

SECTION 10-5

BODY FRONT END

CAUTION: This vehicle is equipped with Supplemental Inflatable Restraint (SIR), refer to CAUTIONS in SECTION 9J under "ON-VEHICLE SERVICE" and the SIR Component and Wiring Location view in SECTION 9J before performing service on or around SIR components or wiring. Failure to follow CAUTIONS could result in possible air bag deployment, personal injury or otherwise unneeded SIR system repairs.

CAUTION: To help avoid personal injury when a vehicle is on a hoist, provide additional support for the vehicle at the opposite end from which components are being removed. This will reduce the possibility of the vehicle falling off the hoist.

NOTICE: Always use the correct fastener in the proper location. When you replace a fastener, use ONLY the exact part number for that application. General Motors will call out those fasteners that require a replacement after removal. General Motors will also call out the fasteners that require thread lockers or thread sealant. UNLESS OTHERWISE SPECIFIED, do not use supplemental coatings (paints, greases, or other corrosion inhibitors) on threaded fasteners or fastener joint interfaces. Generally, such coatings adversely affect the fastener torque and joint clamping force, and may damage the fastener. When you install fasteners, use the correct sequence and tightening specifications. Following these instructions can help you avoid damage to parts and systems.

NOTICE: Anti-corrosion materials have been applied to the interior surfaces of some metal panels to provide rust resistance. When servicing these panels, areas on which this material has been disturbed should be properly recoated with service-type anti-corrosion material.

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GENERAL DESCRIPTION

LUBRICATION

The hood hinges and hood latch assembly require periodic lubrication. Refer to SECTION 0B for specific types of lubricants and lubrication intervals.

FASTENERS

Many aluminum components are used on present models. Aluminum in contact with steel may corrode rapidly if not protected by special fasteners or isolators.

NOTICE: Refer to "NOTICE" on page 10-5-1.

ANTI-CORROSION MATERIAL

Anti-corrosion materials have been applied to the interior surfaces of most metal panels to provide rust resistance. When servicing these panels, areas on which this material has been disturbed should be properly recoated with service type anti-corrosion. Refer to SECTION 10-1 for anti-corrosion application procedures.

10-5-2 BODY FRONT END

ON-VEHICLE SERVICE

FRONT END PANELS

Front Upper Panel

Figures 1 through 4

↔ Remove or Disconnect

- Raise and suitably support hood.
 - Rotate prop rod and remove from vehicle.
1. One grille retaining screw accessible through each wheelhousing (Figure 1).
 2. One screw from top center of the grille.
 3. Two plastic retaining clips and grille from vehicle (Figure 2).

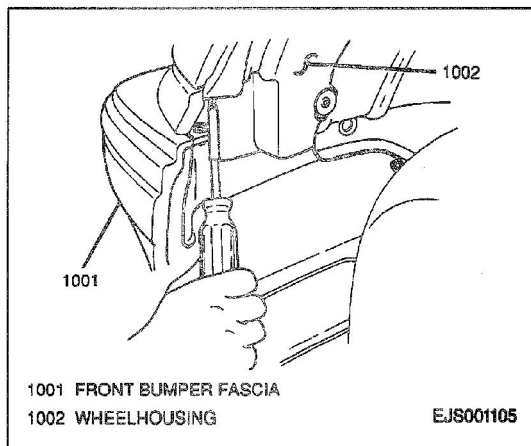


Figure 1—Removing Grille Retaining Screw From Wheelhousing

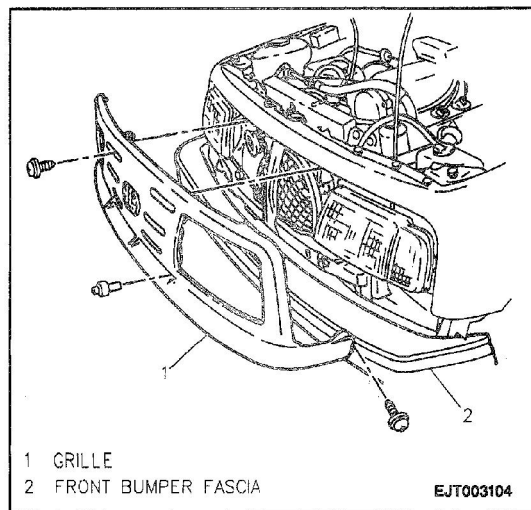


Figure 2—Grille

4. Two bolts and hood latch from body (Figure 3).
5. Horn electrical connectors (Figure 4).
6. One mounting bolt and horn from vehicle (Figure 4).
7. Six bolts along top of front upper panel.
8. Six bolts from front of front upper panel and remove upper panel from vehicle.

→ Install or Connect

1. Front upper panel to vehicle; secure with six bolts along top of panel and six bolts along front of panel.

⌚ Tighten

- Front upper panel bolts to 20 N·m (15 lb. ft.).
2. Horn to vehicle; secure with one mounting bolt (Figure 4).

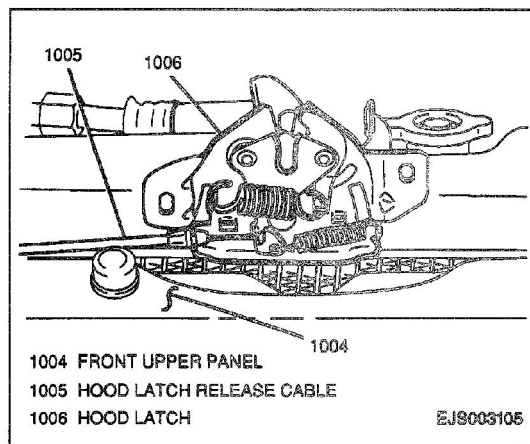


Figure 3—Hood Latch

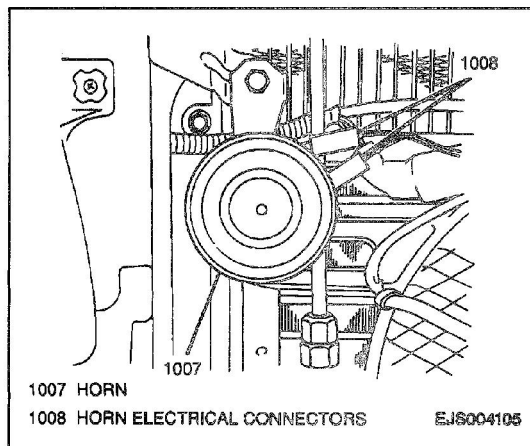


Figure 4—Horn Location

Tighten

- Horn mounting bolt to 10 N·m (89 lb. in.).
- 3. Horn electrical connectors (Figure 4).
- 4. Hood latch to body; secure with two bolts (Figure 3).

Tighten

- Hood latch retaining bolts to 15 N·m (11 lb. ft.).
- 5. Grille to vehicle; secure with two plastic retaining clips (Figure 2).
- 6. One screw to the top center of the grille.
- 7. One grille retaining screw inside each wheelhousing (Figure 1).
- 8. Prop rod to vehicle.
- Lower hood.

Grille

Figures 1 and 2

Remove or Disconnect

1. One grille retaining screw accessible through each wheelhousing (Figure 1).
2. One screw from top center of the grille.
3. Two plastic retaining clips and grille from vehicle (Figure 2).

Install or Connect

1. Grille to vehicle; secure with two plastic retaining clips (Figure 2).
2. One screw to the top center of the grille.
3. One grille retaining screw inside each wheelhousing (Figure 1).

Grille Emblem

Figures 1, 2 and 5

Remove or Disconnect

1. One grille retaining screw accessible through each wheelhousing (Figure 1).
2. One screw from top center of the grille.
3. Two plastic retaining clips and grille from vehicle (Figure 2).
4. Two retainers and grille emblem from grille (Figure 5).

Install or Connect

1. Grille emblem to grille; secure with two retainers (Figure 5).
2. Grille to vehicle; secure with two plastic retaining clips (Figure 2).
3. One screw to the top center of the grille.
4. One grille retaining screw inside each wheelhousing (Figure 1).

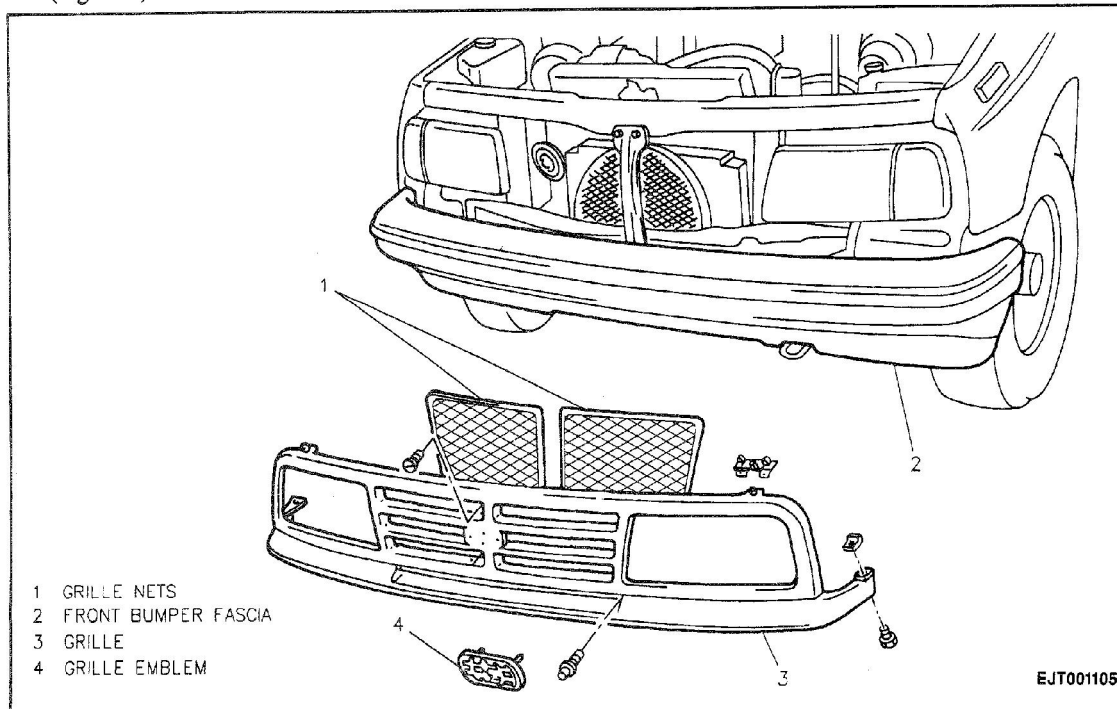


Figure 5—Grille Components

10-5-4 BODY FRONT END

Grille Nets

Figures 1, 2 and 5

Remove or Disconnect

1. One grille retaining screw accessible through each wheelhousing (Figure 1).
 2. One screw from top center of the grille.
 3. Two plastic retaining clips and grille from vehicle (Figure 2).
 4. Two retainers and grille emblem from grille (Figure 5).
- Unclip grille net from grille (Figure 5).

Install or Connect

- Grille net to grille; clip into place (Figure 5).
1. Grille emblem to grille; secure with two retainers (Figure 5).
 2. Grille to vehicle; secure with two plastic retaining clips (Figure 2).
 3. One screw to the top center of the grille.
 4. One grille retaining screw inside each wheelhousing (Figure 1).

Battery Carrier

Remove or Disconnect

1. Negative (-) battery cable.
2. Positive (+) battery cable.
3. Two retaining nuts and battery hold down bracket from vehicle.
4. Battery from vehicle.
5. Battery carrier from vehicle.

Install or Connect

1. Battery carrier to vehicle.
2. Battery to vehicle.
3. Battery hold down bracket to vehicle; secure with two retaining nuts.

Tighten

- Battery hold down bracket retaining nuts to 8 N.m (71 lb. in.).
4. Negative (-) battery cable.

Tighten

- Negative (-) battery cable-to-negative (-) battery terminal retainer to 15 N.m (11 lb. ft.).
5. Positive (+) battery cable.

Tighten

- Positive (+) battery cable-to-positive (+) battery terminal retainer to 15 N.m (11 lb. ft.).

Steering Linkage Skid Plate

Figure 6

Remove or Disconnect

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Front fender fascia. Refer to SECTION 10-4.
3. Four mounting bolts and steering linkage skid plate from vehicle (Figure 6).

Install or Connect

1. Steering linkage skid plate to vehicle; secure with four mounting bolts (Figure 6).

Tighten

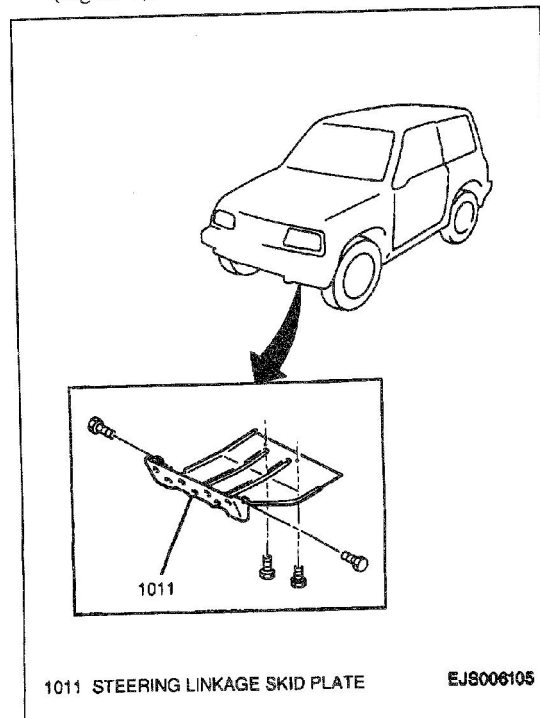
- Steering linkage skid plate mounting bolts to 54 N.m (40 lb. ft.).
2. Front fender fascia. Refer to SECTION 10-4.
 3. Lower vehicle.

FRONT FENDER

Figures 7 through 10

Remove or Disconnect

1. Negative (-) battery cable.
- Unclip front side marker lamp from front fender (Figure 7).



1011 STEERING LINKAGE SKID PLATE

EJS006105

Figure 6—Steering Linkage Skid Plate—Two - Door Model Shown, Four - Door Model Similar

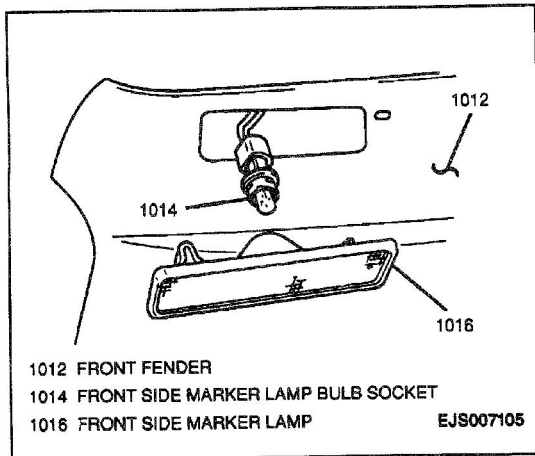


Figure 7—Front Side Marker Lamp

2. Front side marker lamp bulb socket from lamp and remove lamp from vehicle (Figure 7).
3. Nine screws and wheelhousing from vehicle (Figure 8).
4. One screw, one nut and remove rocker panel front trim cover from vehicle to gain access to two front fender lower mounting bolts (Figure 9).

NOTICE: When removing body panels, apply tape to corners of panel and adjacent surfaces to help prevent paint damage.

5. Two front fender lower mounting bolts.
 - Open front door.
6. Two bolts from front fender upper extension panel (Figure 8).
7. One screw from front fender (Figure 10).
8. Four bolts along top of front fender and fender from vehicle.

Install or Connect

1. Front fender to vehicle; secure with four bolts along top of fender.

Tighten

- Front fender bolts to 20 N·m (15 lb. ft.).
2. One screw to front fender (Figure 10).
 3. Two bolts to front fender upper extension panel (Figure 8).

Tighten

- Front fender bolts to 20 N·m (15 lb. ft.).
 - Close front door.
4. Two front fender lower mounting bolts.

Tighten

- Front fender bolts to 20 N·m (15 lb. ft.).
- Check front fender for proper clearance, flushness and alignment. Refer to SECTION 10-1 for front fender adjustment and alignment specifications.

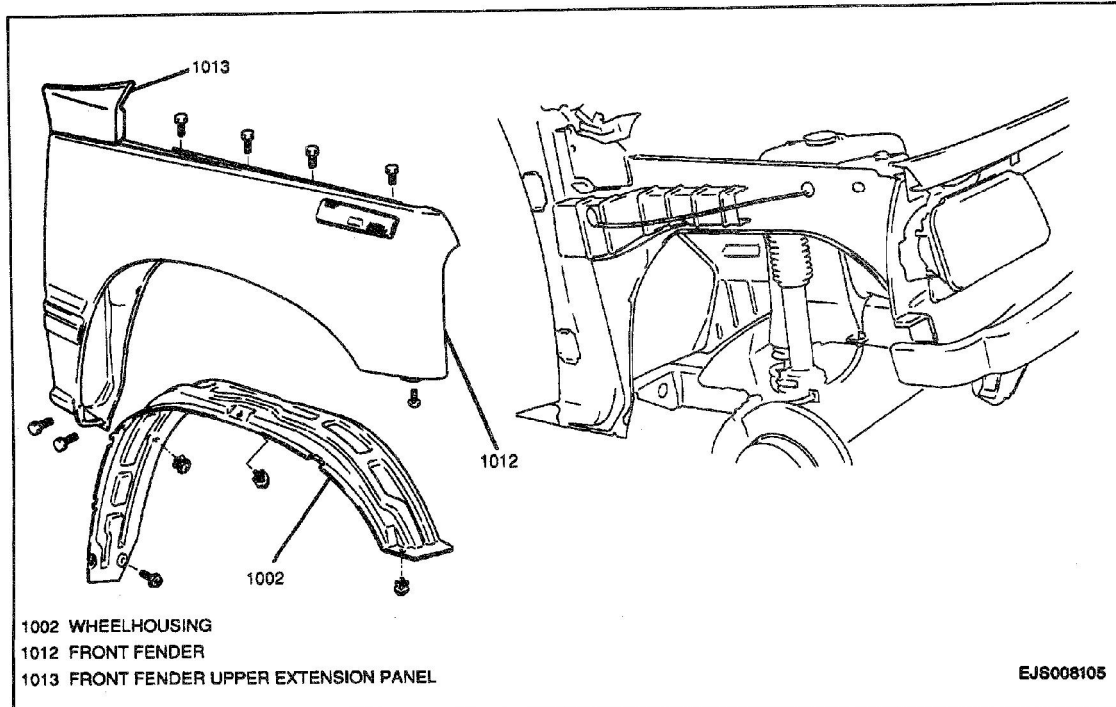


Figure 8—Front Fender and Wheelhousing

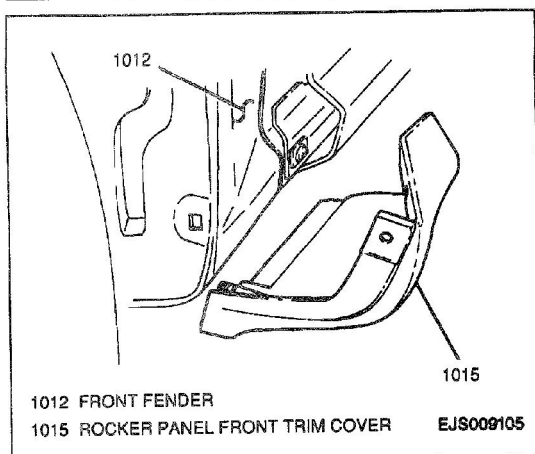


Figure 9—Rocker Panel Front Trim Cover

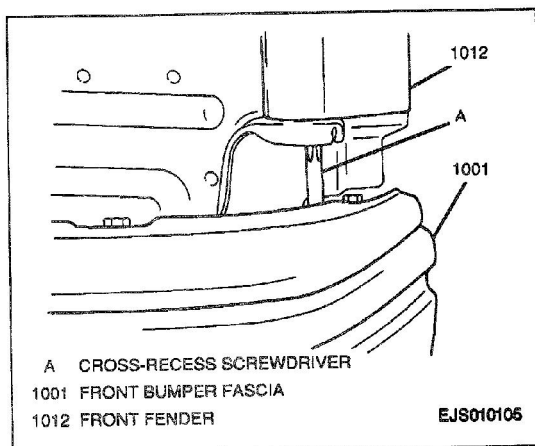


Figure 10—Removing Front Fender Attaching Screw

5. Rocker panel front trim cover to vehicle; secure with one nut and one screw (Figure 9).

Tighten

- Rocker panel front trim cover nut to 15 N.m (11 lb. ft.).
6. Wheelhousing to vehicle; secure with nine screws (Figure 8).
 7. Front side marker lamp bulb socket to lamp (Figure 7).
 8. Front side marker lamp to front fender; clip into place (Figure 7).
 9. Negative (-) battery cable.

Tighten

- Negative (-) battery cable-to-negative (-) battery terminal retainer to 15 N.m (11 lb. ft.).

Wheelhousing

Figure 8

Remove or Disconnect

- Nine screws and wheelhousing from vehicle (Figure 8).

Install or Connect

- Wheelhousing to vehicle; secure with nine screws (Figure 8).

HOOD

Figures 11 and 12

Remove or Disconnect

1. Raise and suitably support hood.
2. Install protective covers over fenders to prevent paint damage.
3. Mark the position of the hinges to the hood for ease of assembly.

NOTICE: When removing body panels, apply tape to corners of panel and adjacent surfaces to help prevent paint damage.

4. Two bolts from each hood hinge and hood from vehicle (Figure 11).

NOTICE: When replacing the hood, be sure to apply anti-corrosive treatment to the mating surfaces between the hood and the hinges. Refer to SECTION 10-1.

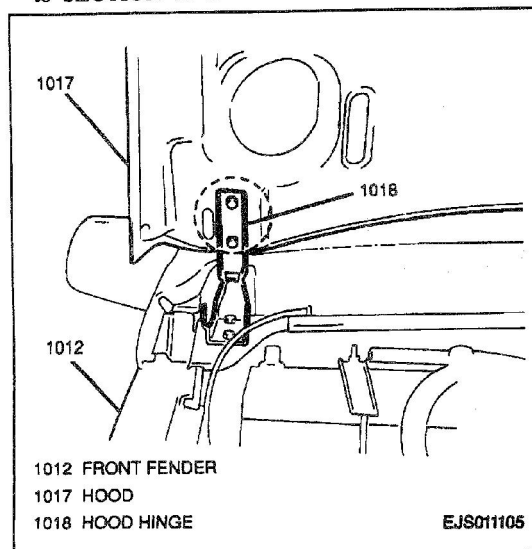


Figure 11—Hood Hinge

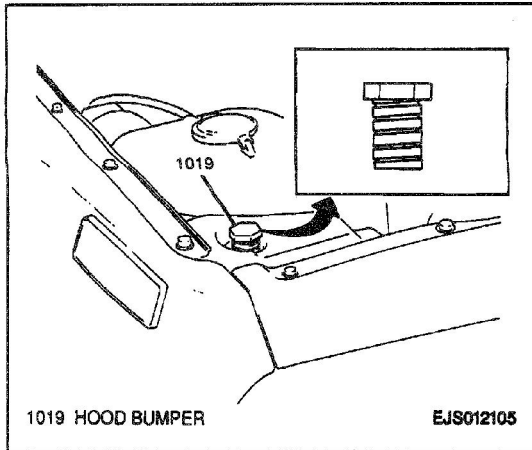


Figure 12—Hood Bumper

Install or Connect

1. Align the hood with the position marks.
2. Hood to hinges; secure to each hinge with two retaining bolts but do not tighten fully (Figure 11).

Adjust

- Hood-to-cowl vent grille clearance, hood-to-headlamp clearance and hood-to-front fender clearance. Refer to SECTION 10-1 for hood alignment and clearance specifications.
- Turn the rubber bumpers for vertical alignment (Figure 12). Refer to SECTION 10-1 for hood flushness specifications.

Tighten

- Hood retaining bolts to 27 N.m (20 lb. ft.).
3. Remove protective covers from fenders.
 4. Lower hood.

Hood Hinge

Figures 11 and 12

Remove or Disconnect

- Raise and suitably support hood.
 - Install protective covers over fenders to prevent paint damage.
 - Mark the position of the hinges to the hood for ease of assembly.
1. Two bolts from each hood hinge and hood from vehicle (Figure 11).
 2. Two bolts from hood hinge and hinge from vehicle (Figure 11).

NOTICE: When replacing the hood, be sure to apply anti-corrosive treatment to the mating surfaces between the hood and the hinges. Refer to SECTION 10-1.

Install or Connect

1. Hood hinge to vehicle; secure with two bolts (Figure 11).

Tighten

- Hood hinge-to-vehicle bolts to 27 N.m (20 lb. ft.).
 - Align the hood with the position marks.
2. Hood to hinges; secure to each hinge with two retaining bolts but do not tighten fully (Figure 11).

Adjust

- Hood-to-cowl vent grille clearance, hood-to-headlamp clearance and hood-to-front fender clearance. Refer to SECTION 10-1 for hood alignment and clearance specifications.
- Turn the rubber bumpers for vertical alignment (Figure 12). Refer to SECTION 10-1 for hood flushness specifications.

Tighten

- Hood retaining bolts to 27 N.m (20 lb. ft.).

Hood Latch

Figure 3

Remove or Disconnect

- Raise hood.
1. Two retaining bolts and hood latch from front upper panel (Figure 3).
 2. Hood latch release cable from hood latch (Figure 3).

Install or Connect

1. Hood latch release cable to hood latch (Figure 3).
2. Hood latch to vehicle; secure with two retaining bolts but do not tighten fully (Figure 3).

Adjust

- Hood latch so that the striker shaft lines up with the center groove of the hood latch.
- Hood latch so that the hood is flush with the front fender. Refer to SECTION 10-1 for hood flushness specifications.

Tighten

- Hood latch retaining bolts to 15 N.m (11 lb. ft.).
- Lower hood.

10-5-8 BODY FRONT END

Hood Latch Release Cable

Figures 3 and 13

↔ Remove or Disconnect

- Raise hood.
- 1. Two retaining bolts and hood latch from vehicle (Figure 3).
- 2. Hood latch release cable from hood latch (Figure 3).
 - Attach a piece of mechanic's wire to the hood latch release cable to aid in the removal and installation of the release cable.
 - Unclip hood latch release cable from hold down clips.
- 3. One screw and instrument panel compartment from instrument panel (Figure 13).
- 4. Two screws and hood latch release lever from support member.
 - Pull hood latch release cable through body and remove from vehicle (pull cable from inside passenger compartment).
- 5. Mechanic's wire from release cable.

! Important

- Mechanic's wire should remain strung through the body to ease installation of hood latch release cable.

↔ Install or Connect

- Attach hood latch release cable to the mechanic's wire from inside passenger compartment.
- 1. Hood latch release lever to support member; secure with two screws.
 - Guide hood latch release cable through body with mechanic's wire.
 - Remove mechanic's wire from hood latch release cable.
- 2. Instrument panel compartment to instrument panel; secure with one screw (Figure 13).

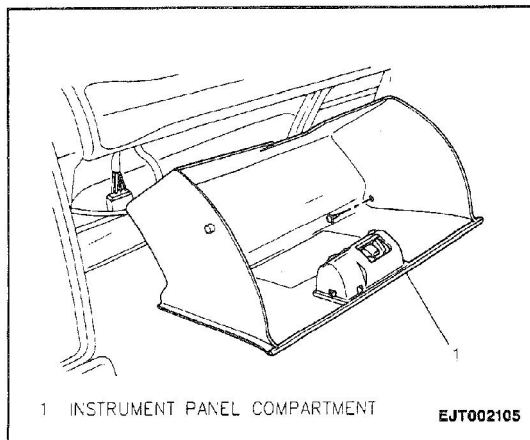


Figure 13—Instrument Panel Compartment

- Hood latch release cable to hold down clips; clip into place.
- 3. Hood latch release cable to hood latch (Figure 3).
- 4. Hood latch to vehicle; secure with two retaining bolts but do not tighten fully (Figure 3).

🔧 Adjust

- Hood latch so that the striker shaft lines up with the center groove of the hood latch.
- Hood latch so that the hood is flush with the front fender. Refer to SECTION 10-1 for hood flushness specifications.

🔧 Tighten

- Hood latch retaining bolts to 15 N.m (11 lb. ft.).
- Lower hood.

Hood Prop Rod

↔ Remove or Disconnect

- Raise and suitably support hood.
- Rotate prop rod and remove from vehicle.

↔ Install or Connect

- Prop rod to vehicle.
- Lower hood.

Hood Rear Weatherstrip

Figure 14

↔ Remove or Disconnect

- Raise hood.
- Pull hood rear weatherstrip from cowl flange (Figure 14).

↔ Install or Connect

- Hood rear weatherstrip to cowl flange, press into place (Figure 14).
- Lower hood.

Hood Bumpers

Figure 12

↔ Remove or Disconnect

- Raise hood.
- Hood bumper from vehicle by unscrewing counter-clockwise (Figure 12).

↔ Install or Connect

- Hood bumper to vehicle; secure by screwing clockwise into vehicle (Figure 12).

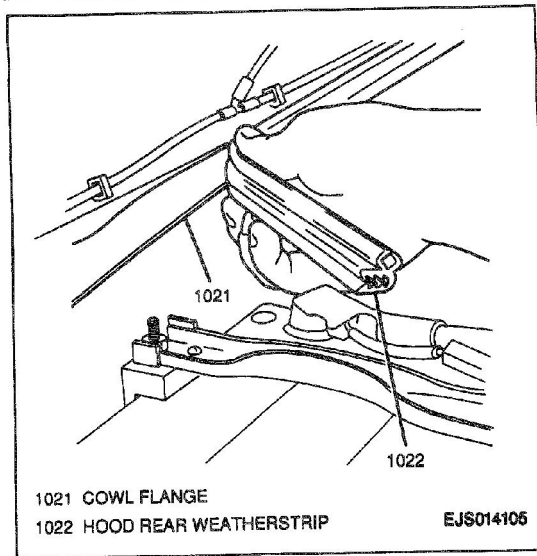


Figure 14—Hood Rear Weatherstrip



Adjust

- Hood bumper so that the hood is flush with the front fender. Refer to SECTION 10-1 for hood flushness specifications.
- Lower hood.

FRONT END SEALING

All potential waterleak locations are sealed in production with high quality durable sealers. Should it be 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. Refer to SECTION 10-1 for painting service procedures.

COWL VENT GRILLE

Figure 15



Remove or Disconnect

1. One nut from each front wiper arm and wiper arms from vehicle.
 - Unclip washer hoses and remove from cowl vent grille.
2. Nine plastic retaining clips and cowl vent grille from vehicle (Figure 15).



Install or Connect

1. Cowl vent grille to vehicle; secure with nine plastic retaining clips (Figure 15).
2. Washer hoses to cowl vent grille; clip into place.
3. Front wiper arms to vehicle; secure each with one nut.

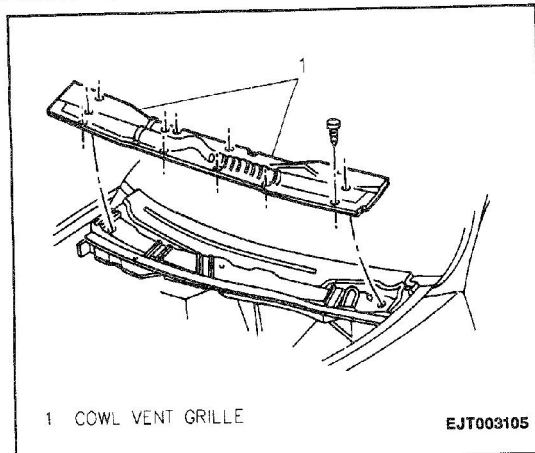


Figure 15—Cowl Vent Grille



Tighten

- Front wiper arm retaining nuts to 20 N.m (15 lb. ft.).

DOOR JAMB SWITCH

Figure 16



Remove or Disconnect

1. Negative (-) battery cable.
 2. One screw from front seat belt trim bezel.
- Pull rear quarter interior trim panel from vehicle, disengaging plastic clips (Two - Door Models only).

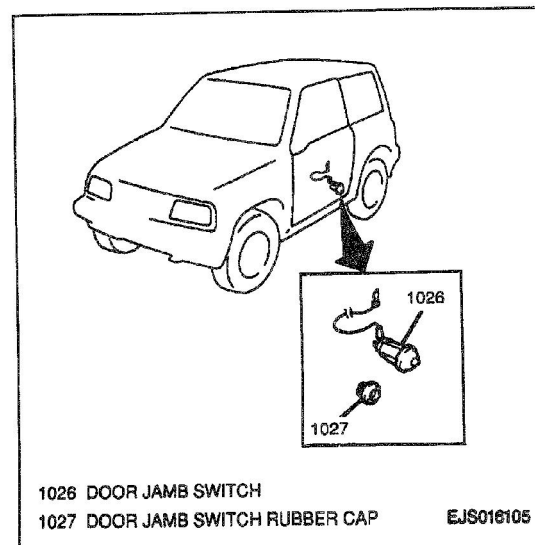


Figure 16—Door Jamb Switch—Two - Door Model Shown, Four - Door Model Similar

10-5-10 BODY FRONT END

- Pull B pillar lower interior trim panel from vehicle (Four - Door Models only). Refer to SECTION 10-7.
- 3. Four screws and pull rear speaker from body (Two - Door Models only).
- 4. Rear speaker electrical connector and remove rear speaker from vehicle (Two - Door Models only).
- 5. Door jamb switch electrical connector.
 - Pull door jamb switch rubber cap off switch.
 - With a flat-bladed tool, gently pry the door jamb switch away from the body and remove switch from vehicle (Figure 16).

Install or Connect

1. Door jamb switch to vehicle, press into place (Figure 16).
 - Fit door jamb switch rubber cap onto switch.
2. Door jamb switch electrical connector.
3. Rear speaker electrical connector (Two - Door Models only).

4. Rear speaker to body; secure with four screws (Two -Door Models only).
5. Rear quarter interior trim panel to vehicle; press into place, engaging plastic clips (Figure 4).
6. B pillar lower interior trim panel to vehicle (Four -Door Models only). Refer to SECTION 10-7.
7. Front seat belt trim bezel to vehicle; secure with one screw.
8. Negative (-) battery cable.

Tighten

- Negative (-) battery cable-to-negative (-) battery terminal retainer to 15 N.m (11 lb. ft.).

BODY PANEL ADJUSTMENT AND ALIGNMENT SPECIFICATIONS

Refer to SECTION 10-1 for body panel alignment specifications.

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Battery Hold Down Bracket Retaining Nuts.....	8 N.m (71 lb. in.)
Hood Hinge-to-Vehicle Bolts	27 N.m (20 lb. ft.)
Hood Latch Retaining Bolts.....	15 N.m (11 lb. ft.)
Hood Retaining Bolts	27 N.m (20 lb. ft.)
Horn Mounting Bolt	10 N.m (89 lb. in.)
Front Fender Bolts.....	20 N.m (15 lb. ft.)
Front Upper Panel Bolts.....	20 N.m (15 lb. ft.)
Front Wiper Arm Retaining Nuts	20 N.m (15 lb. ft.)
Negative (-) Battery Cable-to-Negative (-) Battery Terminal Retainer.....	15 N.m (11 lb. ft.)
Positive (+) Battery Cable-to-Positive (+) Battery Terminal Retainer.....	15 N.m (11 lb. ft.)
Rocker Panel Front Trim Cover Nut.....	15 N.m (11 lb. ft.)
Steering Linkage Skid Plate Mounting Bolts.....	54 N.m (40 lb. ft.)