

**SECTION 10**

**BODY**

**CONTENTS**

<u>SUBJECT</u>	<u>PAGE</u>
Doors.....	10A1-1
Seats .....	10A2-1
Windows .....	10A3-1
Interior Trim .....	10A4-1
End Gate.....	10A5-1
Cab and Body Maintenance .....	10B-1

**NOTES**

## SECTION 10A1

## DOORS

**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.

**NOTICE:** Always use the correct fastener in the correct location. Use the correct fastener part number to replace a fastener. If the correct fastener part number is not available, a fastener of equal size and strength may be used. Do not use a fastener that is stronger when the correct fastener part number is not available in the following applications:

- Some bolts are designed to permanently stretch, and if a stronger fastener is used, the part will not be tightened correctly. These permanently stretching bolts will be called out. The correct part number fasteners must be used to replace this type of fastener because there is no available equivalent.
- Other bolts are designed to break if over tightened to prevent part damage. If a stronger fastener is used part damage may occur.

Fasteners that need to be replaced when removed will be called out. Fasteners that require thread lockers or thread sealant will be called out. The correct tightening specification and sequence must be used when installing fasteners. Part or system damage may occur if the above instructions are not followed.

## CONTENTS

<u>SUBJECT</u>	<u>PAGE</u>
General Description .....	10A1-3
On-Vehicle Service .....	10A1-3
Front Doors .....	10A1-3
Window Regulator Handle Replacement .....	10A1-3
Power Accessory Mounting Panel Replacement .....	10A1-3
Inside Handle Bezel Replacement .....	10A1-4
Power Door Lock Switch Replacement .....	10A1-4
Trim Panel Upper Extension Replacement .....	10A1-5
Trim Panel Replacement .....	10A1-5
Courtesy Lamp Replacement .....	10A1-6
Water Deflector Replacement .....	10A1-6
Wiring Harness Replacement .....	10A1-6
Door Replacement .....	10A1-8
Door Hinge Replacement .....	10A1-9
Door Striker Bolt Replacement .....	10A1-10
Door Adjustment .....	10A1-11
Door Hardware Lubrication .....	10A1-11
Inside Door Handle Assembly Replacement .....	10A1-12
Inner Mounting Panel Assembly .....	10A1-12
Lock Actuator .....	10A1-13
Lock Assembly .....	10A1-13
Binding Lock Cylinders .....	10A1-14
Lock Cylinder and Outside Handle Replacement .....	10A1-14
Window Regulator And Motor Replacement .....	10A1-14
Window Replacement .....	10A1-15
Window Glass Weatherstrip .....	10A1-15
Front Glass Run Channel .....	10A1-15
Outside Rearview Mirror Replacement .....	10A1-15
Outside Rearview Mirror Lens Replacement .....	10A1-16
Pressure Relief Valve .....	10A1-16
Rear Side Doors (Crew Cab And Suburban)-On Vehicle Service .....	10A1-17
Ashtray Assembly Replacement .....	10A1-17

## 10A1-2 DOORS

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### CONTENTS (cont'd)

<u>SUBJECT</u>	<u>PAGE</u>
Window Regulator Handle Replacement.....	10A1-17
Inside Handle Bezel Replacement.....	10A1-17
Power Door Lock Switch Replacement.....	10A1-18
Power Window Switch Replacement.....	10A1-18
Speaker Grille and Speaker Replacement.....	10A1-18
Courtesy Lamp Replacement.....	10A1-19
Trim Panel Replacement.....	10A1-19
Water Deflector Replacement.....	10A1-20
Wiring Harness Replacement.....	10A1-20
Door Replacement.....	10A1-20
Door Hinge Replacement.....	10A1-22
Door Striker Bolt Replacement.....	10A1-23
Door Adjustment.....	10A1-23
Door Hardware Lubrication.....	10A1-24
Inside Door Handle Assembly Replacement.....	10A1-24
Inside Door Handle Bracket Replacement.....	10A1-24
Armrest Bracket Replacement.....	10A1-25
Lock Assembly.....	10A1-25
Lock Actuator.....	10A1-26
Outside Handle Replacement.....	10A1-26
Window Replacement.....	10A1-26
Window Glass Weatherstrip.....	10A1-27
Window Front Glass Run Channel.....	10A1-27
Window Regulator And Motor Replacement.....	10A1-28
Rear Cargo Doors(Utility And Suburban)-On Vehicle Service.....	10A1-28
Trim Panel Replacement.....	10A1-28
Window Garnish Mouldings.....	10A1-28
Water Deflector Replacement.....	10A1-29
Access Hole Covers (Base Models Only).....	10A1-29
Wiring Harness Replacement.....	10A1-29
Cargo Door Replacement.....	10A1-29
Cargo Door Hinge Check Assembly.....	10A1-29
Rear Cargo Door Body Mounted Strikers.....	10A1-31
Rear Cargo Door Protectors.....	10A1-31
Cargo Door Lock Assembly Replacement (Right Door).....	10A1-32
Lock Actuator.....	10A1-32
Door Lock Cylinder, Rod, And Outside Handle Replacement (Right Door).....	10A1-32
Left Door Latch Control Handle.....	10A1-33
Left Door Mounted Striker.....	10A1-33
Lower Latch Replacement.....	10A1-34
Door Bumper Assembly Replacement.....	10A1-34
Upper Latch Replacement.....	10A1-34
Weatherstrip Replacement.....	10A1-35
Side Door Window Sealing Strip Replacement.....	10A1-35
Side Door Opening Weatherstrip Replacement.....	10A1-36
Side Door Roof Drip Weatherstrip Replacement.....	10A1-36
Side Door Auxiliary Weatherstrip Replacement.....	10A1-36
Rear Cargo Door Opening Weatherstrip.....	10A1-36
Rear Cargo Door Upper Weatherstrip.....	10A1-37
Rear Cargo Door Corner Weatherstrip.....	10A1-37
Specifications.....	10A1-37
Fastener Tightening Specifications.....	10A1-37
Special Tools.....	10A1-38

## GENERAL DESCRIPTION

### DOORS

Doors on C/K model trucks use hinges that are welded to the door and body. No adjustment of this type of hinge is recommended. Replacement hinges bolt to the door and body side pillar and are adjustable.

**NOTICE:** Refer to "Driveability, Emissions and Electrical Diagnosis Manual" for information pertaining to operation, and diagnosis of electrical components.

## ON-VEHICLE SERVICE

### FRONT DOORS

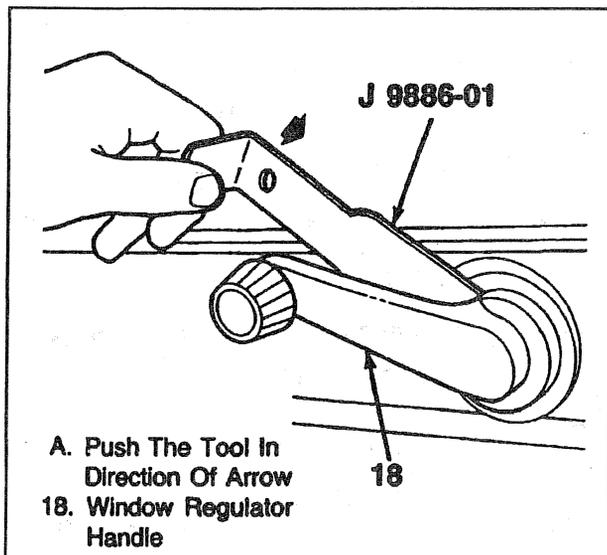


Figure 1—Typical Window Regulator Handle Retaining Clip Removal

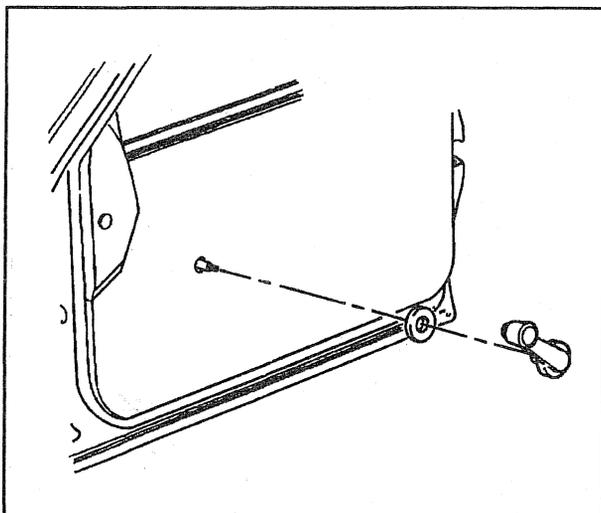


Figure 2—Typical Window Regulator Handle and Bearing Plate

### WINDOW REGULATOR HANDLE REPLACEMENT

#### ↔ Remove or Disconnect (Figures 1 and 2)

Tool Required:

J 9886-01 Door Handle Remover

1. Window regulator handle from vehicle.
  - A. Insert J 9886-01 between the handle and bearing plate (figures 1 and 2).
  - B. Align the tool and push to disengage the clip (figure 1).
  - C. Pull the handle from door.
2. Bearing plate (figure 2).

#### →← Install or Connect (Figures 1 and 2)

1. Bearing plate to door (figure 2).
2. Window regulator handle (figure 1 and 2).
  - A. Raise window.
  - B. Install the clip onto the handle.
  - C. Insert handle onto window regulator shaft so the handle is pointing toward the front of the door.
  - D. Push on the handle until the clip engages window regulator shaft.

### POWER ACCESSORY MOUNTING PANEL REPLACEMENT

#### ↔ Remove or Disconnect (Figure 3)

1. Negative battery cable. Refer to SECTION 0A.
2. Accessory mounting panel.
  - Use a flat blade tool to carefully pry door accessory mounting panel from door trim panel.
3. Power accessory electrical connectors from switches and speaker (if applicable).
4. Switches from accessory mounting panel (if applicable).
  - Use a flat blade tool to carefully pry switches from accessory mounting panel.

## 10A1-4 DOORS

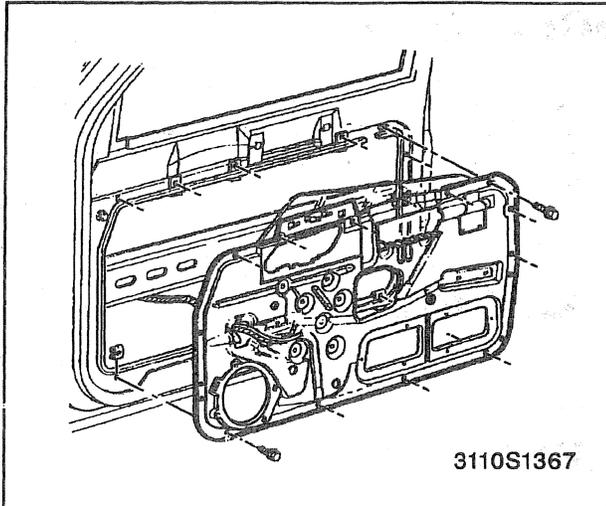


Figure 3—Front Door Power Accessory Mounting Panel

5. Speaker grill from accessory mounting panel (if applicable).
  - Carefully spread speaker grill retainers.
6. Speaker from accessory mounting panel (if applicable).
  - Rotate speaker counterclockwise.

### Install or Connect (Figure 3)

1. Speaker to accessory mounting panel (if applicable).
  - Rotate speaker counterclockwise.
2. Speaker grill to accessory mounting panel (if applicable).
  - Snap in place.
3. Switches to accessory mounting panel.
  - Snap in place.
4. Power accessory electrical connectors to switches and speaker (if applicable).
5. Accessory mounting panel.
  - Snap in place.

## INSIDE HANDLE BEZEL REPLACEMENT

### Remove or Disconnect (Figure 4)

1. Handle bezel from door trim panel.
  - Insert a flat blade tool between door inside bezel and handle assembly.
  - Carefully bend retaining clips outward while pulling out bezel. Refer to arrows shown in figure 3.

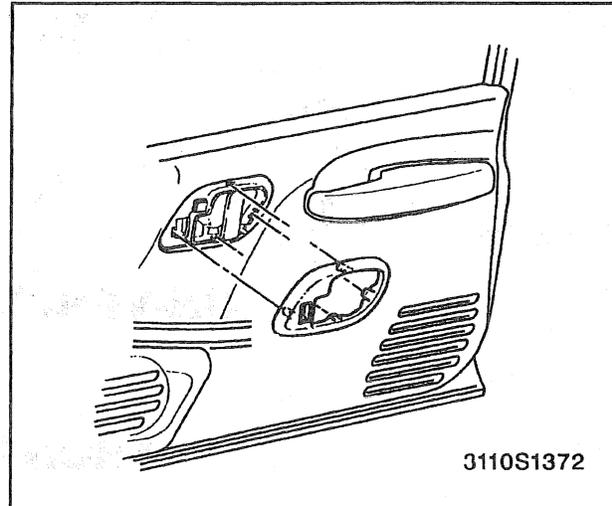


Figure 4—Front Door Inside Handle Bezel

- Disconnect wiring connector (if equipped with power locks).

### Install or Connect (Figure 4)

1. Handle bezel to door trim panel.
  - Connect wiring connector (if equipped with power locks).
  - Snap bezel into place.

## POWER DOOR LOCK SWITCH REPLACEMENT

### Remove or Disconnect (Figure 5)

1. Handle bezel. Refer to "Inside Handle Bezel Replacement".
2. Power door lock switch wiring connector.

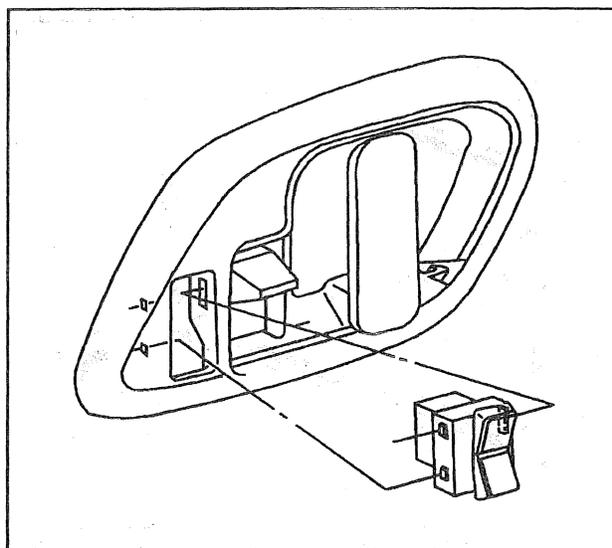


Figure 5—Power Door Lock Switch

3. Power door lock switch (figure 5).
  - Carefully bend retaining tabs outward while pushing switch out of bezel.

**↔ Install or Connect (Figure 5)**

1. Power door lock switch to handle bezel.
2. Wiring connector.
3. Handle bezel.

**TRIM PANEL UPPER EXTENSION REPLACEMENT**

**↔ Remove or Disconnect (Figure 6)**

Tool Required:

J 38778 Trim Panel Remover

1. Trim panel from the door.
  - A. Carefully pry the retainer from door using J 38778.
  - B. Pull upward to release extension from trim panel.
2. Retainer from extension.

**↔ Install or Connect (Figure 6)**

1. Retainer to extension.
2. Extension to door.
  - A. Insert extension on to trim panel.
  - B. Align retainer into hole in door. Push extension until retainer seats.

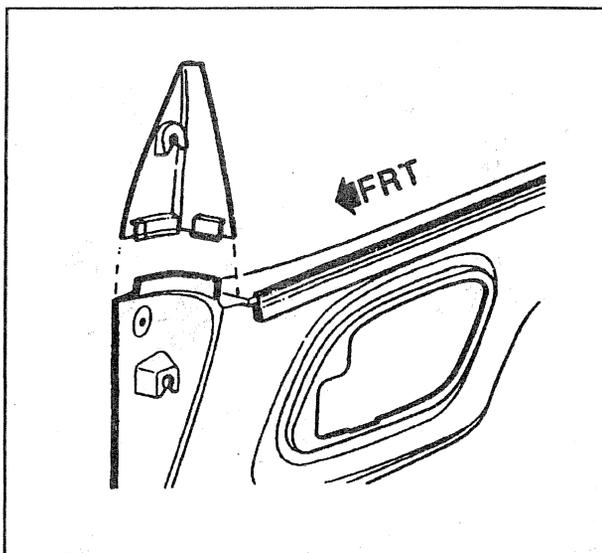
**TRIM PANEL REPLACEMENT**

Tool Required:

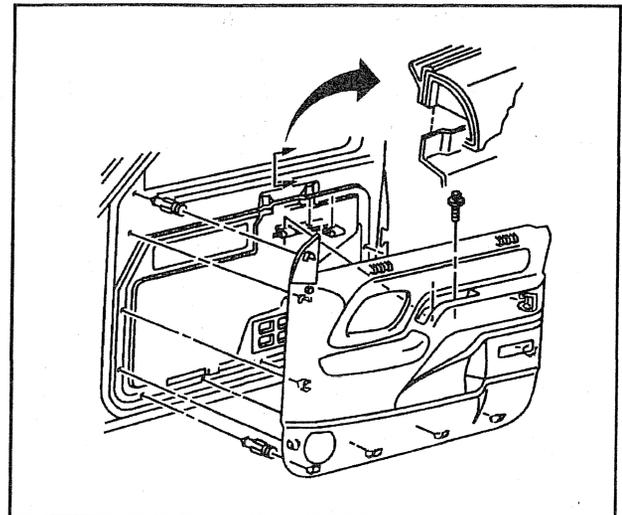
J 38778 Trim Panel Remover

**↔ Remove or Disconnect (Figure 7 and 8)**

1. Door handle bezel. Refer to "Inside Handle Bezel Replacement".
2. Window regulator handle (if equipped). Refer to "Window Regulator Handle Replacement."



**Figure 6—Trim Panel Upper Extension**



**Figure 7—Front Door Trim Panel**

3. Power accessory mounting panel wiring connector (if equipped with power accessories). Refer to "Door Power Accessory Mounting Panel".
4. Trim Panel Upper Extension. Refer to "Trim Panel Upper Extension Replacement".
5. Trim panel armrest screws.

- Carefully pry off trim panel armrest screw cover with a flat blade tool to access screw.

6. Trim panel from the door.

- Carefully pry the retainers from their seats using J 38778.
- Disconnect courtesy light connector (if equipped).

7. Courtesy Lamp lens or reflector.
8. Retainers from trim panel (figure 7).

- Pull retainers from slot.

**↔ Install or Connect (Figures 7 and 8)**

1. Retainers to trim panel (figure 7).
  - Push retainer from slot.
2. Courtesy lamp lens or reflector.
3. Trim panel to the door.
  - Align retainers with holes in door.
  - Carefully apply pressure to seat retainers.
4. Window regulator handle (if equipped). Refer to "Window Regulator Handle Replacement."
5. Power accessory switch mounting panel (if equipped with power accessories).
6. Trim panel arm rest screw.

**⊞ Tighten**

- Trim panel armrest screw to 1.9 N.m (17 lbs. in.).
- Insert screw cover.

7. Trim Panel Upper Extension.
8. Door handle bezel. Refer to "Inside Handle Bezel Replacement."

## COURTESY LAMP REPLACEMENT

### ↔ Remove or Disconnect (Figure 8)

- Refer to the "Driveability, Emissions and Electrical Manual" for electrical diagnosis.

1. Trim panel. Refer to "Trim Panel Replacement".
2. Lamp from trim panel.
  - Disconnect wiring connector.
  - Carefully release lamp assembly retainers with a flat-blade tool.

### →← Install or Connect (Figure 8)

1. Lamp to trim panel.
  - Snap lamp assembly into trim panel.
  - Connect wiring connector.
2. Trim panel. Refer to "Trim Panel Replacement."

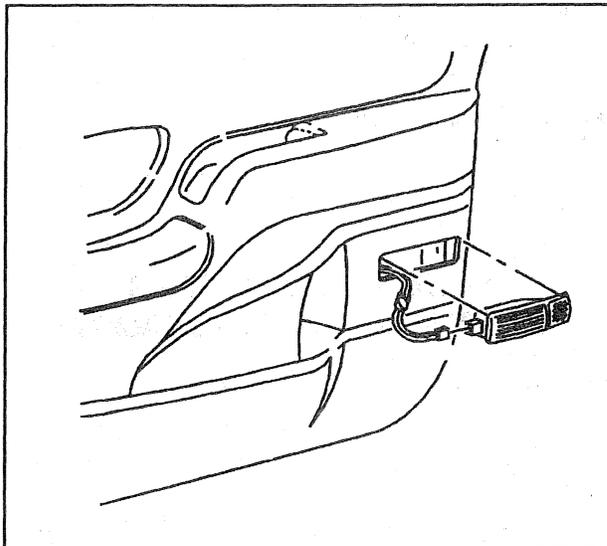


Figure 8—Front Door Trim Panel Courtesy Lamp

## WATER DEFLECTOR REPLACEMENT

Waterproof deflectors are used to seal the inner panel and prevent water from entering into the body. The deflector is secured by a strip of adhesive between the deflector and door.

### ↔ Remove or Disconnect (Figure 9)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector.
  - A. Pull the waterproof sealing tape from the deflector.
  - B. Break the bond between the sealer and the door with a flat-blade tool.

### →← Install or Connect (Figure 9)

1. Water deflector to the door.
  - Use waterproof tape or 3M 777 adhesive.
2. Trim panel to the door.

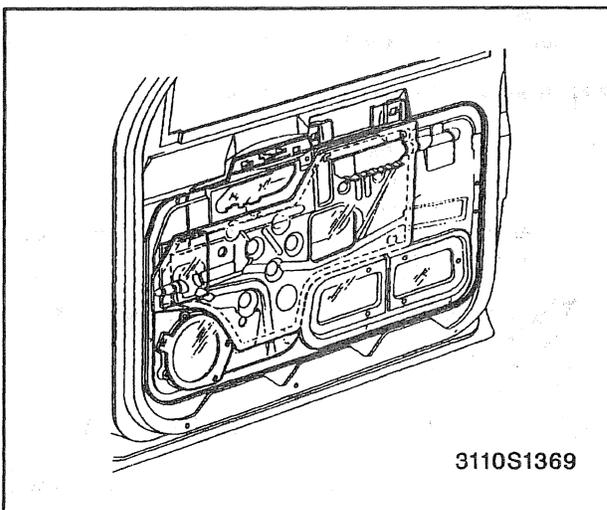


Figure 9—Front Door Inner Panel Water Deflectors

## WIRING HARNESS REPLACEMENT

### ↔ Remove or Disconnect (Figures 10 and 11)

1. Cowl kick panel. Refer to SECTION 10A4.
2. Cross body wiring harness.
3. Conduit.
4. Trim panel. Refer to "Trim Panel Replacement."
5. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
6. Power mirror connector (1) if equipped.
7. Keyless entry connector (2) if equipped.
8. Power Door lock actuator connector (5) if equipped.
9. Power window motor wiring connector (10) if equipped.
10. Courtesy lamp harness retainers if equipped.
11. Speaker.

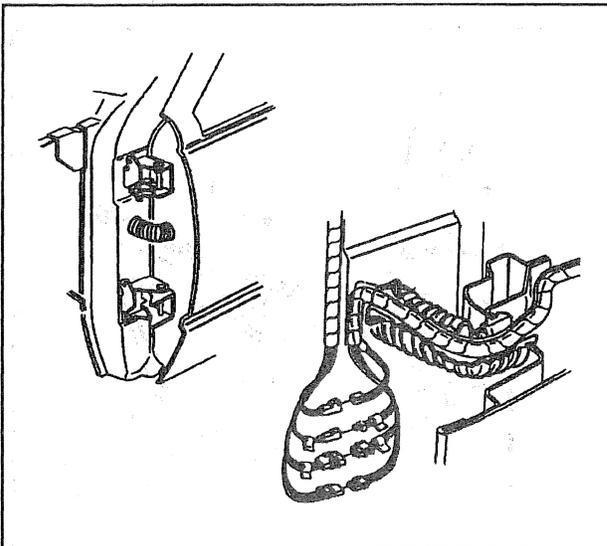


Figure 10—Typical Front Door Cross Body Wiring Harness and Conduit

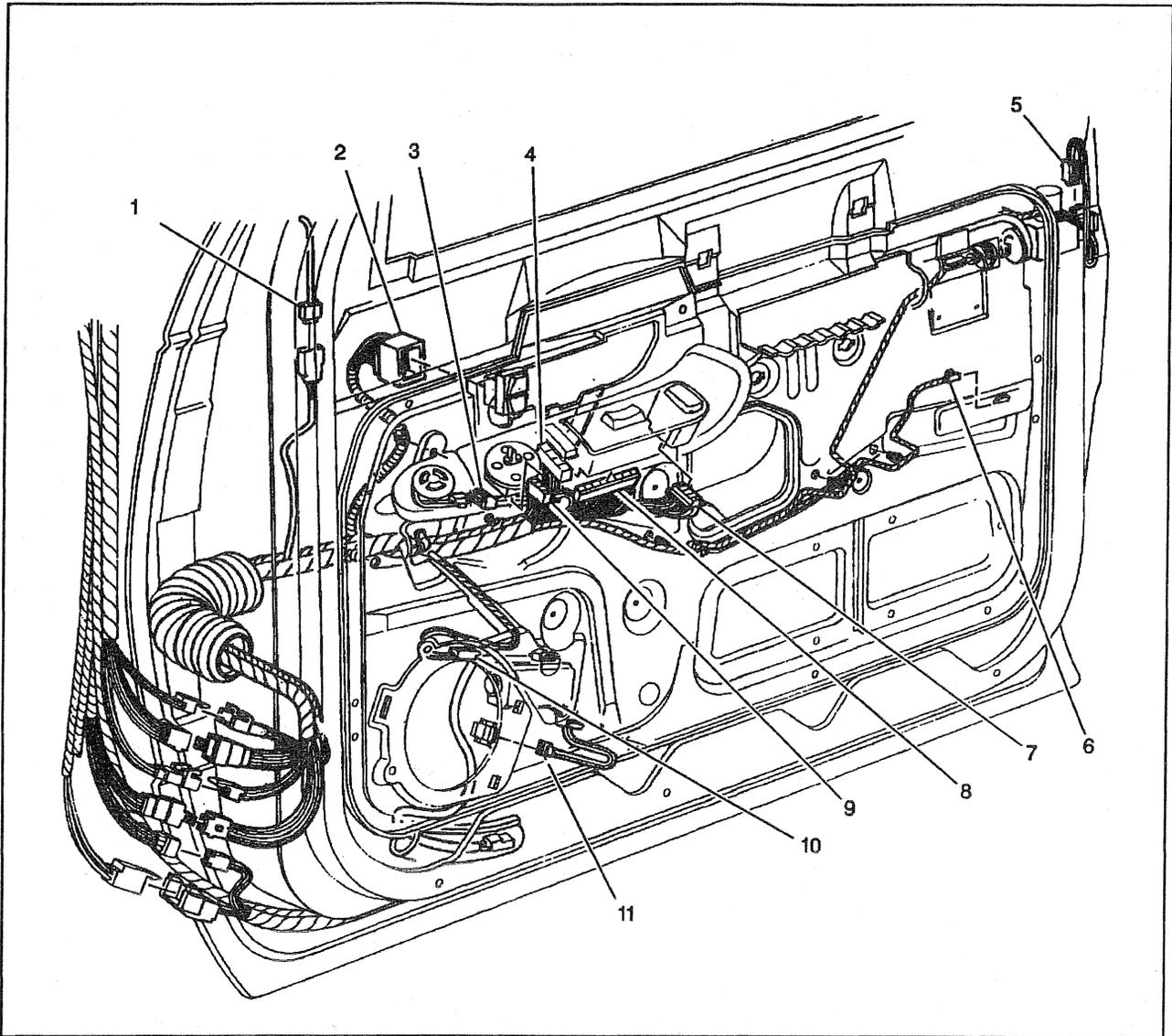


Figure 11—Typical Front Door Wiring Harness Connectors

1	Power Rearview Mirror Wiring Connector
2	Keyless Entry Wiring Connector
3	Speaker
4	Power Rear Window Lock Out Switch Wiring Connector
5	Power Door Lock Actuator Wiring Connector
6	Courtesy Light Wiring Connector
7	Power Door Lock Switch Connector
8	Power Window Switch Connector
9	Power Rearview Mirror Switch Connector
10	Power Window Motor Connector
11	Speaker Connector

T3335

## 10A1-8 DOORS

12. Speaker wiring harness connector (11) if equipped.
13. Door wiring harness from door.

### Install or Connect (Figures 10 and 11)

1. Door wiring harness to door.
2. Speaker wiring harness connector (11) if equipped.
3. Speaker.
4. Courtesy lamp harness retainers if equipped.
5. Power window motor wiring connector (10) if equipped.
6. Power Door lock actuator connector (5) if equipped.
7. Keyless entry connector (2) if equipped.
8. Power mirror connector (1) if equipped.
9. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
10. Trim panel. Refer to "Trim Panel Replacement."
11. Conduit.
12. Cross body wiring harness.
13. Cowl kick panel. Refer to SECTION 10A4.

## DOOR REPLACEMENT

### Remove or Disconnect (Figures 12, 13, and 14)

Tools Required:

J 36604 Door Hinge Spring Compressor

1. Negative battery cable. Refer to SECTION 0A.
2. Cowl side vent cover.
3. Wire harness connectors under the instrument panel.
  - A. Receptacles from the wire harness.
  - B. Retainer from the wire harness grommet.
  - C. Rubber conduit from the door pillar by pushing it from the vent cover side.

**CAUTION:** Before removing the door hinge spring, cover the spring with a towel to prevent the spring from "flying" and possibly causing personal injury or damage.

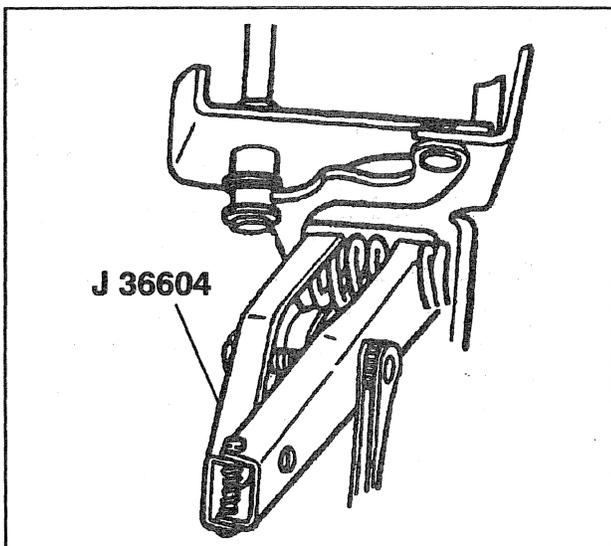


Figure 12—Hinge Spring Removal

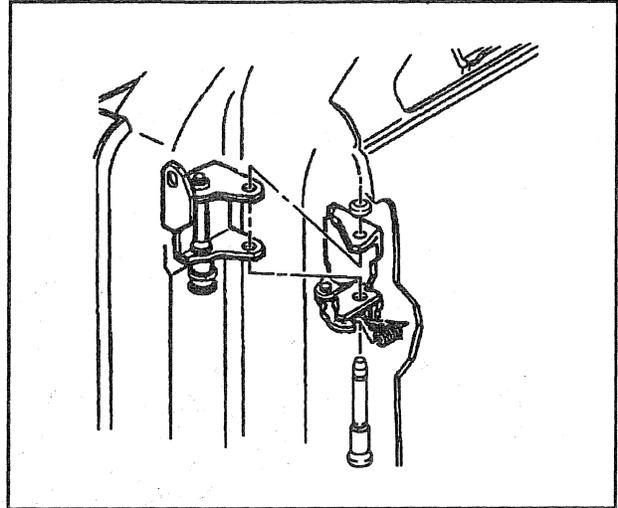


Figure 13—Upper Hinge Pin and Spring

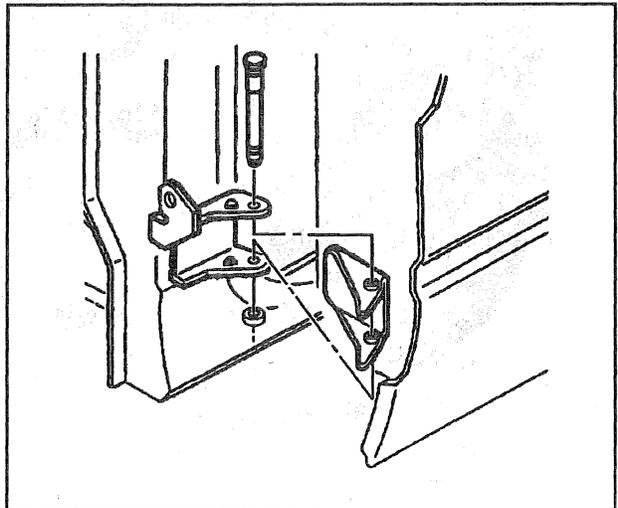


Figure 14—Lower Hinge Pin

4. Door hinge spring using J 36604 (figures 12 and 13).
  - Insert the blades of the tool between the spring coils and turn the barrel nut to compress and hold the spring during removal.
5. Lower hinge pin retainer (figure 13).
6. Lower hinge pin using a soft-faced hammer and a pair of locking pliers to grasp the pin and drive it out (figure 13).
  - Install a bolt through the lower hinges temporarily to hold the door in place while removing the upper hinge pin.
7. Upper hinge pin retainer (figure 13).
8. Upper hinge pin (figure 13).
9. Bolt in lower hinge pin hole.
10. Door from the vehicle.

### Install or Connect (Figures 12, 13, and 14)

Tool Required:

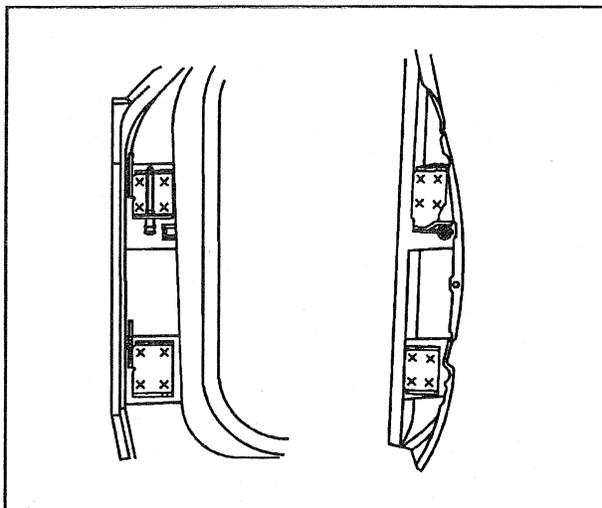
J 36604 Door Hinge Spring Compressor.

1. Door to the vehicle.
2. Bolt temporarily through the lower hinge pin holes.
3. Upper hinge pin with the pointed end up (figure 13).
4. New hinge pin retainer (figure 13).
  - Remove temporary bolt from the lower hinge.
5. Lower hinge pin with the pointed edge down (figure 14).
6. New hinge pin retainer (figure 14).
7. Door hinge spring using J 36604 (figures 12 and 13).
8. Harness connectors.
  - A. Rubber conduit through the body pillar.
  - B. Retainer around the wire harness grommet.
  - C. Receptacles to the harness under the instrument panel.
9. Cowl side vent cover.
10. Negative battery cable.
11. Lubricate bushing with engine oil.

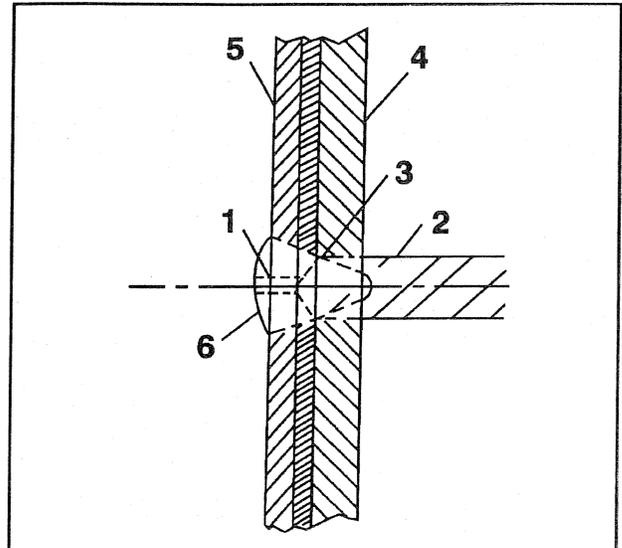
**DOOR HINGE REPLACEMENT**

**↔** Remove or Disconnect (Figures 15, 16, and 17)

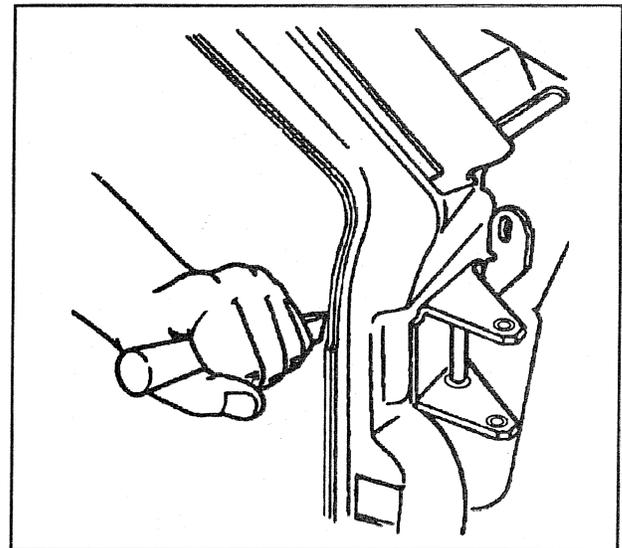
1. Door from body. Refer to "Door Replacement".
2. Excess sealer surrounding hinge.
3. Door hinges.
  - A. Scribe the location of the existing hinges on the body pillar and door.
  - B. Center punch each of the weld marks on the original hinge (figure 15). It is critical to punch the center of the weld so that the all of the weld is removed during drilling.
  - C. Drill a 3-mm (1/8-inch) pilot hole through the welds deep enough to penetrate the hinge base only (Figure 16).
  - D. Drill a 13-mm (1/2-inch) hole through the hinge base only using the smaller hole as a pilot (Figure 16).



**Figure 15—Spot Weld Locations**



**Figure 16—Drilling out Spot Welds**



**Figure 17—Chiseling Welded-On Hinge**

E. Drive a chisel between the hinge and door pillar (Figure 17).

**Left Hinge Replacement:**

1. Sill plate.
2. Kick pad by lifting from the retainers.
3. Parking brake assembly. Refer to SECTION 5F.
  - Carefully pry away the cowl side panel insulator over the lower access hole and set aside to reuse.

**Right Hinge Replacement:**

1. Negative battery cable. Refer to SECTION 0A.
2. Sill plate.
3. Kick pad by lifting from the retainers.
4. Glove compartment.
5. Engine control module (ECM) from the mounting bracket by lifting it from the retainers.

## 10A1-10 DOORS

- ECM mounting bracket and screws.
  - Carefully pry the cowl side panel insulator away from the lower access hole and set aside to reuse.

### ↔ Install or Connect (Figures 18, 19 and 20)

- Hinges to pillar or door.
  - Position the bolt-on service replacement hinges within the scribe marks made on the body hinge pillar and the door at the time of removal.
  - Center punch each bolt hole location on the body hinge pillar and/or door.
  - Drill a 13-mm (1/2-inch) hinge attaching hole in three steps to ensure placing the hinge in the proper position.
- Prepare the surface for the replacement hinges using a file or equivalent.
  - Coat the mating surface of the hinges with a medium bodied sealer.

**NOTICE:** Refer to "Notice" on page 10A1-1.

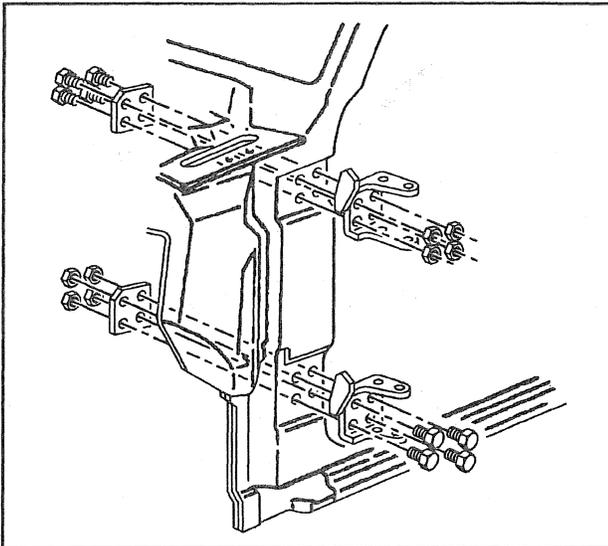


Figure 18—Replacement Hinges (Body Side)

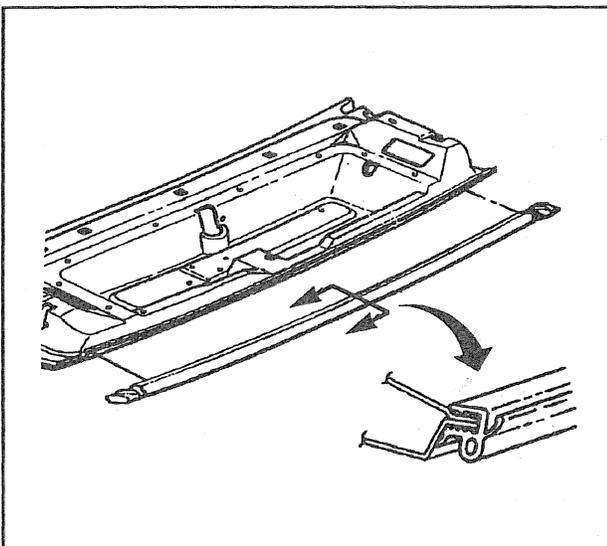


Figure 19—Replacement Hinges (Door Side)

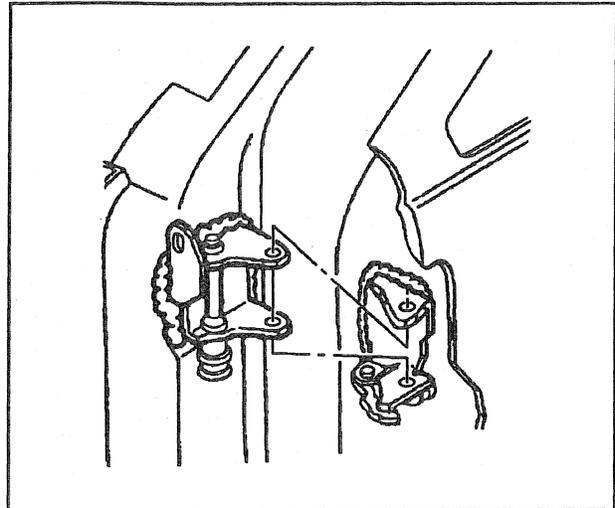


Figure 20—Sealer Application

- Hinges, backing plate, bolts, and nuts.
  - Align the hinge and backing plate with the holes in the hinge pillar and door.
  - Place the bolts through the hinge, pillar and/or door, and through the backing plate.
  - Apply sealer around hinges.

### ⌚ Tighten

- Nuts to 35 N.m (26 lbs. ft.).

#### Left Side:

- Cowl side panel insulator over the lower access hole.
- Parking brake assembly. Refer to SECTION 5A.
- Kick pad and sill plate.

#### Right Side:

- Cowl side panel insulator over the lower access hole.
- Engine control module (ECM) mounting bracket and screws.
- ECM.
- Glove compartment.
- Kick pad and sill plate.
- Door to the cab. Refer to "Door Replacement."
- Door module panel. Refer to "Door Module Replacement."
- Door trim panel. Refer to "Door Trim Panel Replacement."
- Negative battery cable.

### 🔑 Adjust

- Refer to "Door Adjustment."

## DOOR STRIKER BOLT REPLACEMENT

The door striker bolt is the special bolt and washer mounted on the door opening's rear pillar. The bolt passes through a hole into a threaded plate behind the pillar. The cab door is secured in position when the lock cam (arm) of the locking mechanism engages and snaps around the striker bolt.

The striker bolt position is not adjustable.

**↔ Remove or Disconnect (Figure 21)**

Tool Required:  
J 29843-9 Torx Bit (Bit Size T47)

1. Mark the position of the striker bolt spacer on the door pillar.
2. Striker bolt using J 29843-9 or equivalent.

**↔ Install or Connect (Figure 21)**

1. Striker bolt into the door pillar retaining plate.
2. Align the striker bolt spacer with the previously made mark.

**⌚ Tighten**

- Striker bolt while holding spacer in position to 63 N.m (46 lbs. ft.) using J 29843-9 or equivalent.

**DOOR ADJUSTMENT**

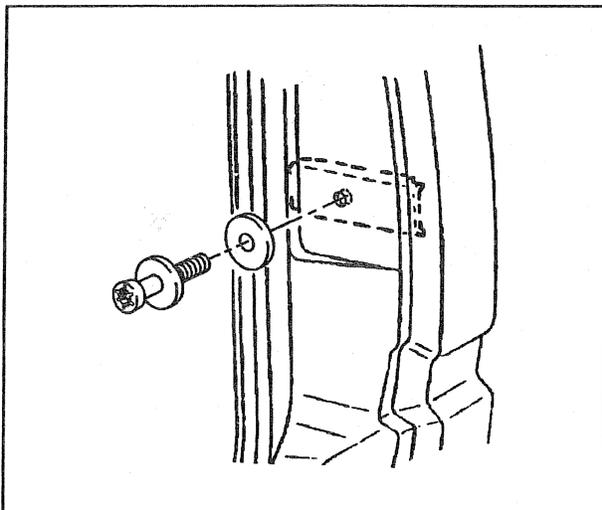
This procedure can only be used when bolt-on service replacement hinges are installed.

Tool Required:  
J 29843-9 Torx Bit (Bit Size T47) or equivalent.

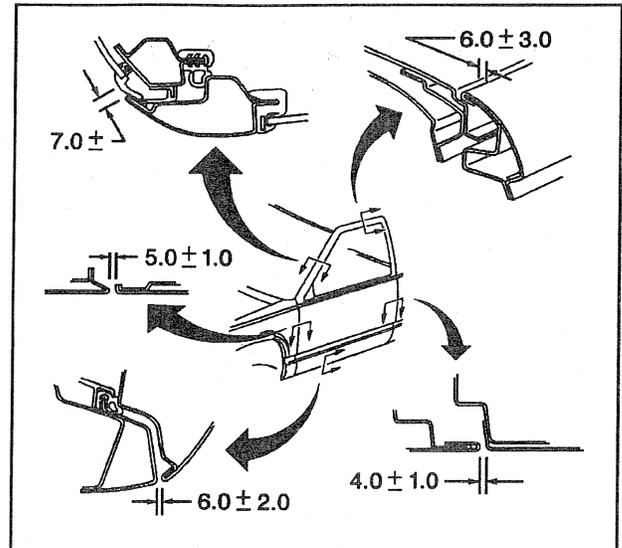
- Door striker bolt using J 29843-9 or equivalent (figure 21).
- Loosen the door hinge to the body side pillar bolts.

**🔑 Adjust (Figure 21)**

1. Door up or down, forward or rearward, and in or out at the door hinges.
2. Gap between the rocker panel and the door to the specifications shown in figure 22.
3. Gap between the door and the roof panel.
4. Gap between the rear of the door and the rear pillar.



**Figure 21—Door Striker**



**Figure 22—Door Adjustment Specifications**

5. Gap between the door and the fender.
6. Door surfaces flush with other panels within  $\pm 1.0$  mm (0.04-inch).

**NOTICE:** Refer to "Notice" on page 10A1-1.

**⌚ Tighten**

- Hinge bolts to 35 N.m (26 lbs. ft.).

**↔ Install or Connect (Figure 22)**

Tool Required:  
J 29843-9 Torx Bit (Bit Size T47).

**NOTICE:** Refer to "Notice" on page 10A1-1.

- Door striker bolt.

**🔑 Adjust**

- Bolt to properly engage the door lock.

**⌚ Tighten**

- Bolt to 63 N.m (46 lbs. ft.).

**DOOR HARDWARE LUBRICATION**

The mechanical components of the door assembly are lubricated during assembly. If additional lubrication is required to any door hardware mechanism, use Lubriplate Spray-Lube "A" (GM P/N 1052349), Lubriplate Auto-Lube "A" (GM P/N 1052196), or equivalent. Lubricate door hinge pins and rollers at normal service intervals with 30 weight engine oil. Do not lubricate hinge roller to hold-open link contacting surfaces. This may prevent the roller from rolling properly.

## 10A1-12 DOORS

### INSIDE DOOR HANDLE ASSEMBLY REPLACEMENT

#### ↔ Remove or Disconnect (Figure 23)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Inside door handle assembly.
  - Drill out the rivet head using a 5-mm (3/16-inch) drill bit.
  - Slide door Handle forward.
4. Control rods from the handle and lock lever.

#### ↔ Install or Connect (Figure 23)

Tool Required:  
J 34940 Rivet Gun

1. Control rods to handle and lock lever.
2. Inside door handle.
  - Insert handle assembly into slot and slide assembly to the rear.
  - Handle rivet using J 34940.
3. Water deflector.
4. Trim Panel.

### INNER MOUNTING PANEL ASSEMBLY

#### ↔ Remove or Disconnect (Figures 24, 25 and 26)

- Lower Window
1. Trim panel. Refer to "Trim Panel Replacement."
  2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
  3. Speaker (if equipped).
    - Carefully pry out retainer clips.
  4. Inner panel bolts (figure 24).
  5. Lock rods from lock handle, lock lever, and lock rod guides (figure 25).
  6. Lock rods from actuator (if equipped).

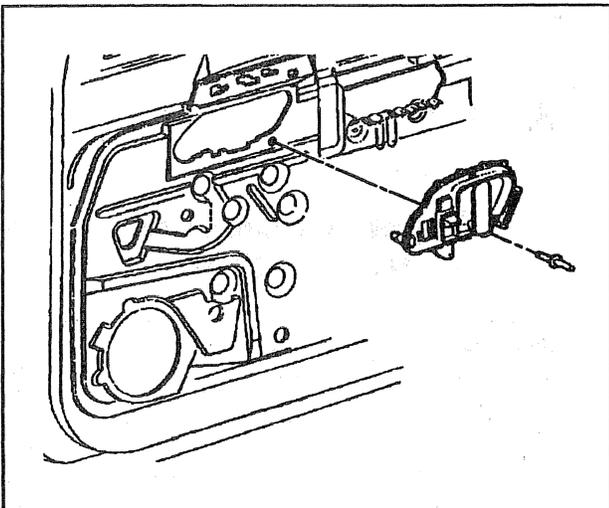


Figure 23—Front Door Inner Handle Assembly

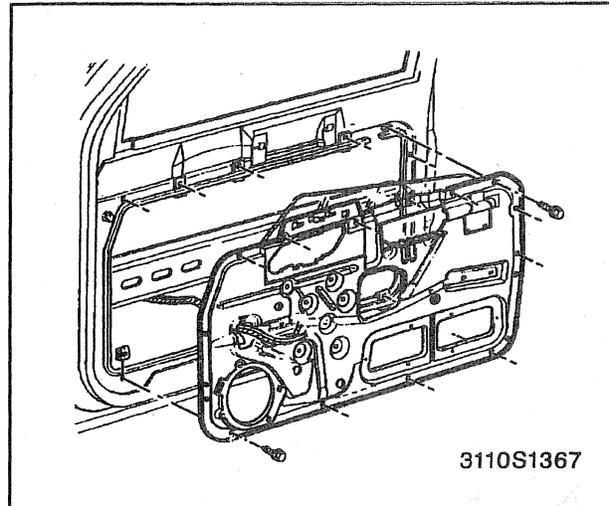


Figure 24—Front Door Inner Mounting Panel Assembly

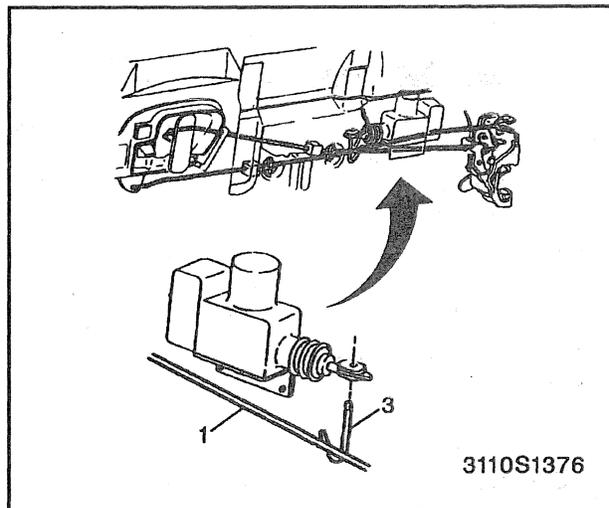


Figure 25—Lock Rods and Actuator

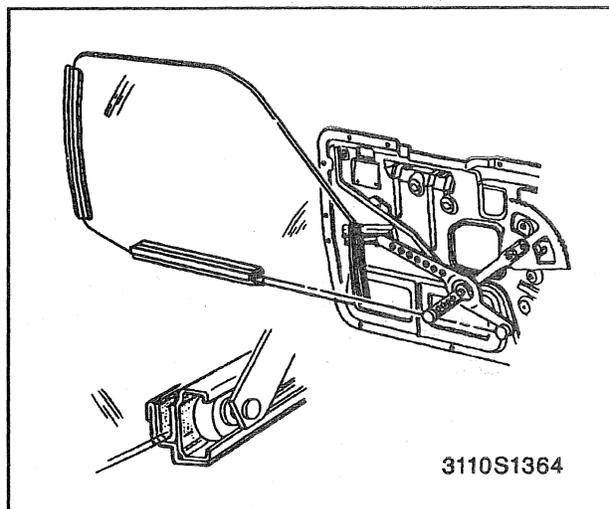


Figure 26—Inner Mounting Panel and Window Sash

7. Wiring harness.
8. Inner mounting panel from window sash (figure 26).
  - Slide inner mounting panel rearward to release regulator roller from window sash.

**↔ Install or Connect (Figures 24, 25 and 26)**

1. Inner mounting panel to window sash (figure 26).
  - Slide inner mounting panel forward to release regulator roller from window sash.
2. Wiring harness.
3. Lock rods to actuator (If equipped).
4. Lock rods to lock handle, lock lever, and lock rod guides (figure 25).
5. Inner panel bolts (figure 24).
6. Speaker (if equipped).
7. Trim panel. Refer to "Trim Panel Replacement."
  - Carefully pry out retainer clips.
8. Water deflector. Refer to "Inner Panel Water Deflector Replacement."

**LOCK ACTUATOR**

**↔ Remove or Disconnect (Figure 25)**

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".
4. Actuator wiring connector.
5. Actuator.
  - Drill out rivets.

**↔ Install or Connect (Figure 25)**

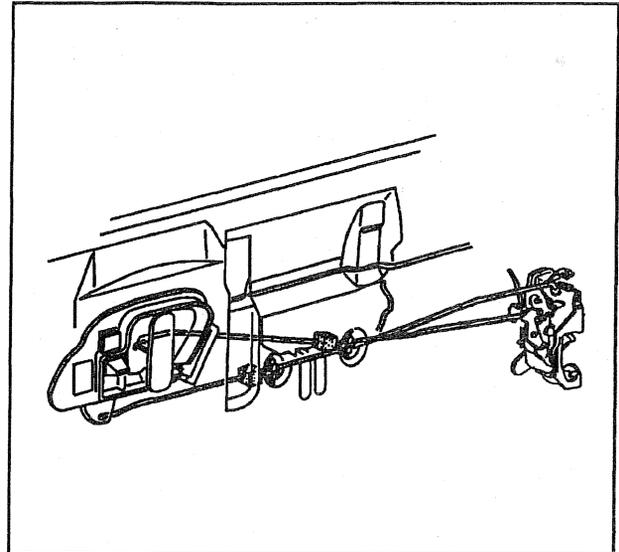
Tool Required:  
J 34940 Rivet Gun

1. Actuator to door.
  - Use J 34940 to install actuator rivets.
2. Actuator wiring connector.
3. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".
4. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
5. Trim panel. Refer to "Trim Panel Replacement."

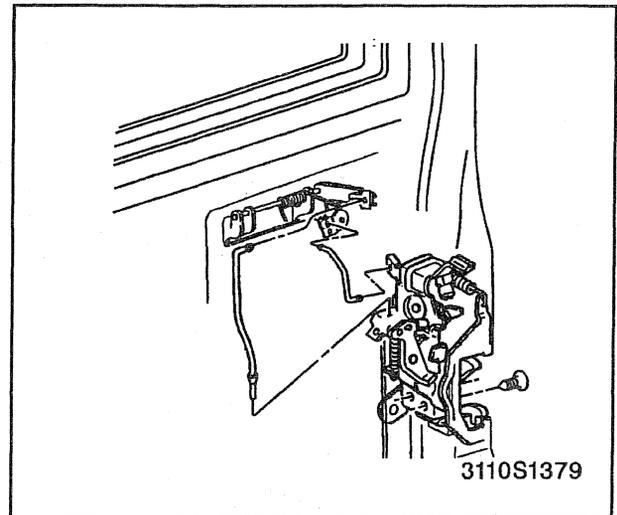
**LOCK ASSEMBLY**

**↔ Remove or Disconnect (Figure 27 and 28)**

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".
4. Inside door handle and lock control rods (figure 27).
5. Outside door handle and lock control rods (figure 28).
6. Lock assembly bolts.



**Figure 27—Inside Door Handle and Lock Control Rods**



**Figure 28—Outside Door Handle and Lock Control Rods and**

**↔ Install or Connect (Figures 27 and 28)**

1. Lock assembly bolts.
2. Outside door handle and lock control rods (figure 28).
3. Inside door handle and lock control rods (figure 27).
4. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".
5. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
6. Trim panel. Refer to "Trim Panel Replacement."

## 10A1-14 DOORS

### BINDING LOCK CYLINDERS

Binding or sticking door lock cylinders and keys that are hard to insert or remove may be corrected in many cases by applying the proper lubrication.

The recommended materials for lubricating these components are (in order of preference):

- Lubricant GM P/N 12345120 (or equivalent).
- 5 W 30 motor oil.
- Silicone spray GM P/N 1052276 (or equivalent)

Penetrating lubricants (such as GM P/N 1052949 and WD-40®) ARE NOT recommended because they wash out the original lubrication and eventually evaporate, leaving little or no lubricating material. However, if these materials are used to unfreeze or loosen lock cylinder components, refer to steps 2 through 4 below for proper methods of lubrication.

Frozen lock cylinders due to cold weather may be repaired using the following procedure:

1. Apply heat to cylinder with a heat gun while being careful not to damage the painted surfaces.
2. Hold the door shutter open with a paper clip (or similar item) and force air into cylinders using compressed air and a blow gun attachment.
3. While holding the shutter door open, inject a small amount of lubricant (refer to above recommendations) into cylinder.
4. Work the key into the cylinder several times and wipe any excess lubrication residue from key.

### LOCK CYLINDER AND OUTSIDE HANDLE REPLACEMENT

New lock cylinders are available as replacement parts. If door lock cylinders require replacement for any reason, apply a coating of GM P/N 12345120 or equivalent lubricant inside of the lock case and cylinder keyway prior to assembling and installing the cylinder.

To repair a binding lock cylinder, refer to "Binding Lock Cylinders." To code a new lock cylinder, refer to "Lock Cylinder coding" in SECTION 0A.

#### ↔ Remove or Disconnect (Figure 28 and 29)

1. Trim panel. Refer to "Trim Panel Replacement."

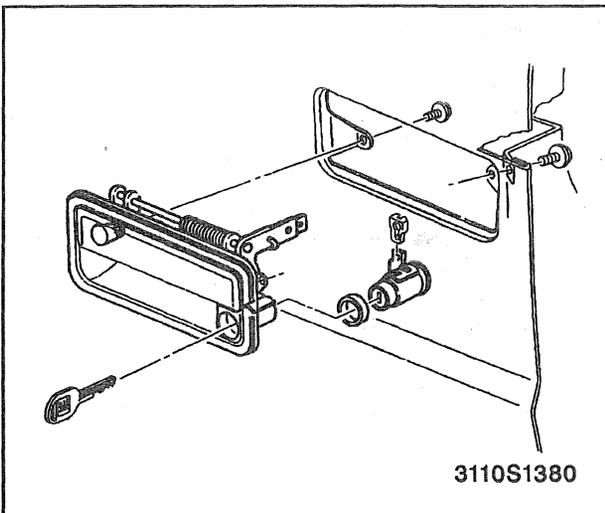


Figure 29—Lock Cylinder and Outside Door Handle

2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".
4. Outside handle rod from the rod clip (figure 28).
5. Lock cylinder rod from the rod clip.
6. Outside handle mounting screws (figure 29).
7. Door lock cylinder from the outside handle housing.
8. Handle.

#### ↔ Install or Connect (Figures 28 and 29)

1. Handle to the vehicle (figure 29).
2. Door lock cylinder to the outside handle housing.
3. Lock cylinder rod to the lock cylinder clip (figure 28).
4. Handle rod to the handle assembly clip.
5. Outside handle mounting screws.

#### ⊠ Tighten

- Screws to 4 N·m (35 lbs. in.).

6. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".
7. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
8. Trim panel. Refer to "Trim Panel Replacement."

### WINDOW REGULATOR AND MOTOR REPLACEMENT

The power window motor can not be serviced. It is replaced as a unit with the regulator.

Tool Required:  
J 34940 Rivet Gun

#### ↔ Remove or Disconnect (Figure 30)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".

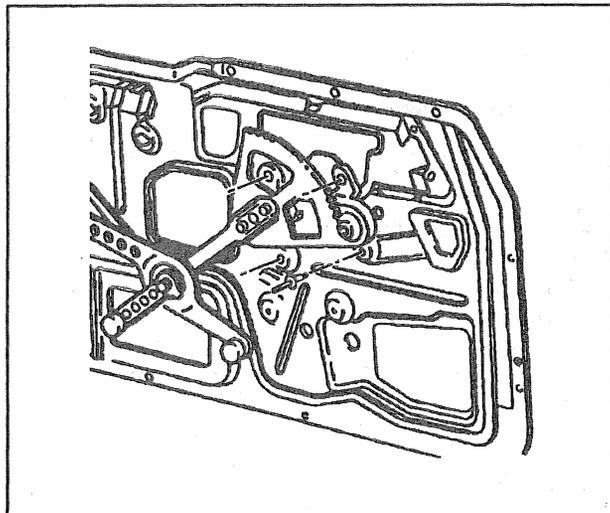


Figure 30—Front Door Window Regulator Assembly

4. Rivets securing the regulator to the door inner panel.
  - Drill out (2) front and (2) rear rivets.
5. Regulator from inner panel.

**↔ Install or Connect (Figure 30)**

1. Regulator to inner panel.
2. Rivets securing the regulator to the door inner panel using J34940.
3. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".
4. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
5. Trim panel. Refer to "Trim Panel Replacement."

**WINDOW REPLACEMENT**

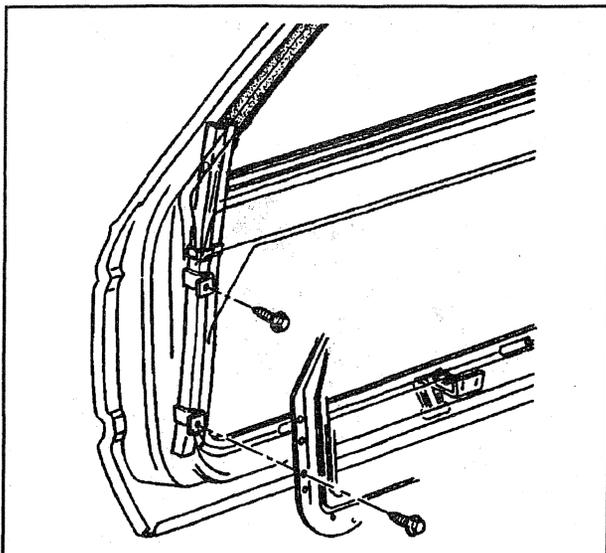
**CAUTION: To prevent personal injury, gloves should be worn when removing broken glass.**

**↔ Remove or Disconnect (Figures 24 and 31)**

- Lower window.
1. Trim panel. Refer to "Trim Panel Replacement."
  2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
  3. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement."
  4. Window front channel top screw.
  5. Slide window out of glass channels from the bottom of door.

**↔ Install or Connect (Figures 24 and 31)**

1. Slide window into glass channels through the bottom of door.
2. Window front channel top bolt. Do not tighten bolt.
3. Inner mounting panel.
  - A. Slide regulator rollers into glass channel.



**Figure 31—Front Door Window Glass Run Channel Assembly**

- B. Align inner panel lower front corner bolt with hole in front glass channel assembly.
- C. Tighten front channel top bolt.
- D. Tighten all inner panel bolts.

**⌚ Tighten**

- Run channel and inner panel bolts to 1.9 N.m (17 lbs. in.).
4. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
  5. Trim panel. Refer to "Trim Panel Replacement."

**WINDOW GLASS WEATHERSTRIP**

**↔ Remove or Disconnect (Figure 31)**

1. Window. Refer to "Window Replacement".
2. Weatherstrip.
  - Pull weatherstrip from front of glass run channel, top of window frame flange, rear of glass run channel.

**↔ Install or Connect (Figure 31)**

1. Weatherstrip.
  - Pull weatherstrip from front of glass run channel, top of window frame flange, rear of glass run channel.
2. Window. Refer to "Window Replacement".

**FRONT GLASS RUN CHANNEL**

**↔ Remove or Disconnect (Figure 31)**

1. Window. Refer to "Window Replacement".
2. Window glass weatherstrip. Refer to "Window Glass Weatherstrip Replacement".
3. Front glass run channel top bolt.
4. Front glass run channel from door.

**↔ Install or Connect (Figure 31)**

1. Rear glass run channel to door.
2. Window front channel top bolt. Do not tighten bolt.
3. Window glass weatherstrip. Refer to "Window Glass Weatherstrip Replacement".
4. Window. Refer to "Window Replacement".

**OUTSIDE REARVIEW MIRROR REPLACEMENT**

**↔ Remove or Disconnect (Figure 32)**

1. Trim Panel Upper Extension. Refer to "Trim Panel Upper Extension Replacement".
2. Access hole plugs.
3. Nuts securing the outside rearview mirror to the door.
4. Outside rearview mirror from the door.

## 10A1-16 DOORS

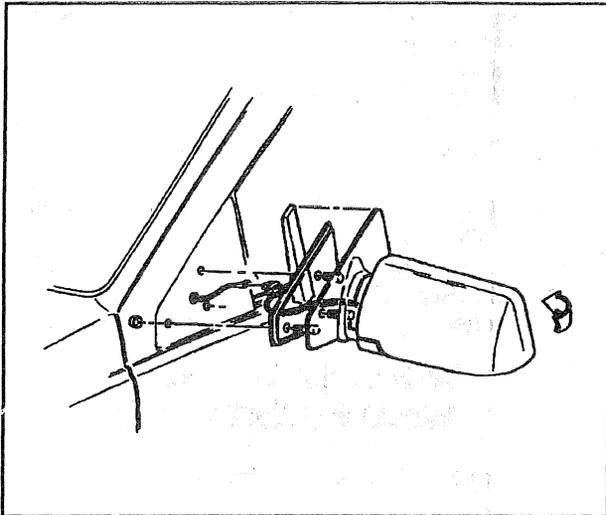


Figure 32—Typical Outside Rearview Mirror

5. Electrical connector (if equipped).

### →← Install or Connect (Figure 32)

1. Electrical connector (if equipped).
2. Outside rearview mirror to the door.
3. Nuts securing the outside rearview mirror to the door.

### ⌚ Tighten

- Outside rearview mirror nuts to 6 N.m (53 lbs. in.).
4. Access hole plugs.
  5. Trim Panel Upper Extension. Refer to "Trim Panel Upper Extension Replacement".

## OUTSIDE REARVIEW MIRROR LENS REPLACEMENT

### ←→ Remove or Disconnect

1. Mirror from the door. Refer to "Outside Rearview Mirror Replacement."
  - A. Tape over the mirror lens.
  - B. Cover the mirror lens with a cloth.
  - C. Break the glass.
2. Broken glass and fiber pad from the mirror lens.

### 🧼 Clean

- Glass from inside the mirror frame.

### →← Install or Connect

- Remove paper from the backside of the replacement mirror lens.
- Replacement mirror lens.

## PRESSURE RELIEF VALVE

Pressure relief valves are located in the front doors of pickup models and behind the quarter panel stationary glass on Utility and Suburban models. Refer to SECTION 10A3 for pressure relief valve removal procedures.

## OUTSIDE VENT VALVE ASSEMBLY

### ←→ Remove or Disconnect (Figure 33)

1. Screw retaining the assembly to the door.
2. Valve assembly by lifting it up.

### →← Install or Connect (Figure 33)

1. Valve assembly to the door edge.
2. Screw.

## INSIDE MODULE VALVE ASSEMBLY

### ←→ Remove or Disconnect (Figure 34)

1. Door trim panel. Refer to "Door Trim Panel Replacement."
2. Valve by drilling out the rivets.

### →← Install or Connect (Figure 34)

1. Valve assembly to the door by riveting.
2. Door trim panel. Refer to "Door Trim Panel Replacement."

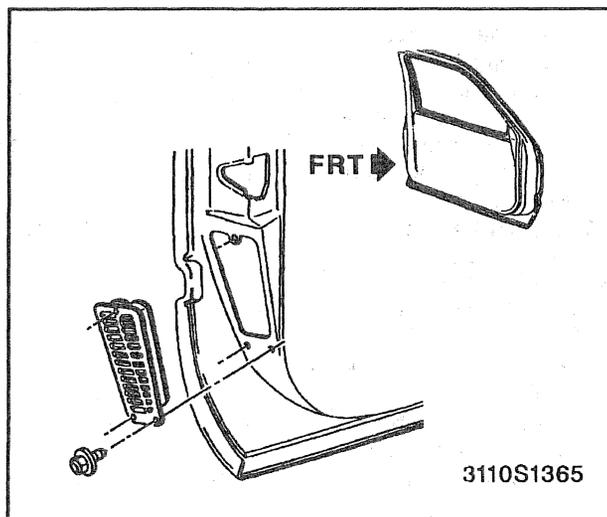


Figure 33—Outside Vent Valve Assembly

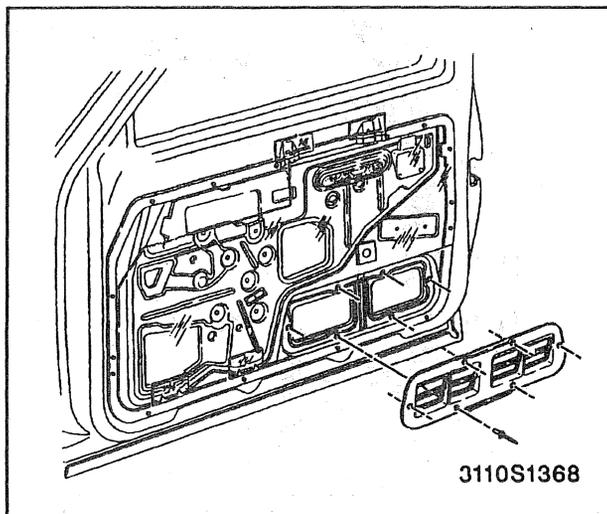


Figure 34—Inside Module Valve Assembly

## REAR SIDE DOORS (CREW CAB AND SUBURBAN)—ON VEHICLE SERVICE

### ASHTRAY ASSEMBLY REPLACEMENT

#### ↔ Remove or Disconnect (Figure 35)

1. Ashtray
  - Grasp the inside of ashtray and pull out.

#### ↔ Install or Connect (Figure 35)

1. Ashtray.
  - Push ashtray into hole in trim panel.

### WINDOW REGULATOR HANDLE REPLACEMENT

#### ↔ Remove or Disconnect (Figures 36 and 37)

Tool Required:

J 9886-01 Door Handle Remover

1. Window regulator handle from vehicle.
  - A. Insert J 9886-01 between the handle and bearing plate (figures 36 and 37).
  - B. Align the tool and push to disengage the clip (figure 36).
  - C. Pull the handle from door.
2. Bearing plate (figure 37).

#### ↔ Install or Connect (Figures 36 and 37)

1. Bearing plate to door (figure 37).
2. Window regulator handle (figures 36 and 37).
  - A. Raise window.
  - B. Install the clip onto the handle.
  - C. Insert handle onto window regulator shaft so

the handle is pointing toward the front of the door.

- D. Push on the handle until the clip engages window regulator shaft.

### INSIDE HANDLE BEZEL REPLACEMENT

#### ↔ Remove or Disconnect (Figure 38)

1. Handle bezel from door trim panel.
  - Insert a flat blade tool between door inside bezel and handle assembly.

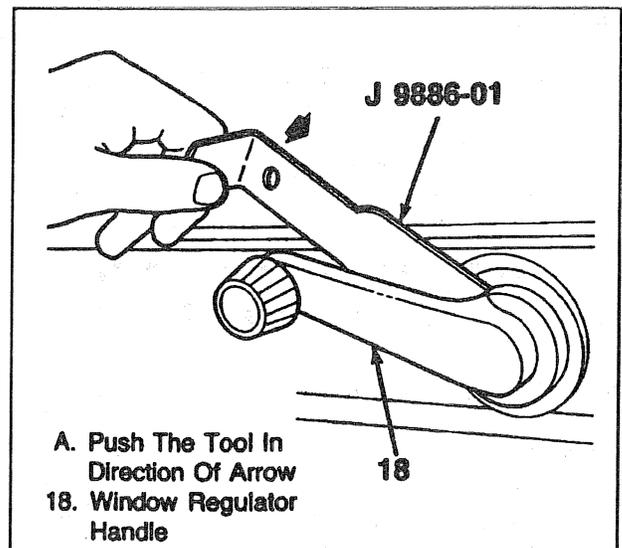


Figure 36—Typical Window Regulator Handle Retaining Clip Removal

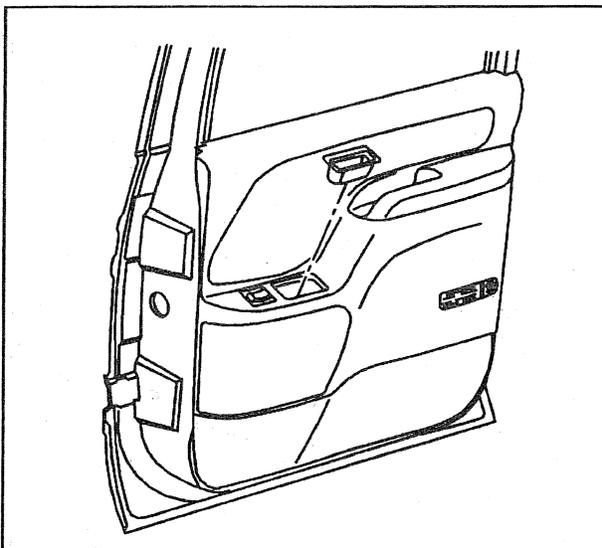


Figure 35—Rear Door Ashtray Assembly

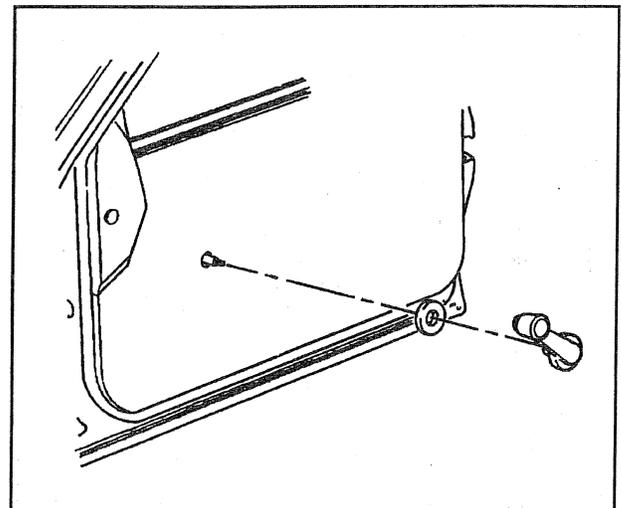


Figure 37—Typical Window Regulator Handle and Bearing Plate

## 10A1-18 DOORS

- Carefully bend retaining clips outward while pulling out bezel.

### ↔ Install or Connect (Figure 38)

1. Handle bezel to door trim panel.
  - Snap bezel into place.

## POWER DOOR LOCK SWITCH REPLACEMENT

### ↔ Remove or Disconnect (Figure 39)

1. Handle bezel. Refer to "Inside Handle Bezel Replacement."
2. Power door lock switch electrical connector.
3. Power door lock switch.

.list1 \*Carefully bend retaining tabs outward while pushing switch out of bezel.

### ↔ Install or Connect (Figure 39)

1. Power door lock switch.
2. Electrical connector.
3. Handle bezel. Refer to "Inside Handle Bezel Replacement".

## POWER WINDOW SWITCH REPLACEMENT

### ↔ Remove or Disconnect (Figure 40)

1. Negative battery cable.
2. Switch mounting panel.
  - Use a flat blade tool to carefully pry door power window switch from door trim panel.
3. Power accessory electrical connectors from switch.

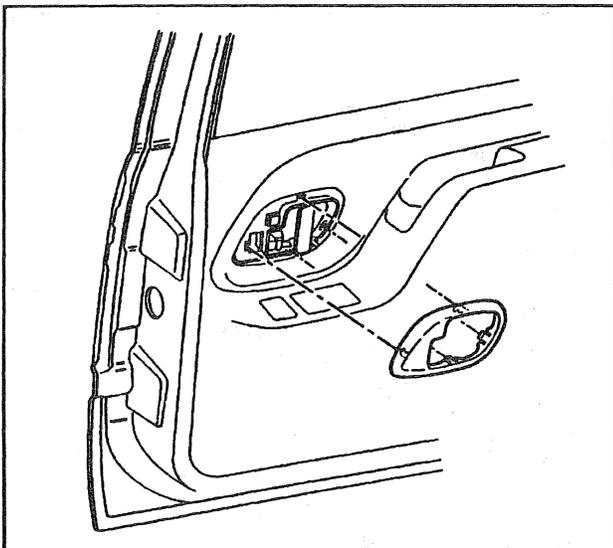


Figure 38—Rear Door Inside Handle Bezel

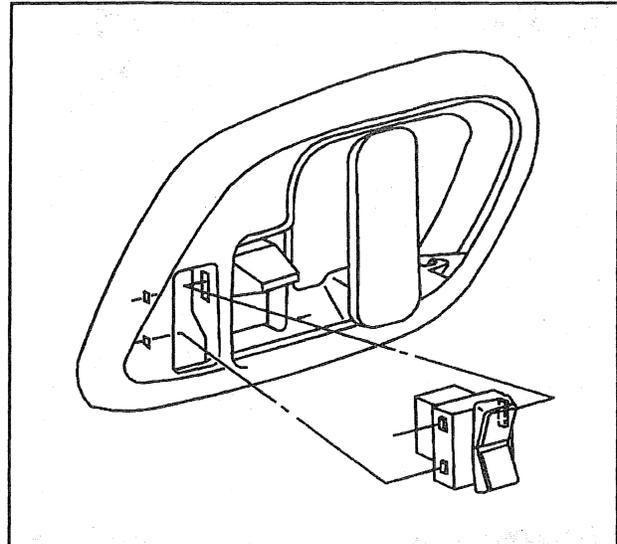


Figure 39—Power Door Lock Switch

### ↔ Install or Connect (Figure 40)

1. Power accessory electrical connectors to switch.
2. Switch to door trim panel.
  - Snap in place.

## SPEAKER GRILLE AND SPEAKER REPLACEMENT

### ↔ Remove or Disconnect (Figure 41)

- Refer to SECTION 9A for audio system diagnosis.
1. Grille.
    - Carefully pry out grille with a flat-blade tool.
  2. Speaker bolts.
  3. Speaker from door.
    - Disconnect wiring connector.

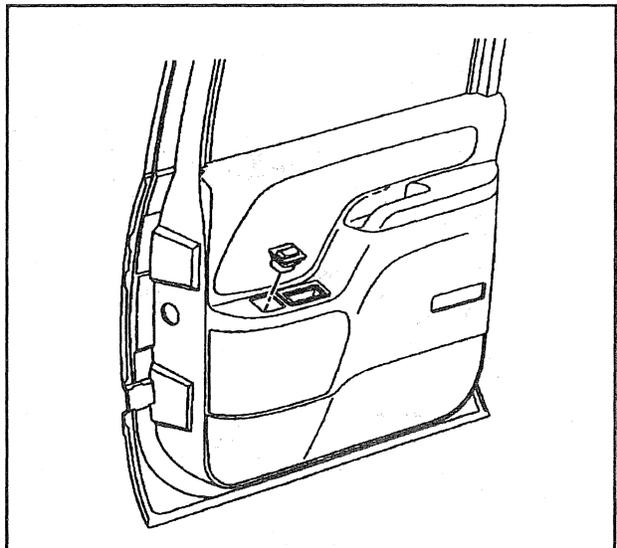


Figure 40—Rear Door Power Window Switch

**↔ Install or Connect (Figure 41)**

1. Connect speaker wiring.
2. Speaker to door.
3. Speaker bolts.
4. Grille.
  - Snap in place.

**COURTESY LAMP REPLACEMENT**

**↔ Remove or Disconnect (Figure 42)**

- Refer to the "Driveability, Emissions and Electrical Manual" for electrical diagnosis.
1. Trim panel. Refer to "Trim Panel Replacement."
  2. Lamp from trim panel.
    - Disconnect wiring connector.
    - Carefully release lamp assembly retainers with a flat-blade tool.

**↔ Install or Connect (Figure 42)**

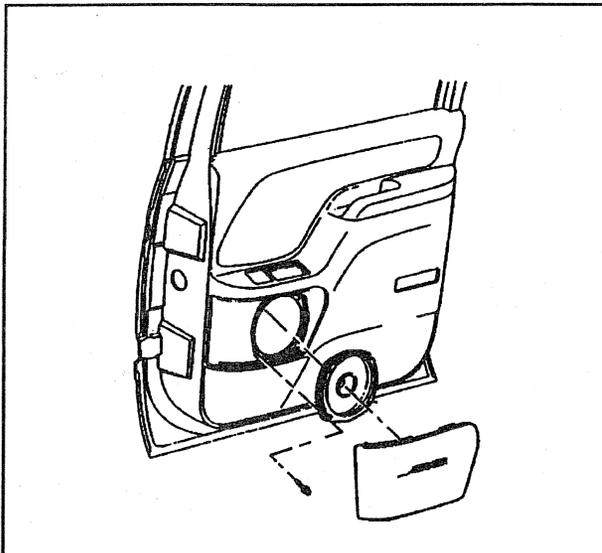
1. Lamp to trim panel.
  - Snap lamp assembly into trim panel.
  - Connect wiring connector.
2. Trim panel. Refer to "Trim Panel Replacement."

**TRIM PANEL REPLACEMENT**

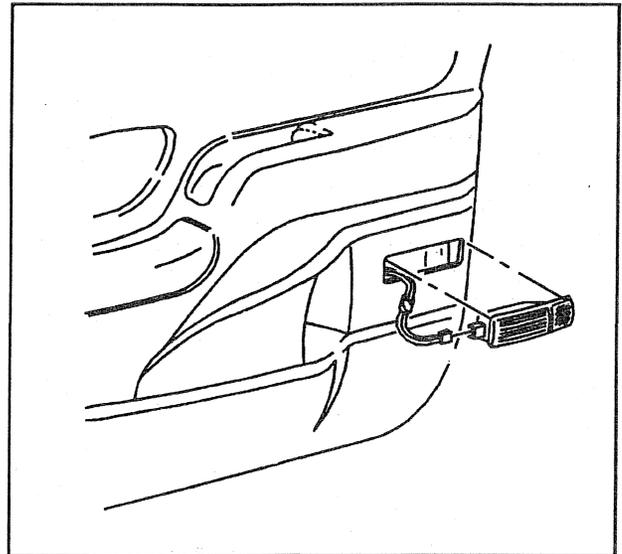
Tool Required:  
J 38778 Trim Panel Remover

**↔ Remove or Disconnect (Figure 43)**

1. Door handle bezel. Refer to "Inside Handle Bezel Replacement".
2. Window regulator handle (if equipped). Refer to "Window Regulator Handle Replacement."
3. Speaker grill and speaker (if equipped). Refer to SECTION 9A.



**Figure 41—Rear Door Grill and Speaker Replacement**

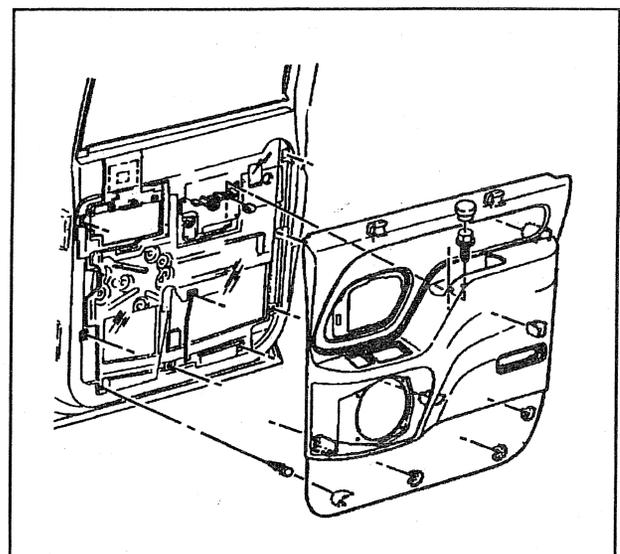


**Figure 42—Front Door Trim Panel Courtesy Lamp**

4. Trim panel armrest screws.
5. Trim panel from the door.
  - Carefully pry the retainers from their seats using J 38778.
  - Disconnect courtesy light connector (if equipped).
  - Disconnect power window switch (if equipped).
  - Disconnect speaker wiring (if equipped).
6. Retainers from trim panel.
7. Courtesy lamp lens. Refer to "Courtesy Lamp Replacement".
8. Power window switch (if equipped). Refer to "Power Window Switch Replacement".

**↔ Install or Connect (Figure 43)**

1. Retainers to trim panel.
2. Power window switch (if equipped). Refer to "Power Window Switch Replacement".
3. Courtesy Lamp lens or reflector to trim panel.



**Figure 43—Typical Rear Door Trim Panel**

## 10A1-20 DOORS

4. Speaker and speaker grill(if equipped). Refer to SECTION 9A.
5. Trim panel to the door.
  - Connect speaker and power window switch connectors (if equipped).
  - Connect Courtesy lamp connector.
  - Align retainers with holes in door.
  - Carefully apply pressure to seat retainers.
6. Window regulator handle (if equipped). Refer to "Window Regulator Handle Replacement."
7. Trim panel arm rest screws.



### Tighten

- Trim panel armrest screws to 1.9 N.m (17 lbs. in.).
8. Door handle bezel. Refer to "Inside Handle Bezel Replacement."

## WATER DEFLECTOR REPLACEMENT

Waterproof deflectors are used to seal the inner panel and prevent water from entering into the body. The deflector is secured with adhesive between the deflector and door.



### Remove or Disconnect (Figure 44)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector.
  - A. Break the bond between the sealer and the door with a flat-blade tool.
  - B. Pull off.



### Install or Connect (Figure 44)

1. Water deflector to the door.
  - Use waterproof tape or 3M 777 adhesive if needed.
2. Trim panel to the door.

## WIRING HARNESS REPLACEMENT



### Remove or Disconnect (Figure 45)

1. B-pillar trim panel. Refer to SECTION 10A4.
2. Disconnect body harness (1) and conduit (2).
3. Trim panel. Refer to "Trim Panel Replacement."
4. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
5. Power door lock actuator (4).
6. Courtesy lamp wiring retainers (5).
7. Power window motor wiring connector (8).



### Install or Connect (Figure 45)

1. Power window motor wiring connector (8).
2. Courtesy lamp wiring retainers (5).
3. Power door lock actuator (4).
4. Water deflector. Refer to "Inner Panel Water Deflector Replacement."

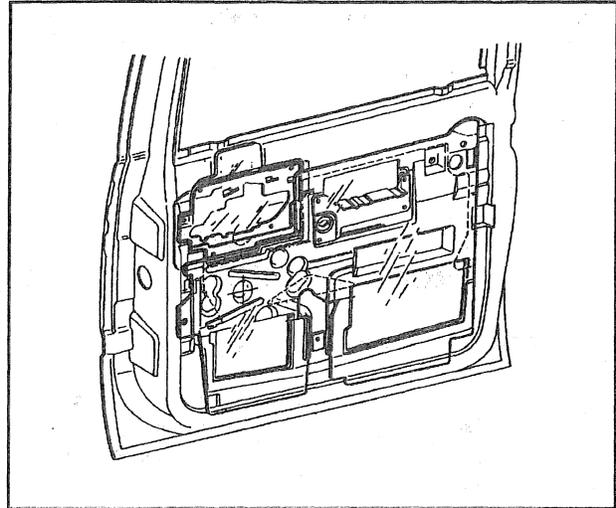


Figure 44—Typical Rear Door Water Deflectors

5. Trim panel. Refer to "Trim Panel Replacement."
6. Disconnect body harness (1) and conduit (2).
7. B-pillar trim panel. Refer to SECTION 10A4.

## DOOR REPLACEMENT



### Remove or Disconnect (Figures 45 and 46)

1. Negative battery cable. Refer to SECTION 0A.
  2. Wiring harness connectors inside B-pillar.
    - A. Remove B-pillar trim panel. Refer to SECTION 10A4.
    - B. Disconnect wiring harness connectors.
    - C. Disconnect wire harness conduit.
- ALL VEHICLES:
- Apply cloth backed tape to the door and the body pillar.

**CAUTION:** Before removing the door hinge spring, cover the spring with a towel to prevent the spring from "flying" and possibly causing personal injury or damage.

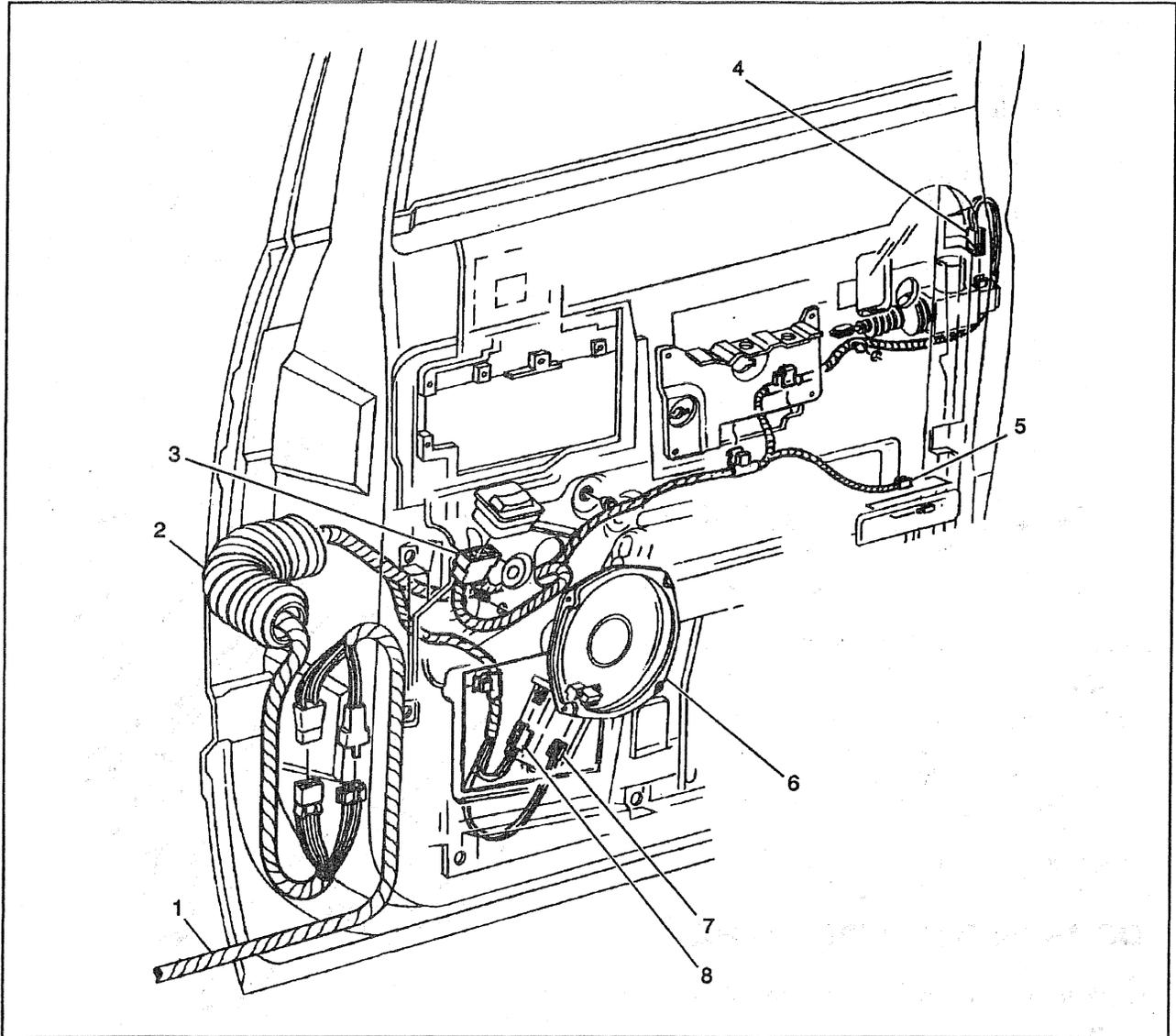
3. Lower hinge pin retainer (figure 46).
4. Lower hinge pin using a soft-faced hammer and a pair of locking pliers to grasp the pin and drive it out (figure 46).
  - Install a bolt through the lower hinges temporarily to hold the door in place while removing the upper hinge pin.
5. Upper hinge pin retainer (figure 46).
6. Upper hinge pin (figure 46).
7. Bolt in lower hinge pin hole.
8. Door from the vehicle.



### Install or Connect (Figures 45 and 46)

#### ALL VEHICLES:

1. Door to the vehicle.
2. Bolt temporarily through the lower hinge pin holes.
3. Upper hinge pin with the pointed end up (figure 46).
4. New hinge pin retainer (figure 46).
  - Remove temporary bolt from the lower hinge.



**Figure 45—Front Door Wiring Harness Locations**

1	Body Wiring Harness
2	Rear Side Door Conduit
3	Power Window Switch Connector
4	Power Door Lock Actuator
5	Courtesy Light Wiring Connector
6	Speaker
7	Speaker Wiring Connector
8	Power Window Motor Wiring Connector Connector
T3336	

## 10A1-22 DOORS

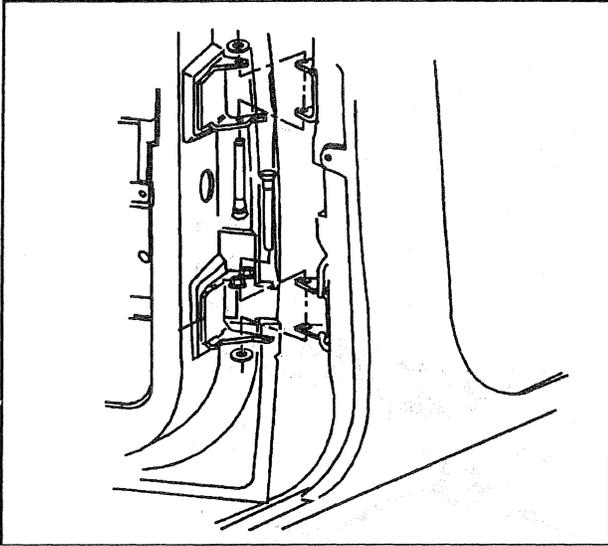


Figure 46—Rear Door Hinge Pin Removal (with power accessories)

5. Lower hinge pin with the pointed edge down (figure 46).

6. New hinge pin retainer (figure 46).

### VEHICLES WITH POWER DOOR COMPONENTS:

7. Wire harness connectors inside B-pillar.

A. Route wire harness through conduit.

B. Connect wiring harness connectors.

C. Install B-pillar trim panel. Refer to SECTION 10A4.

8. Negative battery cable.

9. Lubricate bushing with engine oil.

## DOOR HINGE REPLACEMENT

↔ Remove or Disconnect (Figures 47, 48, and 49)

1. Door from body. Refer to "Door Replacement."

2. B-pillar trim panel. Refer to SECTION 10A4.

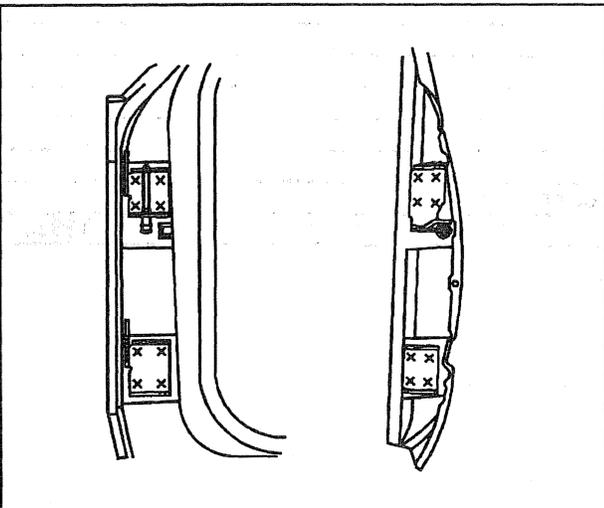


Figure 47—Spot Weld Locations

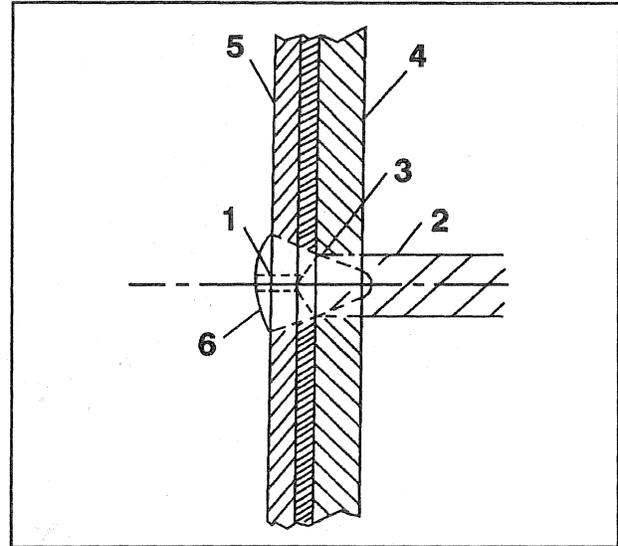


Figure 48—Drilling out Spot Welds

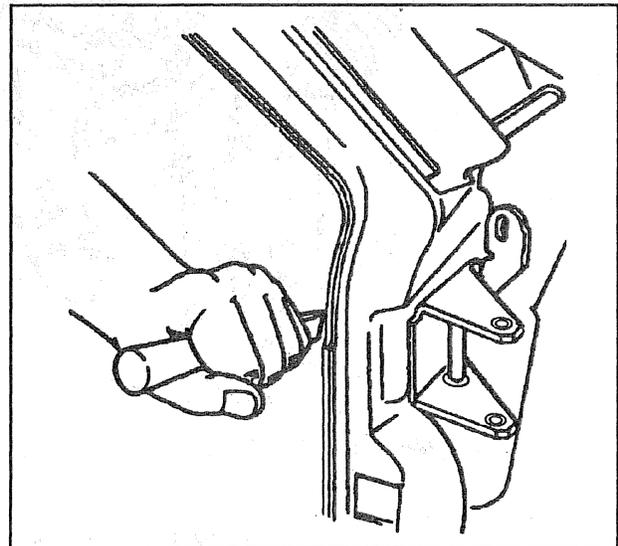


Figure 49—Chiseling Welded-On Hinge

3. Excess sealer surrounding hinge.

4. Door hinges.

A. Scribe the location of the existing hinges on the body pillar and door.

B. Center punch each of the weld marks on the original hinge (figure 47). It is critical to punch the center of the weld so that all of the weld is removed during drilling.

C. Drill a 3-mm (1/8-inch) pilot hole (1) through the welds (6) deep enough to penetrate the hinge base (3) only (figure 48).

D. Drill a 13-mm (1/2-inch) hole (2) through the hinge base (4) only using the smaller hole (1) as a pilot (figure 48).

E. Drive a chisel between the hinge and door pillar (figure 49).

↔ Install or Connect (Figures 47, 48, and 49)

1. Bolt-on hinges to pillar or door.

- A. Position the bolt-on service replacement hinges within the scribe marks made on the body hinge pillar and the door at the time of removal.
  - B. Center punch each bolt hole location on the body hinge pillar and/or door.
  - C. Drill a 13-mm (1/2-inch) hinge attaching hole in three steps to ensure placing the hinge in the proper position.
5. Prepare the surface for the replacement hinges using a file or equivalent.
- Coat the mating surface of the hinges with a medium bodied sealer.

**NOTICE: Refer to "Notice" on page 10A1-1.**

6. Hinges, backing plate, bolts, and nuts.
- A. Align the hinge and backing plate with the holes in the hinge pillar and door.
  - B. Place the bolts through the hinge, pillar and/or door, and through the backing plate.

 **Tighten**

- Nuts to 35 N.m (26 lbs. ft.).
7. Door to body. Refer to "Door Replacement."  
8. B-pillar trim panel. Refer to SECTION 10A4.

 **Adjust**

- Refer to "Door Adjustment."
9. Apply sealer around hinges.

**DOOR STRIKER BOLT REPLACEMENT**

The door striker bolt is the special bolt and washer mounted on the door opening's rear pillar. The bolt passes through a hole into a threaded plate behind the pillar. The cab door is secured in position when the lock cam (arm) of the locking mechanism engages and snaps around the striker bolt.

The striker bolt position is not adjustable.

 **Remove or Disconnect (Figure 50)**

Tool Required:  
J 29843-9 Torx Bit (Bit Size T47)

1. Mark the position of the striker bolt spacer on the door pillar.
2. Striker bolt using J 29843-9 or equivalent.

 **Install or Connect (Figure 50)**

1. Striker bolt into the door pillar retaining plate.
2. Align the striker bolt spacer with the previously made mark.
  - Striker bolt while holding spacer in position to 63 N.m (46 lbs. ft.) using J 29843-9 or equivalent.

**DOOR ADJUSTMENT**

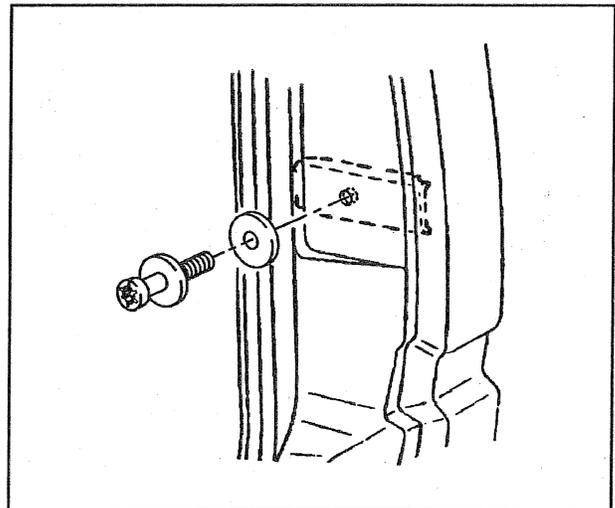
This procedure can only be used when bolt-on service replacement hinges are installed.

- Tool Required:  
J 29843-9 Torx Bit (Bit Size T47) or equivalent.
- Door striker bolt using J 29843-9 or equivalent (figure 50).
  - Loosen the door hinge to the body side pillar bolts.

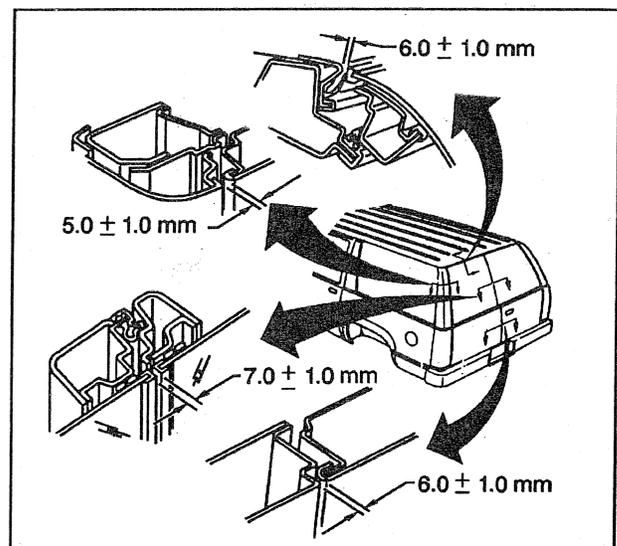
 **Adjust (Figure 51)**

1. Door up or down, forward or rearward, and in or out at the door hinges.
2. Gap between the rocker panel and the door to the specifications shown in figure 51.
3. Gap between the door and the roof panel.
4. Gap between the rear of the door and the rear pillar.
5. Gap between the door and the fender.
6. Door surfaces flush with other panels within  $\pm 1.0$  mm (0.04-inch).

**NOTICE: Refer to "Notice" on page 10A1-1.**



**Figure 50—Door Striker**



**Figure 51—Door Adjustment**

## 10A1-24 DOORS

### Tighten

- Hinge bolts to 35 N·m (26 lbs. ft.).

### Install or Connect (Figure 51)

Tool Required:  
J 29843-9 Torx Bit (Bit Size T47).

**NOTICE:** Refer to "Notice" on page 10A1-1.

- Door striker bolt.

### Adjust

- Bolt to properly engage the door lock.

### Tighten

- Bolt to 63 N·m (46 lbs. ft.).

## DOOR HARDWARE LUBRICATION

The mechanical components of the door assembly are lubricated during assembly. If additional lubrication is required to any door hardware mechanism, use Lubriplate Spray-Lube "A" (GM P/N 1052349), Lubriplate Auto-Lube "A" (GM P/N 1052196), or equivalent. Lubricate door hinge pins and rollers at normal service intervals with 30 weight engine oil. Do not lubricate hinge roller to hold-open link contacting surfaces. This may prevent the roller from rolling properly.

## INSIDE DOOR HANDLE ASSEMBLY REPLACEMENT

### Remove or Disconnect (Figures 52 and 53)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Inside door handle assembly (figure 52).
  - Drill out the rivet heads.
  - Slide door handle forward.

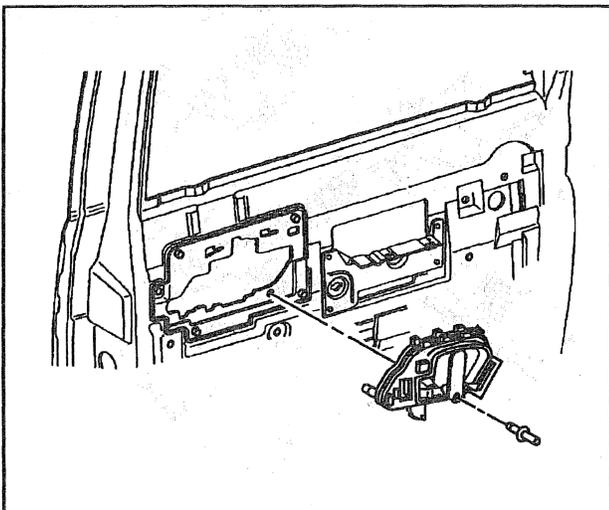


Figure 52—Rear Door Inner Handle Assembly

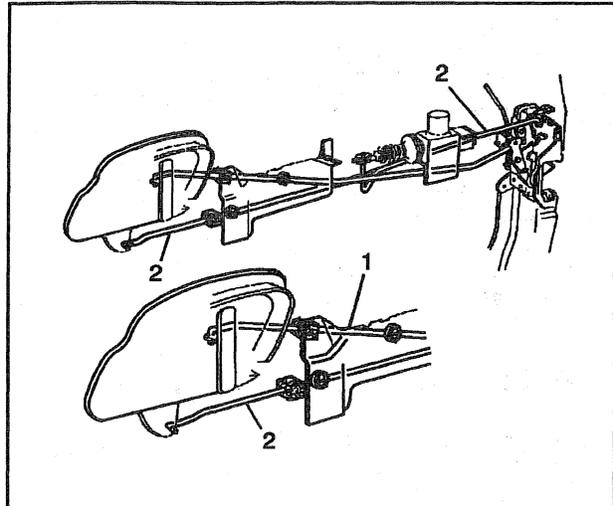


Figure 53—Rear Door Inner Handle Control Rods

4. Inside handle control rod (1) from the handle and lock lever assembly (figure 53).
5. Inside lock control rod (2) from the handle and lock lever assembly (figure 53).

### Install or Connect (Figures 52 and 53)

Tool Required:  
J 34940 Rivet Gun

1. Inside handle control rod (1) from the handle and lock lever assembly.
2. Inside lock control rod (2) from the handle and lock lever assembly.
3. Inside door handle.
  - Insert handle assembly into slot and slide assembly to the rear.
  - Handle rivets using J 34940.
4. Water deflector.
5. Trim Panel.

## INSIDE DOOR HANDLE BRACKET REPLACEMENT

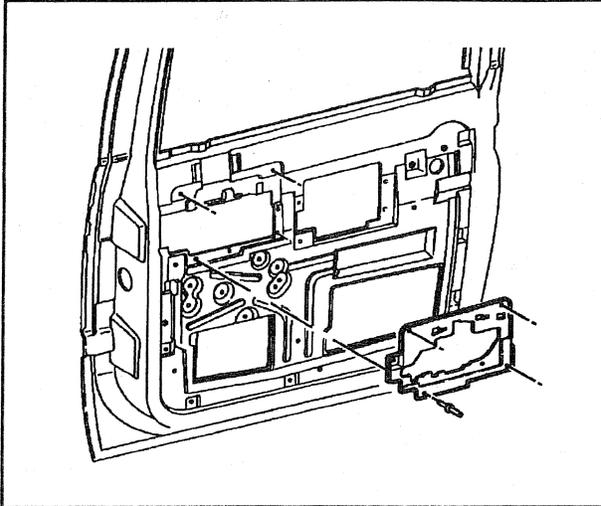
### Remove or Disconnect (Figure 54)

Tool Required:  
J 34940 Rivet Gun

1. Inside door handle assembly. Refer to "Inside Door Handle Assembly Replacement".
2. Inside door handle bracket from door.
  - Drill out rivets.

### Install or Connect (Figure 54)

1. Inside door handle bracket to door.
  - Bracket rivets using J 34940.
2. Inside door handle assembly. Refer to "Inside Door Handle Assembly Replacement".



**Figure 54—Rear Door Inner Handle Assembly Bracket**

**ARMREST BRACKET REPLACEMENT**

**↔** Remove or Disconnect (Figure 55)

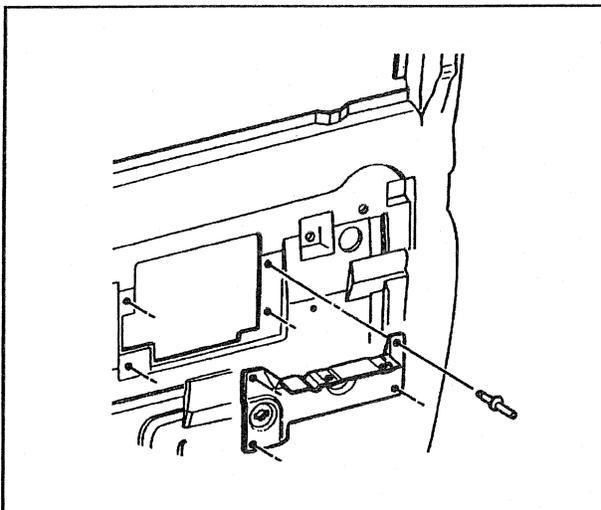
Tool Required:

J 34940 Rivet Gun

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Armrest bracket from door.
  - Drill out rivets.
  - Disconnect control rods from retainers.
4. Retainers and u-nuts from bracket.

**↔** Install or Connect (Figure 55)

1. Retainers and u-nuts to bracket.
2. Armrest bracket to door.
  - Connect control rods from retainers.
  - Bracket rivets using J 34940.



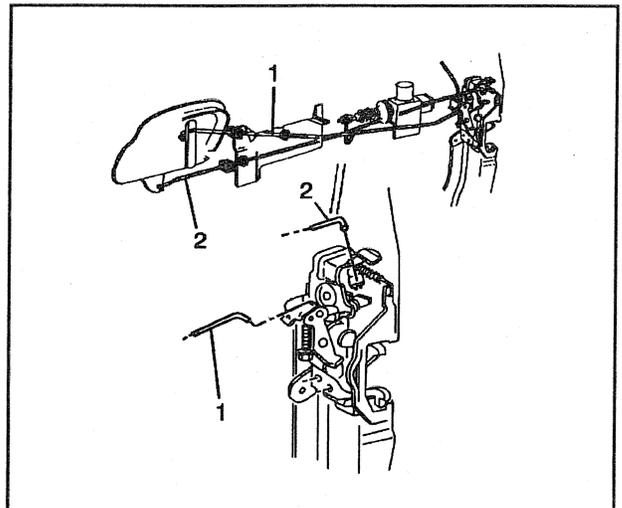
**Figure 55—Armrest Bracket**

3. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
4. Trim panel. Refer to "Trim Panel Replacement."

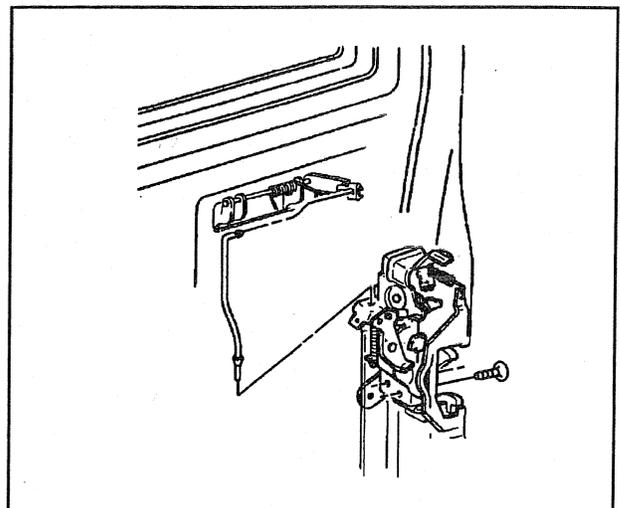
**LOCK ASSEMBLY**

**↔** Remove or Disconnect (Figure 56 and 57)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".
4. Inside door handle and lock control rods (figure 56).
5. Outside door handle and lock control rods (figure 57).
6. Lock assembly bolts.



**Figure 56—Inside Rear Side Door Handle and Lock Control Rods**



**Figure 57—Outside Rear Side Door Handle and Lock Control Rods and Lock Assembly**

## 10A1-26 DOORS

### Install or Connect (Figures 56 and 57)

1. Lock assembly bolts.
2. Outside door handle and lock control rods (figure 57).
3. Inside door handle and lock control rods (figure 56).
4. Inner mounting panel assembly. Refer to "Inner Mounting Panel Replacement".
5. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
6. Trim panel. Refer to "Trim Panel Replacement."

## LOCK ACTUATOR

### Remove or Disconnect (Figure 58)

1. Trim panel. Refer to "Trim Panel Replacement."
  2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
  3. Actuator lock control rod (figure 58).
  4. Actuator wiring connector.
  5. Actuator from door (figure 58).
- Drill out rivets.

### Install or Connect (Figure 58)

Tool Required:  
J 34940 Rivet Gun

1. Actuator to door.
  - Use J 34940 to install actuator rivets.
2. Actuator lock control rod.
3. Actuator wiring connector.
4. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
5. Trim panel. Refer to "Trim Panel Replacement."

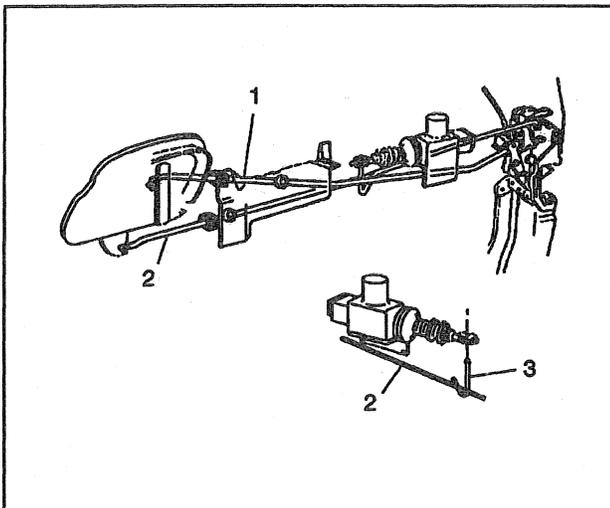


Figure 58—Rear Side Door Lock Actuator Control Rod

## OUTSIDE HANDLE REPLACEMENT

New lock cylinders are available as replacement parts. If door lock cylinders require replacement for any reason, apply a coating of GM P/N 12345120 or equivalent lubricant inside of the lock case and cylinder keyway prior to assembling and installing the cylinder.

### Remove or Disconnect (Figure 59)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Outside handle mounting screws.
4. Outside handle from door.
  - Remove handle control rod from clip retainer.

### Install or Connect (Figure 59)

1. Handle control rod to handle clip retainer.
2. Handle to the vehicle.
  - A. Hold handle assembly upside down.
  - B. Insert handle control rod into hole in lock (figure 57).
  - C. Flip hand assembly right side up.
3. Outside handle mounting screws.

### Tighten

- Screws to 4 N.m (35 lbs. in.).
4. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
  5. Trim panel. Refer to "Trim Panel Replacement."

## WINDOW REPLACEMENT

**CAUTION:** To prevent personal injury, gloves should be worn when removing broken glass.

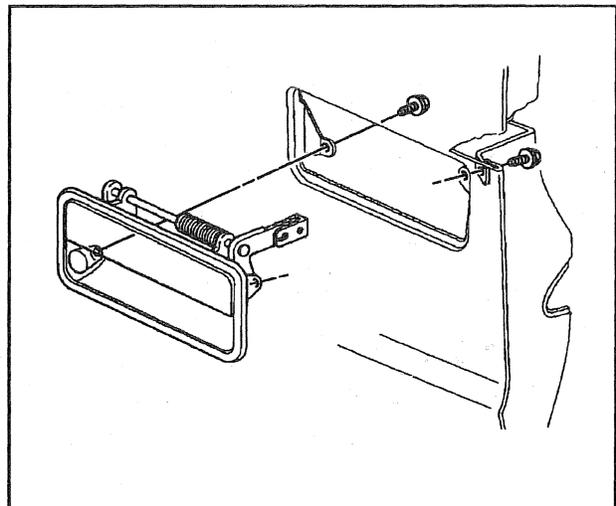
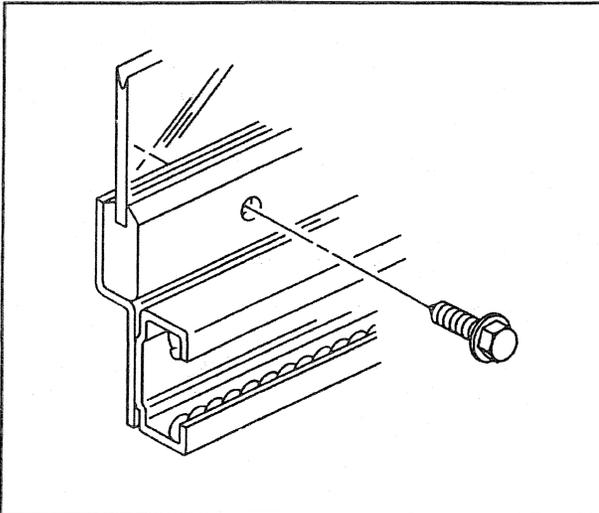
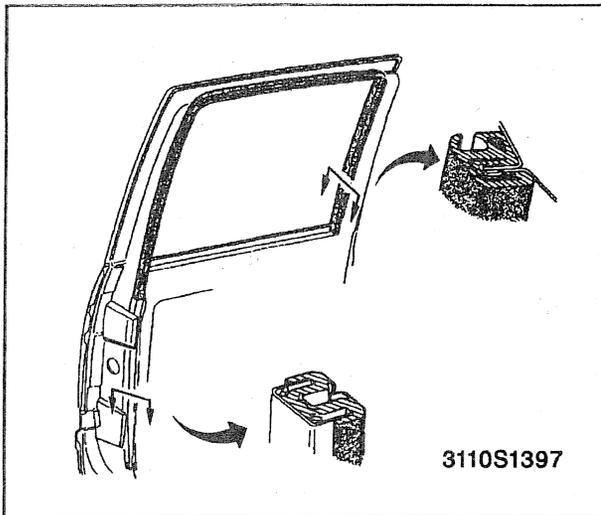


Figure 59—Outside Handle



**Figure 60—Rear Door Window Sash Channel**



**Figure 61—Rear Door Window Weatherstrip**

**↔ Remove or Disconnect (Figures 60 and 61)**

- Lower window.

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Window sash bolts (figure 60).
4. Glass weatherstrip (figure 61).

- Pull weatherstrip out of window frame and front run channel.

5. Lift window out of the top of door.

**→← Install or Connect (Figures 60 and 61)**

1. Slide window into glass channels through the top of door.
2. Glass weatherstrip (figure 61).
3. Window sash bolts (figure 60).

**⌚ Tighten**

- Window sash bolts to 1.9 N·m (17 lbs. in.).

4. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
5. Trim panel. Refer to "Trim Panel Replacement."

**WINDOW GLASS WEATHERSTRIP**

**↔ Remove or Disconnect (Figure 61)**

1. Window. Refer to "Window Replacement".
2. Weatherstrip.
  - Pull weatherstrip from front of glass run channel, top of window frame flange, rear of glass run channel.

**→← Install or Connect (Figure 61)**

1. Weatherstrip.
  - Pull weatherstrip from front of glass run channel, top of window frame flange, rear of glass run channel.
2. Window. Refer to "Window Replacement".

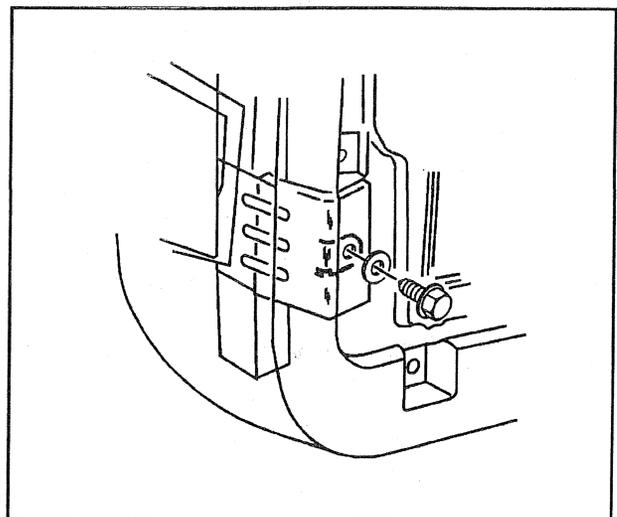
**WINDOW FRONT GLASS RUN CHANNEL**

**↔ Remove or Disconnect (Figure 62)**

1. Window. Refer to "Window Replacement".
2. Window glass weatherstrip. Refer to "Window Glass Weatherstrip Replacement".
3. Front glass run channel top bolt.
4. Front glass run channel from door.

**→← Install or Connect (Figure 62)**

1. Rear glass run channel to door.
2. Window front channel top bolt. Do not tighten bolt.
3. Window glass weatherstrip. Refer to "Window Glass Weatherstrip Replacement".
4. Window. Refer to "Window Replacement".



**Figure 62—Rear Window Front Glass Run Channel Bolts**

## 10A1-28 DOORS

### WINDOW REGULATOR AND MOTOR REPLACEMENT

The power window motor can not be serviced. It is replaced as a unit with the regulator.

#### ←→ Remove or Disconnect (Figure 63)

Tool Required:

J 34940 Rivet Gun

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
3. Window glass. Refer to "Window Replacement".
4. Window sash.
5. Glass weatherstrip.
6. Regulator assembly from door.
  - A. Drill rivets securing the regulator to door inner panel.
  - B. Guide regulator assembly through rear lower hole.

#### →→ Install or Connect (Figure 63)

1. Regulator assembly to door.
  - A. Guide regulator assembly through rear lower hole.
  - B. Install rivets securing the regulator to the door inner panel using J .34940.

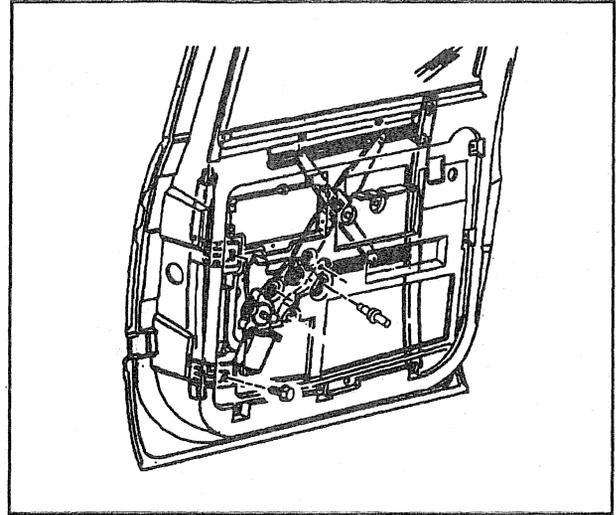


Figure 63—Rear Door Window Regulator Assembly

2. Glass weatherstrip.
3. Window sash.
4. Window glass. Refer to "Window Replacement".
5. Water deflector. Refer to "Inner Panel Water Deflector Replacement."
6. Trim panel. Refer to "Trim Panel Replacement."

## REAR CARGO DOORS(UTILITY AND SUBURBAN)—ON VEHICLE SERVICE

### TRIM PANEL REPLACEMENT

Tool Required:

J 38778 Trim Panel Remover

#### ←→ Remove or Disconnect (Figure 64)

1. Trim panel from the door.
  - Carefully pry the retainers from their seats using J 38778.
2. Remove retainers from trim panel.

#### →→ Install or Connect (Figure 64)

1. Retainers to trim panel.
2. Trim panel to the door.
  - Align retainers with holes in door.
  - Carefully apply pressure to seat retainers.

### WINDOW GARNISH MOLDINGS

#### ←→ Remove or Disconnect (Figure 65)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Garnish molding screws.
3. Garnish molding retainers.
4. Garnish molding from door.

#### →→ Install or Connect (Figure 65)

1. Garnish molding to door.
2. Garnish molding retainers.
3. Garnish molding screws.
4. Trim panel. Refer to "Trim Panel Replacement."

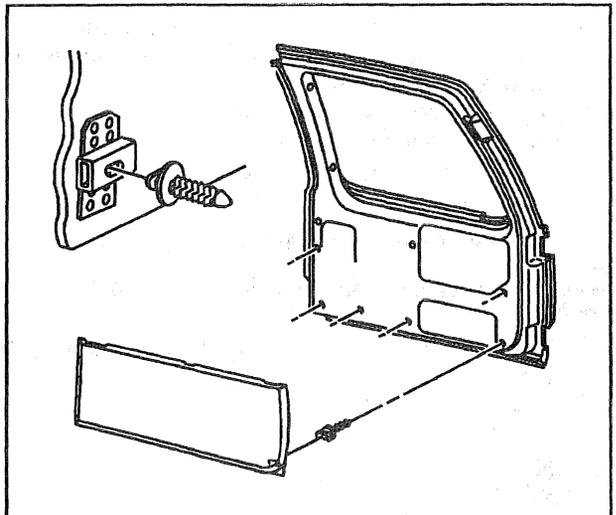


Figure 64—Rear Cargo Door Trim Panel

## WATER DEFLECTOR REPLACEMENT

Waterproof deflectors are used to seal the inner panel and prevent water from entering into the body. The deflector is secured with adhesive between the deflector and door.

### Remove or Disconnect

1. Trim panel. Refer to "Trim Panel Replacement."
2. Water deflector.
  - A. Break the bond between the sealer and the door with a flat-blade tool.
  - B. Pull off.

### Install or Connect

1. Water deflector to the door.
  - Use waterproof tape or 3M 777 adhesive if needed.
2. Trim panel to the door.

## ACCESS HOLE COVERS (BASE MODELS ONLY)

### Remove or Disconnect

1. Access hole cover screws.
2. Access hole covers.

### Install or Connect

1. Access hole covers.
2. Access hole cover screws.

## WIRING HARNESS REPLACEMENT

### Remove or Disconnect (Figure 66)

1. Trim panel. Refer to "Trim Panel Replacement".
2. Wiring.
  - A. Door wiring contact screws (4).
  - B. Door wiring contact connector (4).
  - C. Window defogger wiring connectors (2).
  - D. Power door lock actuator connector (6).
  - E. Wiring harness retainers.
3. Wiring harness from the door.

### Install or Connect (Figure 66)

1. Wiring harness to door.
2. Wiring.
  - A. Wiring harness retainers.
  - B. Power door lock actuator connector (6).
  - C. Window defogger wiring connectors (2).
  - D. Door wiring contact connector (4).
  - E. Door wiring contact screws (4).
3. Trim panel. Refer to "Trim Panel Replacement".

## CARGO DOOR REPLACEMENT

### Remove or Disconnect (Figure 67)

1. Negative battery cable (vehicles with power components only). Refer to SECTION 0A.
  - Apply cloth backed tape to the door, and body pillar.
2. Lower hinge pin using a soft-faced hammer and locking pliers.
  - Temporarily install a bolt through the lower hinges to hold the door in place while removing the upper hinge pin.
3. Upper hinge pin.
4. Bolt in lower hinge pin hole.
5. Door from vehicle.

### Install or Connect (Figure 67)

1. Door to the vehicle.
2. Bolt through the lower hinge pin holes.
3. Upper hinge pin with the pointed end down using a soft-faced hammer and a pair of locking pliers to grasp the pin.
  - Remove the temporary bolt in the lower hinge.
4. Lower hinge pin with the pointed end down.
  - Remove cloth backed tape to the door, and the body pillar.
5. Negative battery cable.

## CARGO DOOR HINGE CHECK ASSEMBLY

### Remove or Disconnect (Figure 68)

1. Apply cloth backed tape to the door and body pillar.
2. Pin retainer.
3. Hinge pin using a soft-faced hammer and locking pliers.
4. Spring.
5. Check assembly.

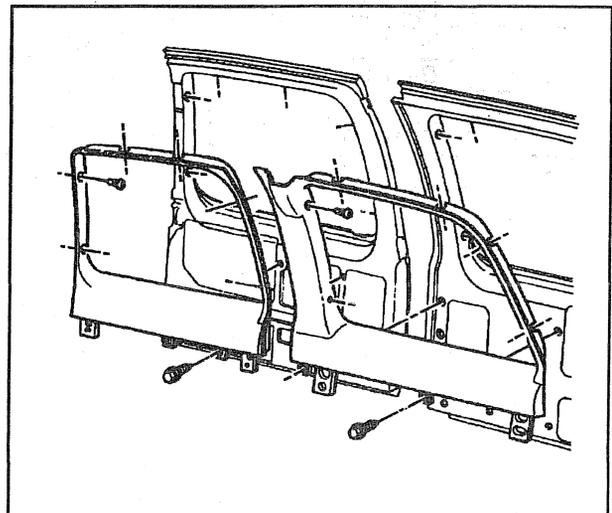


Figure 65—Rear Cargo Door Window Garnish Moldings

# 10A1-30 DOORS

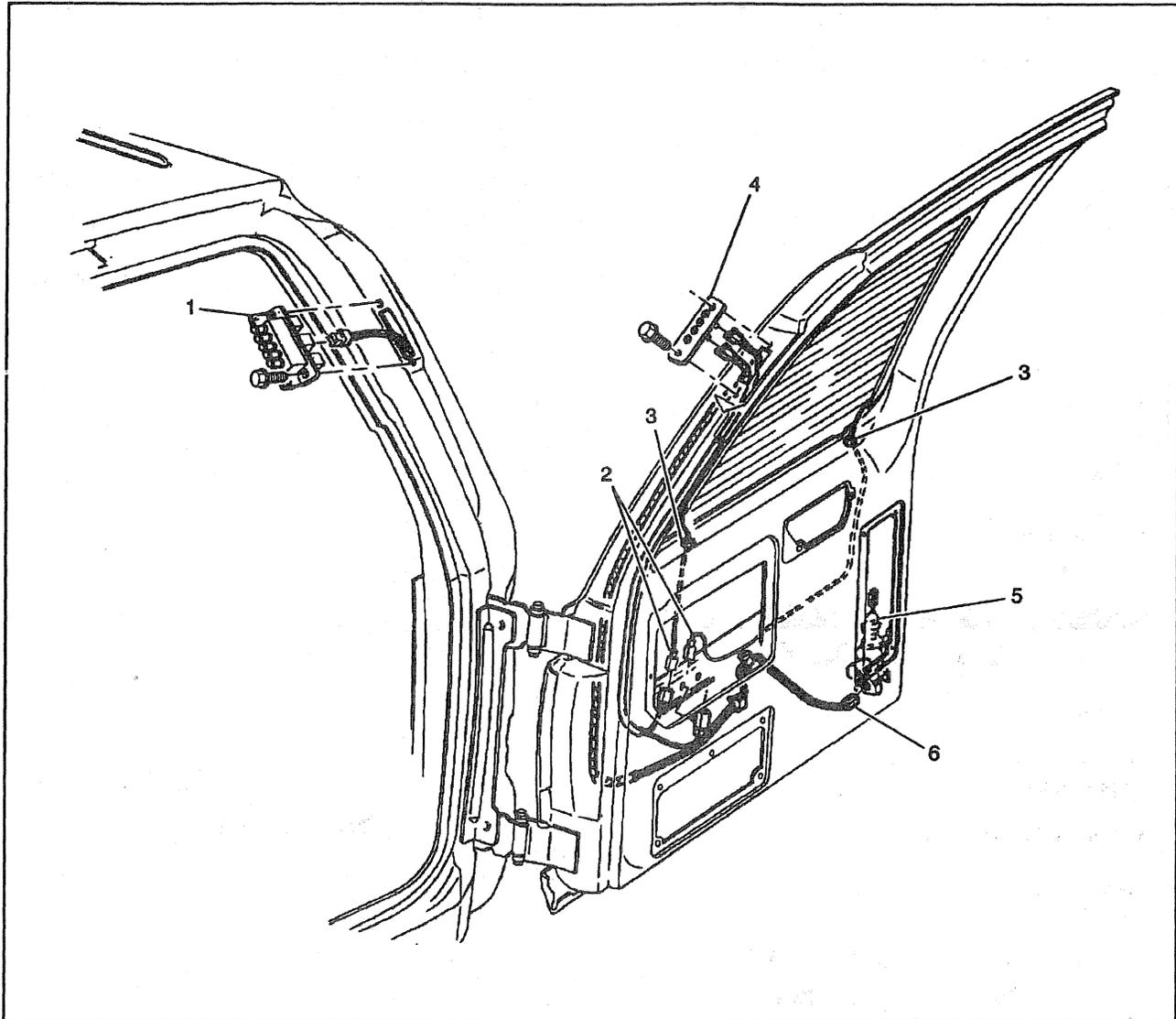
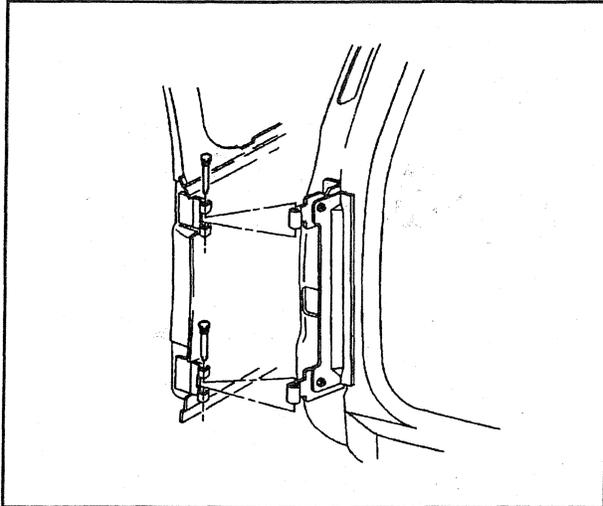


Figure 66—Front Door Wiring Harness Locations

1	Door Opening Contacts
2	Window Defogger Wiring Connector
3	Grommet
4	Rear Cargo Door Contacts
5	Power Door Lock Actuator
6	Power Door Lock Actuator Wiring Connector

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**Figure 67—Rear Cargo Door Hinge Pins**

**→←** Install or Connect (Figure 68)

1. Check assembly.
2. Spring.
3. Hinge pin using a soft-faced hammer and locking pliers.
4. New pin retainer.

- Remove cloth backed tape from the door and the body pillar.

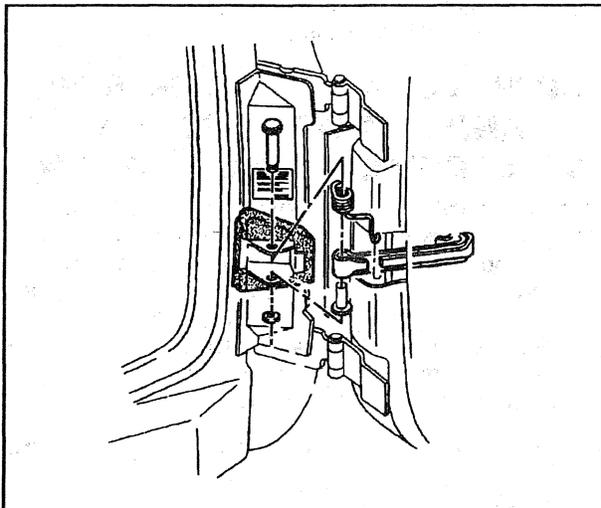
**REAR CARGO DOOR BODY MOUNTED STRIKERS**

**↔** Remove or Disconnect (Figure 69)

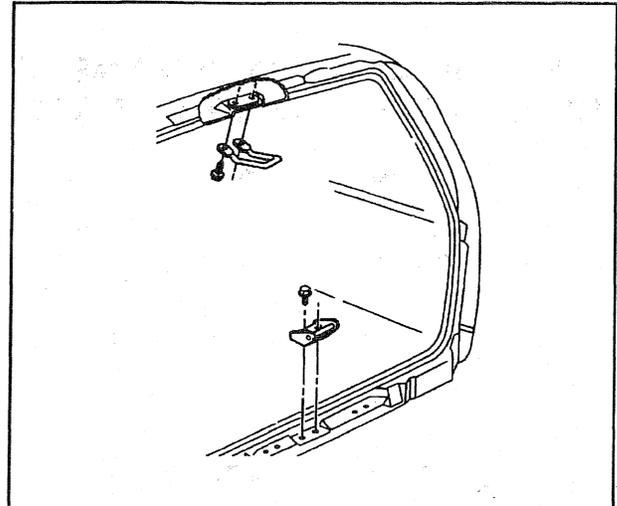
1. Mark the position of the upper and/or lower striker.
2. Striker screw.
3. Striker.

**→←** Install or Connect (Figure 69)

1. Striker to the vehicle.



**Figure 68—Hinge Check Assembly**



**Figure 69—Cargo Upper and Lower Strikers**

**NOTICE:** Refer to "Notice" on page 10A1-1.

2. Striker screw.
3. Align the striker and screw with the previously made mark.

**⌚** Tighten

- Screw to 7.5 N.m (66 lbs. in.).

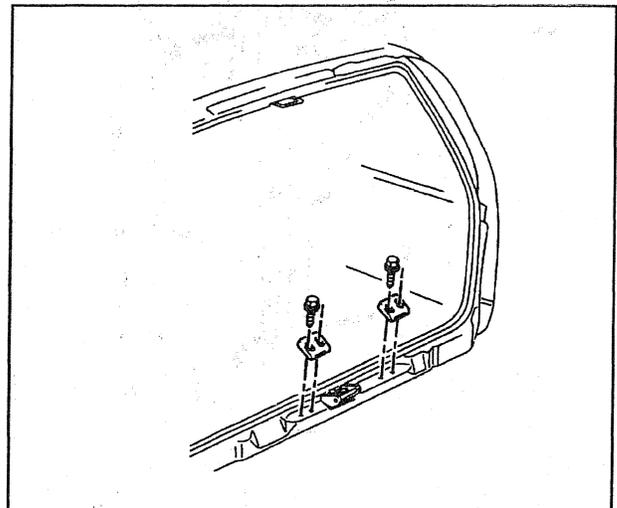
**REAR CARGO DOOR PROTECTORS**

**↔** Remove or Disconnect (Figure 70)

1. Protector bolts.
2. Protector.

**→←** Install or Connect (Figure 70)

1. Protector.



**Figure 70—Rear Cargo Door Protectors**

## 10A1-32 DOORS

- Protector bolts.

### CARGO DOOR LOCK ASSEMBLY REPLACEMENT (RIGHT DOOR)

#### ↔ Remove or Disconnect (Figure 71)

- Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".
- Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
- Lock rod (3) from lock assembly rod clip (figure 72).
- Lock assembly bolts.
- Lock assembly from door.

#### ↔ Install or Connect (Figure 71)

- Lock assembly to door.
- Lock assembly bolts.
- Lock rod (3) from lock assembly rod clip (figure 72).
- Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".

### LOCK ACTUATOR

#### ↔ Remove or Disconnect (Figure 72)

- Trim panel. Refer to "Trim Panel Replacement."

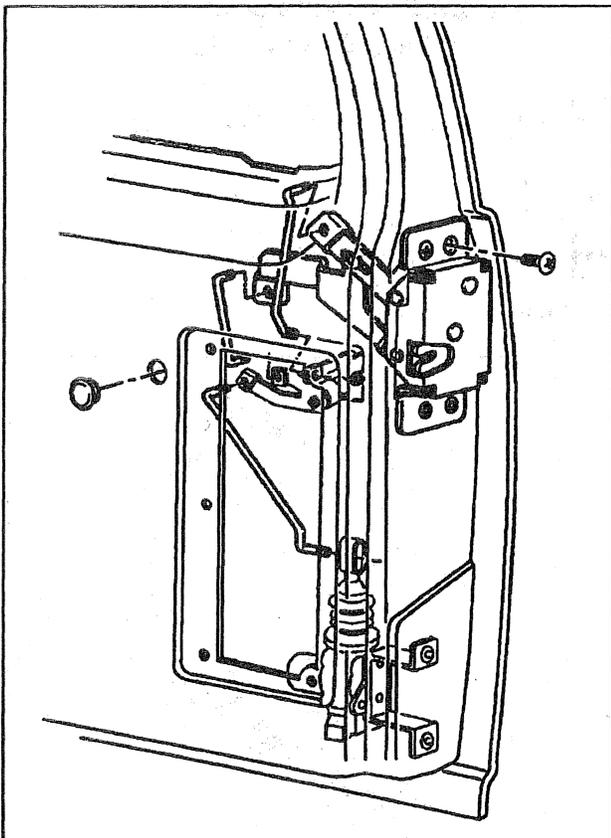


Figure 71—Rear Cargo Door Outside Handle and Lock Control Rods

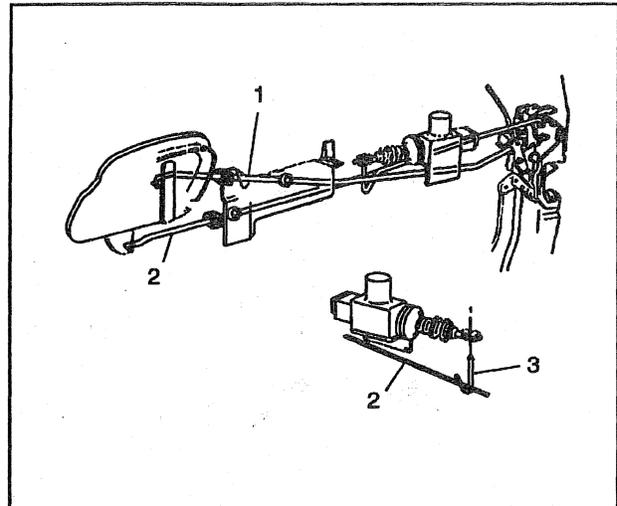


Figure 72—Rear Side Door Lock Actuator Control Rod

- Water deflector. Refer to "Inner Panel Water Deflector Replacement."
- Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
- Actuator lock control rod (1) (figure 72).
- Actuator wiring connector.
- Actuator from door.

- Drill out rivets.

#### ↔ Install or Connect (Figure 72)

Tool Required:  
J 34940 Rivet Gun

- Actuator to door.
  - Use J 34940 to install actuator rivets.
- Actuator lock control rod (1) (figure 72).
- Actuator wiring connector.
- Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
- Trim panel (if equipped). Refer to "Trim Panel Replacement."
- Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".

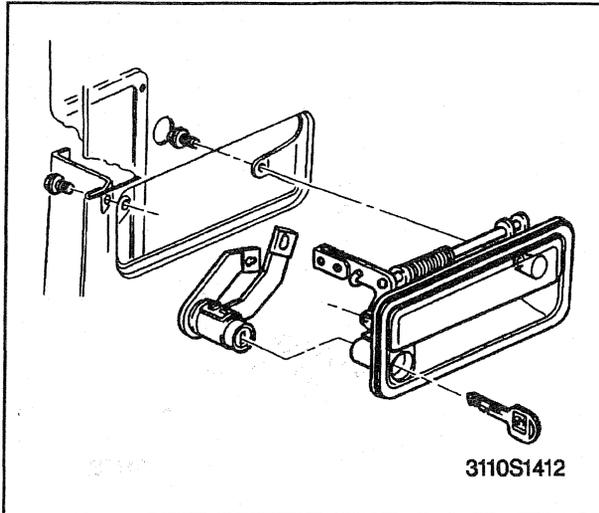
### DOOR LOCK CYLINDER, ROD, AND OUTSIDE HANDLE REPLACEMENT (RIGHT DOOR)

New lock cylinders are available as replacement parts. If door lock cylinders require replacement for any reason, apply a coating of GM P/N 12345120 lubricant or equivalent inside of the lock case and cylinder keyway prior to assembling and installing the cylinder.

To repair a binding lock cylinder, refer to "Binding lock cylinders." To code a new lock cylinder, refer to "Lock Cylinder Coding" in SECTION 0A.

#### ↔ Remove or Disconnect (Figures 72, 73 and 74)

- Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".



**Figure 73—Rear Cargo Door Outside Handle and Lock Assembly**

2. Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
3. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
4. Lock cylinder rod (1) from the rod clip (figure 72).
5. Outside handle rod (2) from the rod clip.
6. Outside handle mounting bolts (figure 73).
7. Handle assembly.
8. Door lock cylinder from the outside handle housing.

**→← Install or Connect (Figures 72, 73 and 74)**

1. Door lock cylinder to the outside handle housing (figure 73).
2. Handle assembly.
3. Outside handle mounting bolts.

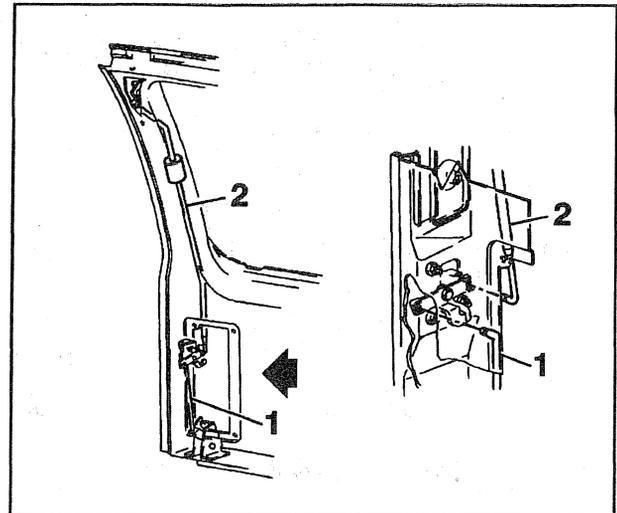
**⌚ Tighten**

- Bolts to 4 N.m (35 lbs. in.).
4. Outside handle rod (2) from the rod clip (figure 72).
  5. Lock cylinder rod (1) from the rod clip.
  6. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
  7. Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
  8. Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".

**LEFT DOOR LATCH CONTROL HANDLE**

**←→ Remove or Disconnect (Figure 74 and 75)**

1. Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".
2. Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
3. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
4. Lower latch control rod (1) from control handle clip (figure 74).



**Figure 74—Rear Cargo Door Latch Control Rods**

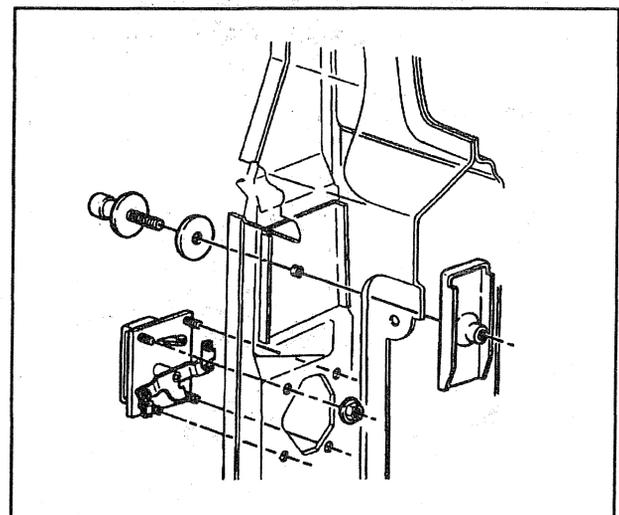
5. Upper latch control rod (2) from control handle clip.
6. Latch control handle nuts (figure 75).
7. Latch control handle.

**→← Install or Connect (Figures 74 and 75)**

1. Latch control handle (figure 75).
2. Latch control handle nuts.
3. Upper latch control rod (2) from control handle clip (figure 74).
4. Lower latch control rod (1) from control handle clip.
5. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
6. Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
7. Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".

**LEFT DOOR MOUNTED STRIKER**

The door striker bolt is the special bolt and washer mounted on the left door opening. The bolt passes through a hole into a threaded plate inside of the door.



**Figure 75—Rear Cargo Door Lock Striker and Latch Control Handle (Mounted to Left Door)**

## 10A1-34 DOORS

Cargo doors are secured in position when the lock cam (arm) of the locking mechanism in the right door engages and snaps around the striker bolt.

### ↔ Remove or Disconnect (Figure 75)

Tool Required:

J 29843-9 Torx Bit (Bit Size T47)

1. Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".
2. Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
3. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
4. Mark the position of the striker bolt spacer on the door pillar.
5. Striker bolt using J 29843-9 or equivalent.

### ↔ Install or Connect (Figure 75)

1. Striker bolt into the door pillar retaining plate.
2. Align the striker bolt spacer with the previously made mark.

### ⊞ Tighten

- Striker bolt while holding spacer in position to 63 N·m (46 lbs. ft.) using J 29843-9 or equivalent.

3. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
4. Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
5. Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".

## LOWER LATCH REPLACEMENT

### ↔ Remove or Disconnect (Figures 76 and 77)

1. Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".
2. Water deflector (if equipped). Refer to "Inner Panel

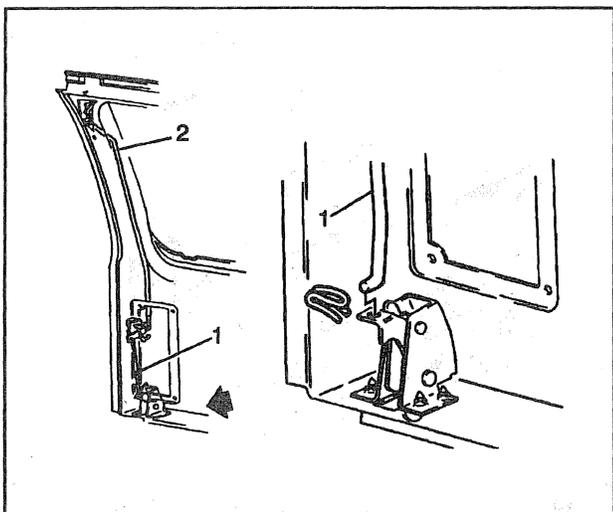


Figure 76—Lower Latch Control Rod

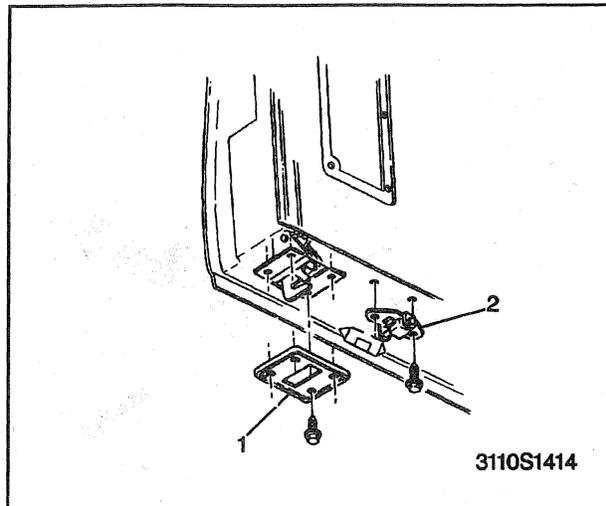


Figure 77—Lower Latch and Bumper

- Water Deflector Replacement."
3. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
4. Control rod from latch.
5. Control latch bolts and spacer.
6. Control latch from door.

### ↔ Install or Connect (Figures 76 and 77)

1. Control latch to door.
2. Control latch spacer and bolts.
3. Control rod to latch.
4. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
5. Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
6. Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".

## DOOR BUMPER ASSEMBLY REPLACEMENT

### ↔ Remove or Disconnect (Figure 77)

1. Bumper bolts.
2. Bumper assembly.

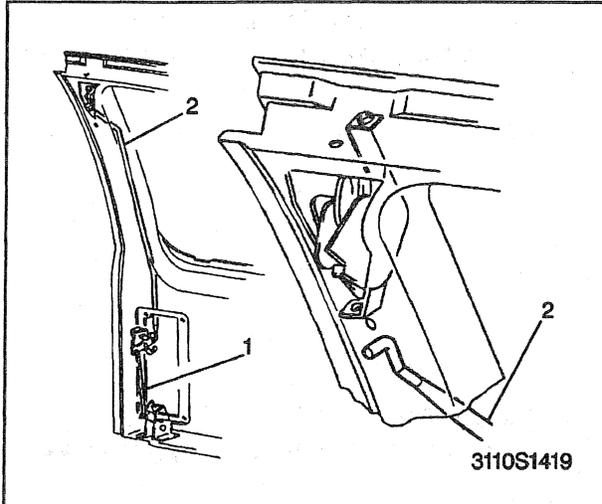
### ↔ Install or Connect (Figure 77)

1. Bumper assembly.
2. Bumper bolts.

## UPPER LATCH REPLACEMENT

### ↔ Remove or Disconnect (Figures 78 and 79)

1. Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".
2. Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
3. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".

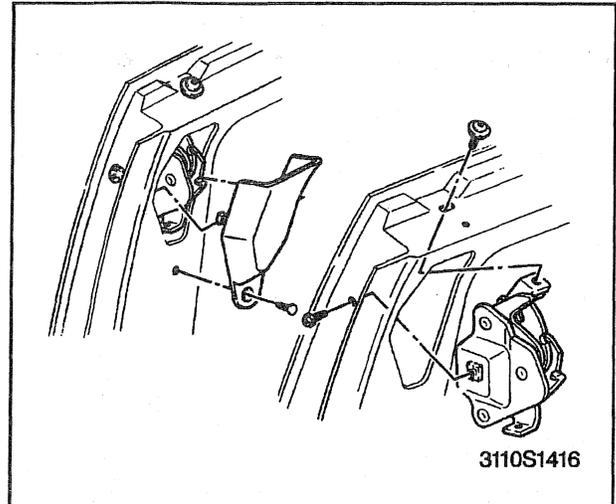


**Figure 78—Upper Latch Control Rod**

4. Control rod from latch.
5. Latch cover.
  - Remove cover screw.
6. Latch bolts.
7. Latch from door.

**↔ Install or Connect (Figures 78 and 79)**

1. Latch to door.



**Figure 79—Upper Latch and Bumper**

2. Latch bolts.
3. Control rod to latch.
4. Access hole cover (if equipped). Refer to "Access Hole Cover Replacement".
5. Water deflector (if equipped). Refer to "Inner Panel Water Deflector Replacement."
6. Door trim panel (if equipped). Refer to "Door Trim Panel Replacement".

## **WEATHERSTRIP REPLACEMENT**

### **SIDE DOOR WINDOW SEALING STRIP REPLACEMENT**

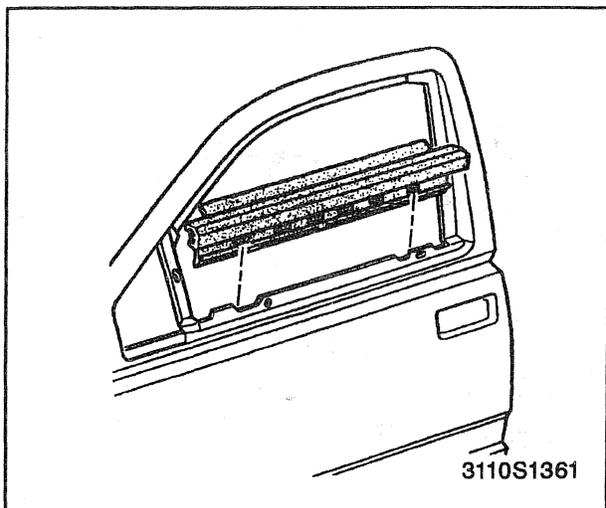
The outer belt sealing strip is used to seal between the inner and outer door panels and the window at the belt line. The outer sealing strip can be replaced. Do not remove the inner sealing strip since the strip is stapled to the trim panel.

**↔ Remove or Disconnect (Figures 80 and 81)**

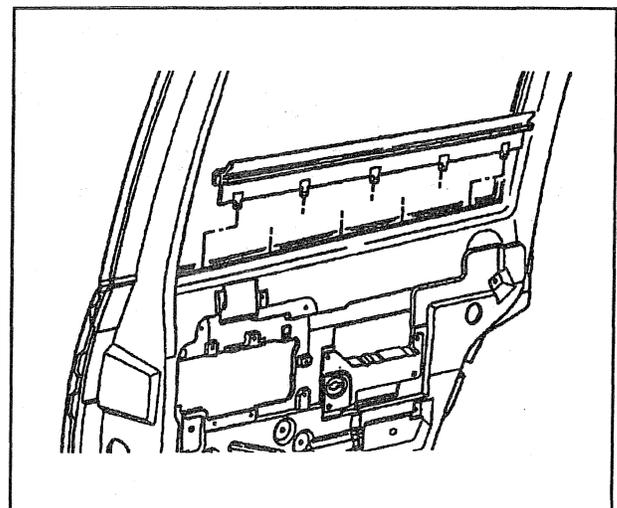
1. Trim panel. Refer to "Trim Panel Replacement."
2. Outer sealing strip from the door channel.

**↔ Install or Connect (Figures 80 and 81)**

1. Outer sealing strip to the door channel.
  - Press it into place.
2. Trim panel. Refer to "Trim Panel Replacement."



**Figure 80—Front Door Outer Belt Door Window Outer Seal**



**Figure 81—Rear Door Outer Belt Door Window Outer Seal**

**SIDE DOOR OPENING WEATHERSTRIP REPLACEMENT**



Remove or Disconnect (Figure 82)

- Pull the weatherstrip from the door pinchweld flange.



Install or Connect (Figure 82)

- Door weatherstrip to the door pinchweld flange.
  - Position the preformed corner of the weatherstrip in the upper rear corner of the door opening.
  - Push the weatherstrip onto the flange, starting at the preformed corner, and working around the entire edge of the door opening.

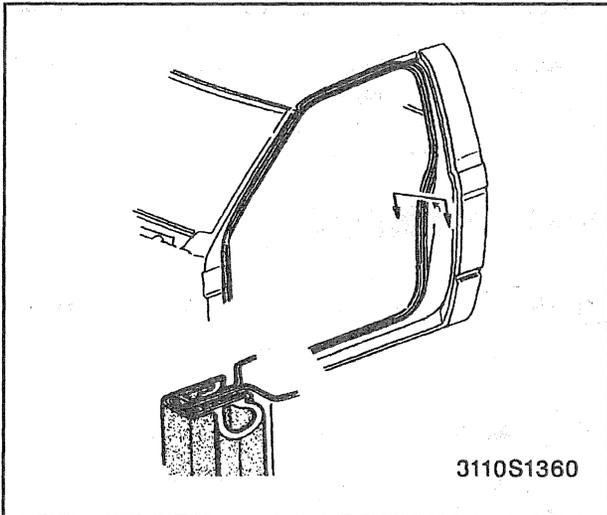


Figure 82—Typical Door Opening Weatherstrip Installation

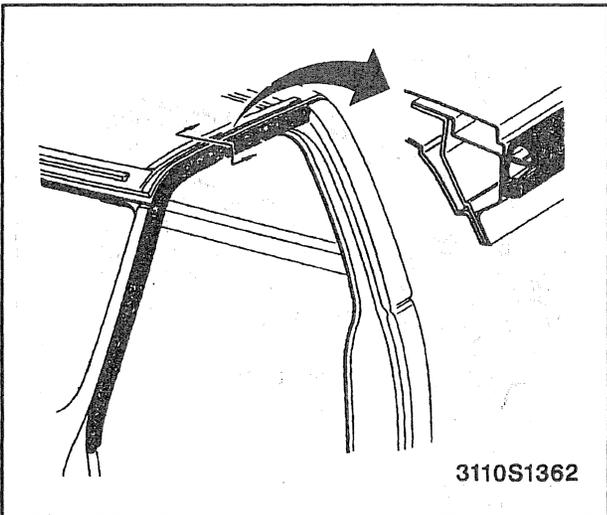


Figure 83—Typical Roof Drip Molding

**SIDE DOOR ROOF DRIP WEATHERSTRIP REPLACEMENT**



Remove or Disconnect (Figure 83)

1. Pull the roof drip molding from the pinchweld and windshield molding flange.



Install or Connect (Figure 83)

1. Roof drip molding.
  - Push the molding over the pinchweld.

**SIDE DOOR AUXILIARY WEATHERSTRIP REPLACEMENT**



Remove or Disconnect (Figure 84)

Tool Required:  
J 38778 Trim Panel Remover

1. Weatherstrip from mounting surface using J 38778.



Install or Connect (Figure 84)

1. Weatherstrip to mounting surface.
  - Press retainers in place.

**REAR CARGO DOOR OPENING WEATHERSTRIP**



Remove or Disconnect

1. Weatherstrip from the door pinchweld flange.



Install or Connect

1. Door weatherstrip to the door pinchweld flange.
  - Align white mark on weatherstrip with the left edge of upper striker (1).

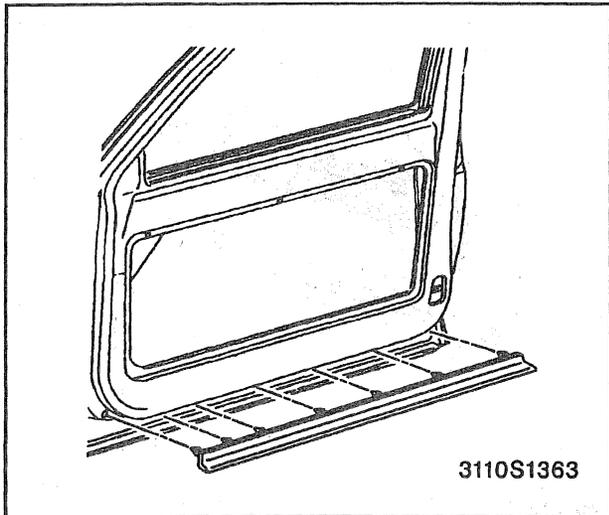


Figure 84—Typical Rocker Auxiliary Weatherstrip

- B. Push weatherstrip on to flange while working outward to left and right corners of door opening (2).
  - C. Push weatherstrip down both sides of outer flanges to lower corners (3).
  - D. Locate the center of the lower portion of weatherstrip and push onto lower flange (4).
  - E. Push excess loops of weatherstrip from the center to outward to corners.
2. Push Weatherstrip securely around the outside perimeter of door opening flange.

**REAR CARGO DOOR UPPER WEATHERSTRIP**

**←→ Remove or Disconnect (Figure 85)**

- 1. Weatherstrip from the door pinchweld flange.

**→← Install or Connect (Figure 85)**

- 1. Center weatherstrip assembly.
- 2. Push firmly to the center of upper roof flange.
- 3. Peel off backing paper while pressing weatherstrip firmly to flange.

**REAR CARGO DOOR CORNER WEATHERSTRIP**

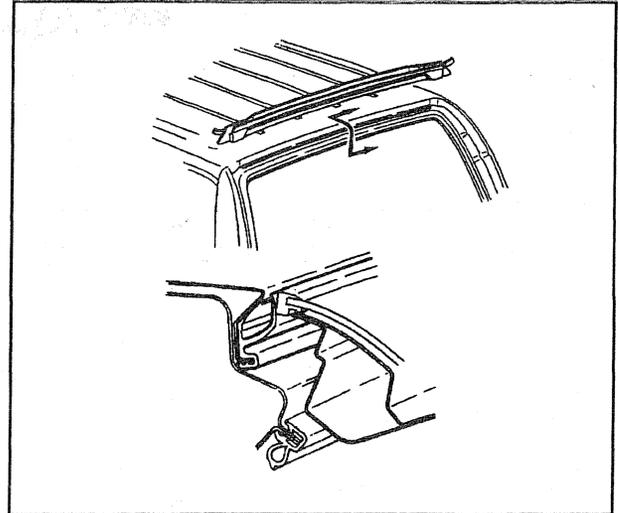
**←→ Remove or Disconnect (Figure 86)**

Tool Required:  
J 38778 Trim Panel Remover

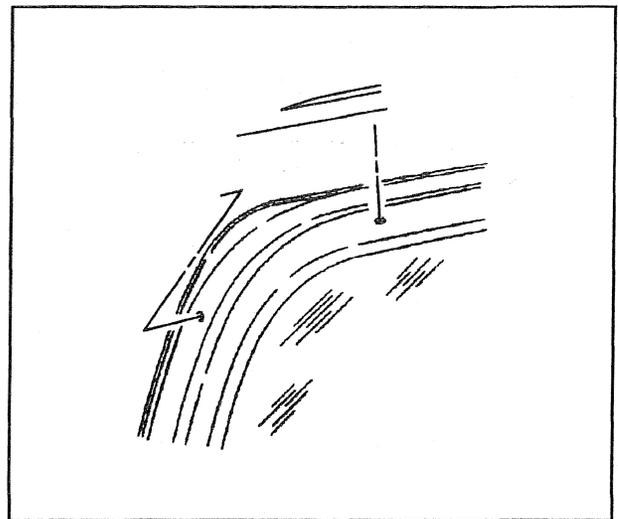
- 1. Weatherstrip from mounting surface using J 38778.

**→← Install or Connect (Figure 86)**

- 1. Weatherstrip to mounting surface.
  - Peel off backing paper.
  - Press retainers in place.



**Figure 85—Cargo Door Upper Weatherstrip**



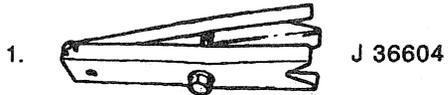
**Figure 86—Cargo Door Corner Weatherstrip**

**SPECIFICATIONS**

**FASTENER TIGHTENING SPECIFICATIONS**

	N-m	Lbs. Ft.	Lbs. In.
Armrest Mounting Screws.....	1.9	—	17
Door Hinge Bolts.....	35	26	—
Door Lock and Acuator Assembly Mounting Bolts.....	24	18	—
Door Striker Bolt.....	40	30	—
Outside Door Handle Mounting Screws.....	4	—	35
Outside Rearview Mirror Nuts.....	6	—	53
Window Run Channel Screws.....	1.9	—	16
Window Sash Channel Bolts.....	6	—	53

**SPECIAL TOOLS**



- 1. DOOR HINGE SPRING COMPRESSOR
- 2. TRIM PAD REMOVER
- 3. DOOR HANDLE CLIP REMOVER

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## SECTION 10A2

## SEATS

**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.

**NOTICE:** Always use the correct fastener in the correct location. Use the correct fastener part number to replace a fastener. If the correct fastener part number is not available, a fastener of equal size and strength may be used. Do not use a fastener that is stronger when the correct fastener part number is not available in the following applications:

- Some bolts are designed to permanently stretch, and if a stronger fastener is used, the part will not be tightened correctly. These permanently stretching bolts will be called out. The correct part number fasteners must be used to replace this type of fastener because there is no available equivalent.
- Other bolts are designed to break if over tightened to prevent part damage. If a stronger fastener is used part damage may occur.

Fasteners that need to be replaced when removed will be called out. Fasteners that require thread lockers or thread sealant will be called out. The correct tightening specification and sequence must be used when installing fasteners. Part or system damage may occur if the above instructions are not followed.

## CONTENTS

<u>SUBJECT</u>	<u>PAGE</u>
Diagnosis of Manual Seat Adjuster .....	10A2- 2
Diagnosis of Six Way Power Seat Adjuster .....	10A2- 2
On-Vehicle Service .....	10A2- 3
Front Seat Trim cover replacement .....	10a2- 3
Front Bucket Seat Replacement .....	10A2- 3
Front Split Bench Seat Replacement .....	10A2- 3
Front Bench Seat Replacement .....	10A2- 3
Power Seat Lumbar Switch Replacement .....	10A2- 4
Manual Seat Lumbar Switch Replacement .....	10A2- 5
Lumbar Bladder Replacement (Non-Removable Seat Back Panel) .....	10A2- 5
Lumbar Bladder Replacement (Seat With Removable Seat Back Panel) .....	10A2- 5
Lumbar Bladder Replacement (Seat Without Removable Seat Back Panel) .....	10A2- 6
Lumbar Pump Replacement .....	10A2- 6
Intermediate Seat Replacement .....	10A2- 6
Rear Seat Replacement .....	10A2- 7
Rear Seat Support Replacement (Extended Cab) .....	10A2- 7
Seat Belts .....	10A2- 8
Front Seat Belt Replacement .....	10A2- 9
Rear Seat Belt Replacement .....	10A2-11
Top Tether Child Seat Anchor Points .....	10A2-15
Top Tether Back Panel Installation .....	10A2-15
Specifications .....	10A2-17
Fastener Tightening Specifications .....	10A2-17
Special Tools .....	10A2-17

## 10A2-2 SEATS

### DIAGNOSIS OF MANUAL SEAT ADJUSTER

PROBLEM	POSSIBLE CAUSE	CORRECTION
<b>Adjuster Will Not Lock</b>	<ol style="list-style-type: none"><li>1. Wire assembly too tight.</li><li>2. Lock bar spring disconnected or broken.</li><li>3. Lock bar sticking or binding.</li></ol>	<ol style="list-style-type: none"><li>1. Loosen the wire assembly by moving the hooked end to the forward hole of the lock bar.</li><li>2. Connect the spring or install a new spring.</li><li>3. Lubricate the lock bar pivot. If the bar is binding, eliminate the cause of binding or replace the adjuster.</li></ol>
<b>Adjuster Will Not Unlock</b>	<ol style="list-style-type: none"><li>1. Wire assembly too loose or disconnected.</li><li>2. Lock bar sticking or binding.</li></ol>	<ol style="list-style-type: none"><li>1. Eliminate the slack in the wire assembly by moving the hooked end to the rearward hole of the lock bar.</li><li>2. Lubricate the lock bar pivot. If the bar is binding, eliminate the cause of binding or replace the adjuster.</li></ol>
<b>Seat Hard To Move Forward Or Rearward</b>	<ol style="list-style-type: none"><li>1. Adjusters new, not seated.</li><li>2. Adjuster(s) improperly lubricated.</li><li>3. Adjuster(s) binding due to bent or damaged channels.</li></ol>	<ol style="list-style-type: none"><li>1. Operate the seat to the full forward and full rearward positions several times to work the new tightness out of the channels.</li><li>2. Lubricate the adjuster channels with Lubriplate Auto-Lube A or equivalent.</li><li>3. Replace the adjuster.</li></ol>
<b>Easy Entry Passenger Seat In Extended Cab Does Not Slide Forward When The Seat Is Tilted Forward</b>	Cable from the seat back to the adjuster is disconnected.	Pull back the covering on the seat back and seat. Make sure the cable is still connected and taut from the seat back through the seat to the adjuster.

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### DIAGNOSIS OF SIX-WAY POWER ADJUSTER

CONDITION	POSSIBLE CAUSE	CORRECTION
<b>Horizontal operation of the seat is not smooth. Apparent hard operation.</b>	<ol style="list-style-type: none"><li>1. Improper lubrication of the seat adjuster carriages and seat adjuster slides.</li><li>2. Transmission assembly is loose or binding.</li></ol>	<ol style="list-style-type: none"><li>1. Lubricate carriages and seat adjuster slides with a lithium base grease.</li><li>2. Inspect transmission assembly. Tighten mounting screws or replace assembly if necessary.</li></ol>
<b>Horizontal chuck or looseness.</b>	<ol style="list-style-type: none"><li>1. Seat adjuster carriages out of alignment or worn.</li></ol>	<ol style="list-style-type: none"><li>1. Inspect transmission assembly and replace if necessary.</li></ol>
<b>Adjuster will not operate horizontally.</b>	<ol style="list-style-type: none"><li>1. No power to the adjuster assembly.</li><li>2. Seat adjuster drive cable damaged.</li><li>3. Seat adjuster motor is not working.</li></ol>	<ol style="list-style-type: none"><li>1. Refer to Driveability, Emissions, and Electrical Diagnosis Manual for this vehicle.</li><li>2. Inspect drive cable and replace if necessary.</li><li>3. Inspect adjuster motor assembly and replace if necessary.</li></ol>
<b>One or both adjusters will not operate vertically.</b>	<ol style="list-style-type: none"><li>1. No power to the adjuster assembly.</li><li>2. Seat adjuster drive cables damaged.</li><li>3. Seat adjuster motor is not working.</li></ol>	<ol style="list-style-type: none"><li>1. Refer to Driveability, Emissions, and Electrical Diagnosis Manual for this vehicle.</li><li>2. Inspect drive cables and replace if necessary.</li><li>3. Inspect adjuster motor assembly and replace if necessary.</li></ol>

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## ON-VEHICLE SERVICE

### FRONT SEAT TRIM COVER REPLACEMENT

#### ↔ Remove or Disconnect (Figure 1)

1. Screws.
2. Seat trim cover from seat.

#### ↔ Install or Connect (Figure 1)

1. Trim cover to seat.
2. Screws.

### FRONT BUCKET SEAT REPLACEMENT

#### ↔ Remove or Disconnect (Figures 3 and 4)

1. Seat trim cover. Refer to "Trim Cover Replacement".
2. Seat retaining bolts.
3. Seat from the vehicle.

#### ↔ Install or Connect (Figures 3 and 4)

1. Seat to the vehicle.

**NOTICE:** Refer to "Notice" on page 10A2-1.

2. Seat retaining bolts.

#### ⌚ Tighten

- Bolts to 55 N·m (41 lbs. ft.).

3. Seat trim cover. Refer to "Trim Cover Replacement."

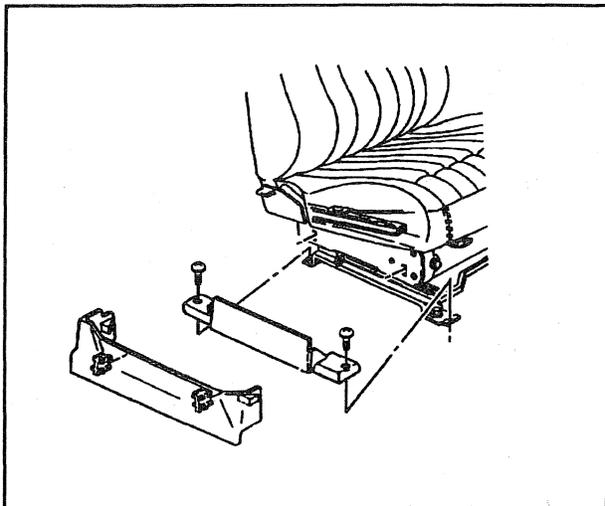


Figure 1—Front Bucket Seat Trim Cover

### FRONT SPLIT BENCH SEAT REPLACEMENT

#### ↔ Remove or Disconnect (Figure 5)

1. Seat trim cover. Refer to "Trim Cover Replacement."
2. Seat retaining bolts.
3. Seat and seat belt from the vehicle.

#### ↔ Install or Connect (Figure 5)

**NOTICE:** For steps 2 and 3, refer to "Notice" on page 10A2-1.

1. Seat to the vehicle.
2. Seat retaining bolts.

#### ⌚ Tighten

- Bolts to 55 N·m (41 lbs. ft.).
3. Bolt retaining the seat belt to the floor.

#### ⌚ Tighten

- Bolt to 55 N·m (40 lbs. ft.).
4. Seat trim cover to seat. Refer to "Trim Cover Replacement."

### FRONT BENCH SEAT REPLACEMENT

#### ↔ Remove or Disconnect (Figure 6)

1. Seat trim cover. Refer to "Trim Cover Replacement."
2. Seat retaining bolts.

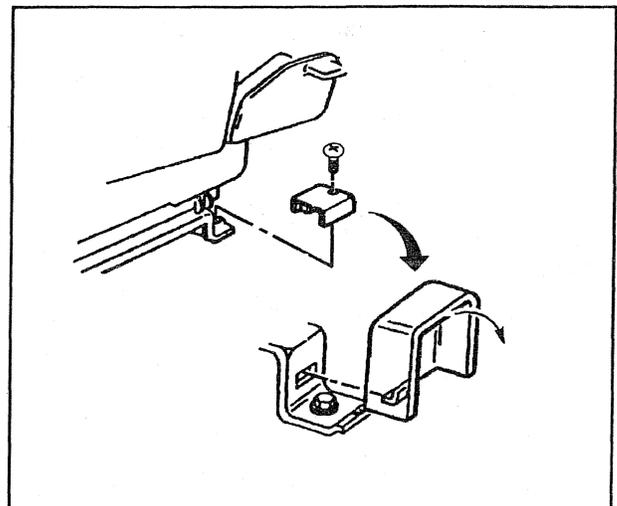


Figure 2—Front Bucket Seat Trim Cover and Components

# 10A2-4 SEATS

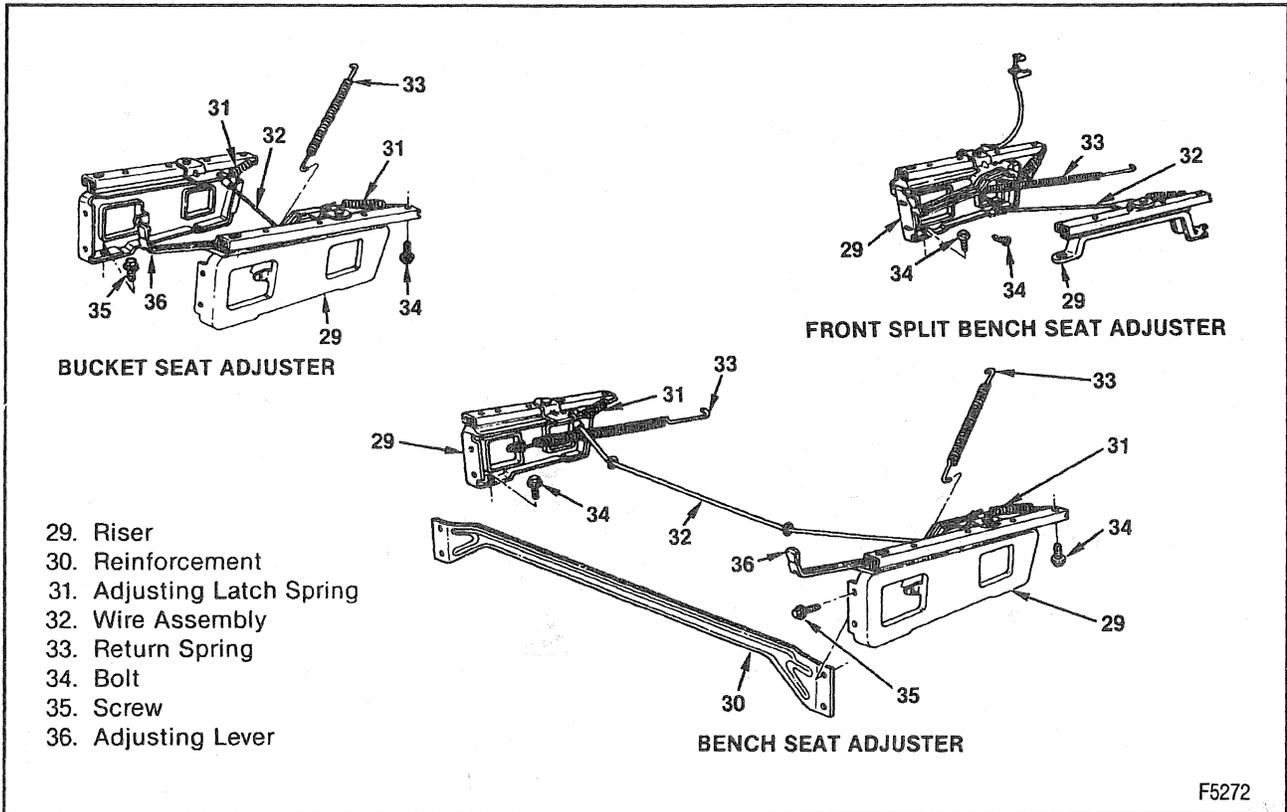


Figure 3—Manual Seat Adjusters

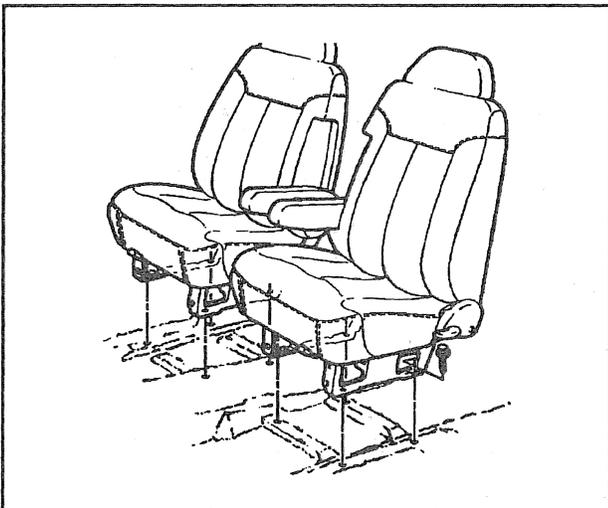


Figure 4—Front Bucket Seat Mounting

3. Seat from the vehicle.

 Install or Connect (Figure 6)

1. Seat to the vehicle.

**NOTICE:** Refer to "Notice" on page 10A2-1.

2. Seat retaining bolts.

 Tighten

• Bolts to 55 N·m (41 lbs. ft.).

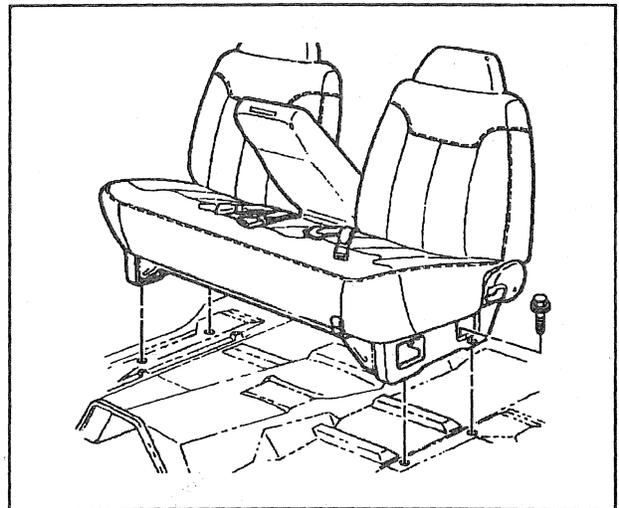


Figure 5—Front Split Bench Seat Mounting

3. Seat trim cover to seat. Refer to "Trim cover replacement".

**Power Seat Lumbar Switch Replacement**

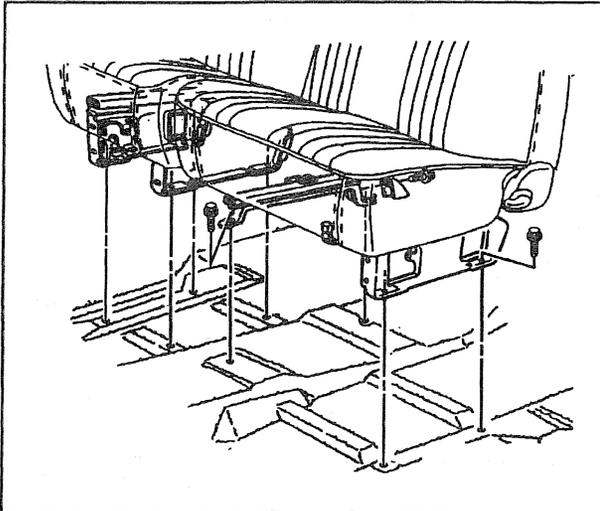
 Remove or Disconnect (Figure 7)

1. Seat from vehicle. Refer to "Front Split Bench or Front Bucket Seat Replacement."

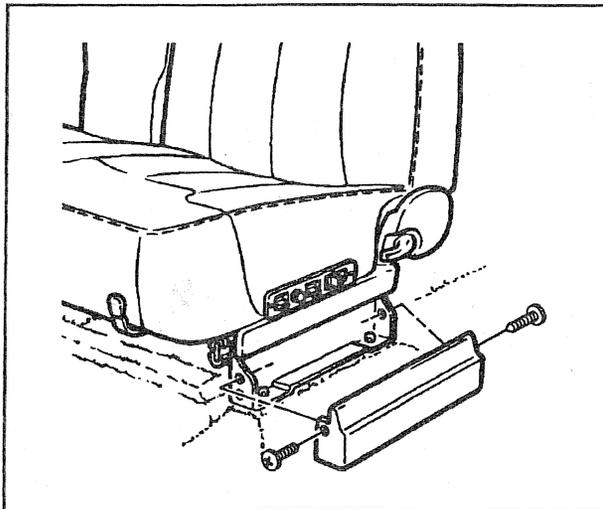
2. Screws attaching switch to side of seat cushion.  
• Pull switch partially out from seat cushion.

3. Switch from switch bezel.

4. Switch wiring harness in-line connector.



**Figure 6—Front Bench Seat Mounting**



**Figure 7—Lumbar Switch and Components**

5. Rubber hoses.
6. Switch, wiring harness and hoses from side of seat cushion.

**Install or Connect**

- Route switch wiring harness and hoses through opening in side of seat cushion and through opening in seat frame.
1. Rubber hoses.
  2. Switch wiring harness to vehicle wiring harness.
  3. Switch in switch bezel.
    - Position switch bezel in seat cushion opening and install screws.
  4. Seat assembly into vehicle. Refer to "Front Split Bench or Front Bucket Seat Replacement."

**Manual Seat Lumbar Switch Replacement**

**Remove or Disconnect**

1. Seat from vehicle. Refer to "Front Split Bench or Bucket Seat Replacement."

2. Screws that attach switch to side of seat cushion.
  - Pull switch out from opening in side of seat cushion.
3. Switch wiring harness in-line connector.
4. Rubber hoses.
5. Switch, wiring harness and hoses from side of seat cushion.

**Install or Connect**

- Route switch wiring harness and hoses through opening in side of seat cushion.
  1. Rubber hoses.
  2. Switch wiring harness to vehicle wiring harness.
    - Position switch in seat cushion opening and install screws.
  3. Seat assembly in vehicle. Refer to "Front Split Bench or Front Bucket Seat Replacement."

**Lumbar Bladder Replacement (Non-Removable Seat Back Panel)**

**Remove or Disconnect**

1. Seat from vehicle. Refer to "Front Split Bench or Front Bucket Seat Replacement."
  - Tilt seat back forward and place seat assembly upside-down.
2. Seat back panel lower retainer from seat frame.
3. Rubber hose between bladder and pump.
  - Place hand down inside seat back and disconnect bladder mounting bars from round hooks on frame (one on each side).
4. Slide bladder downwards and off mounting bars.
5. Bladder from seat back.

**Install or Connect**

- Position bladder inside seat back on mounting bars and slide upwards.
  1. Rubber hose between bladder and pump.
  2. Bladder mounting bars to round hooks on frame (one on each side).
  3. Seat back panel lower retainer to seat frame.
  4. Seat assembly in vehicle. Refer to "Front Split Bench or Front Bucket Seat Replacement."

**Lumbar Bladder Replacement (Seats with Removable Seat Back Panel)**

**Remove or Disconnect (Figure 8)**

1. Seat from vehicle. Refer to "Front Split Bench or Front Bucket Seat Replacement.
2. Seat trim close out strip from seatback trim panel.
3. Lower screws from seatback trim panel.
  - Push down and pull out at top of seatback trim panel and remove.
4. Left and right seat trim J-hooks from seat frame.
5. Rubber hose from bladder.
6. Bladder mounting bars from around hooks on frame (one located on each side). Refer to figure 8 reference 1.
7. Slide bladder upwards, off mounting bars.
8. Bladder from seatback.

## 10A2-6 SEATS

### ↔ Install or Connect (Figure 8)

1. Bladder to seatback by sliding over bladder mounting bars. Refer to figure 8 reference 1.
2. Rubber hose to bladder.
3. Bladder mounting bars around hooks on frame (one located on each side). Refer to figure 8 reference 1.
4. Left and right seat trim J-hooks onto seat frame.
5. Lower seatback panel bracket to lower seatback.
  - Push down and in at top of seatback panel to secure.
6. Seatback panel screws.
7. Seat trim close out strip to seatback trim panel.
8. Seat.

### Lumbar Bladder Replacement (Seats without Removable Seat Back Panel)

#### ↔ Remove or Disconnect (Figure 8)

1. Seat from vehicle. Refer to "Front Split Bench or Front Bucket Seat Replacement."
2. Seat trim close out strip at bottom of seatback.
3. Rubber hose from bladder.
4. Bladder mounting bars from around hooks on frame (one located on each side). Refer to figure 8 reference 1.
5. Slide bladder upwards, off mounting bars.
6. Bladder from seatback.

#### ↔ Install or Connect (Figure 8)

1. Bladder to seatback by sliding over bladder mounting bars. Refer to figure 8 reference 1.
2. Rubber hose to bladder.
3. Bladder mounting bars around hooks on frame (one located on each side). Refer to figure 8 reference 1.
4. Seat trim close out strip at bottom of seatback.
5. Seat.

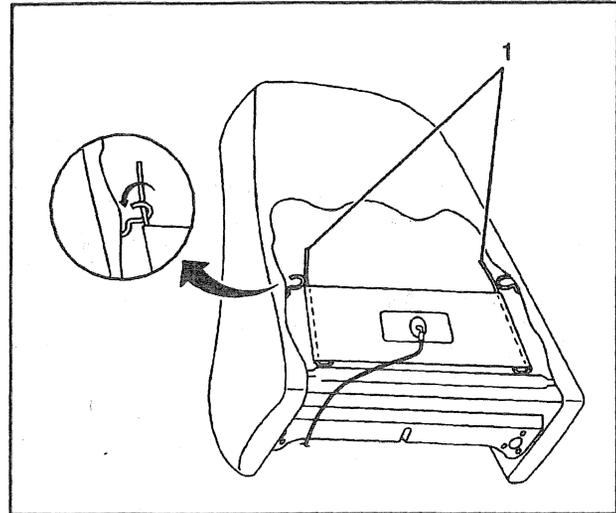
### Lumbar Pump Replacement

#### ↔ Remove or Disconnect

1. Seat from vehicle. Refer to "Front Split Bench or Front Bucket Seat Replacement."
2. Pump wiring harness in-line connector.
3. Rubber hose from switch to pump.
4. Retaining rings which secure pump and pump cover assembly to seat.
5. Pump and pump cover assembly from seat.

#### ↔ Install or Connect

1. Pump and pump cover assembly in seat and secure with retaining rings.
2. Rubber hose from switch to pump.
3. Pump wiring harness in-line connector.
4. Seat assembly in vehicle. Refer to "Front Split Bench or Front Bucket Seat Replacement."



Figure—8 Bladder Assembly

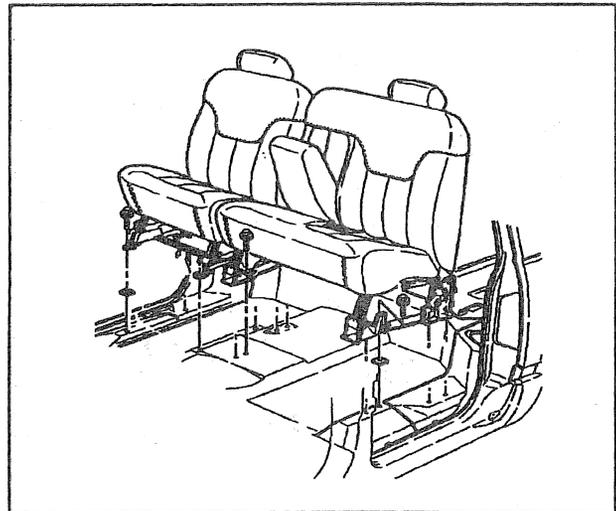


Figure 9—Folding Intermediate Seat Mounting

## INTERMEDIATE SEAT REPLACEMENT

#### ↔ Remove or Disconnect (Figures 9 through 11)

1. Front and rear leg trim covers and (figure 10).
2. Seat retaining bolts (figure 11).
3. Seat from the vehicle.

#### ↔ Install or Connect (Figures 9 through 11)

1. Seat into the vehicle.

**NOTICE:** Refer to "Notice" on page 10A2-1.

2. Seat retaining bolts.

#### Tighten

- Bolts to 55 N.m (41 lbs. ft.).

3. Front and rear leg trim covers (figure 8).

## REAR SEAT REPLACEMENT

↔ Remove or Disconnect (Figures 12 through 16)

1. Seat retaining bolts.
2. Seat from the vehicle.

↔ Install or Connect

1. Seat belts to support assembly, if removed.
2. Seat to the vehicle.

**NOTICE:** Refer to "Notice" on page 10A2-1.

3. Seat retaining bolts.

⌚ Tighten

## REAR SEAT SUPPORT REPLACEMENT (EXTENDED CAB)

↔ Remove or Disconnect (Figure 12)

1. Rear seat.
2. Ashtray and panel pocket.
3. Arm rest.
4. Seat belt anchors.
5. Jack cover, jack, and tray (right side only).
6. Lower trim panel mounting screws.
7. Lower trim panel.
8. Support retaining bolts.
9. Support assembly from the vehicle.

↔ Install or Connect (Figure 12)

1. Support assembly to the vehicle.

**NOTICE:** For steps 2 and 8, refer to "Notice" on page 10A2-1.

2. Bolts.

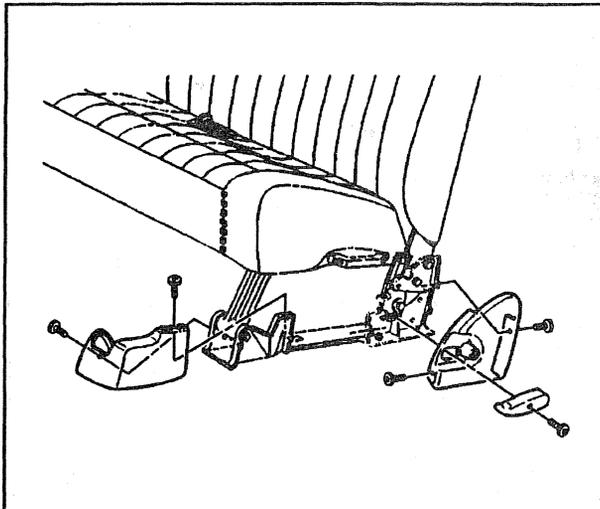


Figure 10—Folding Intermediate Seat Trim Covers

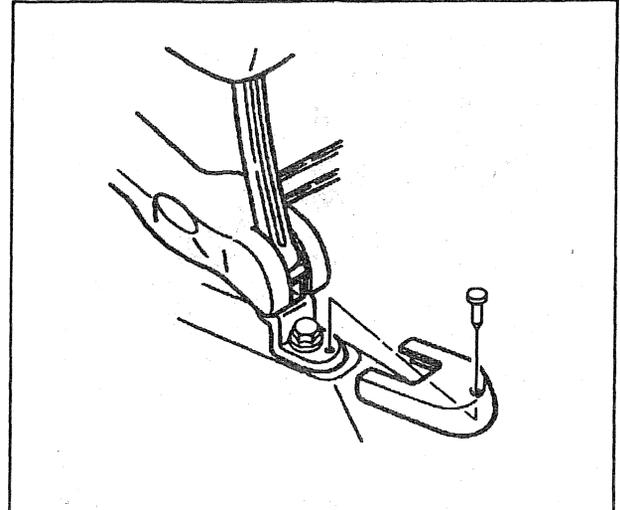


Figure 11—Seat Retaining Bolt and Components

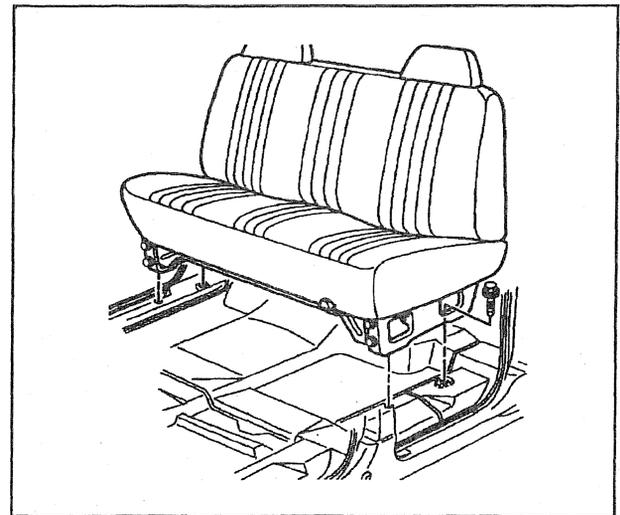


Figure 12—Rear Folding Seat Mounting (Extended Cab)

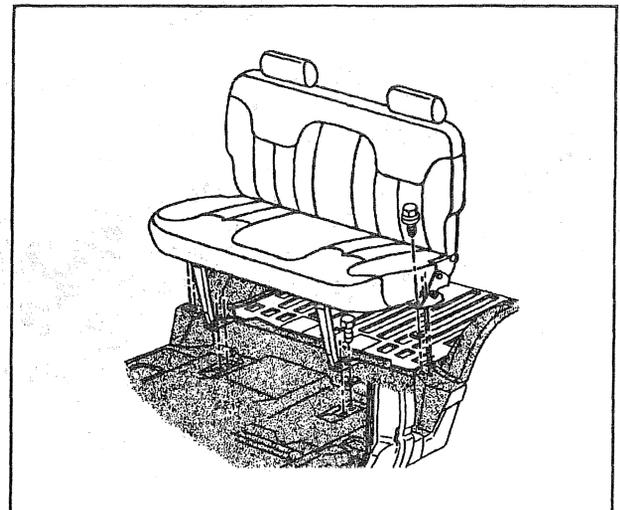


Figure 13—Rear Folding Seat Mounting (Utility)

SEAT BELTS

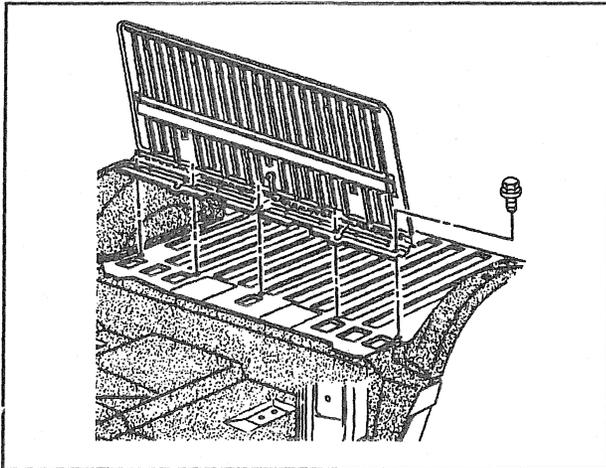


Figure 14—Rear Folding Seat Panel (Utility)



Tighten

- Bolts to 55 N.m (41 lbs. ft.).
- 3. Lower trim panel and screws.
- 4. Jack tray, jack, and, cover (right side only).
- 5. Seat belt anchors to the seat assembly.
- 6. Arm rest.
- 7. Ash tray and panel pocket.
- 8. Rear seat and bolts.



Tighten

- Seat retaining bolts to 17 N.m (12 lbs. ft.).

**NOTICE:** Before servicing or replacing lap and shoulder belts, including single loop belt systems, refer to the following precautionary items:

1. Lap and shoulder belts will be serviced as follows:
  - A. All belts will be serviced in complete sets.
  - B. Do not intermix standard and deluxe belts on front or rear seats.
2. Keep sharp edges and damaging objects away from belts.
3. Avoid bending or damaging any portion of the belt buckle or latch plate.
4. Do not bleach or dye belt or strap webbing. Clean with a mild soap solution and water.
5. When installing lap or shoulder belt anchor bolt, start the bolt by hand to ensure that the bolt is threaded straight.
6. Do not attempt repairs on lap or shoulder belt retractor mechanisms to lap belt retractor covers. Replace defective assemblies with new service replacement parts.
7. Do not attempt to remove the seat belt retractor cover. The cover and the long rivet securing the cover to the retractor are not available as service replacement parts.

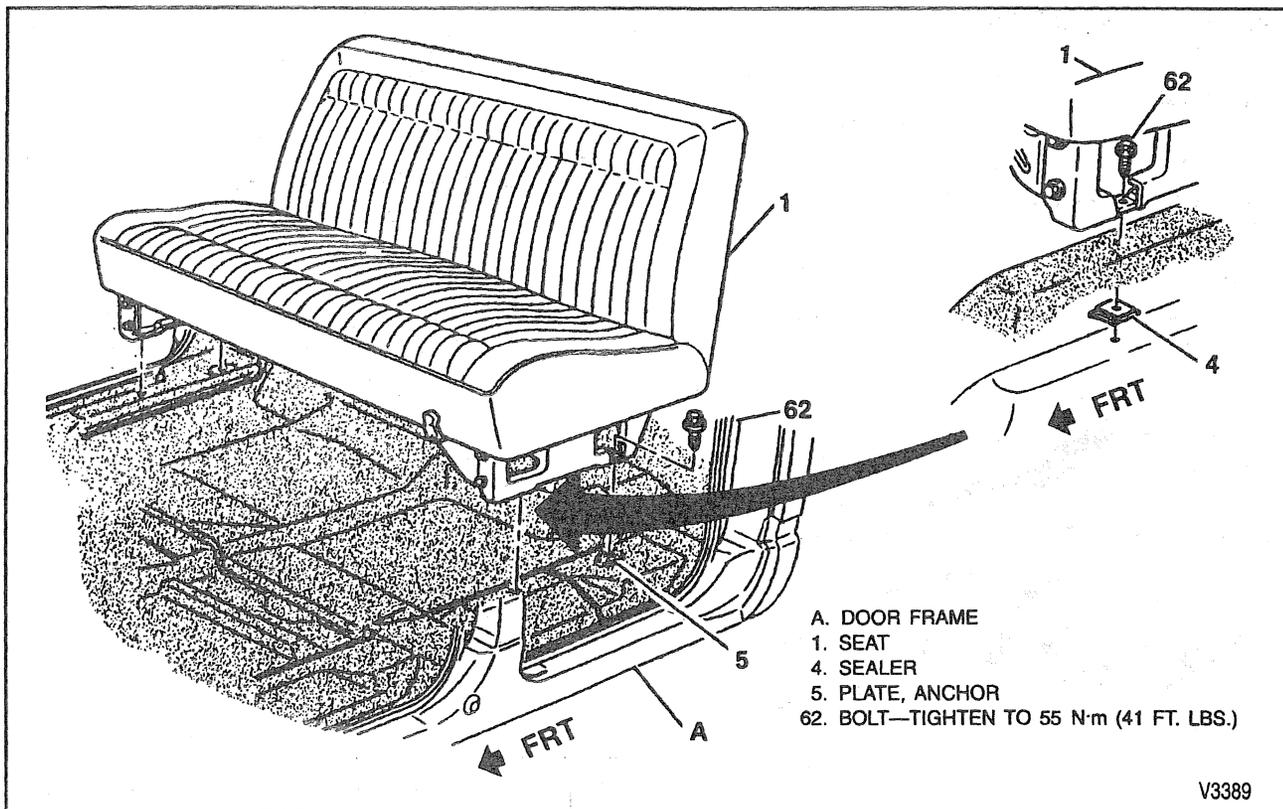


Figure 15—Rear Seat Mounting (Crew Cab)

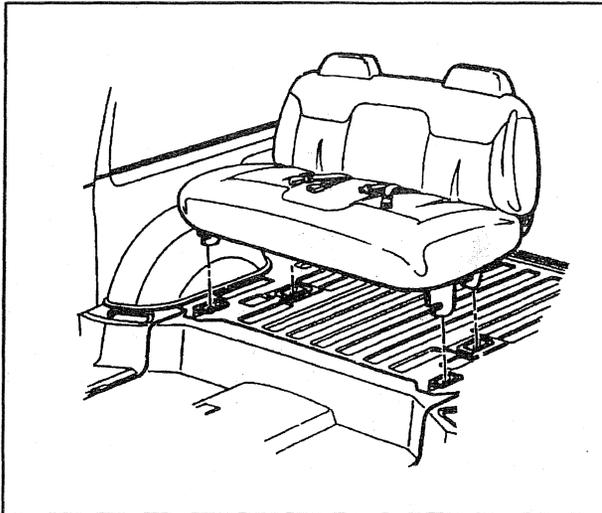


Figure 16—Rear Seat Mounting (Suburban)

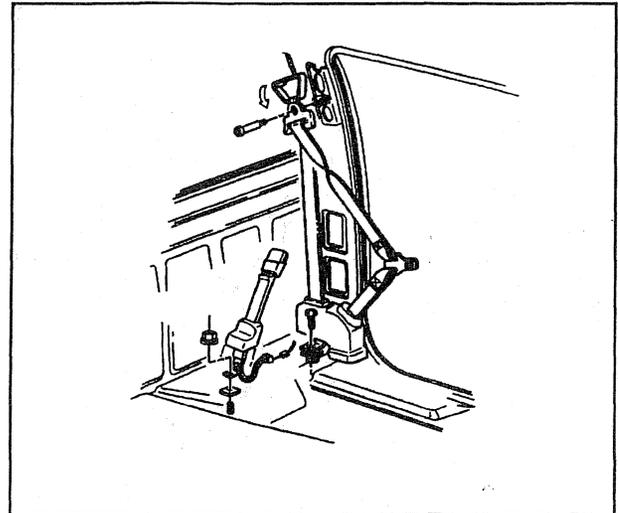


Figure 17—Front Seat Belts (Regular Cab with Bucket Seats)

## FRONT SEAT BELT REPLACEMENT

↔ Remove or Disconnect (Figures 17 through 25)

1. Cover from the door pillar anchor plate.
  - Pry the bottom up.
2. Bolt from the door pillar weld nut.
3. Bolt retaining the retractor to the floor panel.
4. Retractor from the vehicle.
5. Cover from the buckle assembly which conceals the nut.
6. Nut from the buckle assembly to floor weld stud.
7. Seat belt warning wire from the buckle assembly (driver's side only).
8. Buckle assembly from the vehicle.

↔ Install or Connect (Figures 17 through 25)

**NOTICE:** For steps 3 and 6 refer to "Notice" on page 10A2-1.

1. Buckle assembly to the floor panel.
2. Seat belt warning wire to the buckle assembly (driver's side only).
3. Nut to the buckle assembly and onto the floor panel weld stud.

 Tighten

- Nut to 43 N.m (32 lbs. ft.).
4. Cover assembly over nut.
  5. Retractor and belt to floor.
  6. Bolt through the retractor and into the floor panel weld nut.

 Tighten

- Bolt to 55 N.m (41 lbs. ft.).
7. Bolt through the anchor plate and washer, and into the door pillar weld nut.

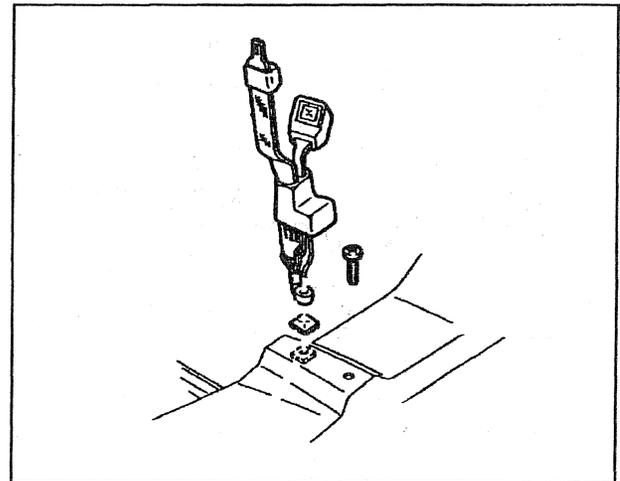


Figure 18—Front Seat Belt Attachments (Regular Cab with Bucket Seats)

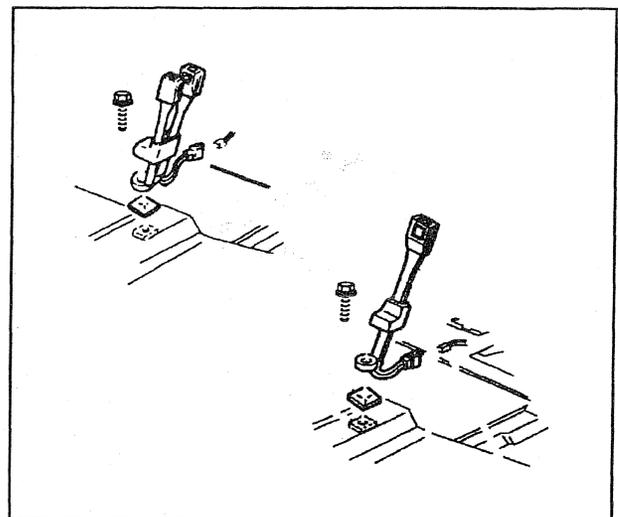
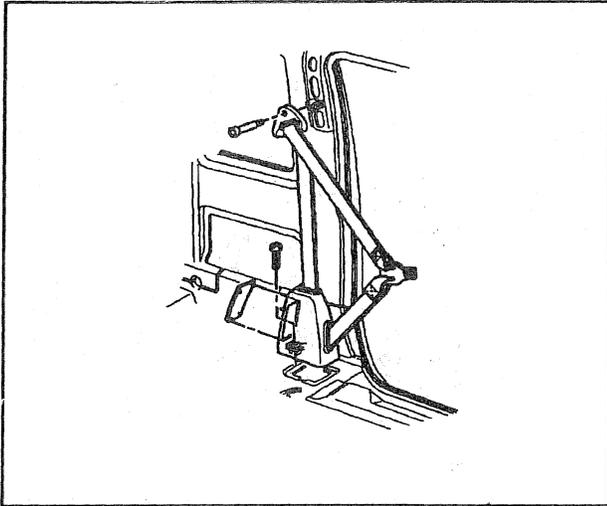
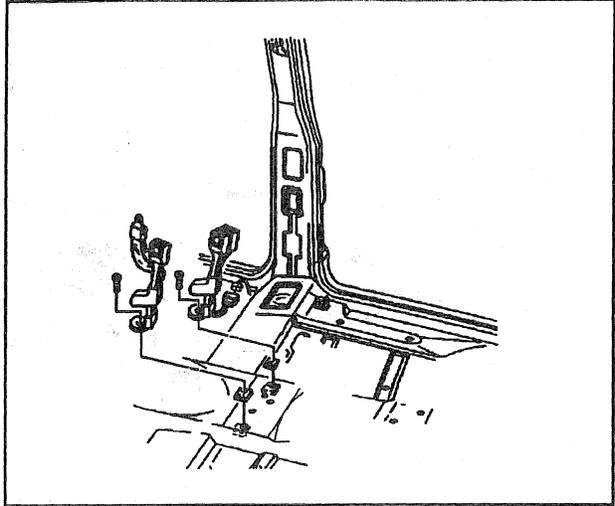


Figure 19—Front Seat Belt Attachments Regular Cab with Bench Seats)

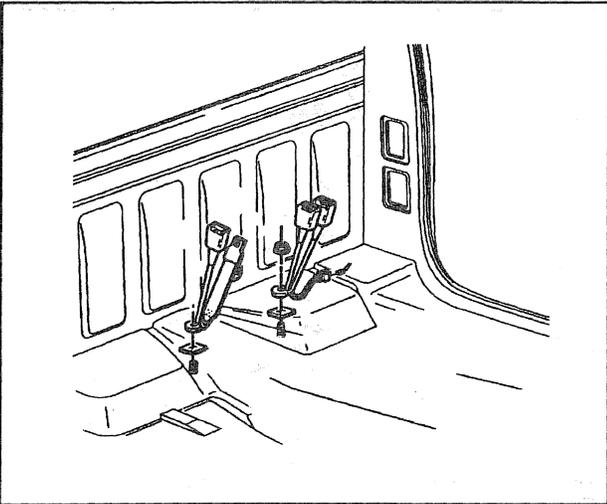
**10A2-10 SEATS**



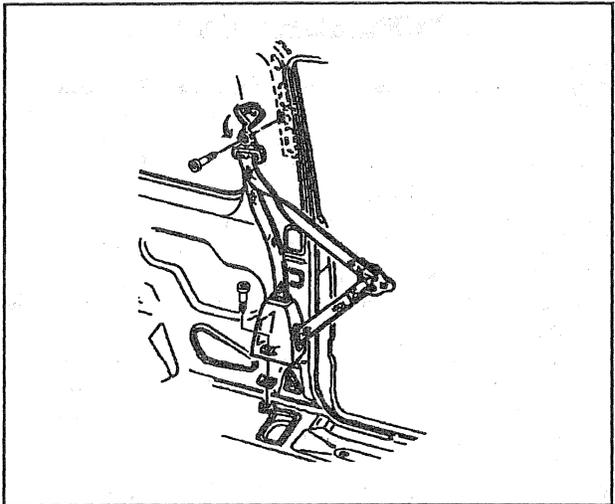
**Figure 20—Front Lap Belt Seat Assembly with Split Front Bench (Regular Cab)**



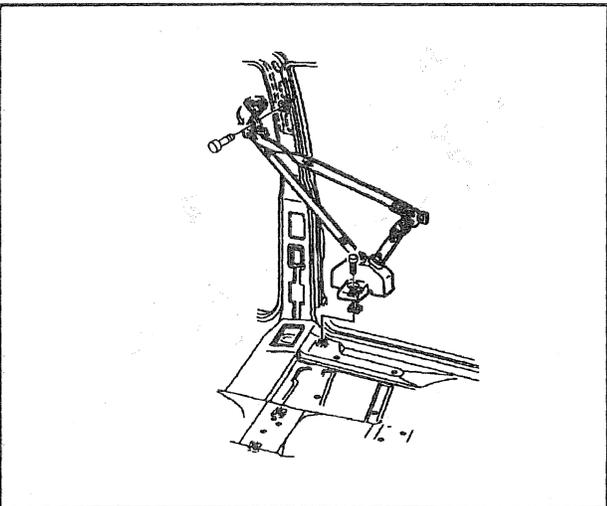
**Figure 23—Front Seat Belt Attachments (Suburban and Crew Cab)**



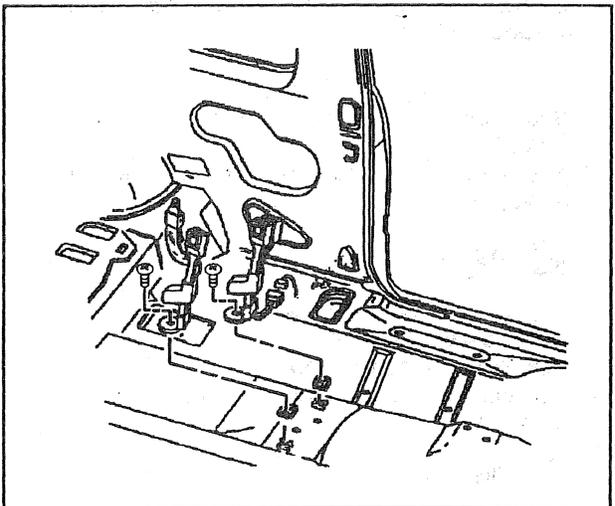
**Figure 21—Front Seat Belts (Regular Cab with Bench Seats)**



**Figure 24—Front Seat Belts (Utility Model)**



**Figure 22—Front Seat Belts (Suburban and Crew Cab)**



**Figure 25—Front Seat Belt Attachments (Utility Model)**



**Tighten**

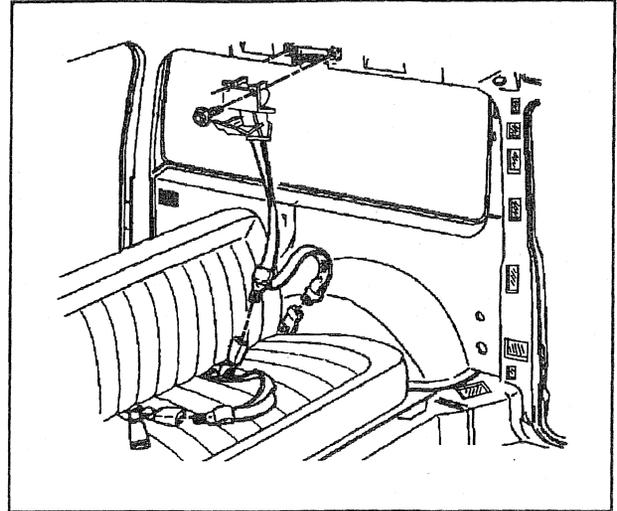
- Bolt to 55 N.m (41 lbs. ft.).
- 8. Cover over the door pillar anchor plate.

**REAR SEAT BELT REPLACEMENT**

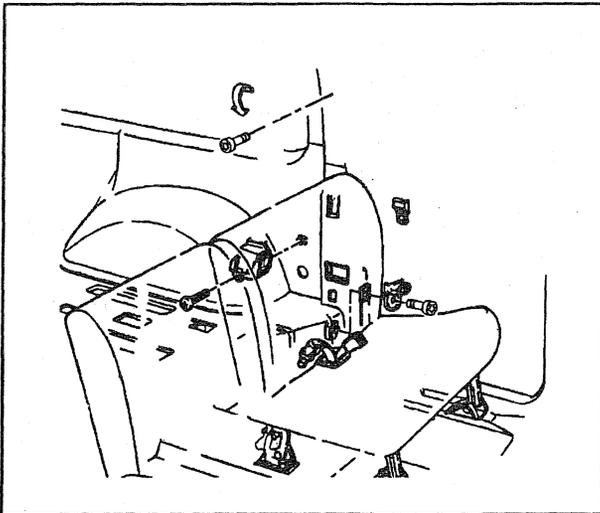


**Remove or Disconnect (Figures 26 through 33)**

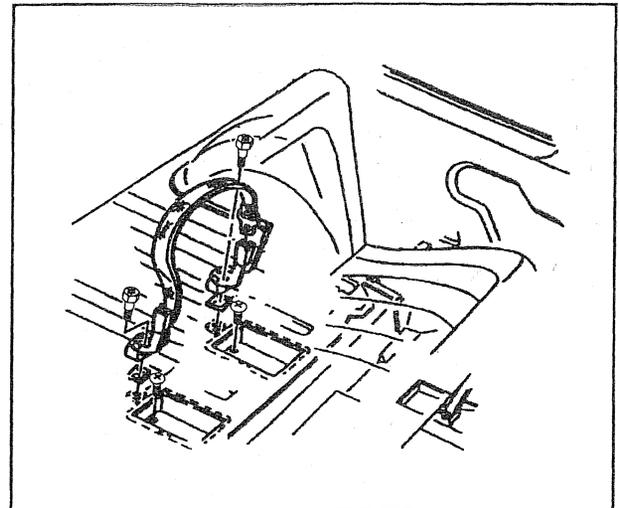
1. Rear seat. Refer to "Rear Seat Replacement."
2. Buckle from the rear seat support assembly.
3. Quarter trim panel. Refer to SECTION 10A4.
4. Bolt and holding the retractor to the body.
5. Seat belt and retractor.
6. Nuts holding the buckle assembly to the studs.
7. Buckle assembly.



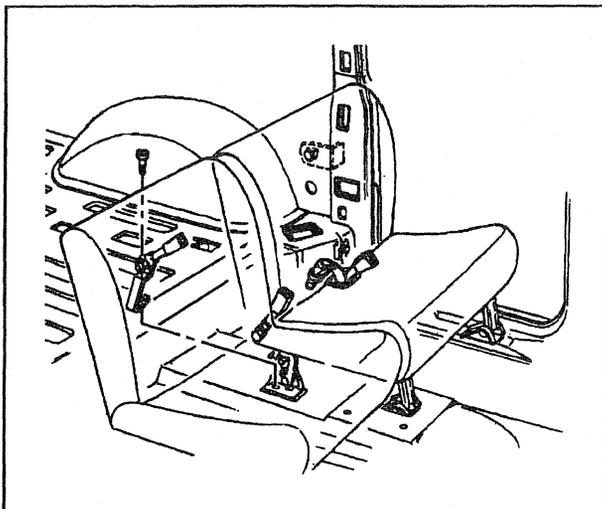
**Figure 28—Rear Seat Belts (Suburban with Removable Folding Rear Seat)**



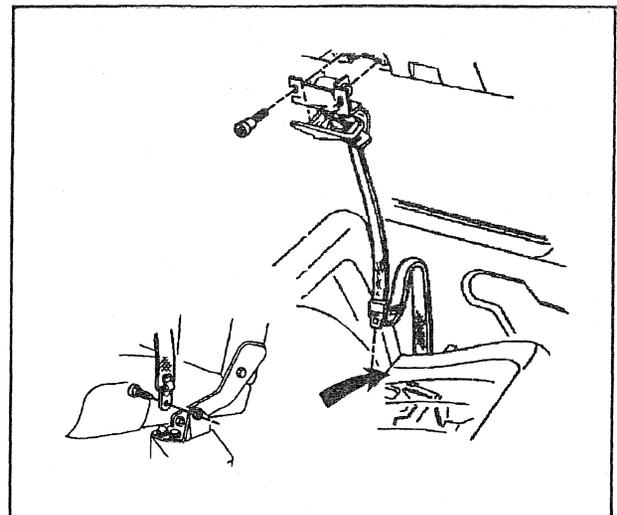
**Figure 26—Folding Intermediate Seat Belts (Suburban)**



**Figure 29—Rear Seat Belts (Utility with Folding Rear Seat)**



**Figure 27—Folding Intermediate Seat Belts (Suburban)**



**Figure 30—Rear Seat Belts Attachments (Utility with Folding Rear Seat)**

## 10A2-12 SEATS

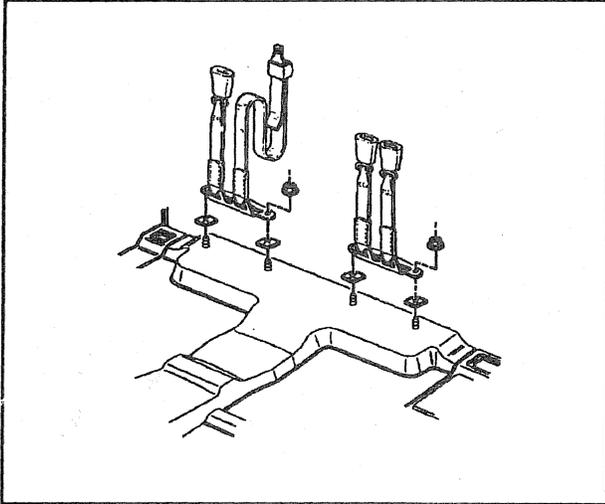


Figure 31—Rear Seat Belts (Crew Cab with Folding Rear Seat)

 Install or Connect (Figures 26 through 33)

1. Buckle assembly to the floor panel stud.

**NOTICE:** For steps 2, 3, and 5, refer to “Notice” on page 10A2-1.

2. Nuts to the buckle assembly.

 Tighten

- Nuts to 43 N.m (32 lbs. ft.).

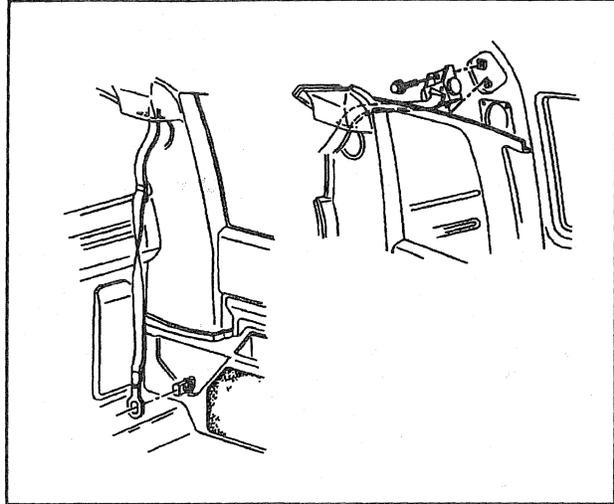


Figure 32—Rear Seat Belt Attachment (Crew Cab with Folding Rear Seat)

3. Bolt through the seat belt retractor to the weld nut.

 Tighten

- Bolt to 55 N.m (41 lbs. ft.).

4. Quarter trim panel. Refer to SECTION 10A4.
5. Bolt to the upper anchor plate.

 Tighten

- Bolts to 55 N.m (41 lbs. ft.).

6. Rear seat. Refer to “Rear Seat Replacement.”

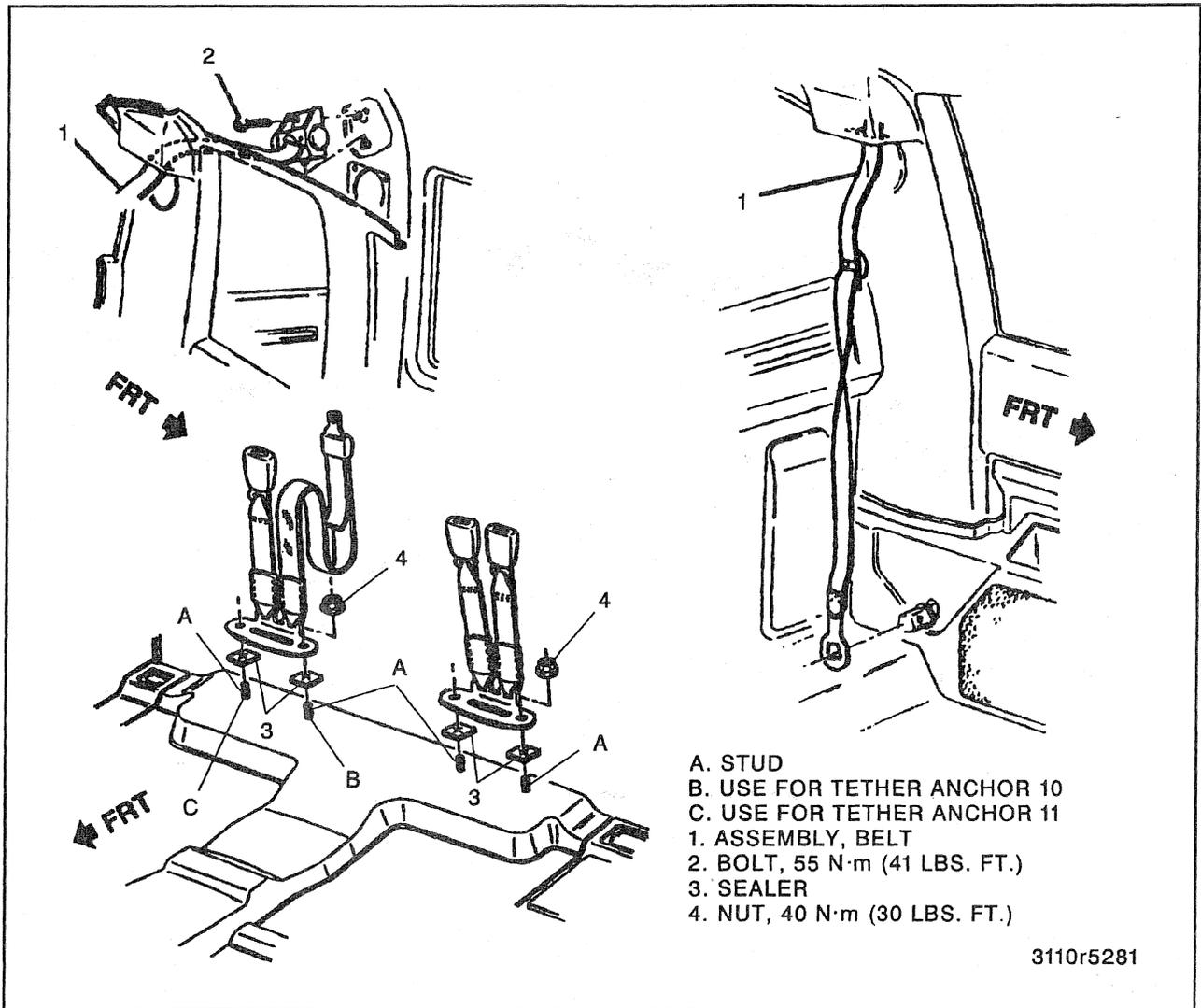
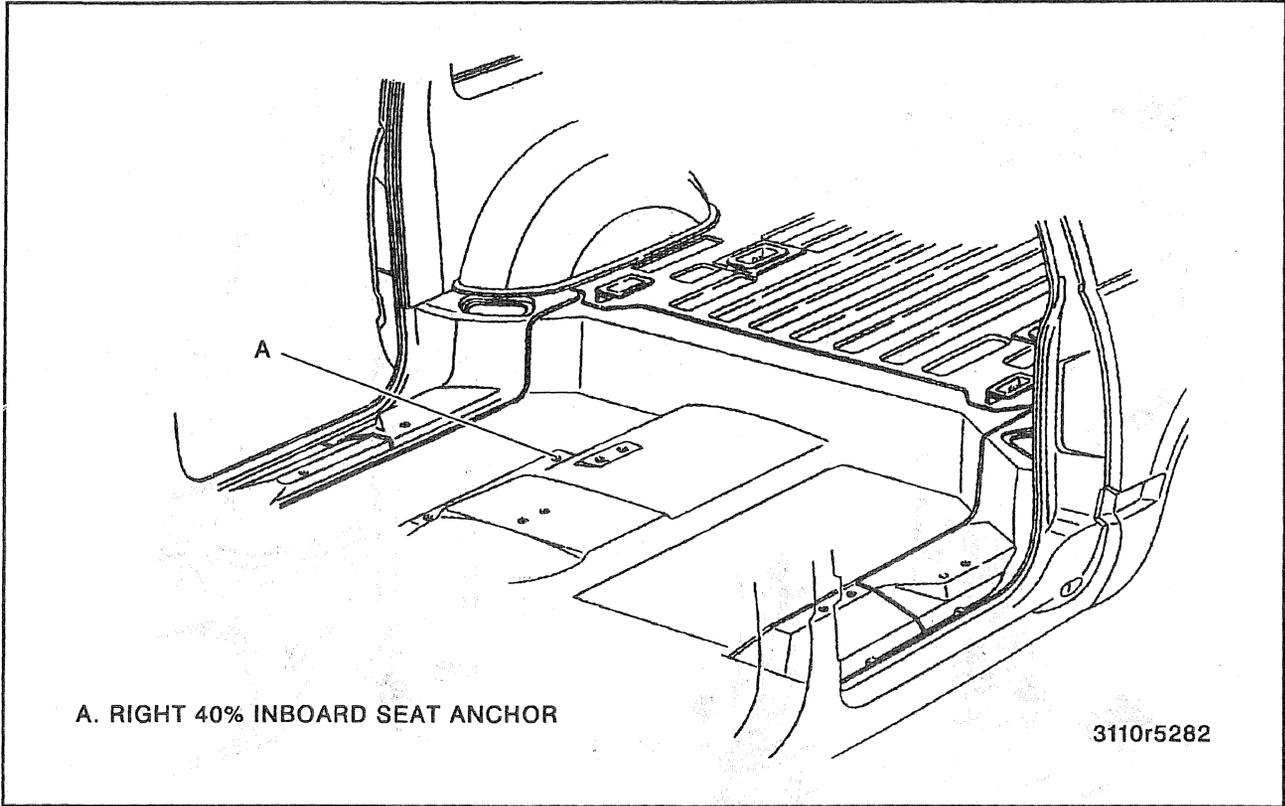


Figure 33—Rear Seat Belts (Extended Cab)

**10A2-14 SEATS**



**Figure 34—Child Seat Tether Anchor Point**

## TOP TETHER CHILD SEAT ANCHOR POINTS

Seat Position	Suburban				Utility	Crew Cab	Extended Cab		Pickup
	With 2nd Folding Seat (AT5)	Without 2nd Folding Seat (AT5)	With 3rd Seat (AS3)	Without 3rd Folding Seat (AS3)			With 2nd Seat (AM7)	Without 2nd Seat (AM7)	
Front Seat Center	1	2	X	X	1	1	1	10	9R
Front Seat Right	3	2	X	X	1	1	1	11	9R
2nd Seat Center Folding	X	X	4	NR	X	X	X	X	X
2nd Seat Left Folding	X	X	4	5	X	X	X	X	X
2nd Seat Right Folding	X	X	12	6	X	X	X	X	X
3rd Seat Center	X	X	NR	X	X	X	X	X	X
3rd Seat Left	X	X	7	X	X	X	X	X	X
3rd Seat Right	X	X	8	X	X	X	X	X	X
2nd Center	X	X	X	X	NR	9C	9C	X	X
2nd Seat Left	X	X	X	X	7	9L	9L	X	X
2nd Seat Right	X	X	X	X	8	9R	9R	X	X
1	Hook tether into 2nd seat center occupant lap belt latch plate if 2nd seat is unoccupied.*								
2	Use anchor hole located in figure 22.								
3	Use GM P/N 15971501 to latch tether to buckle on 2nd 40% seat if seat is unoccupied*.								
4	Hook tether into 3rd seat center occupant lap belt latch plate and pull taught if 3rd seat is unoccupied*.								
5	Use left front cargo tie down located in figure 23.								
6	Use right front cargo tie down located in figure 23.								
7	Use left rear cargo tie down located in figure 23.								
8	Use right rear cargo tie down located in figure 23.								
9L	Refer to "top strap tether back panel installation" below. Drill anchor hole between scallops on the left side of back panel.								
9R	Refer to "top strap tether back panel installation" below. Drill anchor hole between scallops on the right side of back panel.								
9C	Refer to "top strap tether back panel installation" below. Drill anchor hole between scallops centerline back panel.								
10	Use stud in floor located in figure 21.								
11	Use stud in floor located in figure 21.								
12	Use GM P/N 15971501 to latch tether into 3rd seat buckle directly behind child seat location if 3rd seat buckle is unoccupied*.								
X	Not applicable.								
NR	Not recommended for use with child seat that has a top tether.								
*	If seat is occupied the child seat should be placed in a rear seat position that will allow the use of the cargo tie downs on Suburban and Utility models or back panel anchor on pickup, extended cab, and crew cab models. Use chart above for tether locations.								

T3166

### TOP TETHER BACK PANEL INSTALLATION

 Install or Connect (Figures 36 and 37)

Tools Required:

J 24595-C Trim Pad Clip Remover

1. Remove the seat. Refer to "Rear Seat Replacement."
2. Pry the trim panel off the sheet metal below the rear window with J 24595-C.

3. Pry the carpet off the rear panel with J 24595-C.
4. Locate the position where the hole will be drilled from inside the cab. The hole may be located either 109 mm (4.3 inches) or 545 mm (21.4 inches) outboard from the centerline or center line of the back panel and 42 mm (1.65 inches) below the horizontal sheet metal panel (figures 36 and 37).
5. Drill a 9-mm (3/8-inch) hole through the sheet metal from inside the cab. Use a drill stop to prevent damage to the pickup box.

## 10A2-16 SEATS

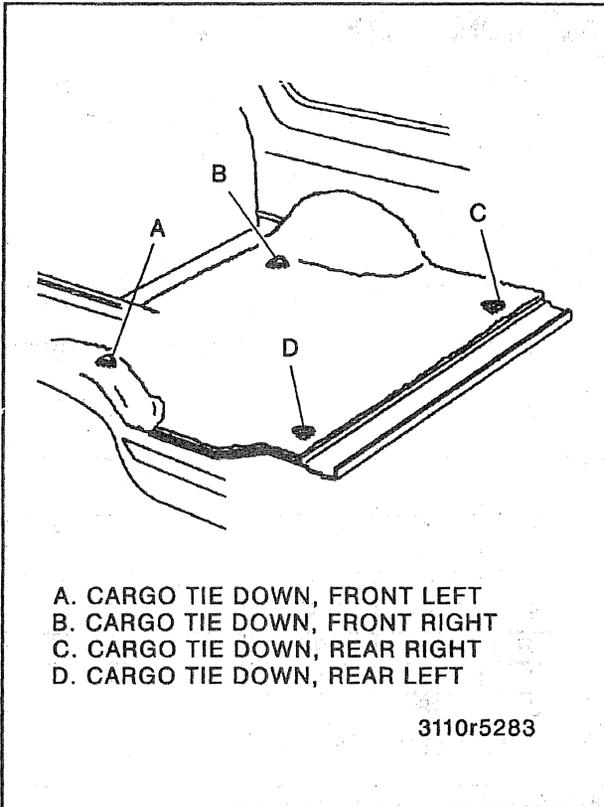


Figure 35—Cargo Tie Downs

6. Place the washer on the bolt and apply a bead of sealer around the hole in the washer.
7. Using a clamping tool, feed the bolt through the hole from the outside of the cab.
8. Thread the nut on the bolt, holding the bolt head with an extended length wrench.

**NOTICE:** Refer to "Notice" on page 10A2-1.

 Tighten

- Nut to 30 N.m (22 lbs. ft.).

9. In the extended cab, the length of the bolt may interfere with the rear seat when it is in the folded position. If this occurs, saw off the end of the bolt, leaving at least two threads visible from the end of the nut.

Note: In the event the child seat anchorage is removed, the 9-mm(3/8-inch) diameter hole must be properly resealed.

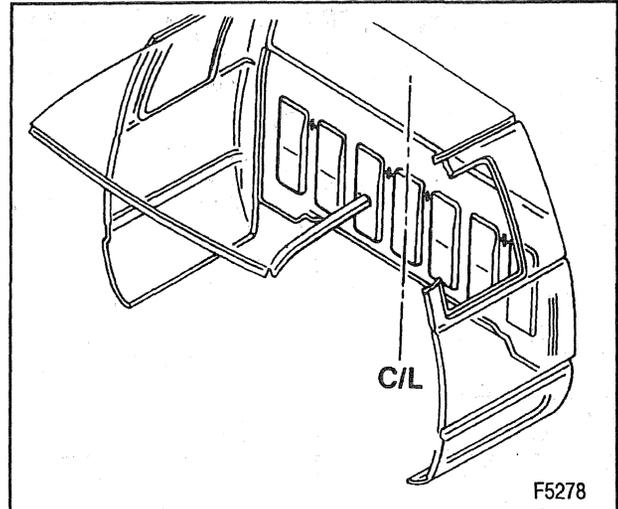


Figure 36—Child Restraint Anchor Installation

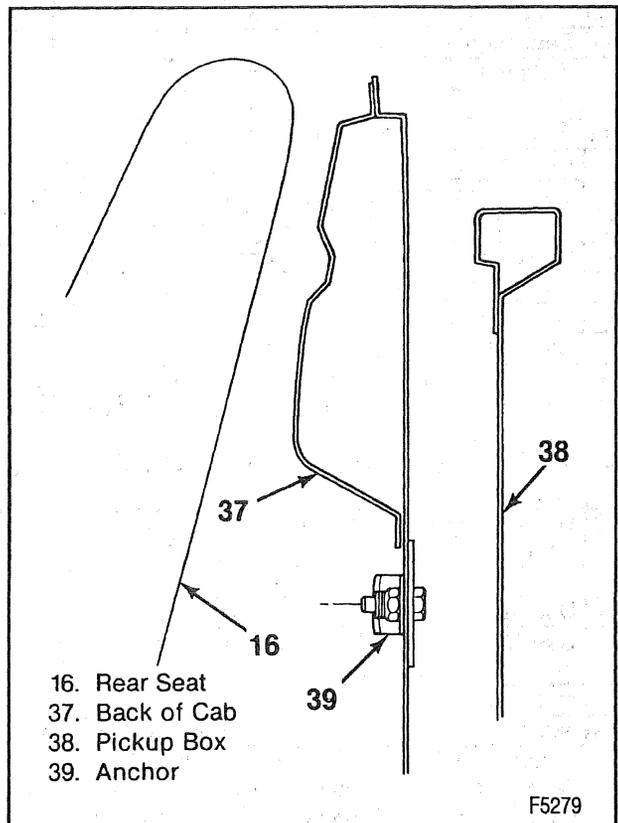


Figure 37—Anchor Installation (Pickup Models)

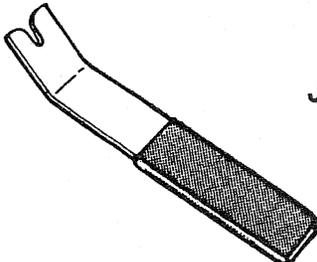
**SPECIFICATIONS**  
**FASTENER TIGHTENING SPECIFICATIONS**

<b>Fastener</b>	<b>N-m</b>	<b>Ft. Lbs.</b>
Child Restraint Anchor Nut.....	30	22
Front Seat Belt Anchor Plate Bolts.....	55	41
Front Seat Belt Buckle		
Assembly Bolts (Extended Cab).....	55	41
Assembly Nuts (Regular Cab).....	42	32
Front Seat Belt Retractor Bolts.....	55	41
Front Seat Retaining Bolts.....	55	41
Rear Seat Belt Buckle Assembly Nuts.....	42	32
Rear Seat Belt Retractor Bolts.....	55	41
Rear Seat Retaining Bolts.....	17	12
Rear Seat Support Bolts.....	40	30

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**SPECIAL TOOLS**

1.



**J 24595-C**

1. Trim Pad Clip Remover

F5280

**NOTES**



# SECTION 10A3

## WINDOWS

**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.

**NOTICE:** Always use the correct fastener in the correct location. Use the correct fastener part number to replace a fastener. If the correct fastener part number is not available, a fastener of equal size and strength may be used. Do not use a fastener that is stronger when the correct fastener part number is not available in the following applications:

- Some bolts are designed to permanently stretch, and if a stronger fastener is used, the part will not be tightened correctly. These permanently stretching bolts will be called out. The correct part number fasteners must be used to replace this type of fastener because there is no available equivalent.
- Other bolts are designed to break if over tightened to prevent part damage. If a stronger fastener is used part damage may occur.

Fasteners that need to be replaced when removed will be called out. Fasteners that require thread lockers or thread sealant will be called out. The correct tightening specification and sequence must be used when installing fasteners. Part or system damage may occur if the above instructions are not followed.

**CAUTION:** When replacing stationary glass; such as a windshield, back window, or hatch roof window, urethane adhesive (P/N 12345633 or equivalent) must be used to maintain original installation integrity. Failure to use urethane adhesive will result in poor retention of the windshield which may allow unrestrained occupants to be ejected from the vehicle with resulting personal injury.

**NOTICE:** If a window is cracked but still intact, it should be crisscrossed with masking tape to reduce the risk of damage to the vehicle.

### CONTENTS

<u>SUBJECT</u>	<u>PAGE</u>
General Description .....	10A3- 2
Night Vision Rearview Mirror with Compass (If Equipped) .....	10A3- 2
Night Vision Mirror Function Check .....	10A3- 2
Compass Variance Set-Up .....	10A3- 2
Calibration of Compass .....	10A3- 3
Magnetic Field .....	10A3- 3
Mirror Autodim .....	10A3- 3
Mirror Clean-Up .....	10A3- 3
On-Vehicle Service .....	10A3- 4
Windshield Service .....	10A3- 4
Windshield Removal (Broken Windshield) .....	10A3- 4
Windshield Removal (Undamaged Windshield) .....	10A3- 4
Inspection .....	10A3- 6
Service Kits .....	10A3- 6
Windshield Installation .....	10A3- 6
Stationary Body Side Window Replacement .....	10A3- 7
Body Side Latched Window Replacement .....	10A3- 8
Rear Window Replacement .....	10A3- 9
Rear Window Defogger System .....	10A3- 9
Diagnosis of the Rear Window Defogger System .....	10A3-13
Testing Defogger Grid Lines .....	10A3-13
Grid Line Repair .....	10A3-13
Braided Lead Wire Repair .....	10A3-14
Window Polishing .....	10A3-14
Minor Scratch and Abrasion Removal .....	10A3-14

**CONTENTS (cont'd)**

<u>SUBJECT</u>	<u>PAGE</u>
Water Leak Tests .....	10A3-15
Checking with Watertest Stands.....	10A3-15
Water Hose Test .....	10A3-16
Air Hose/Bubble Solution Test.....	10A3-16
Windshield Water Leak Repair .....	10A3-16
Special Tools .....	10A3-17

**GENERAL INFORMATION**

**NIGHT VISION REARVIEW MIRROR WITH COMPASS (IF EQUIPPED)**

This mirror automatically dims to a level required to minimize glare while still maintaining maximum rear vision. The compass is an eight point compass readout that calibrates automatically as the vehicle is driven.

The switch on the bottom of the mirror has three positions. An "OFF" position, an "M" position which turns on the night vision mode, and the "C/M" position that turns on both the night vision mirror and compass (figure 2).

To operate the mirror and compass do the following:

1. Turn vehicle ignition switch to "ON."
2. Slide mirror control switch to the "C/M" position.
3. When ignition is initially turned on and the mirror switch is in the C/M position compass display characters will appear briefly.

Compass should display a direction, or a "C." Go to mirror function checkout. If the compass display characters are not on, check that the mirror control switch is at the "C/M" position (slide switch handle all the way to the right); recheck ignition is "ON."

If compass display characters are not displayed check the following:

- For Electrical Diagnosis of the mirror refer to the 1995 C/K Truck Driveability, Emissions & Electrical Diagnosis Manual, Section 8A-84.

1. Remove connector from rear of housing.
2. Check for ignition switched battery voltage at the connector with a digital volt meter.
3. Ignition switched battery voltage should be in the range of 11.0 to 15 volts.
4. If correct voltage is present between terminals, replace mirror assembly.
5. If zero volts is between terminals, check fuse and wiring harness from mirror to fuse box and chassis ground.

**NIGHT VISION MIRROR FUNCTION CHECK**

There may be a time that the night vision mirror or compass does not operate properly. System function checks and procedures for correcting the operation night vision mirror are listed below.

1. Compass reads direction but is not accurate. Refer to "Compass Variance."

2. Compass displays a "C." Refer to "Compass Calibration."
3. Compass displays all segments. Refer to "Magnetic Field."
4. Mirror does not automatically dim when glare is present in mirror at night time. Refer to "Mirror Autodim."

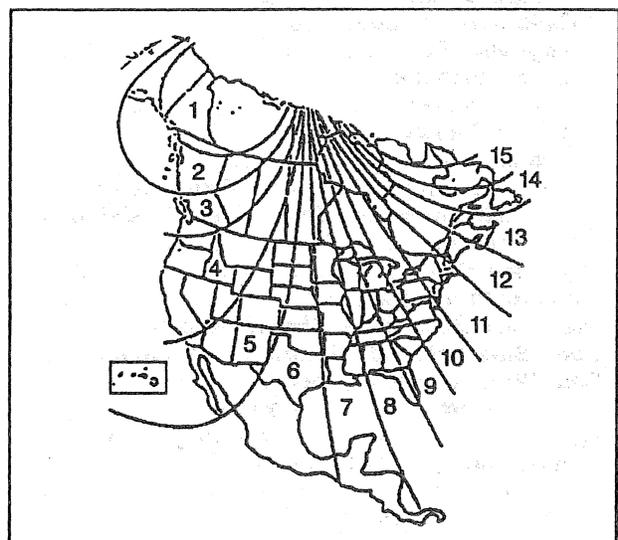
**Compass Variance Set-Up**

Compass variance is the difference between Magnetic North and Geographic North. The difference between Magnetic and Geographic North can be great enough to cause the compass to give false readings.

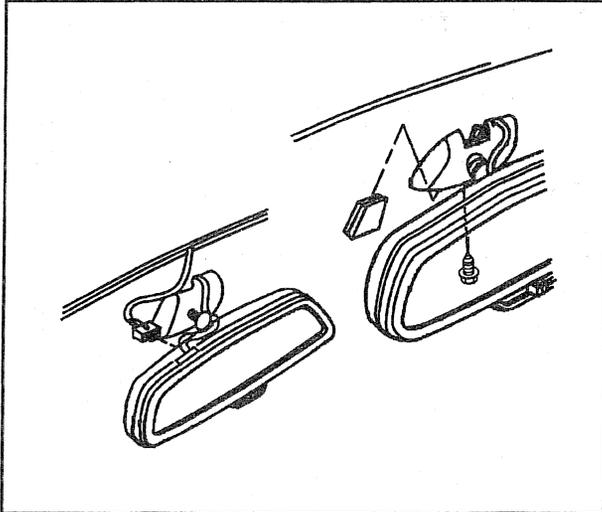
Compass variance is compensated by calibrating the compass. To do this successfully refer to the map in figure 1 to determine the zone number to be entered into the compass Magnetic North to True North. The mirror is preset to Zone 8. Vehicles sold in Japan are preset to Zone 9.

To set compass variance do the following:

1. Hold in the "CAL" switch (hole in bottom of the mirror housing near on/off switch) for five seconds until zone entry number appears in the display.
2. Press in the "CAL" switch until the number for the new zone entry is displayed.



**Figure 1—Compass Variance Zone Map**



**Figure 2—Night Vision Rearview Mirror**

3. When the number for the desired zone number is displayed, stop pressing the CAL switch, and the display will show compass direction or "C" within a few seconds.

**Calibration of Compass**

1. Set the switch on the mirror control to "C/M."
2. Turn vehicle ignition switch ON. The letter "C" should be displayed in the mirror compass window. If not, hold the "CAL" switch (bottom of the mirror) for more than 10 seconds, and the letter C will appear. The display will show a number first, but keep holding until the letter "C" appears.
3. To check calibration quickly, drive vehicle in a 360-degree circle in an area free of large metal and metallic objects (AT LESS THAN 5 MPH) until the display reads a compass direction. If compass does not calibrate after three 360-degree circles and the compass still displays "C," replace mirror assembly. If compass displays "C" to begin with and then after two minutes displays all segments refer to "Magnetic Field."
4. Normal calibration is achieved automatically by simply driving the vehicle.

**Magnetic Field**

1. There is a strong magnetic field in the area near the mirror, and the compass circuit cannot compensate for it. Check for magnetic antenna mount,

magnetic notepad holder, and any similar magnetized items in area of mirror. Remove magnetic item and turn mirror off for 30 seconds and then back on again. If mirror comes back on displaying direction or "C," inform vehicle owner of offending magnetic part and refer to "Compass Calibration."

2. If mirror still displays all segments, replace mirror assembly.

**Mirror Autodim**

A forward-facing sensor in the back of the mirror case measures the ambient light just as your eyes do. When the rear-facing sensor in the mirror glass senses glare such as headlights from a following vehicle, it energizes the chemical layer in the glass, causing it to darken only to the precise level required to eliminate glare while maximizing rear vision. As glare is reduced the mirrored glass returns to its normal clear state.

Do the following steps to check auto mirror function:

1. Position the vehicle in a well lit area.
2. Locate the forward looking sensor on the back side of the mirror housing.
3. Cover the forward looking sensor with a dark cloth (black preferred). After the dark cloth has been over the sensor for 10 seconds to one minute, the glass should start to darken.
4. Remove the cloth, and the glass will begin to return to the clear reflective stage.
5. Repeat above steps several times to make sure the mirror is operating correctly.
6. If glass will not darken after cloth over forward looking sensor has been in place for two minutes and vehicle is positioned in brightly lit area and compass display is showing a direction, replace mirror assembly.
7. If compass display is not on, check to see if ignition is on and mirror switch is in "C/M" position and redo test.

**Mirror Clean-Up**

Once the Compass Variance adjustment and the compass is displaying correct direction, the mirror glass should be cleaned with a paper towel dampened with glass cleaner. Spraying glass cleaner directly on mirror is not recommended.

## ON-VEHICLE SERVICE

### WINDSHIELD SERVICE

**CAUTION:** Always wear heavy gloves and safety glasses when handling glass to minimize the risk of injury.

When replacing a cracked windshield, it is important that the cause of the crack be determined and the condition corrected before a new window is installed. The cause of the crack may be an obstruction or high spot somewhere around the flange of the opening. Cracking may not occur until pressure from the high spot or obstruction becomes particularly high due to winds, extremes of temperature, or rough terrain. Suggestions of what to look for are described later in this section under "Inspection."

If a windshield is broken, the glass may already have fallen or been removed from the adhesive. Often, however, it is necessary to remove a cracked or otherwise imperfect windshield that is still intact.

If a crack extends to the edge of the window, mark the point where the crack meets the reveal molding. (Use a piece of chalk and mark the point on the cab, next to the reveal molding). Later, when examining the flange of the opening for a cause of the crack start at the point marked.

Before removing the window cover the instrument panel and the surrounding sheet metal with protective covering.

### WINDSHIELD REMOVAL (BROKEN WINDSHIELD)

**CAUTION:** Always wear heavy gloves and safety glasses when handling glass to avoid the risk of injury.

#### ↔ Remove or Disconnect (Figures 3 through 5)

Tools Required:

- J-24709-01, Urethane Glass Sealant Remover (Hot Knife—115 Volt)
- J-24402-A, Glass Sealant Removal Knife

- Place protective coverings around the window removal area.

1. Windshield wiper arms.
2. Radio antenna mast.
3. Cowl vent grille.
4. Windshield stop screws.
5. Rear view mirror (figure 5).

- Be sure to disconnect electrical lead for vehicles equipped with night vision rearview mirror.

6. Door opening seals, windshield garnish moldings, and speaker covers.

- Cut the molding from the window with a razor-type knife taking care not to damage the paint.

- Work from the outside.

**NOTICE:** If a window is cracked but still intact, it should be crisscrossed with masking tape to reduce the risk of damage to the vehicle.

7. Windshield glass using J-24709-01 or J-24402-A.

- A. Insert the blade between the glass and urethane.
- B. Keep the blade against the window edge, and cut the adhesive from the windshield.
- C. Use help to remove the windshield.



Clean

- Loosened adhesive from the pinchweld flange by wiping with a dry cloth.
- Do not attempt to scrape away old adhesive still attached. The paint could be damaged.

### WINDSHIELD REMOVAL (UNDAMAGED WINDSHIELD)

**CAUTION:** Always wear safety glasses and heavy gloves when working with glass to avoid the risk of injury.



Remove or Disconnect (figure 3 and 4)

Tools Required:

J-36020 Windshield Remover

1. Windshield wiper arms.
2. Radio antenna mast.
3. Cowl vent grille.
4. Windshield stop screws.
5. Rear view mirror.

- Be sure to disconnect electrical lead for vehicles equipped with night vision rearview mirror.

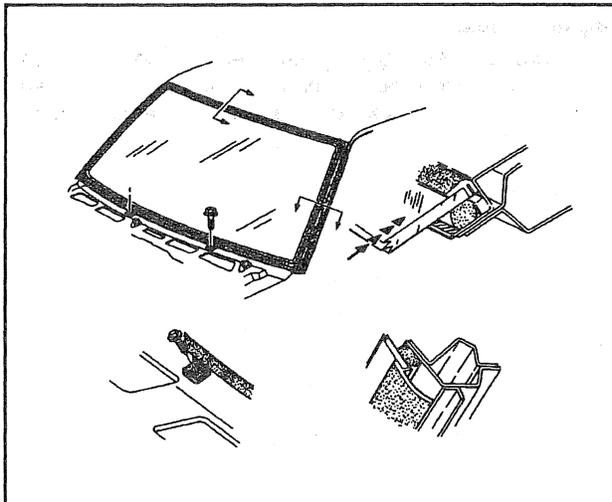
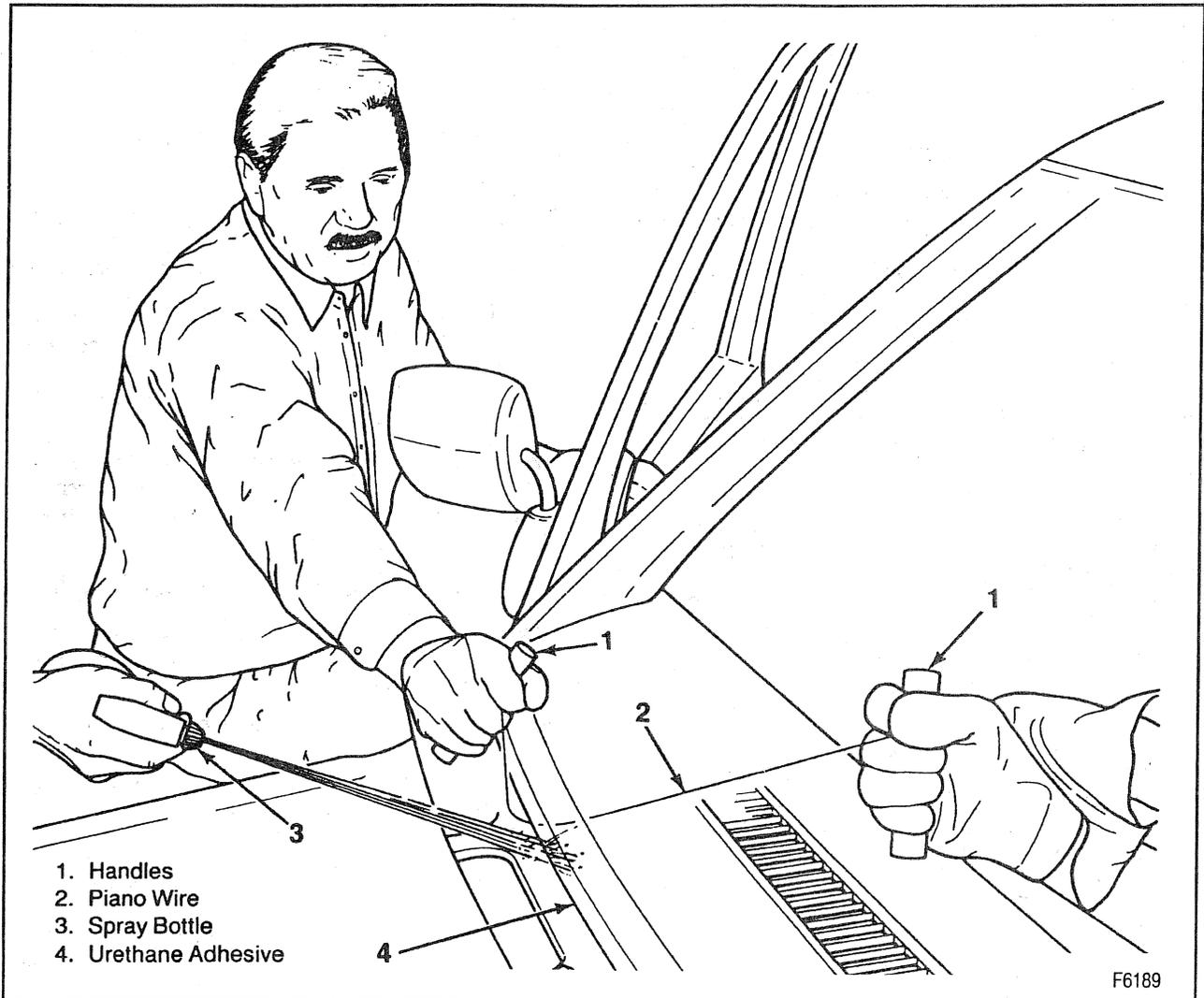


Figure 3—Windshield Assembly



- 1. Handles
- 2. Piano Wire
- 3. Spray Bottle
- 4. Urethane Adhesive

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Figure 4—Cutting the Window from the Frame

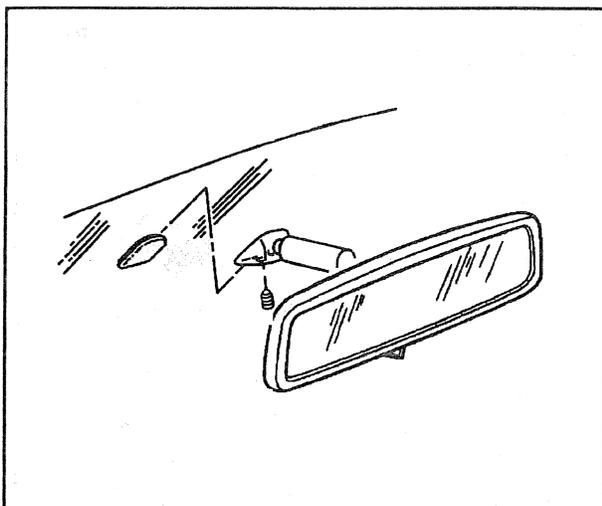


Figure 5—Rearview Mirror

- 6. Radio speaker grilles.
- 7. Windshield pillar trim from both sides of the vehicle and pull the door seal back from the windshield area.
  - A. Using J 36020, insert one end of the wire through the urethane adhesive to the interior of the vehicle and wrap each end of the wire around each handle. Or cut a 6-foot length of 0.020-inch piano wire. Insert one end of the wire through the adhesive around the windshield and wrap each end of the wire around a suitable handle.
  - B. Spray a liquid soap solution around the entire perimeter of the windshield so the urethane is wet.
  - C. With one person at each end of the wire, work the wire back and forth exerting pressure against the urethane. Continue this action until all of the urethane has been cut and the windshield is loose.

## 10A3-6 WINDOWS

### ! Important

\* When working the wire back and forth, follow these precautions:

1. To protect the instrument panel from being damaged during the cutting action of the wire, place a cloth or piece of cardboard between the wire and instrument panel pad.
  2. When working the wire back and forth do not allow the wire to make contact with the glass.
  3. Periodically spray soap solution ahead of the wire until the urethane has been completely cut.
1. Glass from the vehicle with the aid of a helper.

### INSPECTION

An inspection of the flange of the windshield opening, reveal molding, and glass may reveal the cause of a broken windshield. This can help prevent future breakage.

Look for high weld or solder spots, hardened spot weld sealer, or any other obstruction or irregularity in the flange. Also, check the cowl vent grille for contact with the windshield.

Check the fit of the rearview adhesive mounting pad. Replace the mounting pad if needed. Refer to figure 6 for proper location of the mounting pad.

### SERVICE KITS

To replace a urethane adhered windshield, use GM windshield sealer preparation kit P/N 1052420 and GM adhesive caulking kit P/N 12345633 or equivalent. Materials in the GM windshield sealer preparation kit P/N 1052420 kit include:

1. Rubber cleaner.
2. Rubber primer.
3. Pinch weld flange primer.
4. Applicators.
5. Desiccant.
6. Instruction sheet.

Materials in the GM adhesive caulking kit P/N 12345633 kit include:

1. One tube of adhesive material.
2. Clear glass primer.

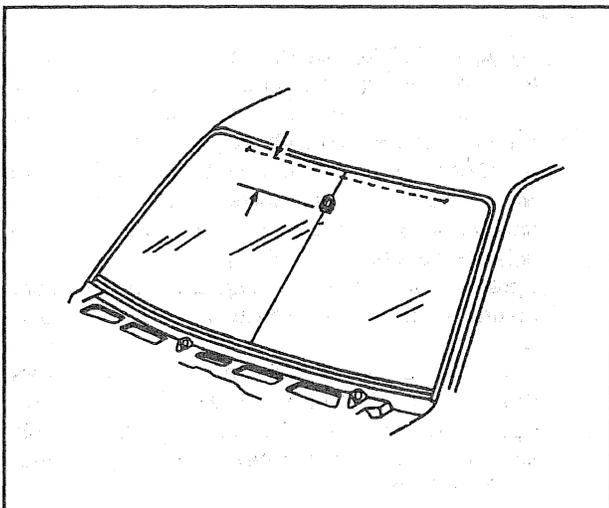


Figure 6—Rearview Mirror Adhesive Pad Location.

3. Blackout primer.
  4. Application dauber
  5. Polyethylene applicator nozzle.
  6. Instruction sheet.
- Other materials required for windshield installation which are not included in the service kit include:
1. Alcohol for cleaning the edge of the glass.
  2. Adhesive dispensing gun J 24811.
  3. A standard household cartridge type gun reworked as follows:
    - A. Widen the end slot to fit the diameter of the dispensing nozzle of the adhesive tube.
    - B. Reduce the diameter of the plunger disc so that the disc will enter the large end of the adhesive tube.
  4. Commercial type razor knife (for cutting along the edge of the glass).

**NOTICE:** Do not use a petroleum-based solvent such as kerosene or gasoline. The presence of oil will prevent adhesion of new material.

### WINDSHIELD INSTALLATION

**CAUTION:** Always wear heavy gloves and safety glasses when handling glass to minimize the risk of injury.

### Install or Connect (Figures 6 through 8)

- If the original windshield is being reinstalled, clean all old urethane off the windshield using a razor knife.
  - Use GM repair kit P/N (12345633) or equivalent which contains the necessary primers and adhesives.
1. Clear primer to the windshield covering an area 18 mm (3/4 inch) from the glass edge. Wipe the primer dry immediately.
  2. Black primer to the same area as the clear primer and allow it to dry.

**CAUTION:** Refer to "Caution" on page 10A3-1.

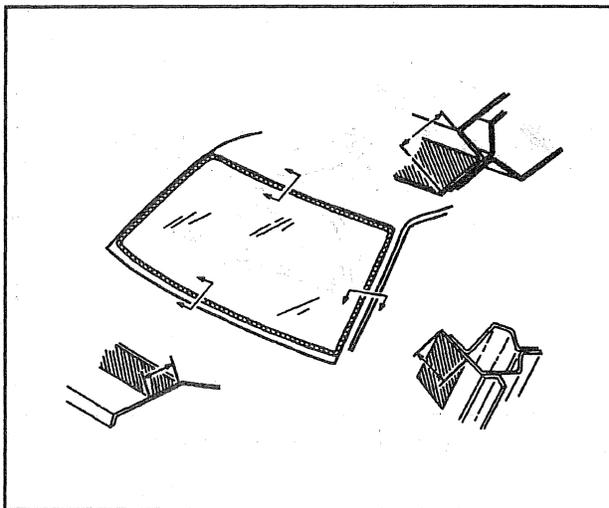
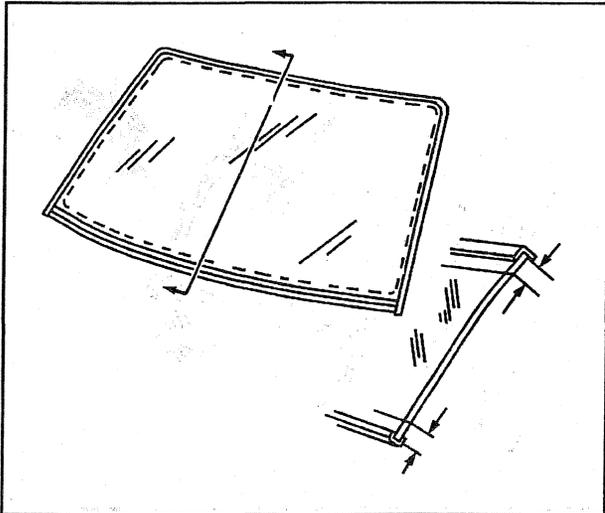


Figure 7—Windshield Primer Locations



**Figure 8—Windshield Primer Dimensions**

3. Bead of urethane 10.0 mm (0.40 inches) high over the primer.
4. Windshield.
  - Drill or punch a hole in the center of each tab at the bottom of the windshield.
  - With the aid of a helper, lift the windshield into place.
  - Align the groove in each upper outer edge of the windshield molding with the door edge.
5. Windshield stop screws.
6. Rear view mirror.
7. Windshield pillar trim and door weatherstrip.
8. Speaker grilles.
9. Cowl vent grille.
10. Windshield wiper arms.
11. Radio antenna mast.
12. Windshield garnish moldings.

**NOTICE:** *Until the new urethane has cured, air pressure from a closing door may cause the windshield to move. To prevent this, lower one window several inches before closing the door.*

- Allow the vehicle to stand for several hours for the adhesive to dry.
- Test the windshield for water leaks. Refer to "Water Leak Tests."

### **STATIONARY BODY SIDE WINDOW REPLACEMENT**

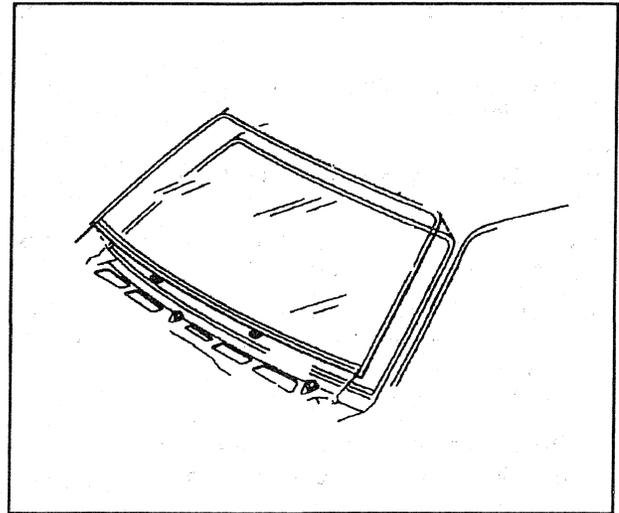
**CAUTION:** Always wear heavy gloves and safety glasses when handling glass to minimize the risk of injury.

**↔** Remove or Disconnect (Figures 10 and 11)

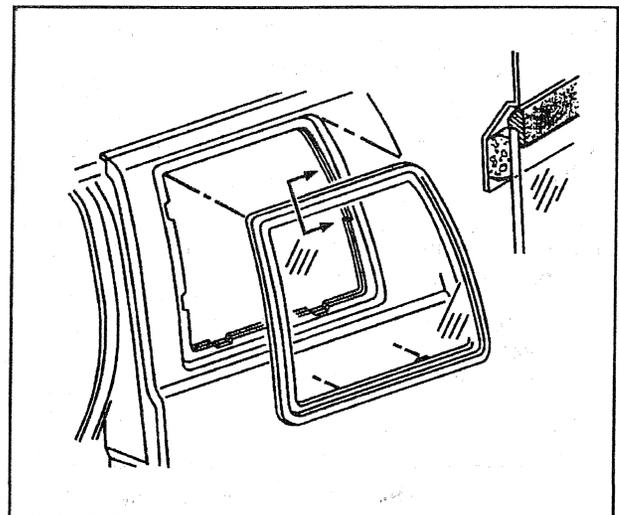
Tools Required:

- J-24709-01, Urethane Glass Sealant Remover—Hot Knife.
- J-24402-A, Glass Sealant Remover Knife.

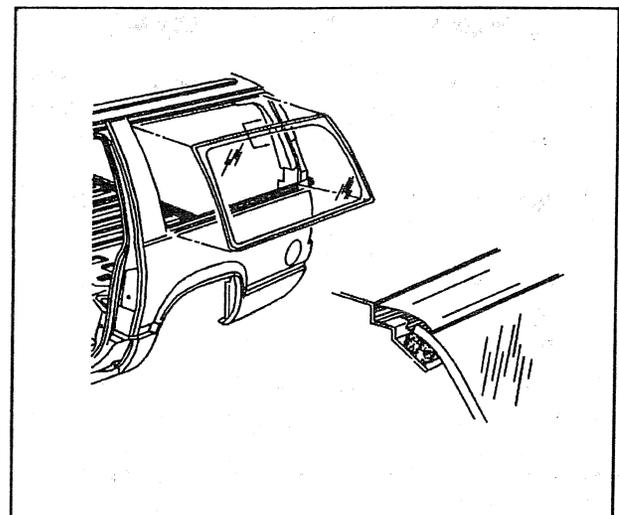
1. Quarter trim panel from around the window frame. Refer to SECTION 10A4.
2. Molding from the glass with a razor knife.



**Figure 9—Glass Installation**



**Figure 10—Extended Cab Stationary Body Side Glass**



**Figure 11—Stationary Body Side Glass**

## 10A3-8 WINDOWS

3. Window glass assembly using J-24709-01 or J-24402-A.

- Wipe away loose adhesive from the frame with a dry cloth.

### Install or Connect (Figures 12, 13, and 14)

1. Body primer on the pinchweld flange in areas where the paint has come off.

- Use the GM repair kit, P/N (12345633), or equivalent, which contains the proper primers and adhesive.
- Allow the primer to dry.

2. Clear primer to the window covering an area of 18 mm (3/4 inch) from the edge of the glass (figures 12 and 13).

- Wipe primer dry immediately.

3. Black primer to the same area as the clear primer.

- Allow the primer to dry.

**CAUTION:** Refer to "Caution" on page 10A3-1.

4. Urethane adhesive bead to the body to fill in any gaps in the old adhesive.

- Apply a light hand pressure to the glass to wet-out the adhesive and to bond the glass to the pinchweld (figure 14).

5. Quarter trim panel. Refer to SECTION 10A4.

- Allow the adhesive to dry for several hours and then test the window for water leaks. Refer to "Water Leak Test."

## BODY SIDE LATCHED WINDOW REPLACEMENT

The latched side window is a one-piece assembly that includes the window, molding, hinges, and latch assembly.

### Remove or Disconnect (Figures 15 and 16)

1. Latch rivets.
2. Hinge rivets.
3. Window assembly.

- Do not replace the weatherstrip unless it is damaged.

### Install or Connect (Figures 15 and 16)

1. Window assembly.
2. Hinge rivets.
3. Latch rivets.

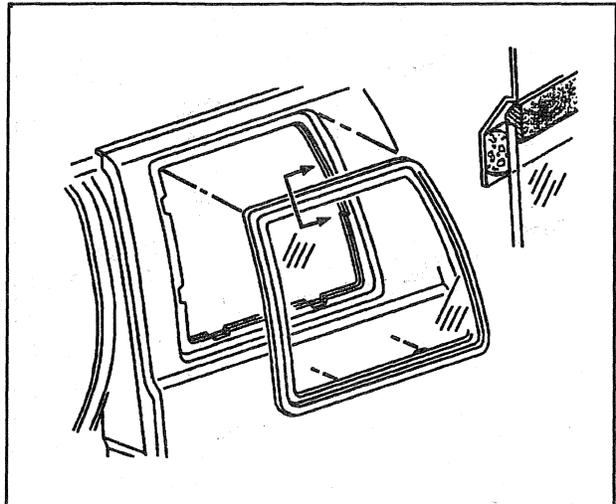


Figure 12—Primer and Adhesive Application Points

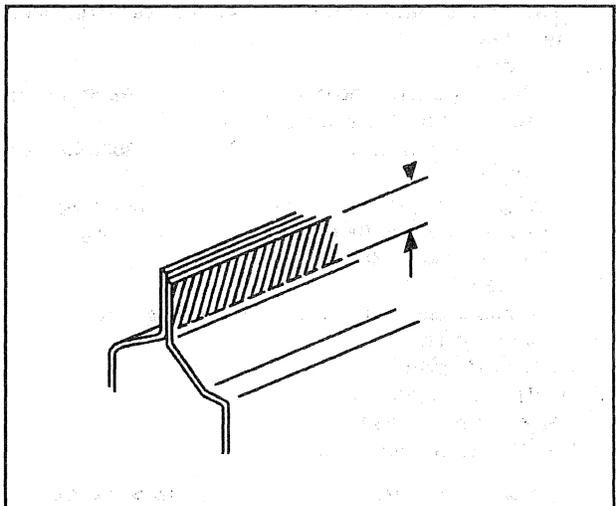


Figure 13—Window Frame Pinchweld for Body Primer

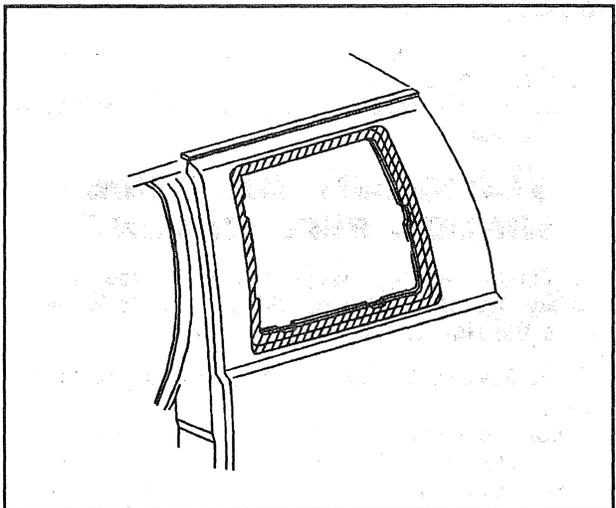
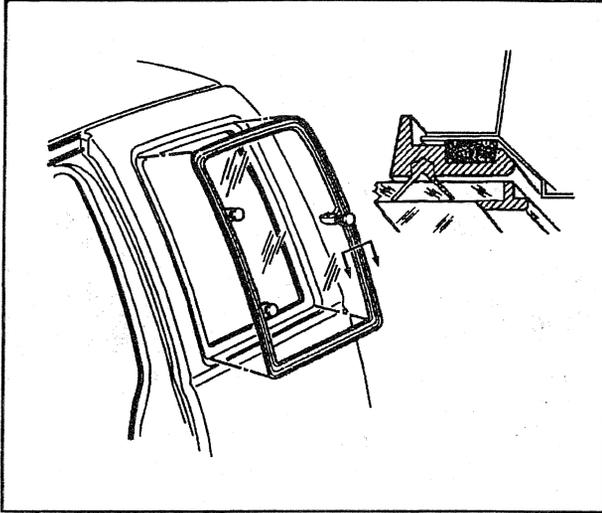
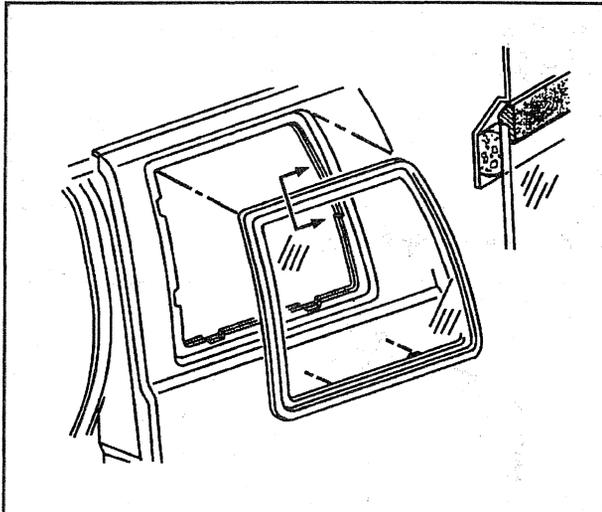


Figure 14—Window Frame



**Figure 15—Body Side Latched Window Components**



**Figure 16—Side Latched Window Weatherstrip**

**REAR WINDOW REPLACEMENT**

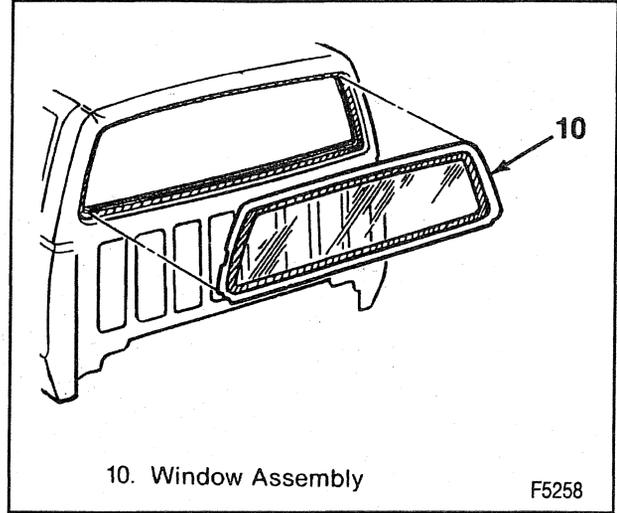
**↔** Remove or Disconnect (Figure 17 through 23)

**CAUTION:** Always wear heavy gloves and safety glasses when handling glass to minimize the risk of injury.

**NOTICE:** If a glass is cracked but still intact, it should be crisscrossed with masking tape to reduce the risk of damage to the vehicle.

- On a window with a defogger, unclip the connector at the left and right side of the window from the inside of the cab.
- Remove all trim panels necessary to gain access for rear window removal. Refer to SECTION 10A4 for the trim panel removal procedures.

1. Molding from the glass with a razor knife.



**Figure 17—Rear Window Assembly Pickup**

10. Window Assembly F5258
2. Glass assembly from the window frame using J-24709-01 or J-24402-A.
    - With a helper standing outside the cab, push the window out from the inside.
    - Wipe away the loose adhesive from the frame with a dry cloth.

**↔** Install or Connect (Figure 17 through 23)

1. Body primer to the pinchweld flange in areas where the paint has come off.
  - Use the GM repair kit P/N (12345633) or equivalent that contains the proper primers and adhesive.
  - Allow the primer to dry.
2. Clear primer to the window covering an area of 18 mm (3/4 inch) from the edge of the glass (figure 21).
  - Wipe off immediately.
3. Black primer to the same area as the clear primer.
  - Allow the primer to dry.

**CAUTION:** Refer to “Caution” on page 10A3-1.

4. Urethane adhesive bead to the body to fill in any gaps in the old adhesive.
5. Window.
  - On windows with defoggers, connect the clips on each side of the window on the inside to the body connectors.
  - Install all trim panels that were removed to gain access for rear window removal.
  - On sliding windows, be sure the two tabs on the bottom of the window are positioned in the slots on the body before installing the window.

**REAR WINDOW DEFOGGER SYSTEM**

The optional defogger consists of a heating element bonded to the inside surface of the rear glass. This unit uses an instrument panel mounted switch with an inte-

# 10A3-10 WINDOWS

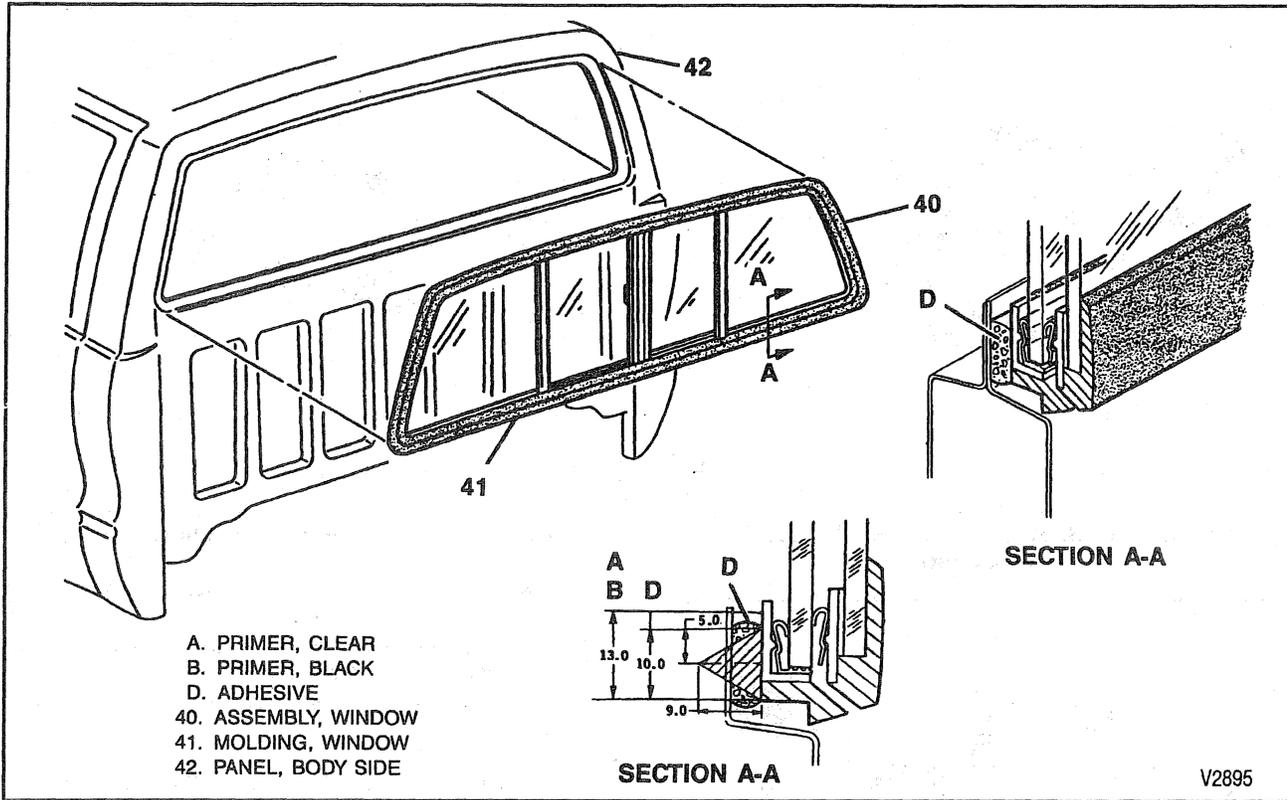


Figure 18—Rear Sliding Glass Window Assembly-Pickup

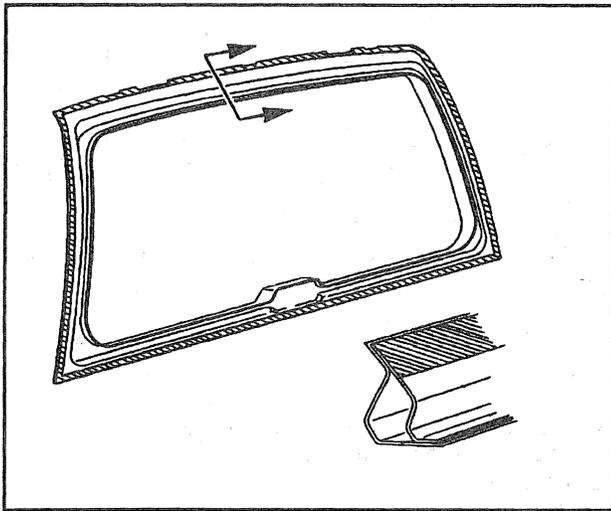


Figure 19—Primer and Adhesive Application Points

gral indicator lamp and will operate for 5 to 10 minutes and will then turn off by automatic timer. The system can be turned off during this operating period by manually shutting off the defogger switch or turning off the ignition switch. When activated, an indicator light is illuminated. A 12-volt current flows through the relay and out to the resistive heating elements on the rear window. The current enters the grid from the left side of the window and leaves the grid heater from the right side of the window. The ground circuit is on the right side of the cab.

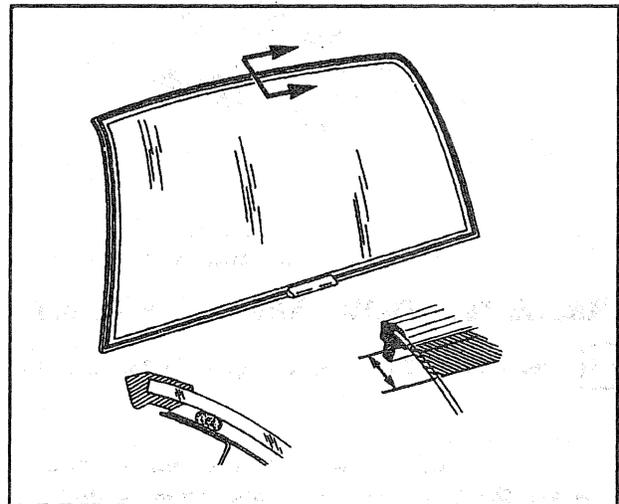
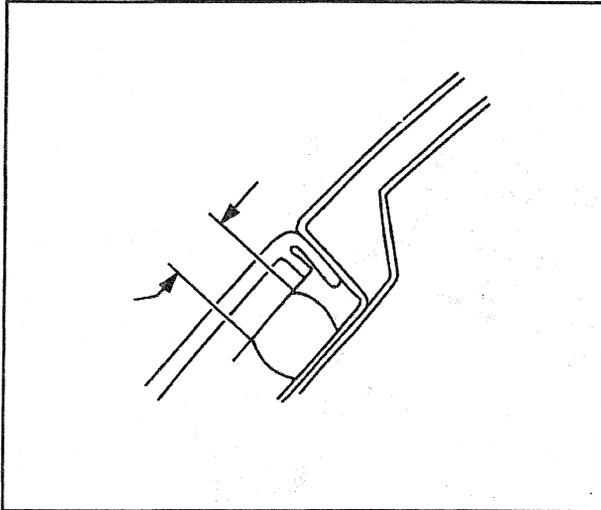


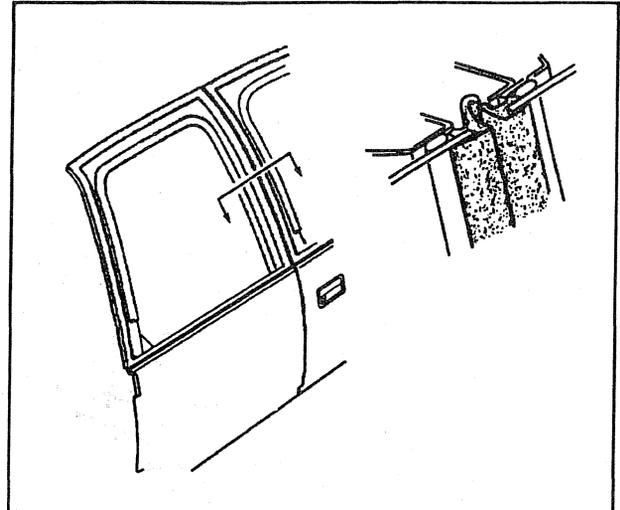
Figure 20—Rear Window Assembly Suburban and Utility

The length of time required to remove interior fog varies under such conditions as vehicle speed, outside glass temperature, atmospheric pressure, and number of passengers.

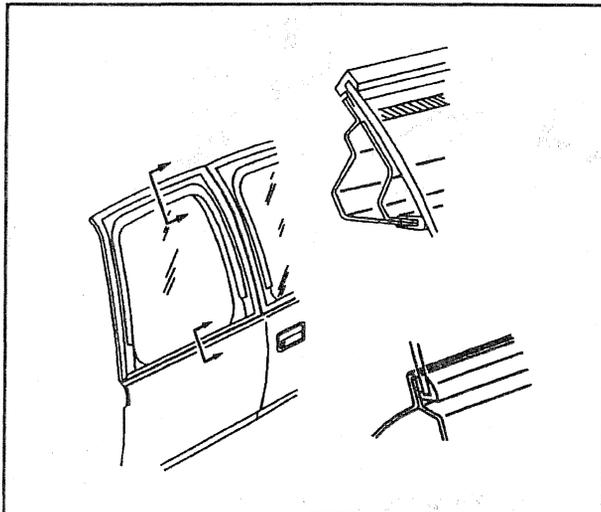
The rear window harness plugs into connector at the fuse panel and leads to the instrument panel mounted switch. The harness then continues from the switch routed along the left rocker panel area to the rear of the cab. At this point it is routed up to where it meets the grid connector at the back glass.



**Figure 21—Rear Window Primer Width Suburban and Utility**



**Figure 23—Rear Door Window Seal Installation Suburban and Utility**



**Figure 22—Rear Window Primer Locations Suburban and Utility**

## 10A3-12 WINDOWS

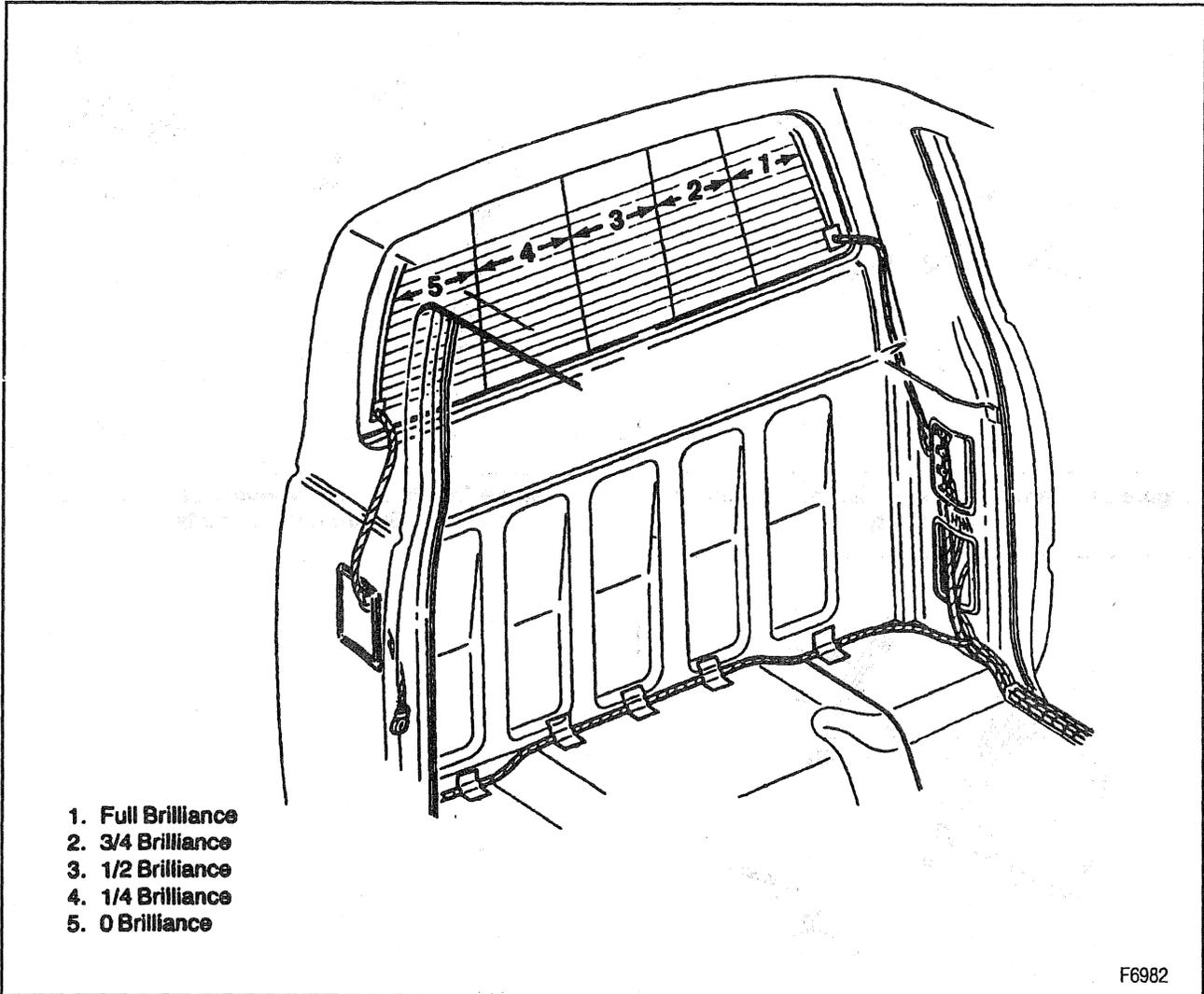


Figure 24—Test Lamp Brilliance Zones - Normal Operating Rear Window

## DIAGNOSIS OF THE REAR WINDOW DEFOGGER SYSTEM

PROBLEM	POSSIBLE CAUSE	CORRECTION
<b>System Won't Heat The Window</b>	<ol style="list-style-type: none"> <li>1. Blown fuse.</li> <li>2. Broken switch.</li> <li>3. Circuit is open.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the fuse with a fuse of the correct rating.</li> <li>2. Test the switch for conduction. Replace the switch if necessary.</li> <li>3. Test for voltage at the left connection of the window. If voltage is present, check the ground circuit. If voltage is not present, test the relay for operation and voltage. If the relay voltage is present, find the open in the harness between the relay and the heater.</li> </ol>
<b>System Won't Turn On. The Indicator Lamp Is Off.</b>	<ol style="list-style-type: none"> <li>1. Blown rear window defogger fuse.</li> <li>2. Relay is faulty.</li> <li>3. Switch is faulty.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the fuse with a fuse of the correct rating.</li> <li>2. Make sure the relay is firmly seated in its socket. Jump the ORN/BLK wire to the LT BLU wire. The relay should click. If the relay clicks, find the open between the switch and the relay if the relay doesn't click, replace the relay.</li> <li>3. Test the switch with a test lamp. Replace the switch with a test lamp. Replace the switch if it's proven faulty.</li> </ol>

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### TESTING REAR WINDOW DEFOGGER GRID LINES

1. Start the engine and turn on the defogger system.
2. Ground an unpowered test lamp and lightly touch the prod tip to each grid line.
  - Move the lamp from the feed wire side to the grounded side of each grid. The lamp should be fully bright then gradually dim as it is moved across the grid. Be sure to check each grid line in at least two places to avoid the possibility of bridging a gap (figure 25).
3. If the test lamp shows full brilliance at both ends of the grid line, check for a loose ground wire connection to the sheet metal.
4. If the lamp suddenly goes out as it is moved across the grid, a break has been located.

#### GRID LINE REPAIR

Tools Required:  
 Rear Window Defogger Repair Kit (P/N 12345345)  
 Heat Gun - capable of reaching 260° C (500° F)

 **Remove or Disconnect**

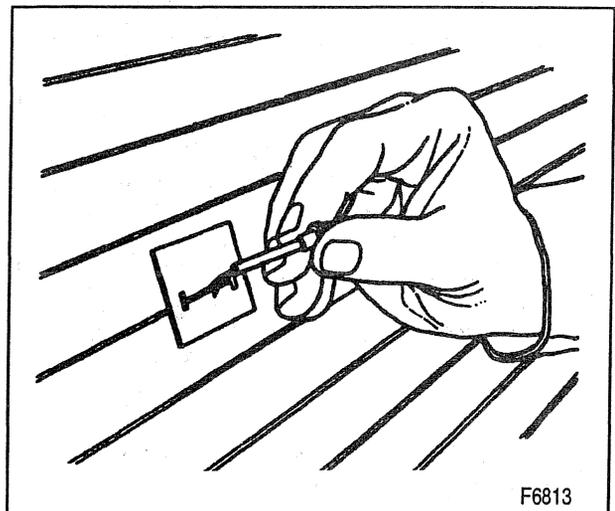
Negative battery cable(s). Refer to SECTION 0A.

 **Inspect**

Rear window defog lines. (Mark the grid line breaks on the outside of the window with a grease pencil).

 **Clean**

The grid line area to be repaired. Buff with steel wool and wipe clean using a cloth dampened with alcohol. Buff and clean about 6 mm (0.25 in.) beyond each side of the break in the grid line. Be sure the glass is at room temperature.



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**Figure 25—Apply Grid Material to a Broken Grid Line**

## 10A3-14 WINDOWS

### Install or Connect

1. Grid line repair template or two strips of tape positioned above and below the repair area. Repair template or tape **MUST** be used to control the width of the repair area. If the template is used, be sure the die cut metering slot is the same width as the grid line.

**CAUTION:** Keep the repair material away from heat, sparks or open flame, since the material is flammable. Avoid breathing the vapor, or allowing it to contact skin or eyes, since it can cause irritation.

2. The grid repair material at room temperature to the repair area using a small brush (figure 25).
3. Remove the template or tape carefully.

**NOTICE:** The grid line repair material must be cured with heat. To avoid heat damage to the interior trim, protect the trim near the repair where heat is applied.

4. Holding the heat gun 25 to 50 mm (1 to 2 inches) from the repair area, apply heat at 260° - 370° C (500° to 700° F) for 2 to 3 minutes (figure 26). If a heat gun is not available, allow the repair to air dry at an ambient temperature of 20° to 39° C (70° to 90° F) for 24 hours.
5. Negative battery cable(s).

### Inspect

1. Grid line repair area. If the repair appears discolored, apply a coat of tincture of iodine to the repair area using a pipe cleaner or a fine brush. Allow iodine to dry for about 30 seconds and carefully wipe off the excess with a lint-free cloth.
2. Test the defogger operation to verify grid line repair.
3. Leave the grid area untouched for 24 hours.

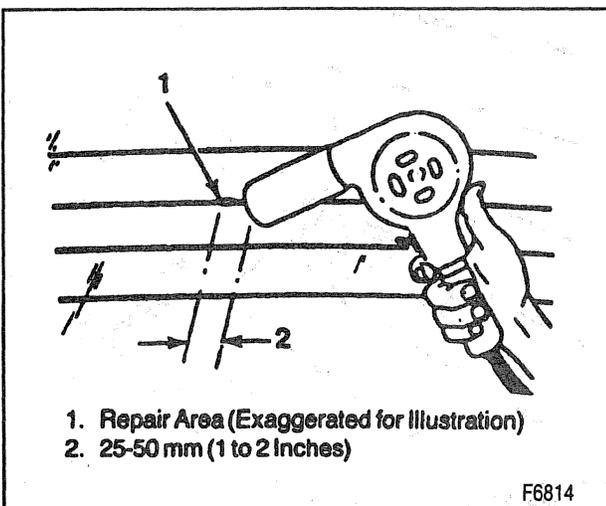


Figure 26—Applying Heat to the Grid Line Repair

### BRAIDED LEAD WIRE REPAIR

1. The rear defogger bus bar lead wire or terminal can be reattached by soldering using a solder containing 3 percent silver and a rosin flux paste.
2. Before soldering the bus bar, the repair area should be buffed with fine steel wool. This removes the oxide coating formed during the glass manufacture.
3. Apply the paste-type rosin flux in small quantities to the wire lead and bus bar repair area using a brush.
4. The soldering iron tip should be coated with solder beforehand. Use only enough heat to melt the solder and only enough solder to ensure a complete repair.
5. Do not overheat the wire when resoldering it to the bus bar.

### WINDOW POLISHING

#### MINOR SCRATCH AND ABRASION REMOVAL

Minor scratches and abrasions can be removed or reduced by following the procedure outlined below. Precautions must be taken to prevent distortions of vision. Double vision may result if an attempt is made to remove deep scratches. Deep scratches should not be removed from an area in the driver's line of vision; in such cases, the glass should be replaced.

The procedure that follows was developed using a cerium oxide compound. Follow manufacturer's directions if other materials are used.

#### Recommended Equipment

1. A low speed (600-1300 rpm) rotary polisher.
2. A wool felt, rotary polishing pad 7 mm (three inches) in diameter and 51-mm (2 inches) thick.
3. Powdered cerium oxide mixed with water. This is the abrasive compound.
4. A wide mouth container to hold the abrasive compound.

#### Polishing Procedure (Figure 27)

1. Mix at least 44 ml (1.5 oz.) of cerium oxide with enough water to obtain a creamy consistency. (If the mixture is too thick it will cake on the felt pad more quickly. If it is too runny, more polishing time will be needed.)
2. Draw a circle around the scratches on the opposite side of the glass with a marking crayon or equivalent.
3. Draw a line directly behind the scratch(es) to serve as a guide for locating the scratch while polishing.
4. Cover the surrounding area with masking paper to catch the drippings or spattered polish.
5. Dip the felt pad attached to the polisher into the mixture. Do not submerge the pad or allow the pad to stay in the mixture as it may loosen the bond between the pad and the metal plate.

**NOTICE:** Never hold the tool in one spot or operate the tool on the glass any longer than 30 to 45 seconds. If the glass becomes hot to touch, let it air cool before proceeding further. Cooling with cold water may crack heated glass. Avoid excessive pressure. It may cause overheating of the glass.

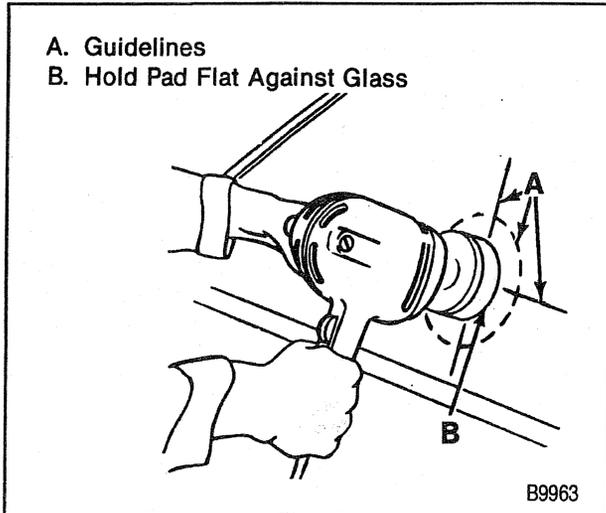


Figure 27—Window Polishing

6. Polish the scratched area, but note the following:
  - Agitate the mixture as often as needed to maintain the creamy consistency of the compound.
  - Use moderate but steady pressure.
  - Hold the pad flat against the glass.
  - Use a feathering-out motion.
  - Dip the pad into the mixture every 15 seconds to ensure that the wheel and the glass are always wet during the polishing operation. (A dry pad causes excessive heat to develop.)
  - Keep the pad free of dirt and other foreign substances.

## WATER LEAK TESTS

Various methods can be used to check for water leaks after the window adhesive has been allowed to dry. Use the first test method whenever possible for generalized testing since it provides a large volume of water to a general area without exceeding the sealing limitations of the glass. Once the leak area has been found, locate the exact entry point by using the water hose or air hose test.

### CHECKING WITH WATERTEST STANDS

To assemble watertest stands, refer to figure 28. Use them as follows.

1. Position the stands as shown in figures 29 and 30. Water spray from the stands should overlap on the vehicle.
2. Run the water at a volume of 14 liters (3.7 gallons) per minute and at a pressure of 155 kPa (22 psi) (measured at the nozzle) for at least 4 minutes.
3. Have someone inside the cab during the test to check for the location of any leaks.
4. To check the windshield, the water spray should be aimed 30 degrees down and 45 degrees toward the rear. Aim at the corner of the windshield (figure 30).
5. To check the side windows, the water spray should be aimed 30 degrees down and 45 degrees toward the rear. Aim at the center of the rear quarter.
6. To check the back window, aim the water spray 30 degrees down and 30 degrees toward the front.

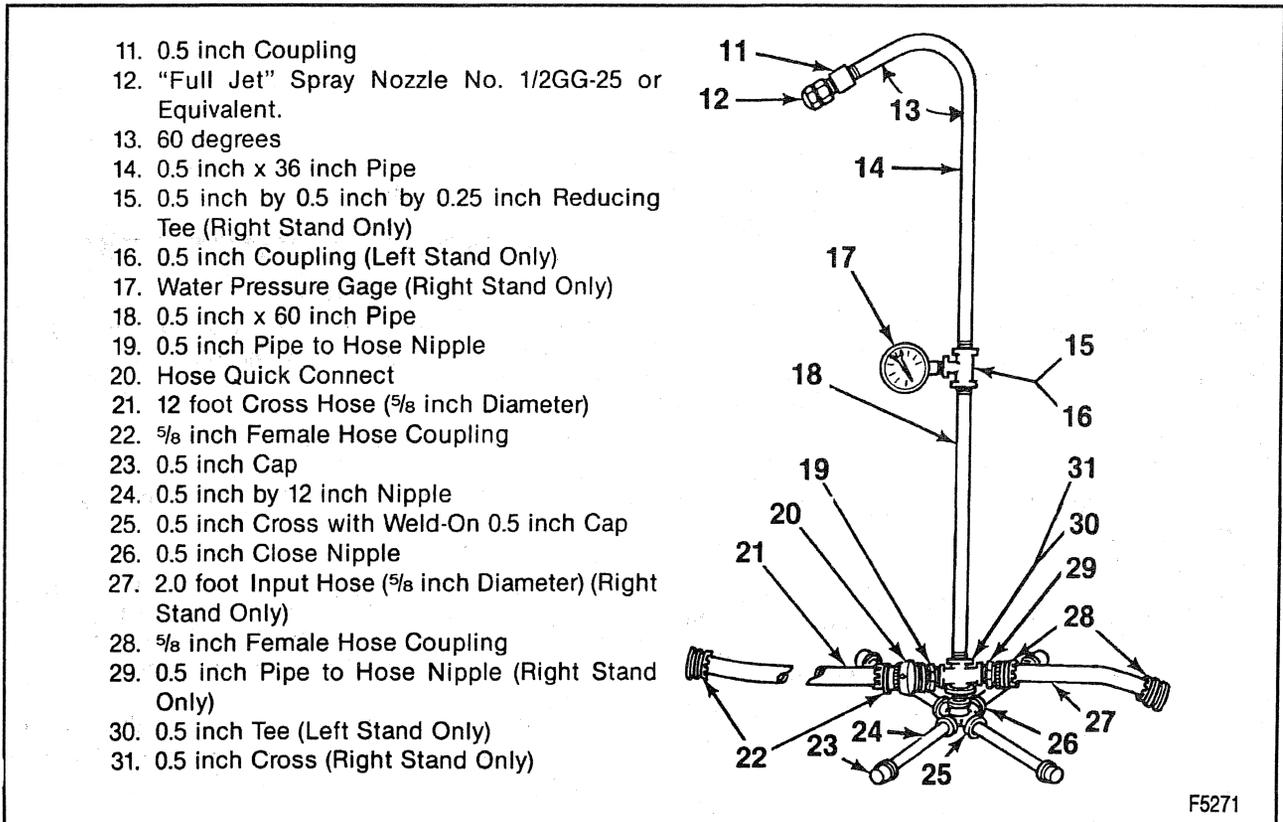


Figure 28—Watertest Stand Assembly

## 10A3-16 WINDOWS

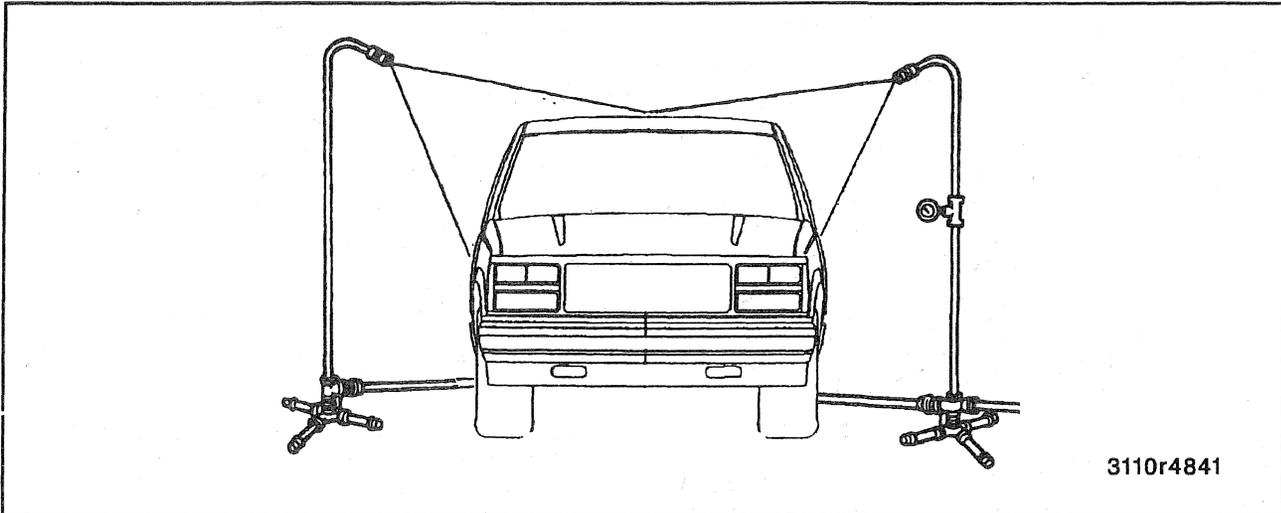
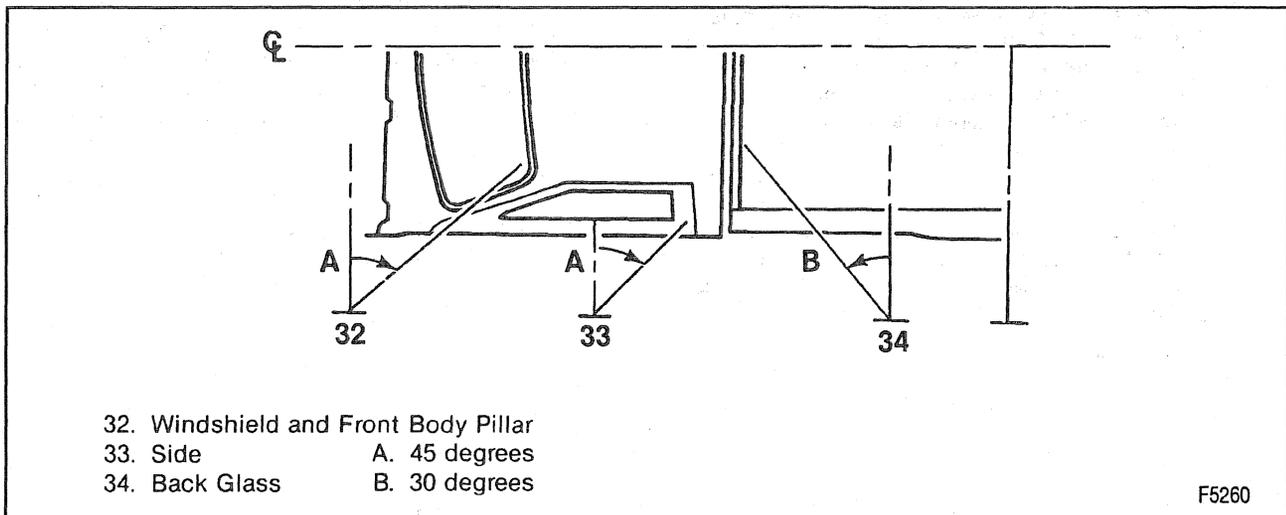


Figure 29—Water Leak Test Stands



32. Windshield and Front Body Pillar  
33. Side                   A. 45 degrees  
34. Back Glass           B. 30 degrees

Figure 30—Water Leak Test with Test Stands

### WATER HOSE TEST

Run water through a hose without the nozzle attached. Begin testing at the base of the window or windshield and slowly move the hose upward and across the top. Have someone in the vehicle watch for leaks.

### AIR HOSE/BUBBLE SOLUTION TEST

Put liquid detergent diluted with water in a squirt bottle. Have a helper inside the cab with an air hose. Beginning at the bottom of the window and gradually moving up the window edges and across the top, squirt soap solution on the window moldings and glass on the outside of the vehicle. Have a helper aim the compressed air at the same locations from the inside of the vehicle. Air pressure from the hose should not exceed 205 kPa (30 psi). Bubbles will form in the soap solution at the location of the leak.

### WINDSHIELD WATER LEAK REPAIR

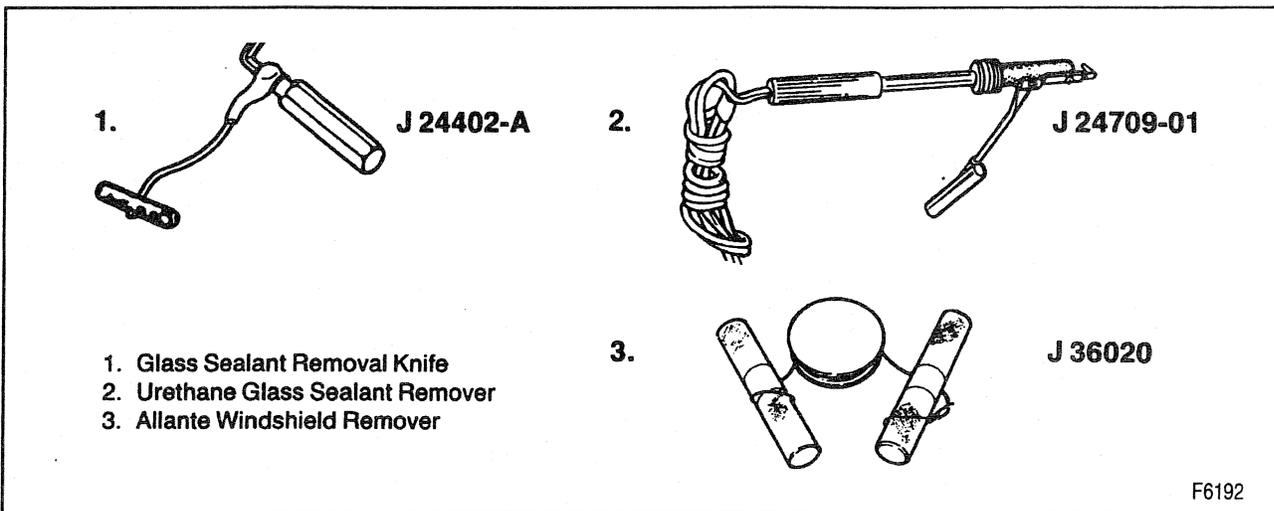
Depending on where the leak is located, it may be necessary to remove trim molding or the headliner to repair the leak. Refer to SECTION 10A4 for removal procedures.

1. Determine the source of water entry.

**CAUTION: Refer to "Caution" on page 10A3-1.**

2. If water is leaking at the edge of the windshield, reseal it using "Windo-Weld Resealant" P/N 08633 and applicator gun 3M 08992 or equivalent. Use a "duck bill" applicator tip to inject the sealant under the molded glass seal.
3. If water is leaking into the vehicle at the sides of the glass use 3M "Super Fast" urethane auto glass sealant P/N 08609 or equivalent.

**SPECIAL TOOLS**



**NOTES**

**SECTION 10A4**

**INTERIOR TRIM**

**CAUTION:** On vehicles equipped with Supplemental Inflatable Restraint (SIR), refer to CAUTIONS in Section 9J under "ON-VEHICLE SERVICE" and the SIR Component and Wiring Location views 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.

**NOTICE:** Always use the correct fastener in the correct location. Use the correct fastener part number to replace a fastener. If the correct fastener part number is not available, a fastener of equal size and strength may be used. Do not use a fastener that is stronger when the correct fastener part number is not available in the following applications:

- Some bolts are designed to permanently stretch, and if a stronger fastener is used, the part will not be tightened correctly. These permanently stretching bolts will be called out. The correct part number fasteners must be used to replace this type of fastener because there is no available equivalent.
- Other bolts are designed to break if over tightened to prevent part damage. If a stronger fastener is used part damage may occur.

Fasteners that need to be replaced when removed will be called out. Fasteners that require thread lockers or thread sealant will be called out. The correct tightening specification and sequence must be used when installing fasteners. Part or system damage may occur if the above instructions are not followed.

**CONTENTS**

<u>SUBJECT</u>	<u>PAGE</u>
On-Vehicle Service .....	10A4-2
Handling Electrostatic Discharge (ESD) Sensitive Parts .....	10A4-2
Instrument Panel Assembly Replacement .....	10A4-2
Sunshade Replacement .....	10A4-6
Assist Handle Replacement .....	10A4-6
Coat Hook Replacement .....	10A4-7
Floor Storage Compartment Replacement .....	10A4-7
Upper Windshield Garnish Molding Replacement .....	10A4-7
Windshield Garnish Molding Replacement .....	10A4-7
Rear Side Door Upper Garnish Molding Replacement .....	10A4-8
Headliner Replacement .....	10A4-8
Pickup, Extended Cab, and Crew Cab .....	10A4-8
Suburban and Utility .....	10A4-9
Overhead Console Replacement .....	10A4-10
Rear Window Upper Garnish Molding Replacement .....	10A4-10
Rear Window Lower Garnish Molding Replacement .....	10A4-10
Quarter Panel Trim Replacement .....	10A4-11
Pickup, Extended Cab, and Crew Cab .....	10A4-11
Suburban and Utility .....	10A4-12
Lower Rear Quarter Trim Panel Replacement .....	10A4-15
Pickup and Extended Cab .....	10A4-15
Hinge Pillar Trim Panel Replacement .....	10A4-16
Door Sill Plate Replacement .....	10A4-16
Pillar Molding Replacement .....	10A4-17
Suburban, Utility, and Crew Cab .....	10A4-17
Rear Panel Carpet Replacement .....	10A4-18
Flexible Plastic Part Refinishing .....	10A4-18

## ON-VEHICLE SERVICE

### HANDLING ELECTROSTATIC DISCHARGE (ESD) SENSITIVE PARTS

Many solid state electrical components, such as those found in the instrument panel and the radio, can be damaged by electrostatic discharge (ESD). Some will display a label, but many will not (figure 1).

**NOTICE:** In order to avoid possibly damaging any components, observe the following:

1. Body movement produces an electrostatic charge. To discharge personal static electricity, touch a ground point (metal) on the vehicle. This should be done any time you:
  - Slide across the seat.
  - Sit down or get up.
  - Do any walking.
2. Do not touch exposed electric terminals on components with your finger or any tools. Remember, the connector that you are checking might be tied into a circuit that could be damaged by electrostatic discharge.
3. When using a screwdriver or similar tool to disconnect a connector, never let the tool come in contact with or come between the exposed terminals.
4. Never jump, ground, or use test equipment probes on any components or connectors unless specified in diagnosis. When using test equipment, always connect the ground lead first.
5. Do not remove the solid state component from its protective packaging until you are ready to install the part.
6. Always touch the solid state component's package to a ground before opening. Solid state components can also be damaged if:

- They are bumped or dropped.
- They are laid on any metal work benches or components that operate electrically, such as a TV, radio, or oscilloscope.

### INSTRUMENT PANEL ASSEMBLY REPLACEMENT

↔ Remove or Disconnect (Figures 2 through 13)

1. Negative battery cable(s). Refer to SECTION 0A.
2. Disable SIR system. Refer to SECTION 9J.
3. Three relay center bolts from inside wheel opening and set aside.
4. Bulkhead connector.
  - Two screws retaining Convenience Center to cowl.
  - Cruise control harness (if equipped).
  - Forward lamp harness.

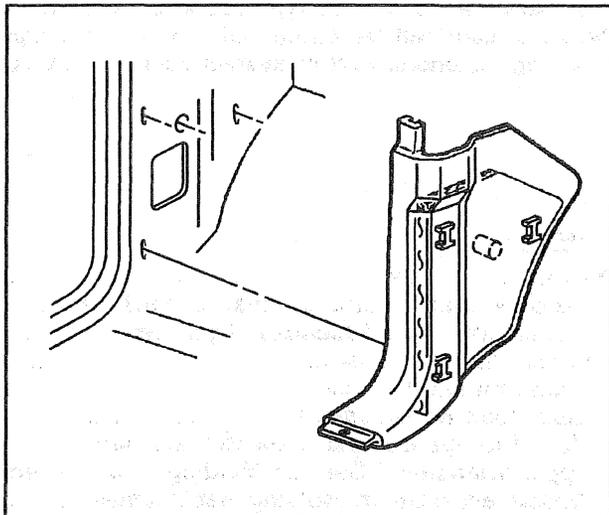


Figure 2—Hinge Pillar Trim Panel

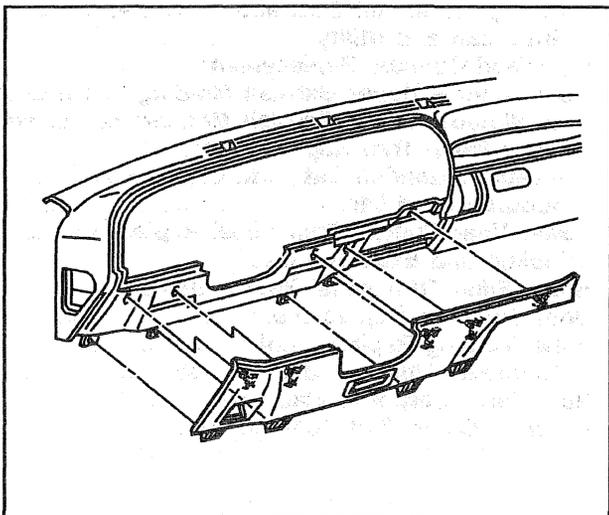


Figure 3—Knee Bolster

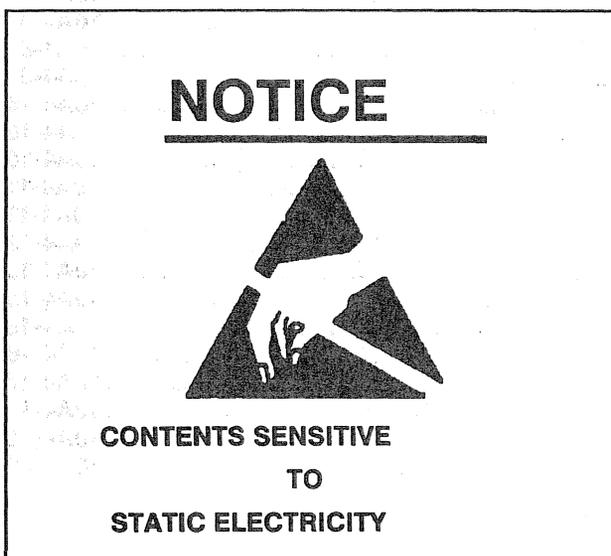
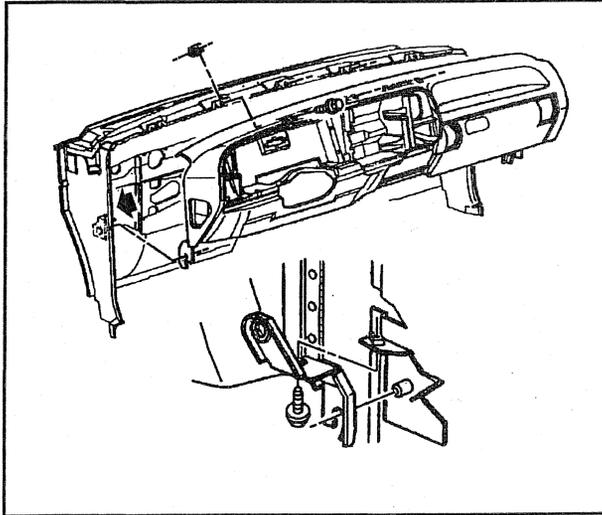
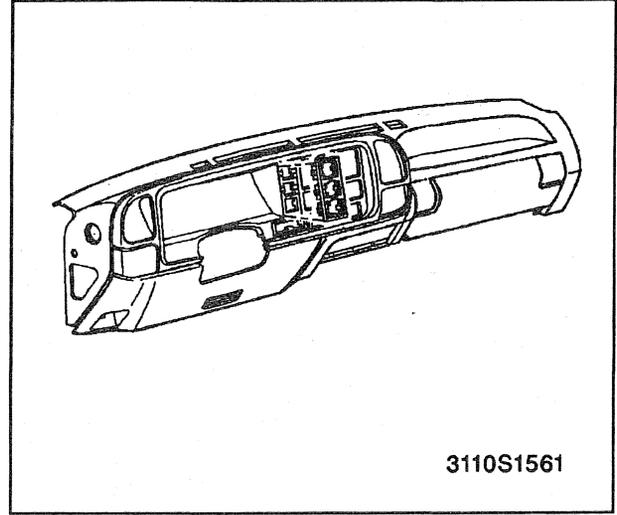


Figure 1—Electrostatic Discharge Parts Label

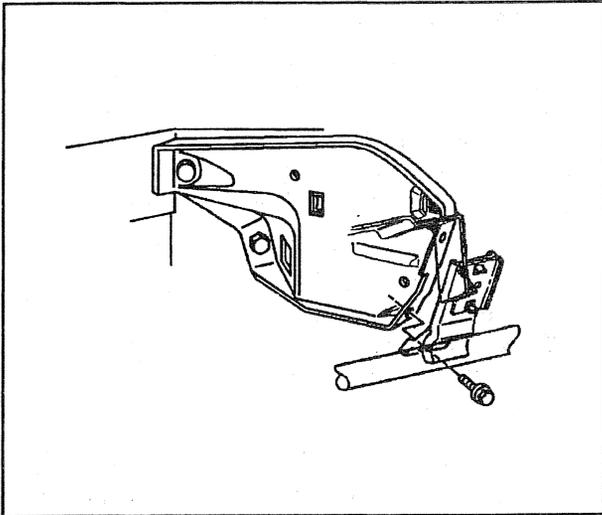


**Figure 4—I/P Pivot Bolts**

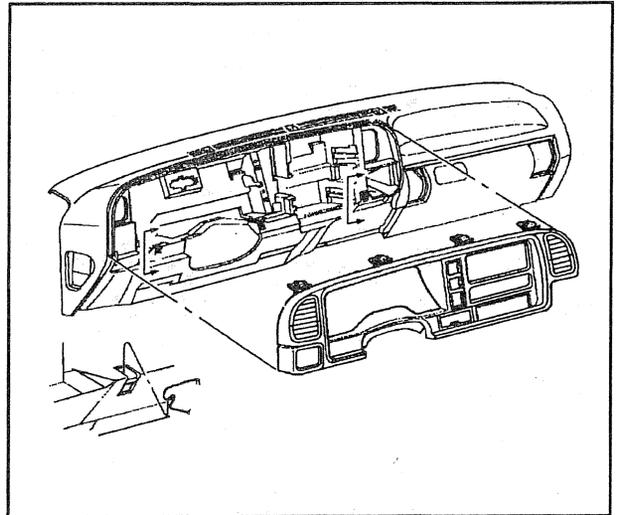


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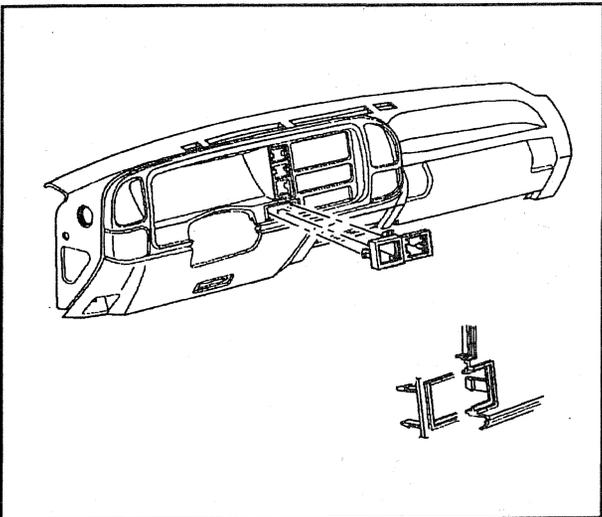
**Figure 7—Accessory Lamp Switch Replacement (cont.)**



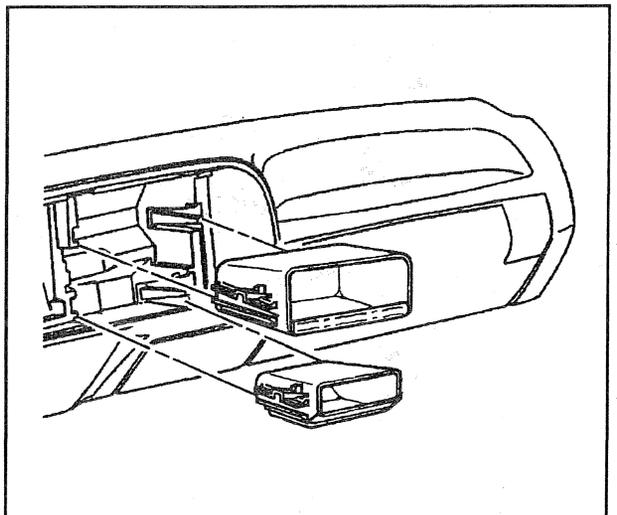
**Figure 5—Center Support Screw**



**Figure 8—Instrument Cluster Trim**



**Figure 6—Accessory Lamp Switch Replacement**



**Figure 9—I/P Auxillary Storage Compartments**

## 10A4-4 INTERIOR TRIM

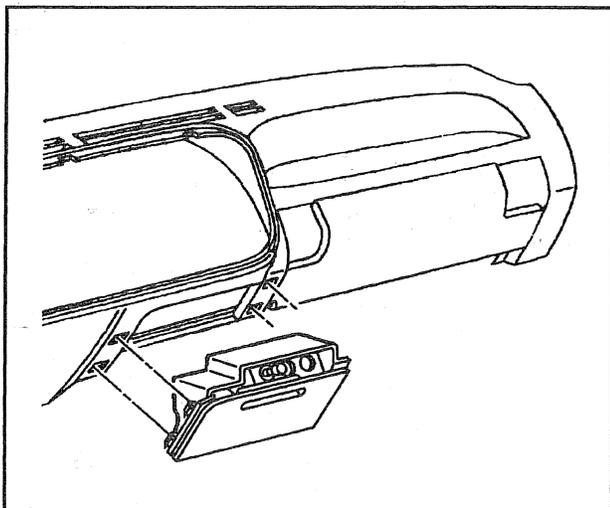


Figure 10—Ashtray

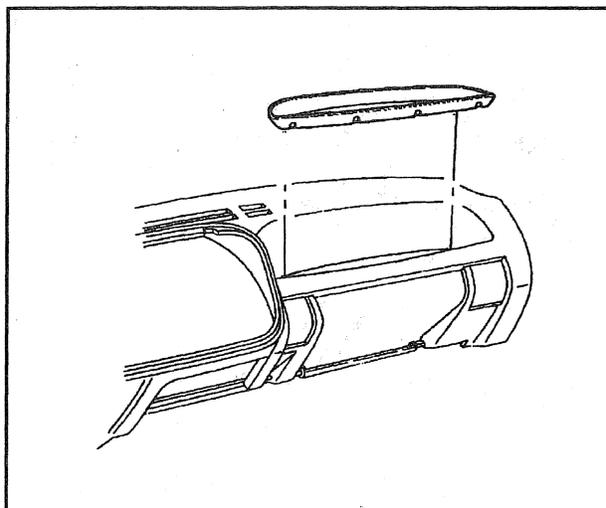


Figure 13—I/P Liner Assembly

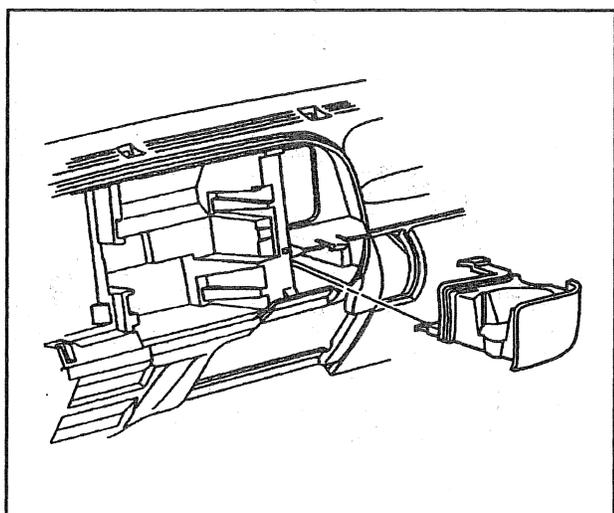


Figure 11—Cupholder

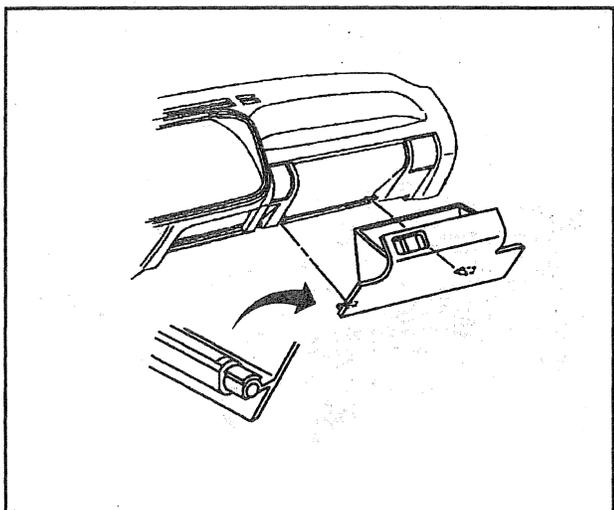


Figure 12—I/P Storage Compartment

- Rear lamp harness.
- SIR system harness.
- Relay center.

5. Antenna lead-in.
6. Steering shaft bolt.
7. Left and right hinge pillar trim panels (figure 2).
8. Brake release handle from the cable.
  - Clip releases handle from cable.
9. Four lower bolster screws (figure 3).
  - A. Unsnap bolster.
  - B. Twist brake release cable to disengage.
  - C. Lap cooler hose.
10. Reaction plate assembly.
11. Tie bar.
12. 8-way column connector.
13. 48-way connector retainer to access two lower column nuts.
14. Shift cable (automatic transmission).
15. Steering column from the vehicle.
16. Shift levers.
  - A. Transfer case knob by pulling straight up.
    - Four wheel drive models must be in 4-LO range.
  - B. Manual transmission (if equipped).
17. Left and right lower I/P pivot bolts (figure 4).
18. Center support screw (figure 5).
19. Three upper I/P support screws.
20. I/P from the cowl.
21. Park brake release cable.
22. Electrical connectors (as necessary).
  - DERM
  - HVAC
  - 22-way engine harness
  - Stoplamp switch
  - VSS calibrator module
  - Clutch or Brake release switches
  - Electronic accelerator (Diesel)
  - HVAC control cables (if equipped).
23. I/P from the vehicle.

At this point, I/P removal is complete. Continue with the next step if replacing or refinishing the I/P.

1. Accessory lamp switch(es) as necessary (figures 6 and 7).
  2. Headlamp switch.
  3. Instrument cluster trim (figure 8).
  4. HVAC control assembly.
    - A. Electrical connectors.
    - B. Cables (if equipped).
  5. Instrument cluster screws.
- NOTICE: Refer to "ESD Notice" on page 10A4-1.**
6. Instrument cluster.
  7. I/P auxiliary storage compartments (if equipped) (figure 9).
  8. Ashtray (figure 10).
    - Electrical connectors.
  9. I/P cupholder (figure 11).
    - Retainer inserts from underneath.
    - Twist to the left to release.
  10. Two air distributor duct screws.
  11. Antenna lead-in.
    - Squeeze clips from front of I/P to release duct.
  12. Air distributor duct from the I/P.
  13. Rosebud retainers on right side of I/P for harness.
  14. Instrument panel compartment lamp.
    - Slide to release.
  15. I/P storage compartment (figure 12).
    - Squeeze compartment to release.
  16. I/P liner assembly (figure 13).
  17. Low coolant module (diesel only).
  18. Harness from the I/P.
  19. DLC.
    - One screw and slide out.
  20. Rosebud retaining harness to accessory switches.
  21. Fuse panel and courtesy lamps switch.
  22. Unclip turn signal flasher.
  23. Ground screw.
  24. Harness from the I/P.
  25. Jumper harness to remote playback device (if equipped).
  26. Antenna lead-in.
  27. Courtesy lamp switches.
  28. Side defog outlet.
  29. Park brake cable clip.

**↔ Install or Connect (Figures 2 through 13)**

1. Antenna lead-in.
2. Jumper harness to remote playback device (if equipped).
3. Harness to the I/P.
4. Right side harness rosebud retainer.
5. Fuse panel and two screws.
6. Courtesy lamp switch and electrical connector.
7. I/P cluster connector.
  - Insert through I/P and pull back to seat.
8. Clip harness to the I/P.
9. Accessory outlet wiring.
10. Harness to accessory switches.
  - Feed through holes.
11. Ashtray.

**NOTICE: Refer to "ESD Notice" on page 10A4-1.**

12. Instrument cluster with four screws.
13. HVAC control assembly.
  - Electrical connectors.
  - Cables (if equipped). Refer to SECTION 1A.
14. Radio electrical connectors and lead-in (if equipped).
  - Radio snap fits to the I/P.
15. I/P auxiliary storage compartments (if equipped).
16. I/P cupholder.
  - Twist retainer to the right.
17. Air distribution duct.
  - A. Two snap-fit clips.
  - B. Two screws.
18. DLC.
19. I/P cluster trim.
20. Side window defogger outlets.
21. I/P to the vehicle.
  - Rest I/P on lower pivot studs.
22. Convenience center to the cowl.
23. Lap cooler duct.
24. DERM to the center I/P support.
25. Nut to steering column support.
26. Park brake cable.
27. I/P pivot nuts.
28. Upper I/P support screws.
29. Steering column to the vehicle with four nuts.
30. 48-way connector and screw built onto steering column.
31. Tie bar with four nuts.
32. Shift cable (automatic transmission).
33. Accelerator electrical connector (diesel).
34. Knee bolster close out panel with two screws.
35. Reaction plate with four screws.
36. Shift knobs.
  - Manual transmission.
  - Transfer case.
37. Lap cooler hose.
38. Park brake cable.
39. Knee bolster trim snaps into place.
  - Four screws from the bottom.
40. Park brake handle clips into place.
41. Antenna lead-in at the fender.
42. Bulkhead connector.
  - A. Two retainer screws.
  - B. One center screw.
43. Electrical connectors in the engine compartment.
  - Cruise control (if equipped).
  - Rear lamps harness.
  - Forward lamps harness.
  - SIR.
  - Relay center.
44. I/P storage compartment.
  - A. Two pivot points.
  - B. Compartment snaps into place.
45. Steering shaft and bolt.
46. Enable SIR system. Refer to SECTION 9J.
47. Negative battery cable.

**SUNSHADE REPLACEMENT**

**↔** Remove or Disconnect (Figure 14)

1. Screws.
2. Electrical connector (if equipped).
3. Sunshade.

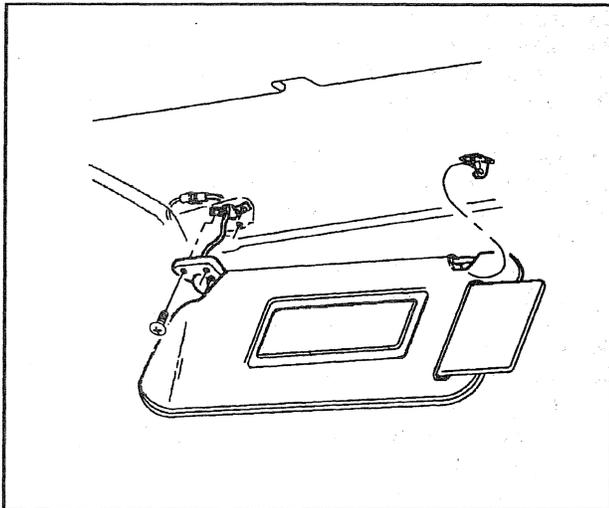
**↔** Install or Connect (Figure 14)

1. Electrical connector (if equipped).
2. Sunshade.
3. Screws.

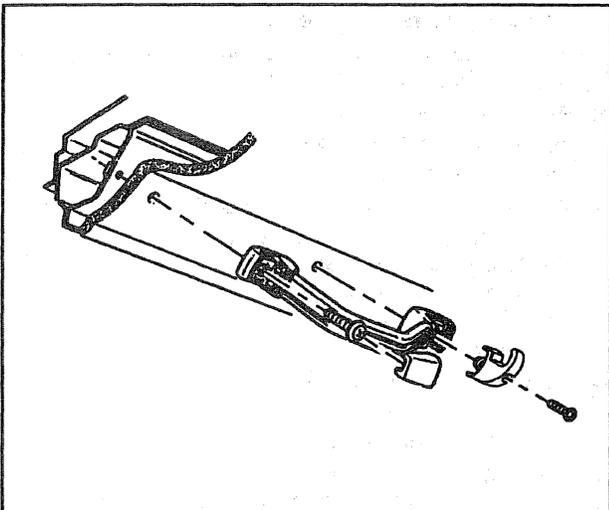
**ASSIST HANDLE REPLACEMENT**

**↔** Remove or Disconnect (Figures 15 through 18)

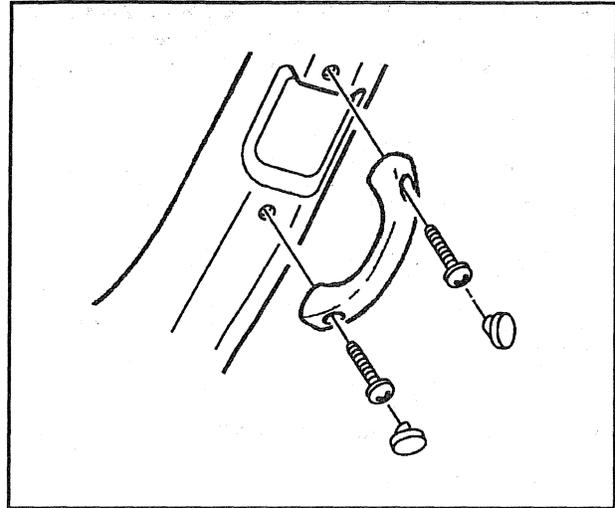
1. Handle screw covers.
2. Screws.
3. Handle.



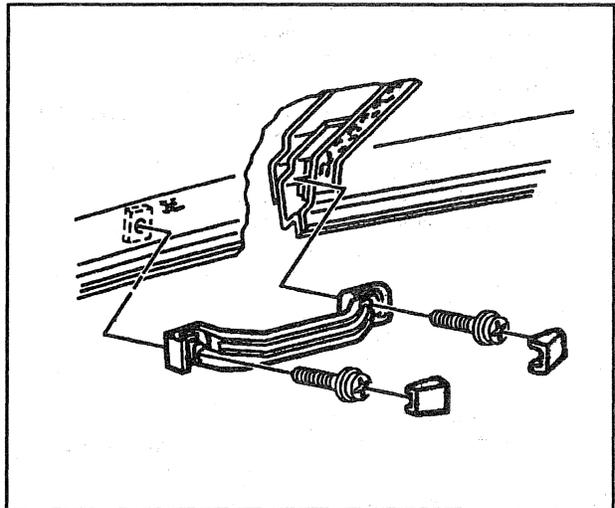
**Figure 14—Sunshade Replacement**



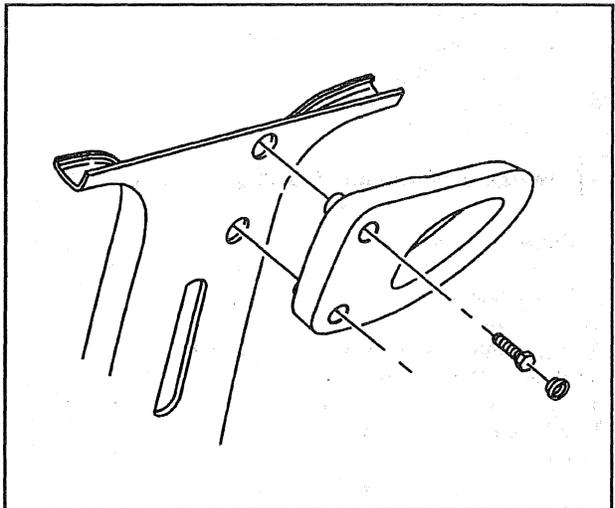
**Figure 15—Assist Handle Replacement (Rear)**



**Figure 16—Assist Handle Replacement (Front)**



**Figure 17—Assist Handle Replacement (Right Side Only)**



**Figure 18—Assist Handle Replacement (Rear Side Door)**

**↔↔ Install or Connect (Figures 15 through 18)**

1. Handle.
2. Screws.
3. Handle screw covers.

**COAT HOOK REPLACEMENT**

**↔↔ Remove or Disconnect (Figure 19)**

1. Screw.
2. Coat hook.

**↔↔ Install or Connect (Figure 19)**

1. Coat hook.
2. Screw.

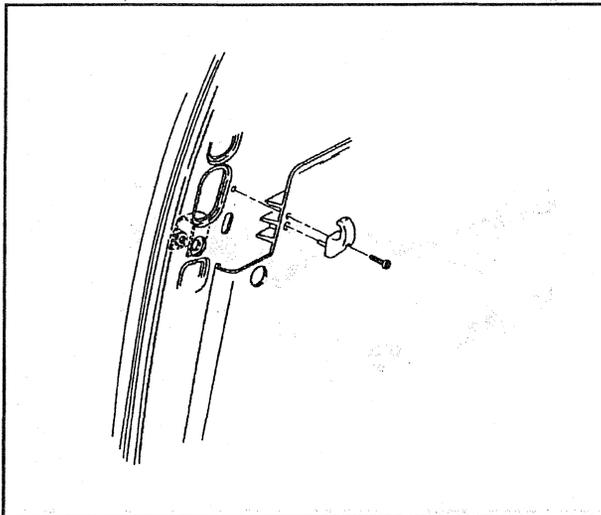


Figure 19—Coat Hook Replacement

**FLOOR STORAGE COMPARTMENT REPLACEMENT**

**↔↔ Remove or Disconnect (Figure 20)**

1. Storage bin.
2. Two screws.
3. Storage compartment by sliding forward.

**↔↔ Install or Connect (Figure 20)**

1. Storage compartment by sliding onto bracket.
2. Two screws.
3. Storage bin.

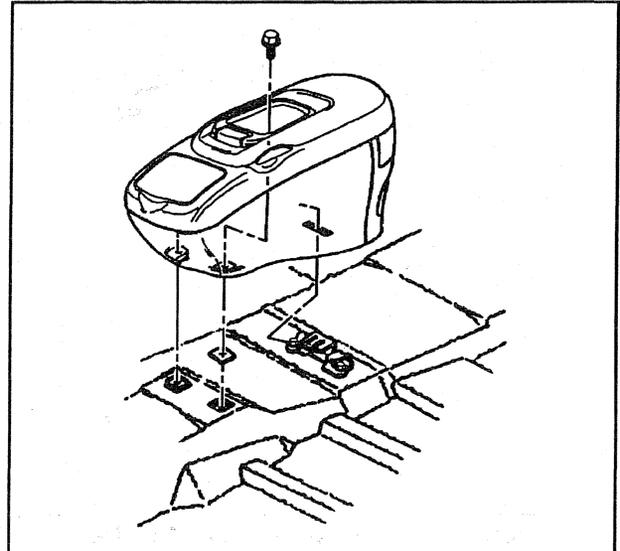


Figure 20—Floor Storage Compartment

**UPPER WINDSHIELD GARNISH MOLDING REPLACEMENT**

**↔↔ Remove or Disconnect**

1. Upper windshield trim.
2. Roof side door trim.
3. Windshield pillar trim.

**↔↔ Install or Connect**

1. Windshield pillar trim.
2. Roof side door trim.
3. Upper windshield trim.

**WINDSHIELD GARNISH MOLDING REPLACEMENT**

**↔↔ Remove or Disconnect (Figure 21)**

1. Hinge pillar trim panel. Refer to "Hinge Pillar Trim Panel Replacement."
2. Assist handle (if equipped).
3. Windshield garnish molding.

- Pull molding straight out to release retainers.

**↔↔ Install or Connect (Figure 21)**

1. Windshield garnish molding.
  - Insert molding retainers into slots and press.
2. Hinge pillar trim panel. Refer to "Hinge Pillar Trim Panel Replacement."
3. Assist handle (if equipped).

## 10A4-8 INTERIOR TRIM

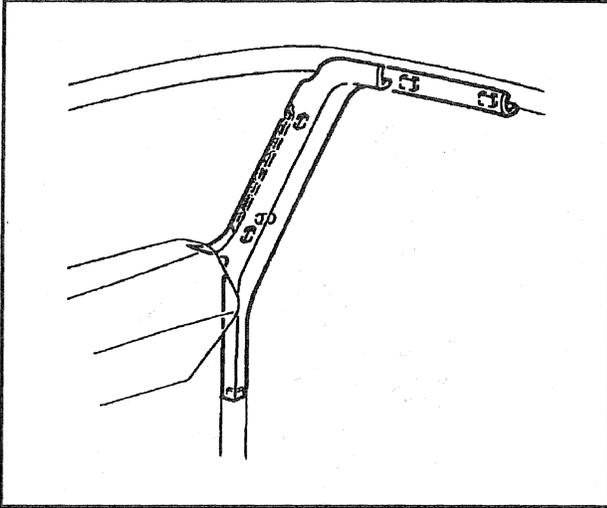


Figure 21—Windshield Garnish Molding Replacement

### REAR SIDE DOOR UPPER GARNISH MOLDING REPLACEMENT

↔ Remove or Disconnect (Figure 22)

1. Molding by pulling straight down.

↔ Install or Connect (Figure 22)

1. Molding by inserting retainers into slots and pressing into place.

### HEADLINER REPLACEMENT

PICKUP, EXTENDED CAB, AND CREW CAB

↔ Remove or Disconnect (Figures 23, 24, and 25)

1. Sunshades. Refer to "Sunshade Replacement."

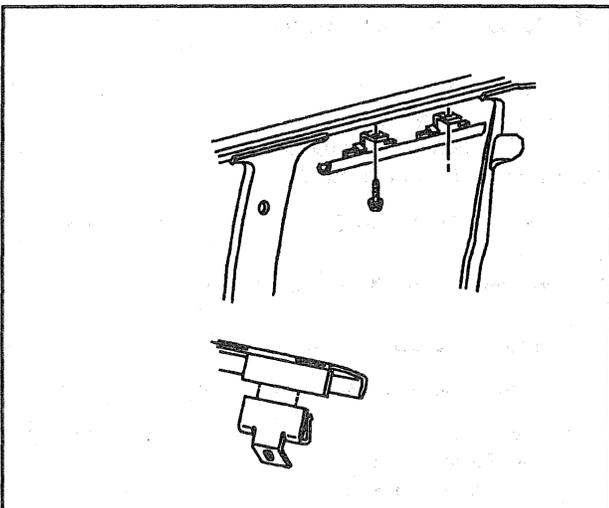


Figure 22—Rear Side Door Upper Garnish Molding Replacement

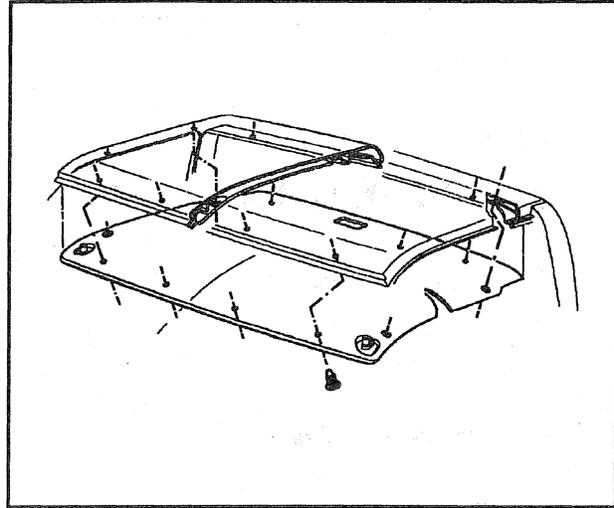


Figure 23—Headliner (Pickup)

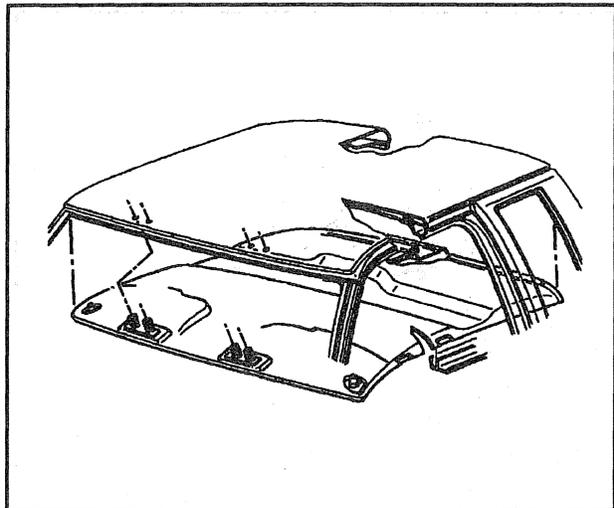


Figure 24—Headliner (Extended Cab)

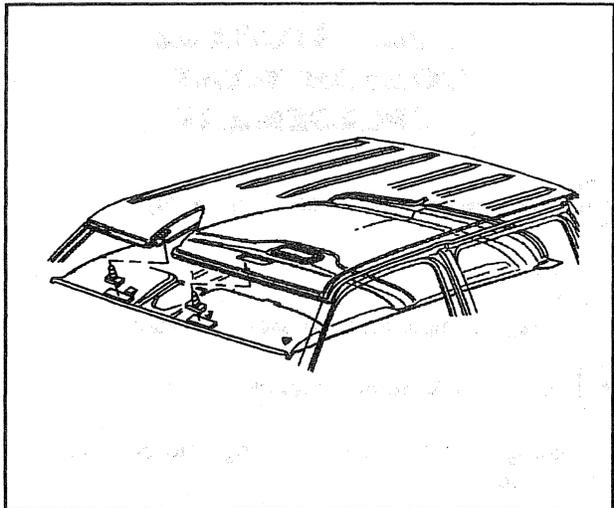


Figure 25—Headliner (Crew Cab)

2. Assist handles (if equipped). Refer to "Assist Handle Replacement."
3. Rear window lower molding. Refer to "Rear Window Lower Garnish Molding Replacement."
4. Quarter panel trim. Refer to "Quarter Panel Trim Replacement."
5. Rear window upper molding. Refer to "Rear Window Upper Garnish Molding Replacement."
6. Upper windshield garnish molding (if equipped). Refer to "Upper Windshield Garnish Molding Replacement."
7. Dome lamp.
8. Headliner.

- A. Grasp the panel on the left and right sides near the front of the cab.
- B. Disengage the front of the panel from the roof.

9. Retainers from trim panel.

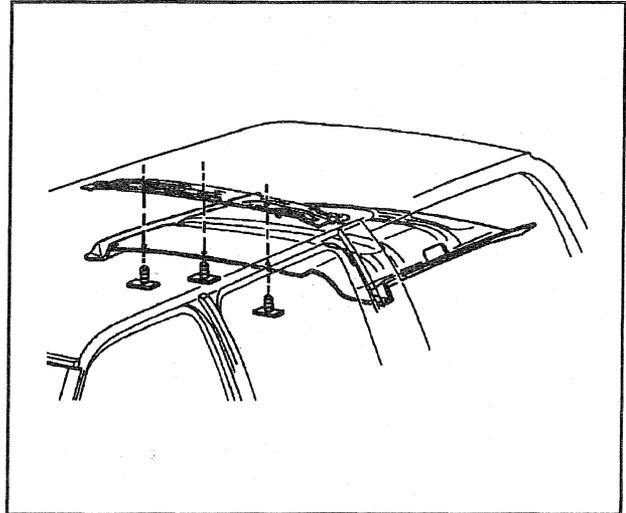
**↔ Install or Connect (Figures 23, 24, and 25)**

1. Retainers to the trim panel.
2. Headliner to the vehicle.
  - Insert the retainers into the windshield frame.
3. Upper windshield garnish molding (if equipped). Refer to "Upper Windshield Garnish Molding Replacement."
4. Rear window upper molding. Refer to "Rear Window Upper Garnish Molding Replacement."
5. Quarter panel trim. Refer to "Quarter Panel Trim Replacement."
6. Rear window lower molding. Refer to "Rear Window Lower Garnish Molding Replacement."
7. Dome lamp.
8. Assist handle (if equipped). Refer to "Assist Handle Replacement."
9. Sunshades. Refer to "Sunshade Replacement."

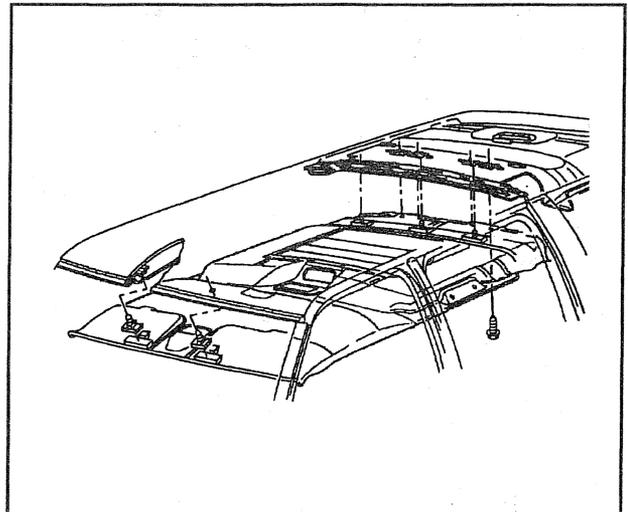
**SUBURBAN AND UTILITY**

**↔ Remove or Disconnect (Figures 26, 27, and 28)**

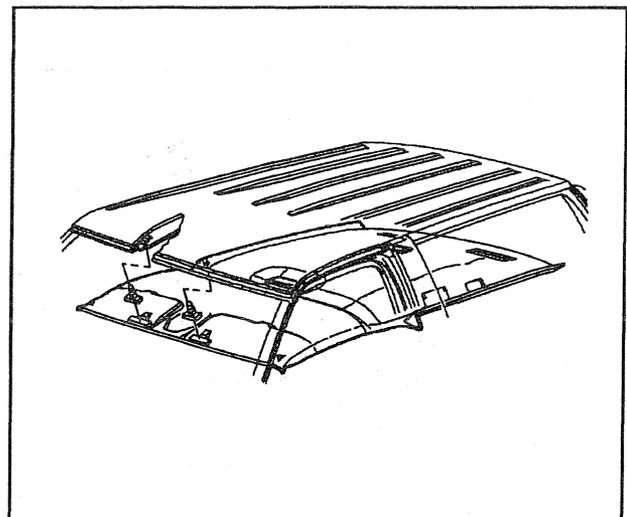
1. Assist handles (if equipped). Refer to "Assist Handle Replacement."
2. Sunshades. Refer to "Sunshade Replacement."
3. Windshield garnish moldings (if equipped). Refer to "Windshield Garnish Molding Replacement."
4. Coat hooks. Refer to "Coat Hook Replacement."
5. Dome lamps.
6. HVAC control assembly (if equipped). Refer to SECTION 1B.
7. Upper windshield garnish moldings. Refer to "Upper Windshield Garnish Molding Replacement."
8. Rear seat belt trim covers and bolt.
9. Side door lock pillar molding. Refer to "Pillar Molding Replacement."
10. Upper center trim panel.
11. Cargo door lock pillar molding panel. Refer to "Pillar Molding Replacement."
12. Overhead console. Refer to "Overhead Console Replacement."



**Figure 26—Rear Headliner (Suburban w/o Rear A/C)**



**Figure 27—Rear Headliner (Suburban w/Rear A/C)**



**Figure 28—Headliner (Two-Door Utility)**

## 10A4-10 INTERIOR TRIM

### ↔ Install or Connect (Figures 26, 27, and 28)

1. Overhead console. Refer to "Overhead Console Replacement."
2. Windshield garnish moldings.
3. Assist handles.
4. Coat hooks.
5. Dome lamps.
6. HVAC control assembly (if equipped).
7. Upper windshield garnish moldings. Refer to "Upper Windshield Garnish Molding Replacement."
8. Rear seat belt upper trim covers.
9. Side door lock pillar molding. Refer to "Pillar Molding Replacement."
10. Upper center trim panel.
11. Cargo door lock pillar molding panel. Refer to "Pillar Molding Replacement."
12. Sunshades.
13. Assist handles (if equipped).

### OVERHEAD CONSOLE REPLACEMENT

### ↔ Remove or Disconnect (Figure 29)

1. Console to the roof screw.
2. Electrical connectors.
3. Console.

### ↔ Install or Connect (Figure 29)

1. Console to the roof.
2. Electrical connectors.
3. Console to the roof screw.

 Tighten

- Overhead Console Screw to 1.9 N.m (17 lbs. in.).

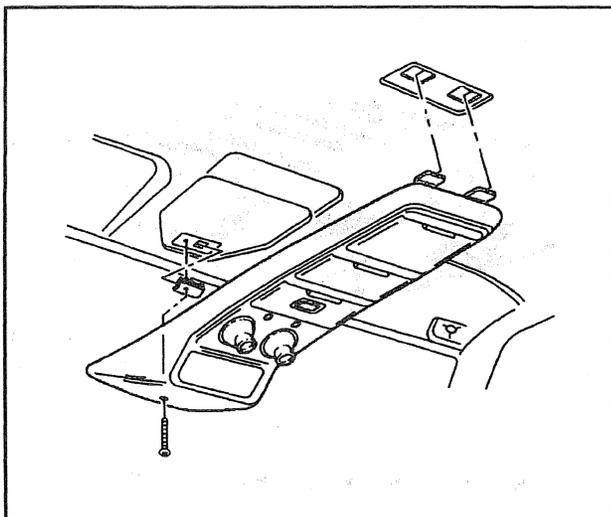


Figure 29—Overhead Console

### REAR WINDOW UPPER GARNISH MOLDING REPLACEMENT

#### PICKUP, CREW CAB, SUBURBAN AND UTILITY

### ↔ Remove or Disconnect (Figures 31 and 32)

1. Retainer screws.
2. Molding from rear body panel.

### ↔ Install or Connect (Figures 31 and 32)

1. Molding to the rear body panel.

**NOTICE:** Refer to "Notice" on page 10A4-1.

2. Retainer screws.

 Tighten

- Upper Garnish Molding Screws to 1.9 N.m (17 lbs. in.).

#### EXTENDED CAB

### ↔ Remove or Disconnect (Figure 30)

1. Quarter panel trim. Refer to Quarter Panel Trim Replacement.
2. Molding from rear body panel.

### ↔ Install or Connect (Figure 30)

1. Molding to rear body panel.
2. Quarter panel trim. Refer to Quarter Panel Trim Replacement.

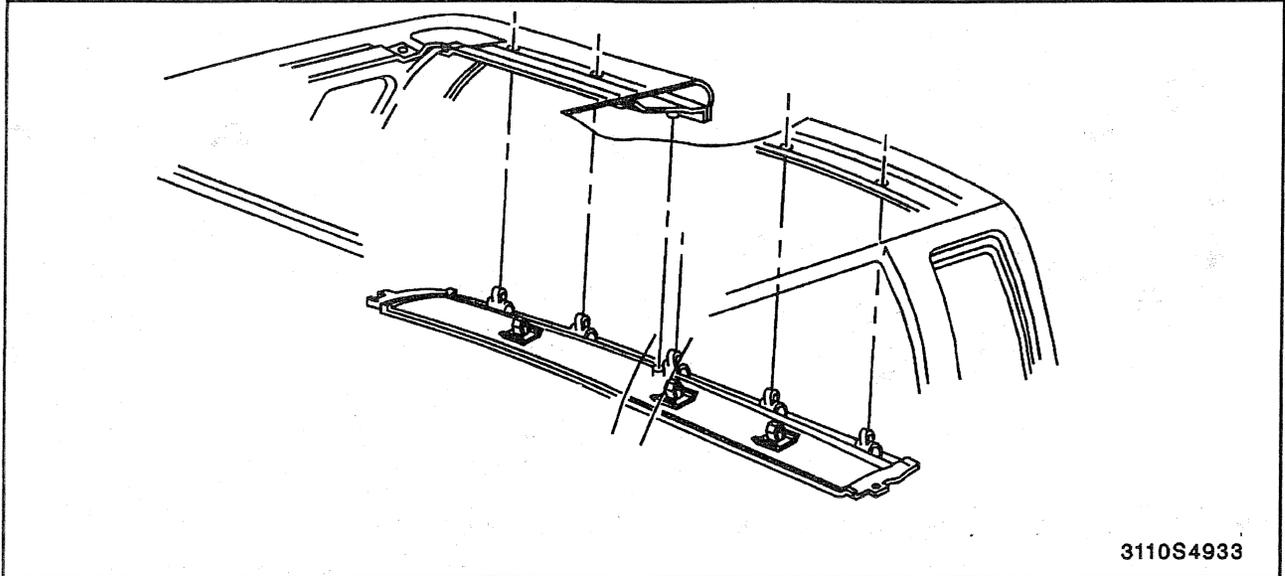
### REAR WINDOW LOWER GARNISH MOLDING REPLACEMENT

### ↔ Remove or Disconnect (Figure 33)

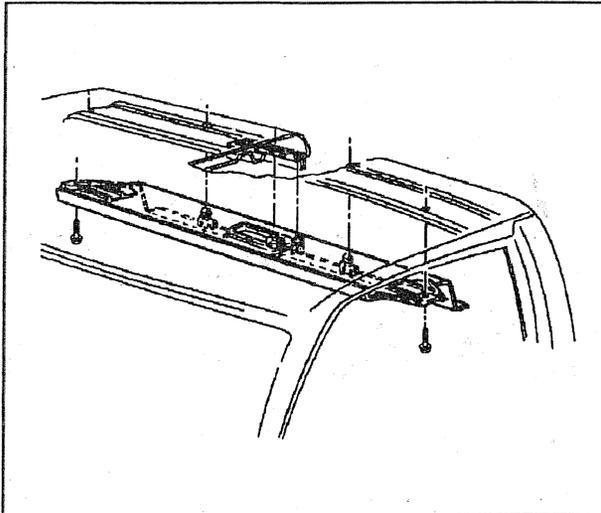
1. Lightly pull lower edge of molding to release the four clips.
2. Lift molding up and away from glass to release upper retainers.

### ↔ Install or Connect (Figure 33)

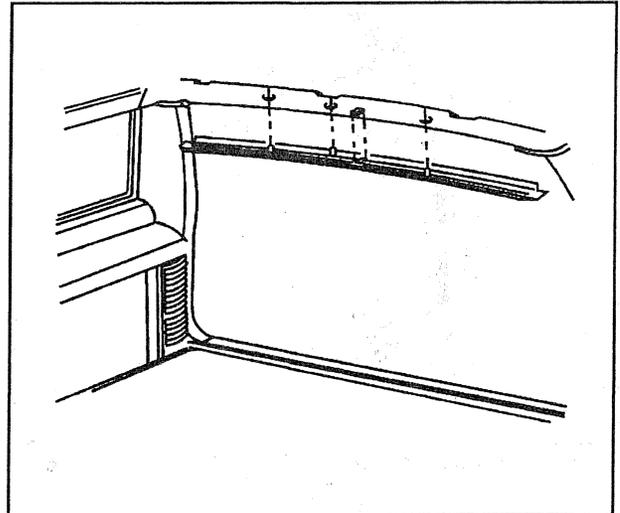
1. Align molding clips with holes in body panel along back glass.
2. Snap molding into place by applying light pressure along top of molding at glass.
3. Align lower row of molding clips, then snap lower portion of molding into place.



**Figure 30—Rear Window Upper Garnish Molding (Extended Cab)**



**Figure 31—Rear Window Upper Garnish Molding (Pickup and Crew Cab)**



**Figure 32—Rear Window Upper Garnish Molding (Suburban and Utility)**

**QUARTER PANEL TRIM REPLACEMENT**

**PICKUP, EXTENDED CAB, AND CREW CAB**

**↔** Remove or Disconnect (Figures 34 and 35)

1. Coat hook.
2. Seat belt guide.
3. Seat belt retractor. Refer to SECTION 10A2.
4. Jack cover, jack, and jack tray (right side).
5. Rear window lower garnish molding. Refer to "Rear Window Lower Garnish Molding Replacement."
6. Quarter panel trim screws (Pickup and crew cab only).
7. Rear screw from the sill plate (Pickup and crew cab only).
8. Quarter panel.

**→** Install or Connect (Figure 34 and 35)

1. Quarter panel.

**NOTICE:** Refer to "Notice" on page 10A4-1.

2. Panel screws (Pickup and crew cab only).

**Tighten**

- Quarter panel trim screws to 1.9 N.m (17 lbs. in.).

3. Rear screw into the sill plate.
4. Rear window lower garnish molding.
5. Jack tray, jack, and cover (right side).
6. Seat belt retractor.
7. Seat belt guide.
8. Coat hook.

## 10A4-12 INTERIOR TRIM

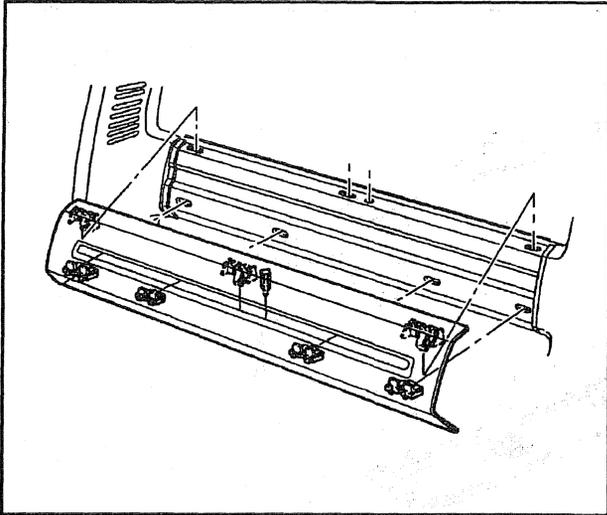


Figure 33—Rear Window Lower Garnish Molding

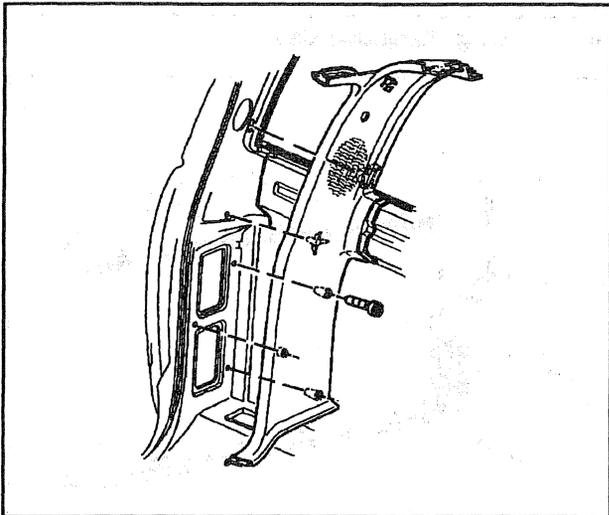


Figure 34—Quarter Panel Trim (Pickup and Crew Cab)

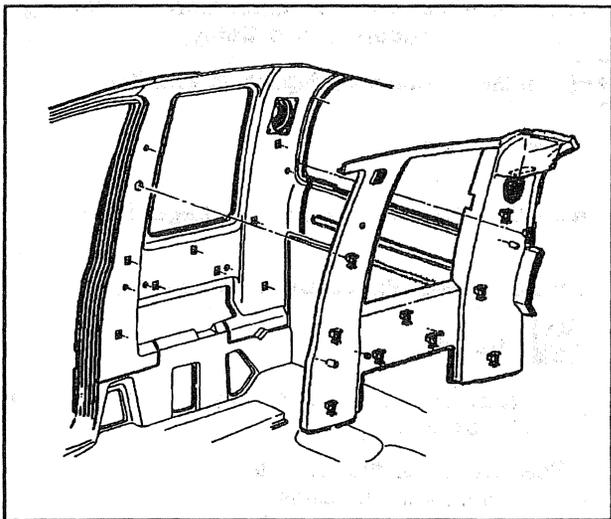


Figure 35—Quarter Panel Trim (Extended Cab)

### SUBURBAN AND UTILITY

#### Right Side

↔ Remove or Disconnect (Figures 36 through 46)

1. Rear seat. Refer to SECTION 10A2.
2. Arm rest to side panel screws. (Suburban only)
3. Arm rest from the quarter panel trim.
4. Rear blower motor trim cover (if equipped).
5. Cargo door pillar molding. Refer to "Pillar Molding Replacement."
6. Rear door lock pillar molding (Suburban only). Front door lock pillar molding (Utility). Refer to "Pillar Molding Replacement."
7. Quarter panel trim screws.
8. Quarter panel trim from the vehicle.

• Lift panel to release from vehicle.

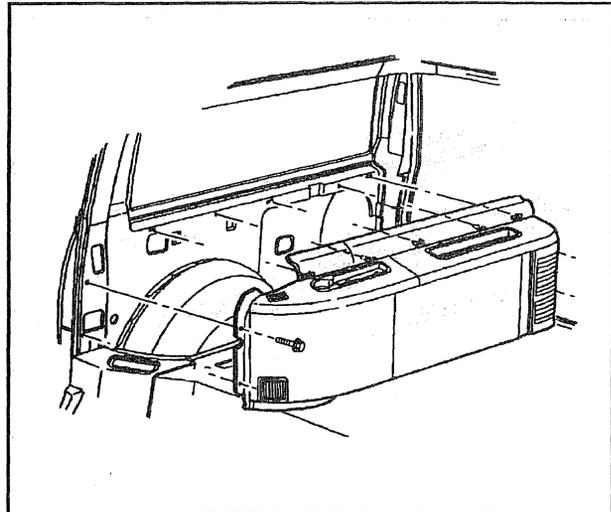


Figure 36—Right Quarter Panel Trim (Suburban)

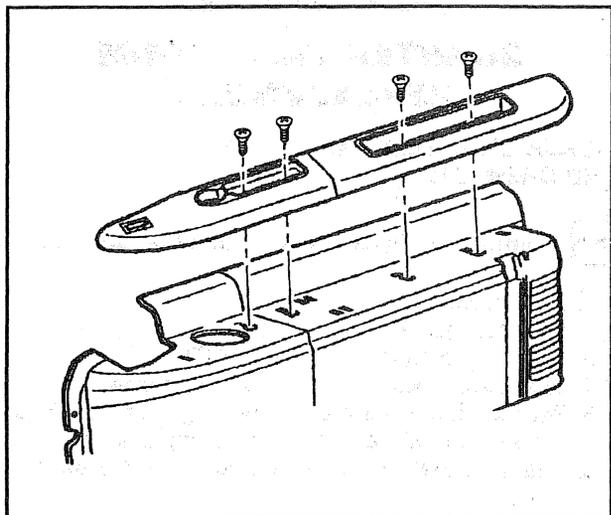
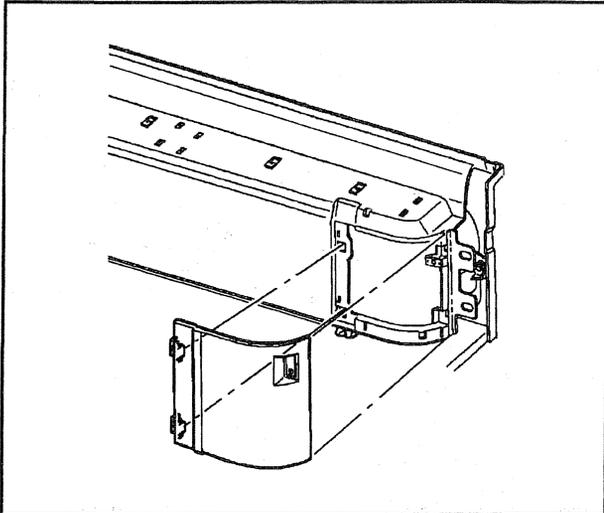


Figure 37—Right Quarter Panel Trim (Upper Arm Rest)



**Figure 38—Right Quarter Panel Trim (Access Door)**

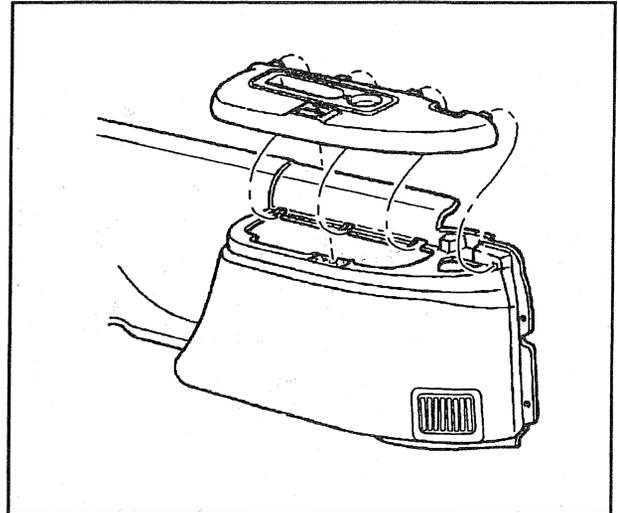
**→←** Install or Connect (Figure 36 through 46)

**NOTICE:** For steps 2 and 8, refer to "Notice" on page 10A4-1.

1. Quarter panel trim to the vehicle.
2. Quarter panel trim screws.

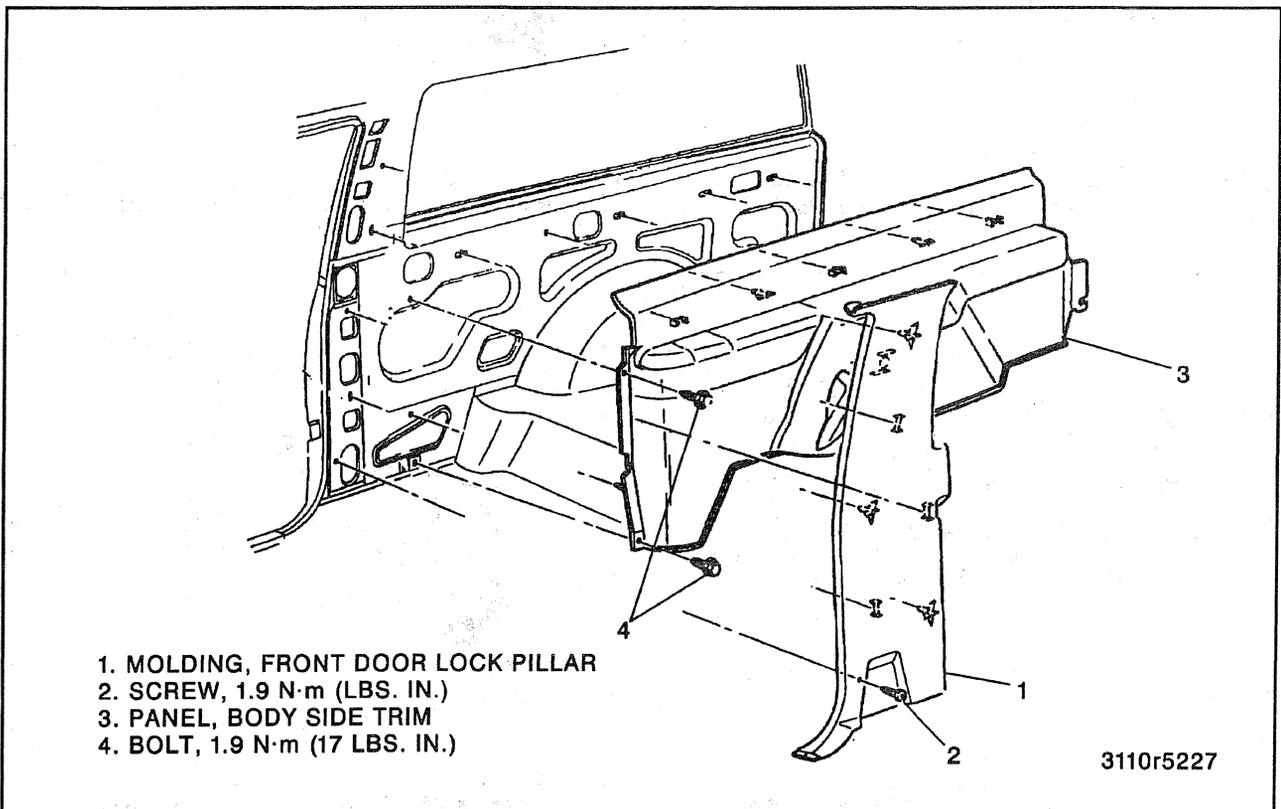
**⌚** Tighten

- Quarter Panel Trim Screws to 1.9 N·m (17 lbs. in.).



**Figure 40—Left Quarter Panel Trim (Upper Armrest-Suburban)**

3. Rear door lock pillar molding to pillar (Suburban only).
4. Front door lock pillar molding to pillar (Utility only).
  - Refer to "Pillar Molding Replacement."
5. Cargo door pillar molding to pillar.
  - Refer to "Pillar Trim Panel Replacement."
6. Rear blower motor trim cover (if equipped).
7. Arm rest to quarter panel trim.
8. Arm rest to the quarter panel trim screws.



1. MOLDING, FRONT DOOR LOCK PILLAR
2. SCREW, 1.9 N·m (LBS. IN.)
3. PANEL, BODY SIDE TRIM
4. BOLT, 1.9 N·m (17 LBS. IN.)

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**Figure 39—Quarter Panel Trim (Utility)**

# 10A4-14 INTERIOR TRIM

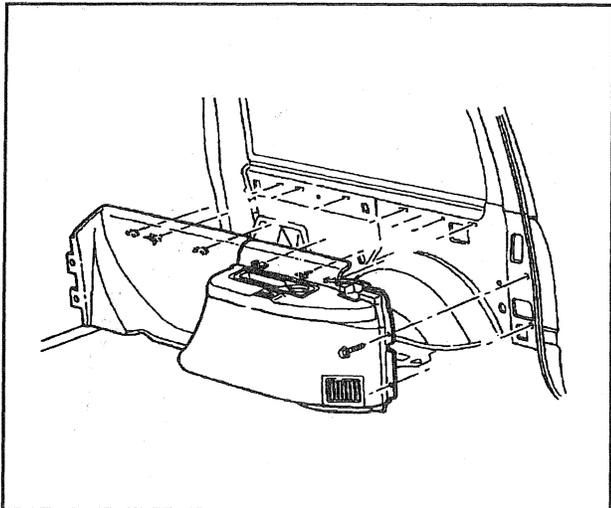


Figure 41—Left Quarter Panel Trim (Lower-Suburban)

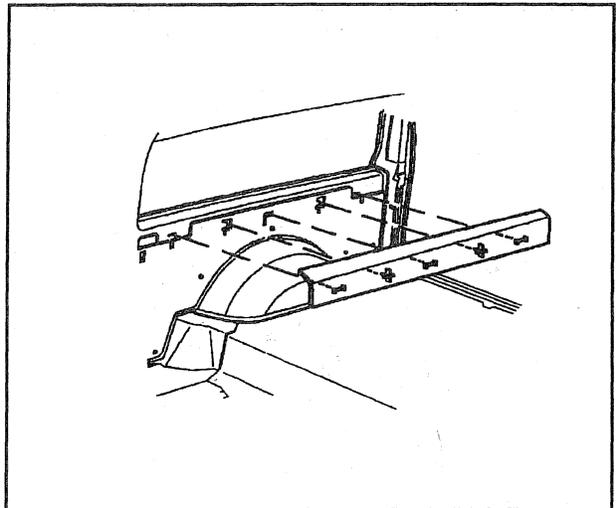


Figure 44—Rear Window Garnish Molding (Utility w/o RPO YE9)

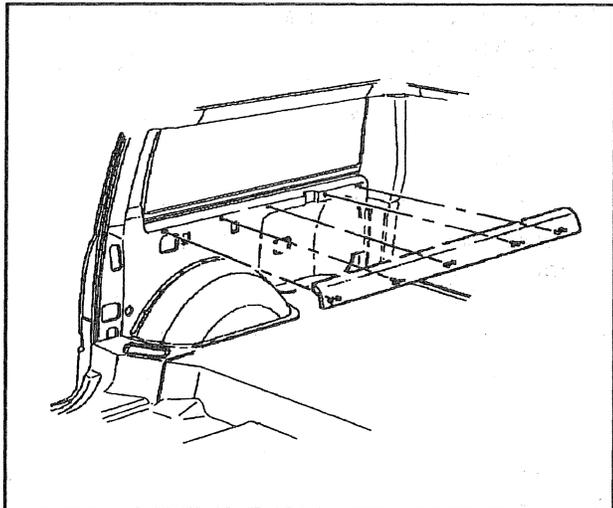


Figure 42—Rear Window Garnish Molding (Suburban w/o RPO YE9)

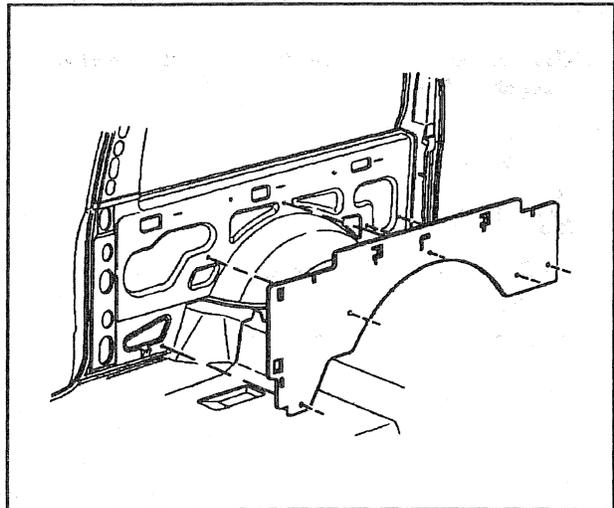


Figure 45—Quarter Panel Trim (Right Side—Two door Utility w/o RPO YE9)

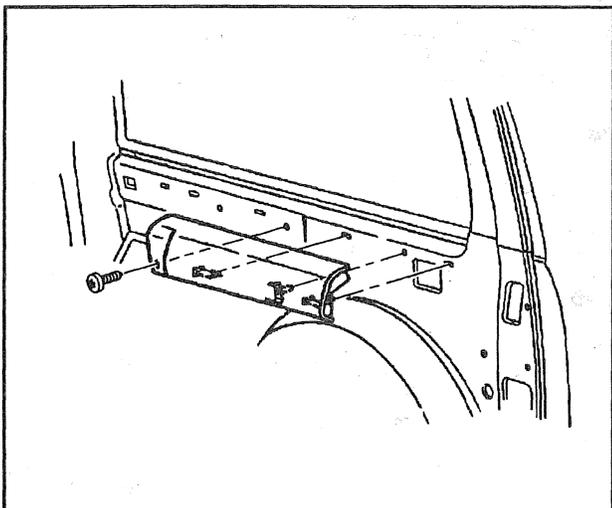


Figure 43—Rear Window Garnish Molding

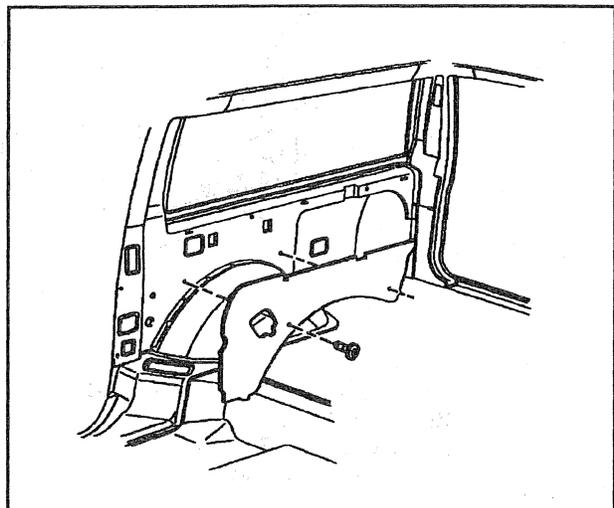


Figure 46—Quarter Panel Trim (Right Side—Suburban w/o RPO YE9)

 **Tighten**

- Quarter Panel Trim Armrest Screws to 1.9 N.m (17 lbs. in.).

9. Rear seat. Refer to SECTION 10A2.

**Left Side**

 **Remove or Disconnect**

1. Rear seat. Refer to SECTION 10A2.
2. Spare tire cover.
3. Spare tire and jack (Utility).
4. Spare tire rest trim covers.
5. Spare tire rest bolts.
6. Spare tire rest from the vehicle.
7. Spare tire holder from the floor.
8. Spare tire I-bolt from the vehicle.
9. Arm rest.
10. Cargo door pillar moldings. Refer to "Pillar Trim Panel Replacement".
11. Intermediate seat belt to rear door pillar bolt. Refer to SECTION 10A2.
12. Intermediate seat belt anchor to the floor bolt. Refer to SECTION 10A2.
13. Rear door lock pillar molding. Refer to "Pillar Trim Panel Replacement."
14. Quarter panel trim screws.
15. Quarter panel trim from the vehicle.

 **Install or Connect**

1. Quarter panel trim to vehicle.

**NOTICE:** Refer to "Notice" on page 10A4-1.

2. Quarter panel screws.

 **Tighten**

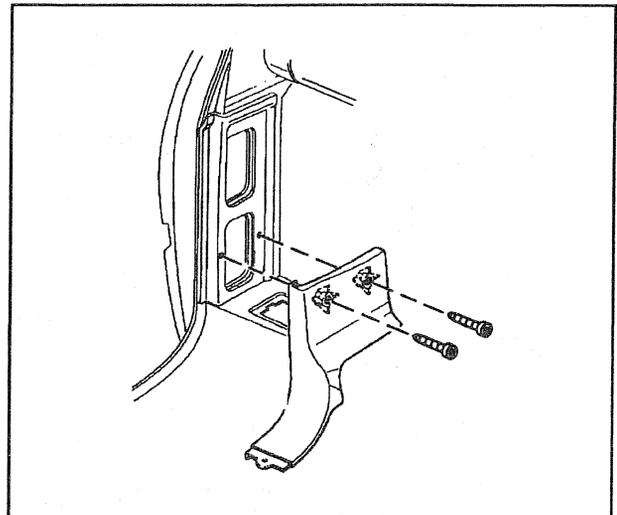
- Quarter Panel Screws to 1.9 N.m (17 lbs. in.).
3. Rear door lock pillar trim panel (Suburban only). Front door lock pillar (Utility only). Refer to "Pillar Trim Panel Replacement."
  4. Intermediate seat belt anchor to floor bolt.
  5. Intermediate seat belt to rear door pillar bolt.
  6. Cargo door pillar trim panels to pillar. Refer to "Pillar Trim Panel Replacement".
  7. Arm rest.
  8. Spare tire I-bolt to vehicle.
  9. Spare tire holder to floor.
  10. Spare tire rest to vehicle.
  11. Spare tire rest bolts.
  12. Spare tire rest covers and jack (Utility).
  13. Spare tire.
  14. Spare tire cover.

**LOWER REAR  
QUARTER TRIM PANEL  
REPLACEMENT**

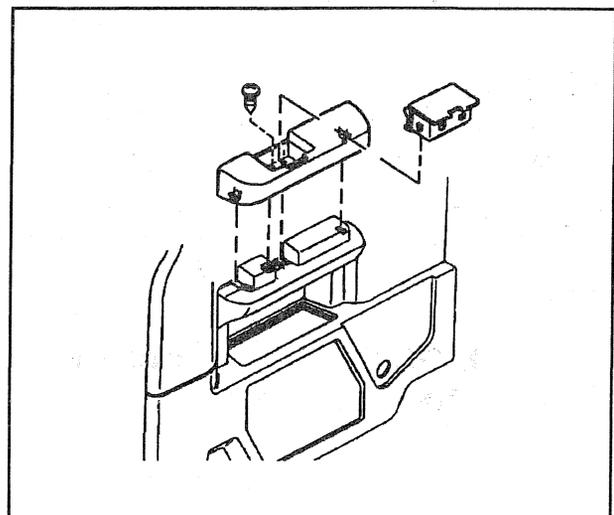
**PICKUP AND EXTENDED CAB**

 **Remove or Disconnect (Figures 47 through 50)**

1. Armrest (if equipped).
2. Pocket from the lower panel (if equipped).
3. Seat belt cover.
4. Seat belt. Refer to SECTION 10A2.
5. Door sill plate. Refer to "Door Sill Plate Replacement."
6. Seat. Refer to SECTION 10A2.
7. Four lower panel screws.
8. Panel from the vehicle.



**Figure 47—Side Rear Lower (Pickup)**



**Figure 48—Side Rear Lower Panel (Extended Cab w/Rear Seat)**

## 10A4-16 INTERIOR TRIM

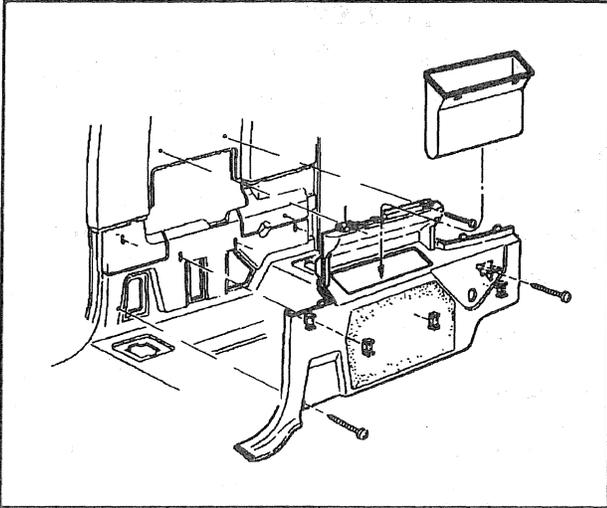


Figure 49—Side Rear Lower Panel (Extended Cab w/Rear Seat)

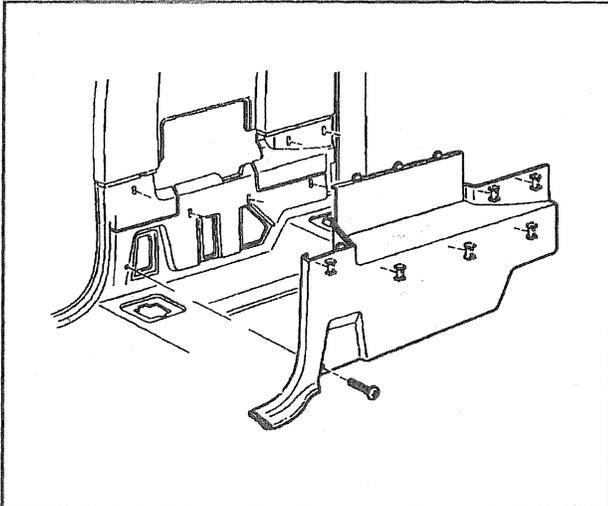


Figure 50—Side Rear Lower Panel (Extended Cab w/o Rear Seat)

⇔ Install or Connect (Figures 47 through 50)

1. Panel to the vehicle.
2. Four lower panel screws.
3. Seat. Refer to SECTION 10A2.
4. Door sill plate. Refer to "Door Sill Plate Replacement."
5. Seat belt. Refer to SECTION 10A2.
6. Seat belt cover.
7. Pocket to the lower panel (if equipped).
8. Armrest (if equipped).

### HINGE PILLAR TRIM PANEL REPLACEMENT

⇔ Remove or Disconnect (Figure 51)

1. Retainer screw.
2. Trim panel from the retainers.

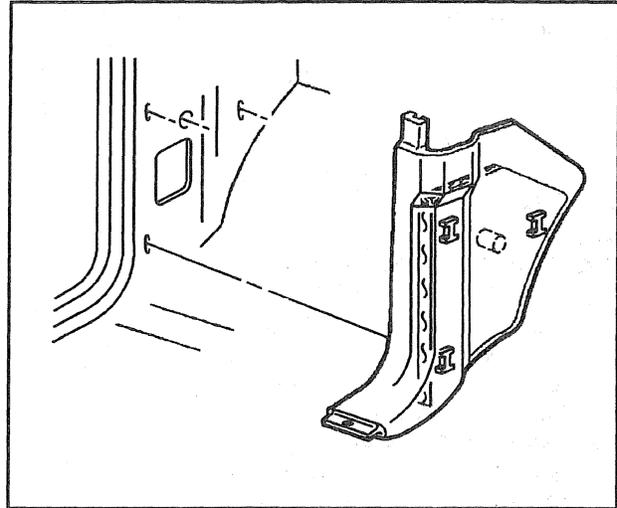


Figure 51—Hinge Pillar Trim Panel

⇔ Install or Connect (Figure 51)

1. Trim panel to the retainers.
2. Retainer screw.

### DOOR SILL PLATE REPLACEMENT

⇔ Remove or Disconnect (Figure 52)

1. Screws.
2. Sill plate.

⇔ Install or Connect (Figure 52)

1. Sill plate.
2. Screws.

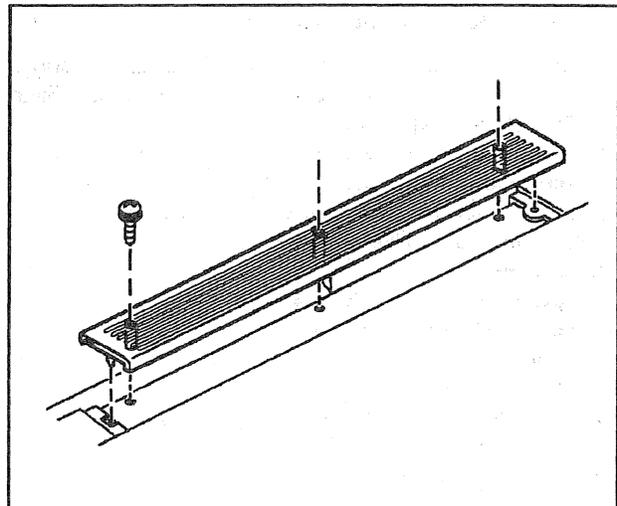


Figure 52—Door Sill Plate Replacement

## PILLAR MOLDING REPLACEMENT

SUBURBAN, UTILITY, AND CREW CAB

↔ Remove or Disconnect (Figures 53 through 57)

1. Door sill plate screws.
2. Door sill plates.
3. Seat belt to pillar anchors (side door lock pillars only). Refer to SECTION 10A2.
4. Arm rest pad (extended cab only).
5. Two upper screws from lower molding (extended cab only).
6. Pillar molding screws
7. Pillar moldings.

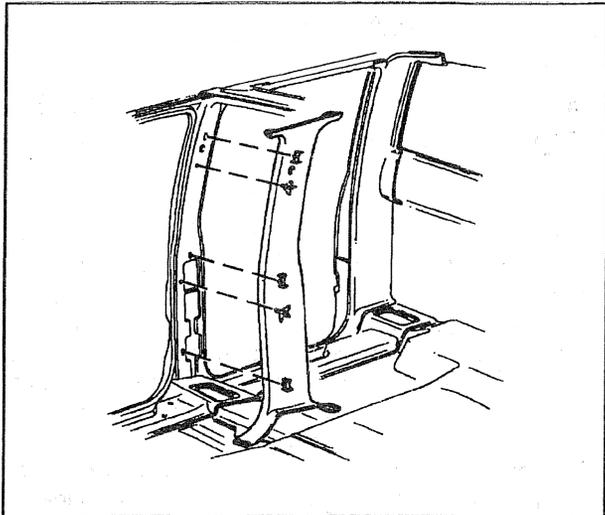


Figure 53—Front Side Door Lock Pillar Garnish Molding (Crew Cab)

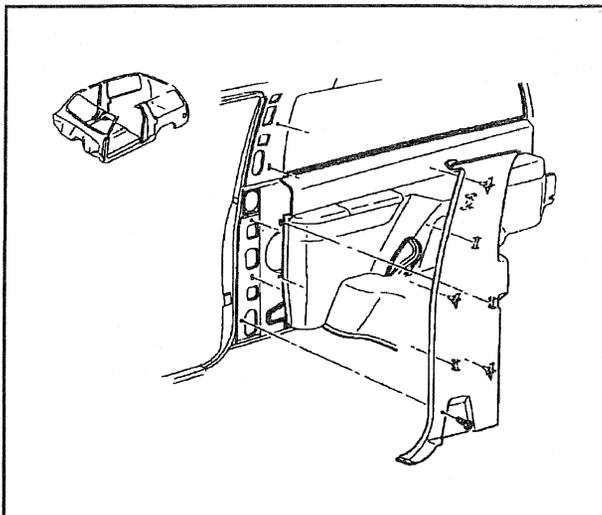


Figure 54—Front Side Door Lock Pillar Garnish (Two-Door Utility)

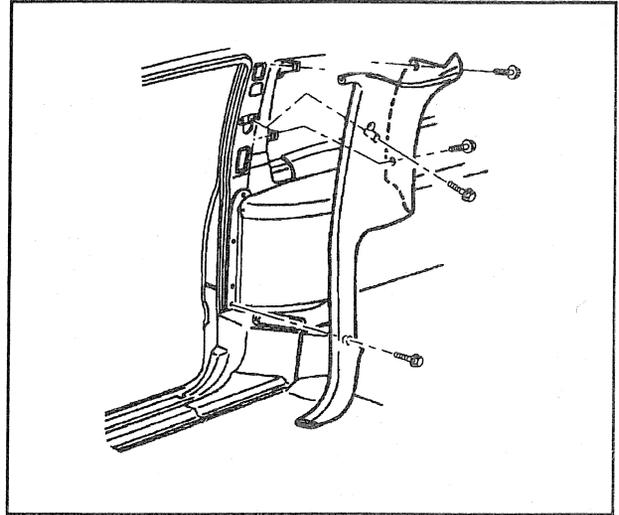


Figure 55—Right Rear Side Door Lock Pillar Garnish (Suburban)

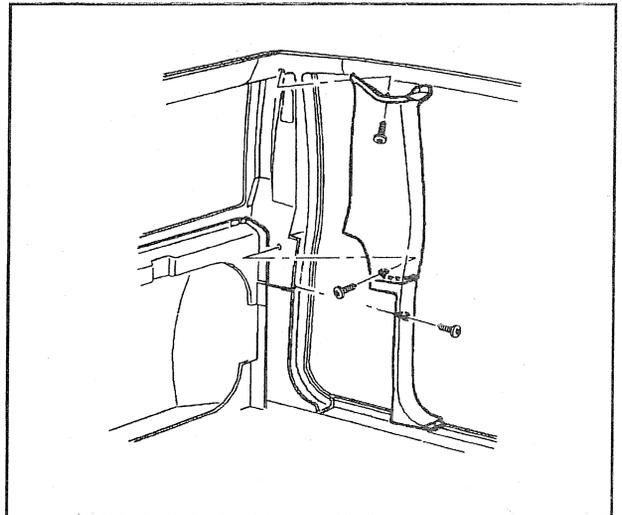


Figure 56—Rear Body Corner Garnish (Suburban)

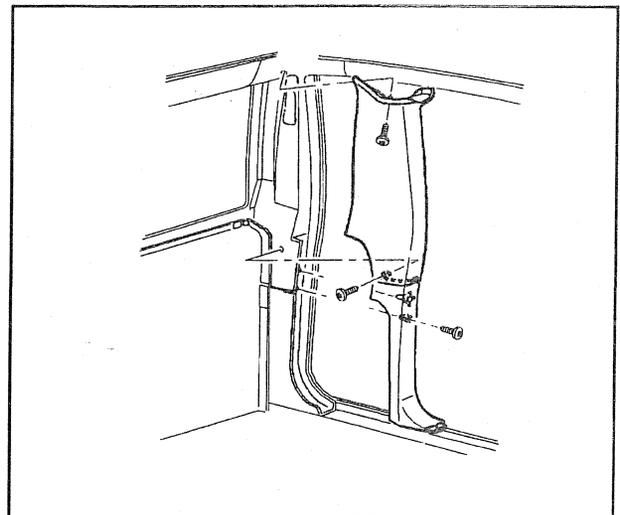


Figure 57—Rear Body Corner Garnish (Two-Door Utility)

## 10A4-18 INTERIOR TRIM

### Install or Connect (Figure 53 through 57)

**NOTICE:** For steps 2, 3, and 4, refer to "Notice" on page 10A4-1.

1. Pillar moldings.
2. Two upper screws from lower molding (extended cab only).
3. Arm rest pad (extended cab only).
4. Pillar moldings screws to pillar.

### Tighten

- Pillar molding screws to 1.9 N.m (17 lbs. in.).

5. Seat belt anchors to pillars. Refer to SECTION 10A2.
6. Door sill plates.
7. Door sill plate screws.

## REAR PANEL CARPET REPLACEMENT

### Remove or Disconnect (Figure 58)

1. Rear window lower garnish molding.
2. Side rear trim panel.
3. Side rear lower panel.
4. Carpet retainers.
5. Carpet panel (Pickup, Extended, and Crew Cab)
6. Carpet.

### Install or Connect (Figure 58)

1. Carpet.
2. Carpet panel.
3. Carpet retainers.
4. Side rear lower panel.
5. Side rear lower panel.
6. Rear window lower garnish molding.

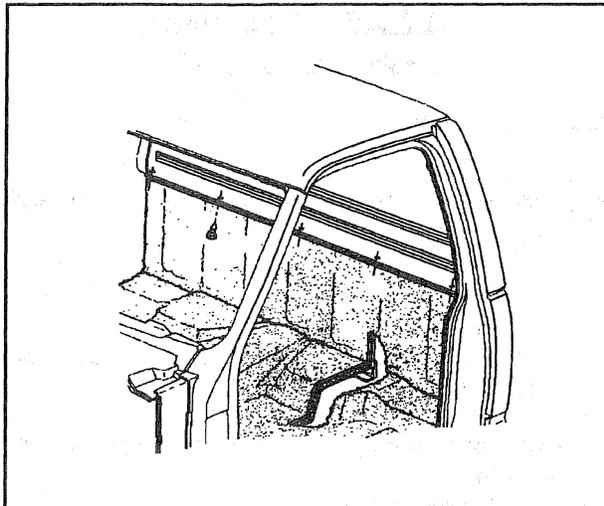


Figure 58—Rear Carpet Panel

## FLEXIBLE PLASTIC PART REFINISHING

**NOTICE:** Use supplies, primer, basecoats and clearcoats from the same manufacturer for the best results. Do not intermix paint systems.

To refinish repaired or replacement flexible parts, follow the paint manufacturer's system regarding preparation, priming, and refinishing. Because these parts are flexible, they may require special additives in the primers and topcoat to prevent cracking and poor adhesion. Always use manufacturer's recommended materials. Never intermix with other systems.

To identify the type of paint to use when refinishing interior panels, refer to "Service Parts Identification Label" in SECTION 0A. This label contains all paint technology, paint codes, trim level, and any special order paint color codes necessary to identify the correct paint.

**SECTION 10A5**

**END GATE**

**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.

**NOTICE:** Always use the correct fastener in the correct location. Use the correct fastener part number to replace a fastener. If the correct fastener part number is not available, a fastener of equal size and strength may be used. Do not use a fastener that is stronger when the correct fastener part number is not available in the following applications:

- Some bolts are designed to permanently stretch, and if a stronger fastener is used, the part will not be tightened correctly. These permanently stretching bolts will be called out. The correct part number fasteners must be used to replace this type of fastener because there is no available equivalent.
- Other bolts are designed to break if over tightened to prevent part damage. If a stronger fastener is used part damage may occur.

Fasteners that need to be replaced when removed will be called out. Fasteners that require thread lockers or thread sealant will be called out. The correct tightening specification and sequence must be used when installing fasteners. Part or system damage may occur if the above instructions are not followed.

**CONTENTS**

<u>SUBJECT</u>	<u>PAGE</u>
On-Vehicle Service for Pickup Models.....	10A5-2
End Gate Replacement.....	10A5-2
End Gate Latch Operating Handle Replacement.....	10A5-2
End Gate Latch and Rod Replacement.....	10A5-3
Striker and Striker Bolt Replacement.....	10A5-3
Side Panel Lower Hinge Replacement.....	10A5-3
End Gate Hinge Replacement.....	10A5-3
On-Vehicle Service for Utility Models.....	10A5-5
End Gate Replacement.....	10A5-5
Torque Rod Replacement.....	10A5-5
Trim Panel Replacement.....	10A5-6
End Gate Latch Operating Handle Replacement.....	10A5-6
End Gate Latch Assembly Replacement (Right or Left).....	10A5-7
End Gate Latch Striker Adjustment.....	10A5-7
Lock Assembly Replacement.....	10A5-7
End Gate Belt Weatherstrip Replacement.....	10A5-8
End Gate Window Striker Replacement.....	10A5-8
End Gate Window Hinge Replacement.....	10A5-8
End Gate Window Support Replacement.....	10A5-9
Specifications.....	10A5-9
Fastener Tightening Specifications.....	10A5-9

## ON VEHICLE SERVICE FOR PICKUP MODELS

### END GATE REPLACEMENT

#### ↔ Remove or Disconnect (Figures 1 and 2)

- Lower the end gate to a horizontal position.
  - Pull up on the middle of the cable assembly.
  - With the aid of a helper, raise the end gate 45-degrees.
1. Cable on each side from the side panel striker bolts (figure 2).
  2. End gate from the right side hinge assembly and then the left hinge assembly with the aid of a helper.

#### ↔ Install or Connect (Figures 1 and 2)

- Use a helper to lift the end gate.
1. End gate to side panel hinge assemblies holding the gate at a 45-degree angle (figure 2).
  2. Cable on each side onto the side panel striker bolts (figure 2).

### END GATE LATCH OPERATING HANDLE REPLACEMENT

#### ↔ Remove or Disconnect (Figure 3)

- Lower the end gate.
1. Three bolts and washers from the back of the end gate behind the handle.

- Raise the end gate.

2. Bezel from around the handle by prying gently.

#### 👁 Inspect

- Bezel for damage to the retention prongs. If any of them are broken or bent, replace the bezel.

3. Latch operating rods from the retainers on the handle by pushing the rods back.

4. Handle assembly from the end gate.

#### ↔ Install or Connect (Figure 3)

1. Handle assembly into the end gate.
2. Latch operating rods into the retainers on the handle.
3. Bezel to the handle and end gate.

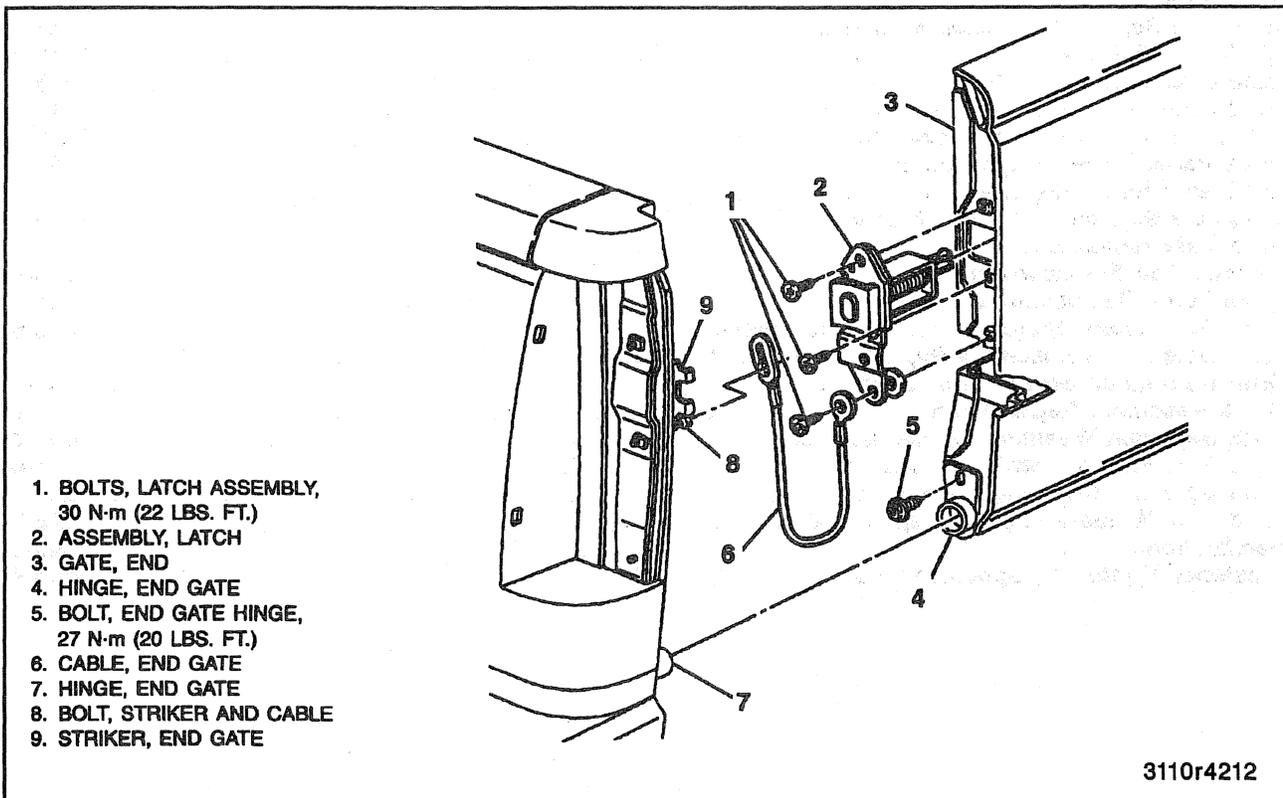
- Lower the end gate.

**NOTICE:** Refer to "Notice" on page 10A5-1.

4. Three bolts and washers into the handle from the back of the end gate.

#### 🔧 Tighten

- End gate to handle bolts to 25 N.m (18 lbs. ft.).



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Figure 1—End Cable and Latch Components

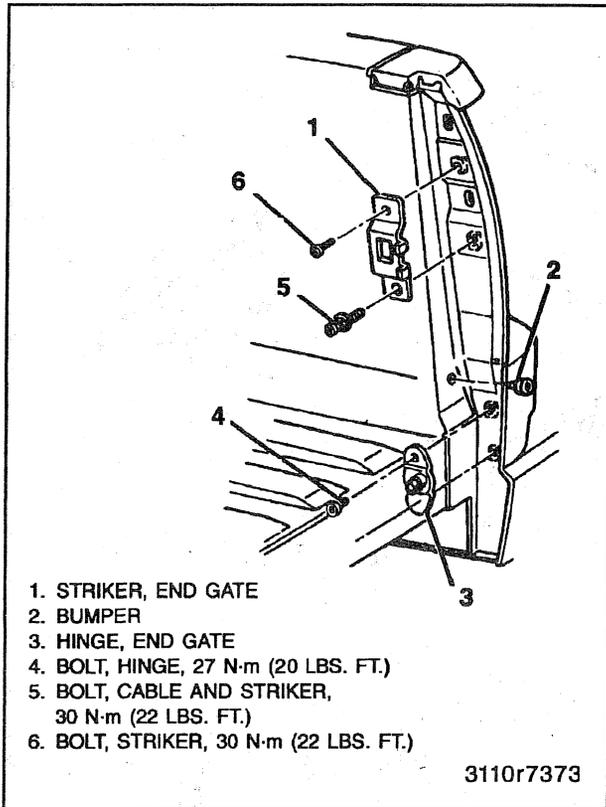


Figure 2—Side Panel Striker and Hinge Components

### END GATE LATCH AND ROD REPLACEMENT

↔ Remove or Disconnect (Figure 1 and 3)

1. Operating handle. Refer to "End Gate Latch Operating Handle Replacement."
  - Lower and support the end gate and lift the cables off the striker bolts.
2. Three bolts holding the latch assembly to the end gate.
3. Latch assembly and rod.

→ Install or Connect (Figures 1 and 3)

1. Latch assembly and rod to the end gate.

**NOTICE:** Refer to "Notice" on page 10A5-1.

2. Three bolts holding the latch assembly to the end gate (figure 1).

 Tighten

- Latch to end gate bolts to 30 N·m (22 lbs. ft.).
  - Raise the end gate and attach the cables to the striker bolts.
3. Operating handle. Refer to "End Gate Latch Operating Handle Replacement."

### STRIKER AND STRIKER BOLT REPLACEMENT

↔ Remove or Disconnect (Figure 2)

- Lower the end gate to a support and lift the cables off the striker bolts.
1. Striker and cable bolt.
  2. Striker bolt.
  3. Striker.

→ Install or Connect (Figure 2)

**NOTICE:** For steps 2 and 3, refer to "Notice" on page 10A5-1.

1. Striker to the side panel.
2. Striker bolt.

 Tighten

- Striker bolt to 30 N·m (22 lbs. ft.).
3. Striker and cable bolt.

 Tighten

- Striker and cable bolt to 30 N·m (22 lbs. ft.).
- Raise the end gate and attach the cables to the striker bolts.

### SIDE PANEL LOWER HINGE REPLACEMENT

↔ Remove or Disconnect (Figure 2)

1. End gate. Refer to "End Gate Replacement."
2. Bolts from the panel hinge.
3. Hinge from the side panel.

→ Install or Connect (Figure 2)

1. Hinge to the side panel.

**NOTICE:** Refer to "Notice" on page 10A5-1.

2. Lower panel hinge bolts.

 Tighten

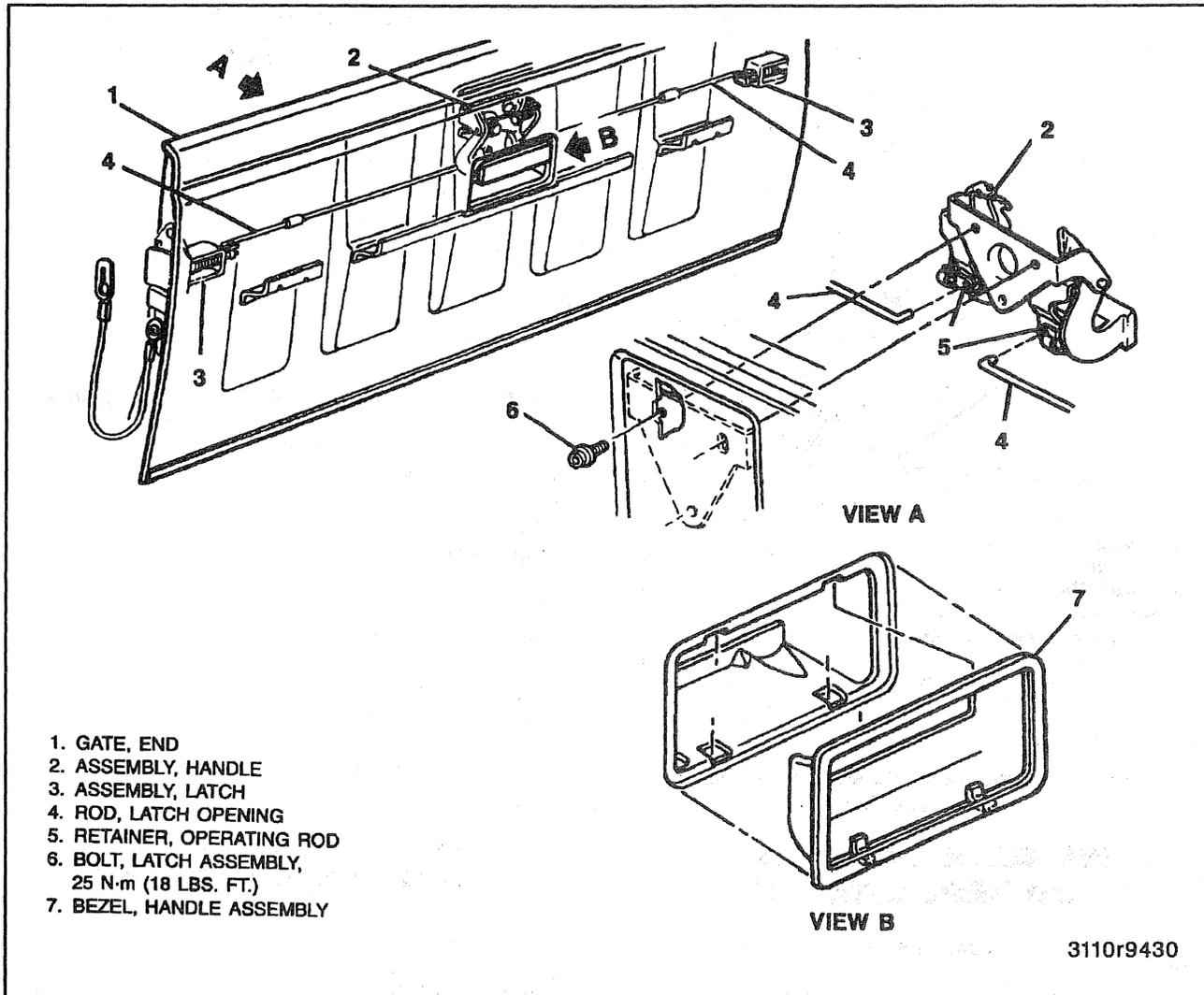
- Bolts to 27 N·m (20 lbs. ft.).
3. End gate to the side panels.

### END GATE HINGE REPLACEMENT

↔ Remove or Disconnect (Figure 1)

1. End gate. Refer to "End Gate Replacement."
  - Mark the position of the hinge on the end gate.
2. Hinge bolt.

# 10A5-4 END GATE



- 1. GATE, END
- 2. ASSEMBLY, HANDLE
- 3. ASSEMBLY, LATCH
- 4. ROD, LATCH OPENING
- 5. RETAINER, OPERATING ROD
- 6. BOLT, LATCH ASSEMBLY,  
25 N·m (18 LBS. FT.)
- 7. BEZEL, HANDLE ASSEMBLY

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Figure 3—Latch Operating Handle

3. Hinge from the end gate.

- Drill a pilot hole in the weld plug.
- Drill out the weld plug from the end gate side of the hinge with a 3/8-inch drill bit.

**→←** Install or Connect (Figure 1)

1. Hinge to the end gate. Use the marks made previously to position it.

**NOTICE:** Refer to "Notice" on page 10A5-1.

2. Hinge bolt.



- Hinge to end gate bolt to 27 N·m (20 lbs. ft.).

- Plug weld the hole that was drilled in the end gate.
- MIG weld the hinge to the end gate around the edge of the hinge.
- Paint and lubricate the hinge.

3. End gate to the pickup box.

## ON-VEHICLE SERVICE FOR UTILITY VEHICLES

### END GATE REPLACEMENT

#### ↔ Remove or Disconnect (Figures 4 and 5)

- Open the end gate to a horizontal position.
1. Torque rod. Refer to "Torque Rod Replacement."
  2. Electrical connector for rear window release.
    - Support the end gate in a horizontal position with a suitable support.
  3. Support cable bolts and washers.
  4. Hinge pin clips.
    - Spread the clip enough to move the clip above the recess in the pin.
    - As the pin is removed, the clip will ride on the pin, and fall free of the pin.
5. Hinge pins from the right and left hinges.

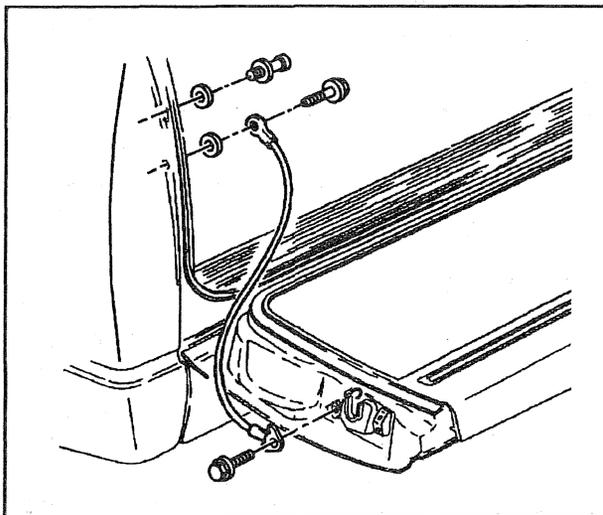


Figure 4—End Gate Replacement

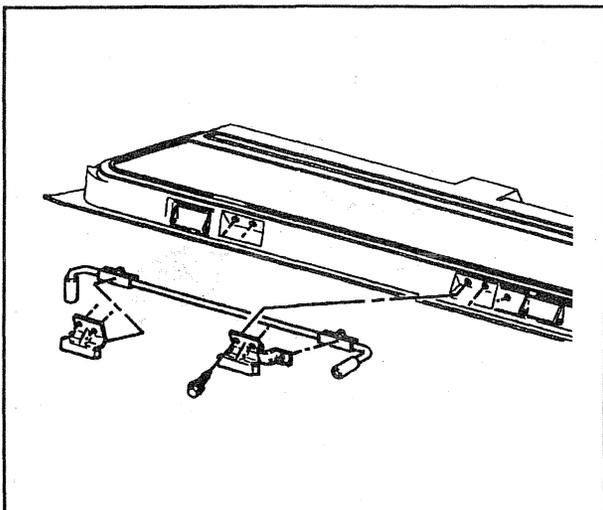


Figure 5—Torque Rod Replacement

6. End gate from the vehicle.

#### ↔ Install or Connect (Figures 4 and 5)

1. End gate to the vehicle.
  - Support the end gate in a horizontal position with a suitable support.
2. Hinge pins into the left and right hinges.
3. Hinge pin clips to the hinge pins.

**NOTICE:** Refer to "Notice" on page 10A5-1.

4. Support cable bolts and washers.

#### ⌚ Tighten

- Support cable to body bolts to 29 N.m (21 lbs. ft.).
5. Electrical connector for rear window release.
  6. Torque rod. Refer to "Torque Rod Replacement."

### TORQUE ROD REPLACEMENT

#### ↔ Remove or Disconnect (Figure 5)

1. Bolt at left end with end gate open.
2. Rear bumper. Refer to SECTION 2A.
3. Rear bumper filler panel. Refer to SECTION 2A.
4. Bolts retaining the torque rod to the end gate.
  - With the gate in the closed position, the bolts are accessible from under the vehicle.
5. Torque rod and retainers.

#### ↔ Install or Connect (Figure 5)

**NOTICE:** For steps 2 and 3, refer to "Notice" on page 10A5-1.

1. Torque rod and retainers to vehicle.
  - With the gate in the closed position, place the torque rod and retainers onto the vehicle.
2. Bolts to the torque rod retainers.

#### ⌚ Tighten

- Torque rod retainer bolts to 15 N.m (11 lbs. ft.).

3. Bolt at left end with end gate open.

#### ⌚ Tighten

- Torque rod retainer bolt to 15 N.m (11 lbs. ft.).

4. Rear bumper filler panel. Refer to SECTION 2A.
5. Rear bumper. Refer to SECTION 2A.

# 10A5-6 END GATE

## TRIM PANEL REPLACEMENT

### ↔ Remove or Disconnect (Figure 6)

- Lower the end gate.

  1. Trim panel to end gate screws.
  2. Trim panel from the end gate.

### ↔ Install or Connect (Figure 6)

1. Trim panel to the end gate.

**NOTICE:** Refer to "Notice" on page 10A5-1.

2. Trim panel to end gate screws.

### ⌚ Tighten

- Trim panel to end gate screws to 1.9 N.m (17 lbs. in.).

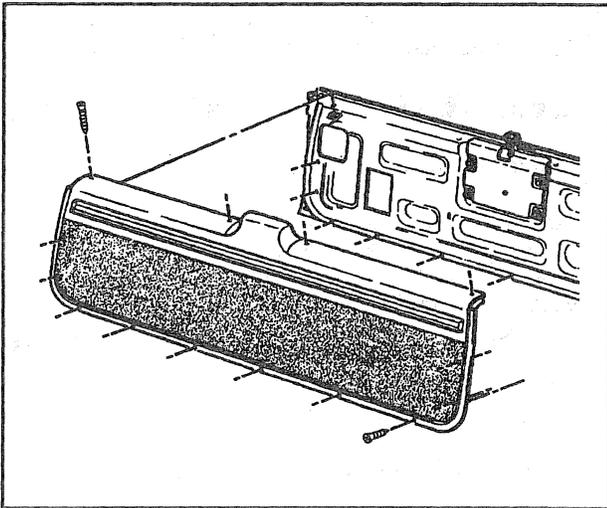


Figure 6—Trim Panel and Belt Weatherstrip

## END GATE LATCH OPERATING HANDLE REPLACEMENT

### ↔ Remove or Disconnect (Figure 7)

- Lower the end gate.

  1. Trim panel. Refer to "Trim Panel Replacement."
  2. Lock assembly cover from the end gate.
  3. Two bolts and washers from the back of the end gate behind the handle assembly.

  - Raise the end gate.

    4. Handle assembly by prying gently.
    5. Latch operating rods from the clips on the handle by pushing the rods back.
    6. Handle assembly from the end gate.

### ↔ Install or Connect (Figure 7)

1. Handle assembly into the end gate.
  2. Latch operating rods into the clips on the handle.
- Lower the end gate.

**NOTICE:** Refer to "Notice" on page 10A5-1.

3. Two bolts and washers into the handle assembly from the back of the end gate.

### ⌚ Tighten

- End gate to handle bolts to 4 N.m (35 lbs. in.).

  4. Lock assembly cover to the end gate.

  - Cover must be installed with both gates closed for proper alignment.

  5. End gate trim panel. Refer to "Trim Panel Replacement."

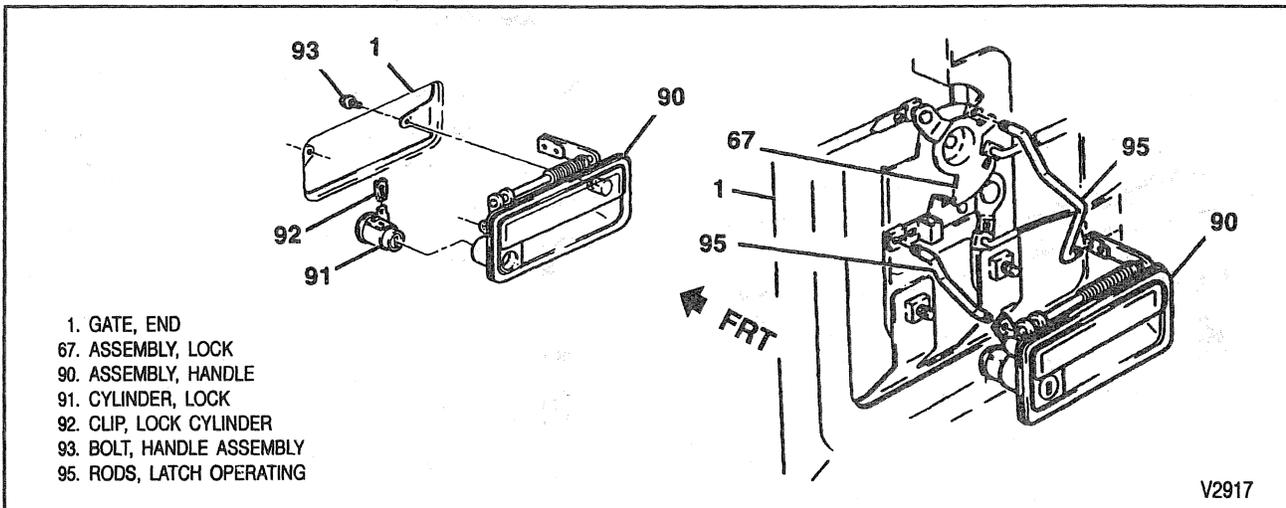


Figure 7—End Gate Operating Handle Replacement

## END GATE LATCH ASSEMBLY REPLACEMENT (RIGHT OR LEFT)

### ↔ Remove or Disconnect (Figure 8)

- Open the end gate to the horizontal position.
- 1. End gate trim panel. Refer to "Trim Panel Replacement."
- 2. Lock assembly cover.
- 3. Locking rod from the lock assembly.
- 4. Screws securing the bumper to the end gate.
- 5. Bumper from the end gate.
- 6. Bolts securing the latch to the end gate.
- 7. Latch from the end gate.

### ↔ Install or Connect (Figure 8)

**NOTICE:** For steps 2 and 4, refer to "Notice" on page 10A5-1.

1. Latch to the gate.
2. Bolts securing the latch to the end gate.

### ⌚ Tighten

- Latch to the end gate bolts to 25 N.m (18 lbs. ft.).
- 3. Bumper to the end gate.
- 4. Screws securing the bumper to the end gate.

### ⌚ Tighten

- Bumper to the end gate screws to 2.8 N.m (25 lbs. in.).
- 5. Locking rod to the window latch.
- 6. Lock assembly cover.
  - Cover must be installed with both gates closed for proper alignment.
- 7. End gate trim panel. Refer to "Trim Panel Replacement."

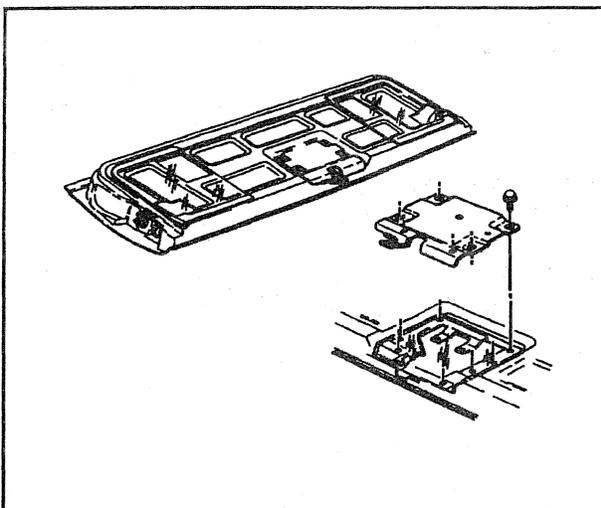


Figure 8—End Gate Latch Replacement

## END GATE LATCH STRIKER ADJUSTMENT

### ⌚ Adjust (Figure 6)

**NOTICE:** Refer to "Notice" on page 10A5-1.

- End gate striker assemblies up or down, forward or backward, to obtain the proper close of the end gate. The end gate should seal completely with a minimum of closing effort.

### ⌚ Tighten

- Striker assemblies to 63 N.m (47 lbs. ft.).

## LOCK ASSEMBLY REPLACEMENT

### ↔ Remove or Disconnect (Figure 8)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Lock assembly cover to the end gate bolts.
3. Lock assembly cover.
4. Lock rods from the lock assembly.

- Mark the location of the lock assembly on the end gate.

5. Lock assembly to the end gate bolts.
6. Lock assembly from the end gate.

### ↔ Install or Connect (Figure 8)

**NOTICE:** For steps 2 and 5, refer to "Notice" on page 10A5-1.

1. Lock assembly to the end gate.
  - Align the assembly to the marks on the end gate inner panel.
2. Lock assembly to the end gate bolts.

### ⌚ Tighten

- Lock assembly to the end gate bolts to 15 N.m (11 lbs. ft.).
- 3. Lock rods to the lock assembly.
- 4. Lock assembly cover.
  - Cover must be installed with both gates closed for proper alignment.
- 5. Lock assembly cover to end gate bolts.

### ⌚ Tighten

- Cover to end gate bolts to 15 N.m (11 lbs. ft.).
- 6. Trim Panel. Refer to "Trim Panel Replacement."

## END GATE BELT WEATHERSTRIP REPLACEMENT

### ↔ Remove or Disconnect (Figure 6)

1. Trim panel. Refer to "Trim Panel Replacement."
2. Weatherstrip from the end gate flange.

### ↔ Install or Connect (Figure 6)

1. Weatherstrip onto end gate flange.
  - A. Install ends of weatherstrip first by pressing fastener into end gate hole.
  - B. Push center of weatherstrip onto center of end gate flange and work out to ends.
2. Trim panel. Refer to "Trim Panel Replacement."

## END GATE WINDOW STRIKER REPLACEMENT

### ↔ Remove or Disconnect (Figure 9)

- Open the end gate window.
1. Striker to the end gate window pin.
  2. Striker to the end gate window bolt.
  3. Striker from the end gate window.

### ↔ Install or Connect (Figure 9)

**NOTICE:** For steps 2 and 3, refer to "Notice" on page 10A5-1.

1. Striker to the end gate window.
2. Striker to the gate window bolt.

### Tighten

- Striker to the end gate window bolt to 10 N.m (89 lbs. in.).
3. Striker to the end gate window pin.

### Tighten

- Striker to the end gate window pin to 10 N.m (89 lbs. in.).

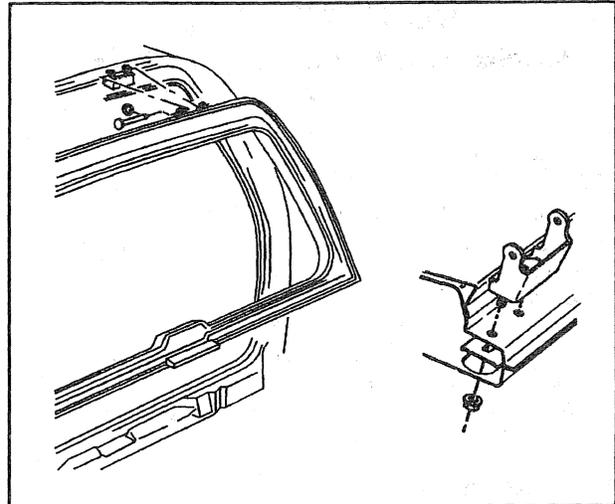


Figure 9—End Gate Window Striker and Hinge

## END GATE WINDOW HINGE REPLACEMENT

### ↔ Remove or Disconnect (Figure 9)

1. End gate window supports. Refer to "End Gate Window Support Replacement."
2. Hinge pin retainers and the hinge pins.
3. End gate window assembly from the vehicle.
4. End gate window garnish molding.
5. Hinge to end gate window assembly nuts.
6. Hinge from the end gate window.

### ↔ Install or Connect (Figure 9)

1. Hinge to the end gate window.

**NOTICE:** Refer to "Notice" on page 10A5-1.

2. Hinge to end gate window assembly nuts.

### Tighten

- Hinge to end gate window assembly nuts to 23 N.m (17 lbs. ft.).
3. End gate window garnish molding.
  4. End gate window assembly to the vehicle.
  5. Hinge pins and the hinge pin retainers.
  6. End gate window supports. Refer to "End Gate Window Support Replacement."

## END GATE WINDOW SUPPORT REPLACEMENT

**CAUTION:** Do not attempt to remove or loosen gas support assembly attachments with glass in any position other than fully open as personal injury may result.

Do not intermix original quality gas supports with other quality supports, since not all supports have the same output level.

### ←→ Remove or Disconnect (Figure 10)

1. Rear window defogger wires attached to the gas supports (if equipped).
2. Ball sockets from the glass side.
  - Carefully pry the gas support ball socket from the ball. Insert a small screwdriver between the ball and the ball socket and pull the gas support from the window.
  - Support the rear window glass.
3. Ball sockets from the body side.

### →← Install or Connect (Figure 10)

1. Gas support ball socket to the body and glass sides.
  - Push the ball socket onto the ball.
2. Rear window defogger wires to the gas supports (if equipped).

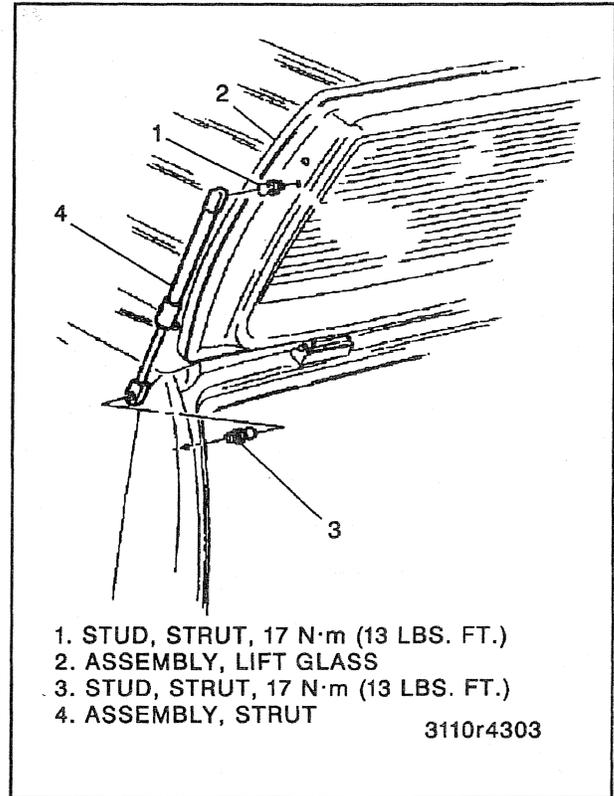


Figure 10—Window Support

## SPECIFICATIONS

### FASTENER TIGHTENING SPECIFICATIONS

	N·m	Lbs. Ft.	Lbs. In.
<b>Utility Vehicle</b>			
End Gate Bumper to End Gate Screws .....	2.8	—	25
End Gate Latch to End Gate Bolts .....	10	—	89
End Gate Window Assembly Hinge Nuts .....	23	17	—
End Gate Window Assembly Striker Bolts .....	10	—	89
Latch Operating Handle to End Gate Bolts .....	4	—	35
Lock Assembly Cover to End Gate Bolts .....	15	11	—
Lock Assembly to End Gate Bolts .....	15	11	—
Support Cable to Body Bolts .....	29	21	—
Support Cable to End Gate Bolts .....	2.8	—	25
Torque Rod Bracket Bolts .....	15	11	—
Trim Panel to End Gate Screws .....	1.9	—	17
Striker to Body Bolts .....	63	47	—
Strut Stud to the Body .....	17	13	—
Strut Stud to the End Gate Window Assembly	17	13	—
<b>Pick-Up</b>			
Body Side Hinge Bolts .....	27	20	—
End Gate Side Hinge Bolts .....	27	20	—
End Gate Striker Bolts .....	30	22	—
Latch Operating Handle Bolts .....	25	18	—
Latch to End Gate Bolts .....	30	22	—

**NOTES**

**SECTION 10B**

**CAB AND BODY MAINTENANCE**

**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.

**NOTICE:** Always use the correct fastener in the correct location. Use the correct fastener part number to replace a fastener. If the correct fastener part number is not available, a fastener of equal size and strength may be used. Do not use a fastener that is stronger when the correct fastener part number is not available in the following applications:

- Some bolts are designed to permanently stretch, and if a stronger fastener is used, the part will not be tightened correctly. These permanently stretching bolts will be called out. The correct part number fasteners must be used to replace this type of fastener because there is no available equivalent.
- Other bolts are designed to break if over tightened to prevent part damage. If a stronger fastener is used part damage may occur.

Fasteners that need to be replaced when removed will be called out. Fasteners that require thread lockers or thread sealant will be called out. The correct tightening specification and sequence must be used when installing fasteners. Part or system damage may occur if the above instructions are not followed.

**CONTENTS**

<u>SUBJECT</u>	<u>PAGE</u>
On-Vehicle Service.....	10B-2
Cleaning Agents .....	10B-2
Interior Cleaning .....	10B-2
Basic Steps Before Cleaning .....	10B-2
General Cleaning Of Fabric Trim With Foam Type Cleaner .....	10B-2
Spot Cleaning Fabric Trim With Solvent Type Cleaner .....	10B-2
Removal Of Specific Stains.....	10B-2
Cleaning Vinyl Trim .....	10B-3
Seat Belt Care .....	10B-3
Glass Surfaces.....	10B-3
Exterior Cleaning .....	10B-3
Washing And Waxing .....	10B-3
Foreign Material Deposits.....	10B-3
Cleaning Bright Metal Parts .....	10B-3
Weatherstrip Lubrication.....	10B-3
Water Leaks .....	10B-3
Corrective Measures.....	10B-3
Dust Leaks.....	10B-3

# ON-VEHICLE SERVICE

## CLEANING AGENTS

**CAUTION:** Follow the manufacturer's advice when cleaning agents or other chemicals are used inside or outside the vehicle. Some cleaners may be poisonous or flammable, and improper use may cause personal injury or damage. When cleaning the interior or exterior of the vehicle, do not use the following cleaners except as specifically directed in the fabric cleaning procedures contained in this manual:

- acetone
- lacquer thinners
- enamel reducers
- nail polish removers
- laundry soaps
- bleaches
- reducing agents

Never use carbon tetrachloride, gasoline, benzene, or naphtha for any cleaning purpose.

Open all vehicle doors for ventilation when any cleaning agents or other chemicals are used inside the vehicle. Overexposure to some vapors, which is more likely to occur in small, unventilated spaces, may result in a health problem.

**NOTICE:** To avoid possible permanent discoloration of light colored seats, do not let materials with non-fast colors come in contact with seat trim materials until these materials are totally dry. This includes certain types of clothing, such as colored denims, corduroys, leathers, and suedes.

Use the proper cleaning techniques and cleaners on the first cleaning to avoid water spots, spot rings, or setting of stains or soilage—all of which are more difficult to remove in a second cleaning.

Remove dust and loose dirt often that collect on interior fabrics with a vacuum cleaner or soft bristle brush. Wipe vinyl trim regularly with a clean damp cloth.

## INTERIOR CLEANING

### BASIC STEPS BEFORE CLEANING

1. Remove stains as quickly as possible before they set.
2. Use a clean cloth or sponge, and change to a clean area often. A soft brush may be used if stains persist.
3. Use solvent-type cleaners only in a well ventilated area. Do not saturate the stained area.
4. If a ring forms after spot cleaning, clean the entire area immediately.
5. Follow manufacturer's instructions for all cleaning agents.

### GENERAL CLEANING OF FABRIC TRIM WITH FOAM TYPE CLEANER

Use GM Multi-Purpose Powdered Cleaner or equivalent for this type of cleaning and for cleaning panel sections where small cleaning rings may be left from spot cleaning.

Vacuum and brush the area to remove any loose dirt and mask surrounding trim along stitch or welt lines.

Clean a whole trim panel or section. Mix the cleaner following the directions on the container label. Mix in proportion for smaller quantities. Use suds on a clean sponge. Do not saturate the material or rub it harshly. Wipe off remaining residue with a slightly damp absorbent towel or cloth. Dry the material with an air hose. A heat dryer or heat lamp may be used. Use care with a heat dryer or lamp to prevent fabric damage.

### SPOT CLEANING FABRIC TRIM WITH SOLVENT TYPE CLEANER

Before trying to remove a spot or stain from fabric, try to determine the type and age of the spot or stain. Some spots or stains can be removed with water or a mild soap solution. Remove spots or stains as soon as possible.

Some types of stains or soilage, such as lipstick, inks and grease, are very difficult (sometimes impossible) to remove completely. When cleaning this type of stain, do not enlarge the soiled area. Use GM Fabric Cleaner (solvent type) or equivalent for spot-cleaning grease, oil, or fat stains.

Gently scrape excess stain from the trim material with a clean dull knife or scraper. Use very little cleaner, light pressure, and clean cloths, preferably cheesecloth. Start cleaning at the outside of the stain and feather towards the center. Keep changing to a clean section of the cloth.

After the stain has been removed, immediately dry the area with an air hose, heat dryer, or heat lamp to help prevent a cleaning ring. Use caution with heat from the dryer or lamp to help prevent fabric damage.

If a ring forms, immediately repeat the cleaning operation over a slightly larger area with emphasis on "feathering" towards its center. If a ring still remains, mask off the surrounding trim sections and clean the entire area with GM Multi-Purpose Powdered Cleaner or equivalent as described earlier in this section.

### REMOVAL OF SPECIFIC STAINS

#### Grease Or Oily Stains

The following applies to stains caused by such substances as grease, oil, butter, margarine, shoe polish, coffee with cream, chewing gum, cosmetic creams, vegetable oils, wax crayon, tar, and asphalts.

- Carefully scrape off excess matter, then use GM Fabric Cleaner (solvent type) or equivalent as explained earlier in this section.
- Shoe polish, wax crayons, tar, and asphalts will stain if left on trim; remove them as soon as possible. Use care since the cleaner may cause the stains to "bleed" as it dissolves them.

**Non-Greasy Stains**

This includes stains from catsup, black coffee, egg, fruit, fruit juice, milk, soft drinks, wine, vomit, blood, and urine.

- Carefully scrape off excess matter, then sponge the stain with cool water.
- If a stain remains, use GM Multi-Purpose Cleaner (foam type) or equivalent as explained earlier in this section.
- If an odor lingers after cleaning vomit or urine, treat the area with a water/baking soda solution of 5 milliliters (1 teaspoon) of baking soda to 250 milliliters (1 cup) of lukewarm water.
- Finally, if needed, clean lightly with GM Fabric Cleaner (solvent type) or equivalent.

**Combination Stains**

This includes stains from candy, ice cream, mayonnaise, chili sauce, and stains of unknown origin.

- Carefully scrape off excess matter. Clean with cold water and allow to dry.
- If a stain remains, clean it with GM Fabric Cleaner (solvent type) or equivalent.

**CLEANING VINYL TRIM**

Ordinarily soilage can be removed from vinyl with warm water and mild soap.

Apply a small amount of soap solution and let it soak for a few minutes to loosen the dirt; then rub briskly with a clean damp cloth to remove dirt and traces of soap. This may be repeated several times, if needed.

Soilage from such things as tars, asphalts, shoe polish, etc. will stain if left on trim. Wipe off these compounds as quickly as possible and clean the area with a clean cloth dampened with GM Vinyl/Leather Cleaner (solvent type) or equivalent.

**SEAT BELT CARE**

**CAUTION: Do not bleach or dye seat belts since this may severely weaken them. Damaged seat belts are a safety hazard.**

- Keep the belts clean and dry.
- Clean seat belts only with mild soap and lukewarm water.

**GLASS SURFACES**

Glass surfaces should be cleaned on a regular basis. Use GM Glass Cleaner or equivalent to remove normal tobacco smoke and dust films.

A non-abrasive cleaner may be used on the outside of the windshield. Clean wiper blades with a cloth soaked in a solution of one-half water and one half GM Opticlean or equivalent. A solution of one-half water and one-half methanol alcohol may also be used. Then rinse the blade with water.

**EXTERIOR CLEANING****WASHING AND WAXING**

Wash the vehicle in lukewarm or cold water. Do not use hot water or wash the vehicle in the direct rays of the sun. Do not use strong soap or chemical detergents. All cleaning agents should be promptly flushed from the surface and not allowed to dry on the finish.

Painted body surfaces and chrome plating should be protected by a coating of wax. Any good body wax can be used for both painted and chrome surfaces. Apply wax immediately after the vehicle has been cleaned. Periods between applications should be short enough to ensure continuous protection of the finish.

**FOREIGN MATERIAL DEPOSITS**

Calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, and other foreign matter may damage vehicle finishes if left on painted surfaces. Use cleaners that are marked safe for painted surfaces for these deposits.

**CLEANING BRIGHT METAL PARTS**

Clean bright metal parts regularly. Washing with water is all that is usually needed. Use GM Chrome Polish or equivalent on chrome or stainless steel trim, if necessary.

Use special care with aluminum trim. Do not use auto or chrome polish, steam, or caustic soap to clean aluminum. A coating of wax, rubbed to a high polish, is recommended for all bright metal parts.

**WEATHERSTRIP LUBRICATION**

Use silicone grease to lengthen weatherstrip life, to help sealing, and to help eliminate squeaks. Use a clean cloth to apply a thin film of silicone grease to all weatherstrips.

**WATER LEAKS**

If water has leaked into the interior, test for leak points. Refer to "Water Leak Tests" in SECTION 10A3. Mark the location(s) of any leaks.

Water which appears at a certain place inside the body may actually be entering from another point. It may be necessary to remove the floor mat, insulation, instrument panel, etc. in order to backtrack the path of the water to the point of entry. If it is still not possible to locate the point of entry, do the following:

1. Close all windows and vents.
2. Cover the air pressure relief valves.
3. Place the air lever in position to use outside air.
4. Turn the fan lever to the "HI" position.
5. Close the doors.
6. Run a small stream of water over the area suspected of leaking.
7. Check for pressure bubbles that indicate air is escaping from the interior.

**CORRECTIVE MEASURES**

If the leak is between body panels, use an air drying body sealing compound.

If the leak is around a door, it may be because the door is not properly aligned. Refer to SECTION 10A1 and align the door. If the door is contacting the weatherstrip correctly, make sure the weatherstrip is not damaged and is properly seated on the opening flange. If the weatherstrip is damaged, replace it.

**DUST LEAKS**

Dust will leak into the vehicle where water will not, particularly in the lower portion of the interior. Forward motion of the vehicle can create a slight vacuum which pulls air and dust inside.

## 10B-4 BODY MAINTENANCE

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To determine the location of dust leaks:

1. Remove the mats and insulation from the floor and toe panel.
2. Drive the vehicle on a dusty road.
3. Examine the interior. Dust in the shape of a small cone or slit will usually be found at the point of leakage.
4. Mark the points of leakage.
5. With the interior of the vehicle darkened, shine bright lamps on the underside of the floor and cowl, and have an assistant check inside for any points where the light shines through. Mark the leakage points. Check weld joints and body mounts.

Sealing of leaks should be done with an air-drying body-sealing compound.