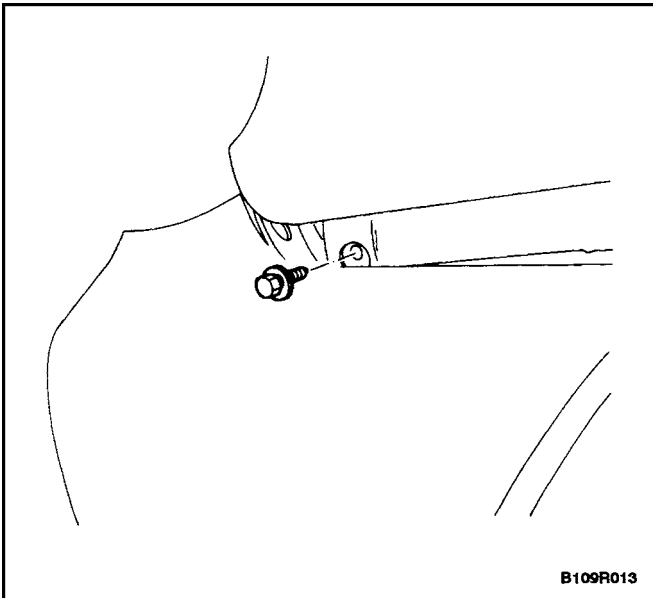
Tighten the A-pillar fender bolt to 8 N•m (71 lb-in).



5. Install the bolt at the base of the fender.

**Tighten**

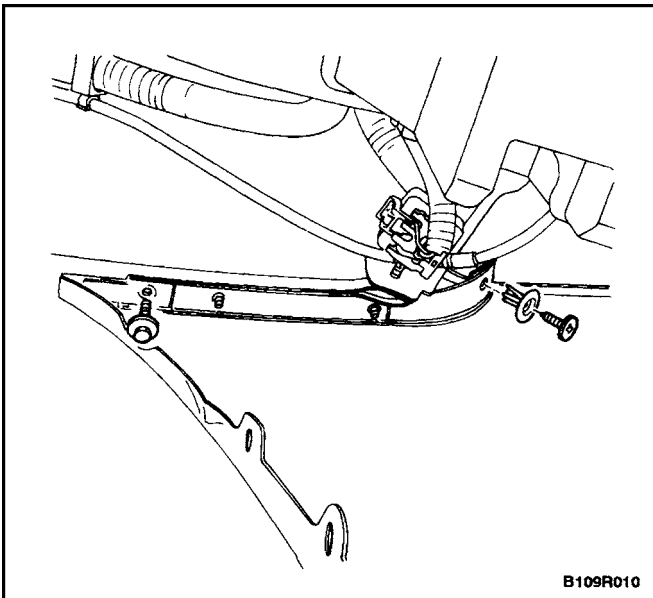
Tighten the lower fender bolt to 8 N•m (71 lb–in).



6. Install the bolt between the bumper fascia and the fender.

**Tighten**

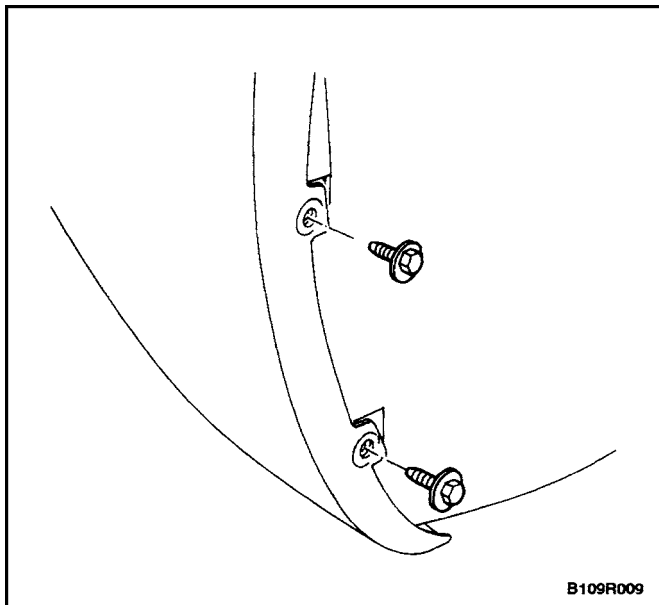
Tighten the fender bolt on the front of the fascia to 4 N•m (35 lb–in).



7. Install the fender to the front bumper fascia with the screw and the bolt.

**Tighten**

Tighten the front bumper fascia-to-fender bolt to 1.5 N•m (13 lb–in).



8. Install the side turn signal lamp. Refer to *Section 9B, Lighting Systems*.
9. Install the front wheel well splash shield with the screws and the bolts.

**Tighten**

Tighten the splash shield bolts to 1.5 N•m (13 lb-in).

10. Install the front wheel. Refer to *Section 2E, Tires and Wheels*.
11. Lower the vehicle.

## **GENERAL DESCRIPTION AND SYSTEM OPERATION**

### **BODY FRONT END**

This vehicle has a unitized body with a frame assembly supporting the engine and the transaxle. The fender panels and the radiator support are also integral parts of the body.