

# Service Bulletin

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Mazda Motor of America, Inc.  
7755 Irvine Center Drive  
Irvine, California 92718  
Telephone (714)727-1990

**mazda**

Category S	Applicable Model/s 1988-'91 626/MX-6 (USA made)	Subject WATER ENTERING INTERIOR	Bulletin No. 034/92
			Issued 7/7/92
			Revised

## DESCRIPTION

Some 1988-'91, USA made 626/MX-6 vehicles may experience interior water leaks. This occurs in the front floor, the headliner (sunroof), or the trunk areas. If the area where water entered the vehicle cannot be confirmed, a water leak test must be performed. These tests are described in the Inspection and Repair section of this bulletin.

## INSPECTION AND REPAIR PROCEDURE

To perform the appropriate procedure, refer to the following chart.

LOCATION	PAGES
I. Right Front Side of Passenger Compartment	Pages 1 through 6
II. Left Front Side of Passenger Compartment	Pages 6 through 9
III. Trunk Compartment and Under Rear Seat	Pages 9 through 13
IV. Sunroof of Headliner Area	Pages 13 through 15

### LOCATION I: RIGHT FRONT SIDE OF PASSENGER COMPARTMENT

#### Location of Water Leak Source

1. Remove the dash undercover, scuff plate and kick panel. Pull back the carpet and pad. Remove the front seat, carpet, and pad if necessary.
2. At least 12 minutes should be spent during initial hose testing, because the water may have to move through several body seams before being detected.
3. Turn the water pressure to the hose so that a 12" to 18" stream of water is present while the hose is in a vertical position.
4. Get inside the vehicle and use a flashlight to help locate the water entry point.

**IMPORTANT:** Service and Parts Managers should read this bulletin carefully, sign and convey all information to those concerned.

Signature \_\_\_\_\_  
Service Manager

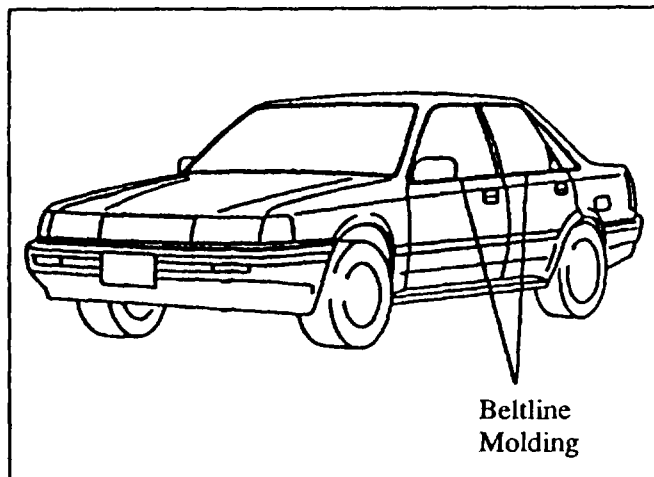
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Parts Manager

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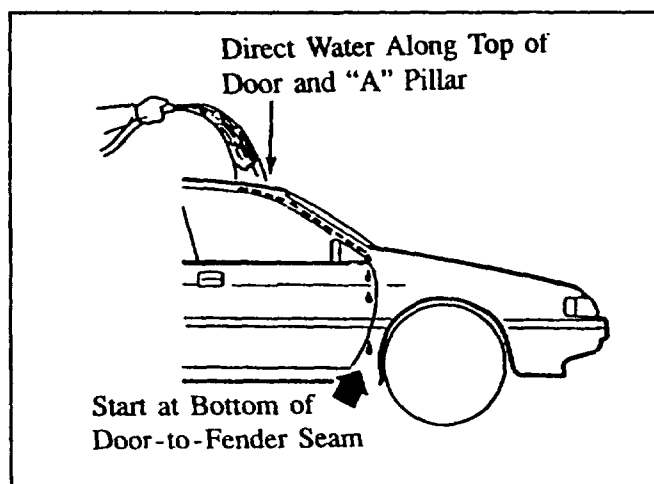
5. With the door closed, watch for water leaks during hose test. Have an assistant slowly direct the water stream up from the bottom portion of the door-to-fender seam, then up the "A" pillar to the top of the door and around the windshield. Next, have the assistant slowly direct water along the window beltline molding (if the vehicle is a four door, perform this test on both the front and rear doors.) **Figures 1 and 2.**

**NOTE:**

DO NOT direct water into blower motor opening (under cowl panel).



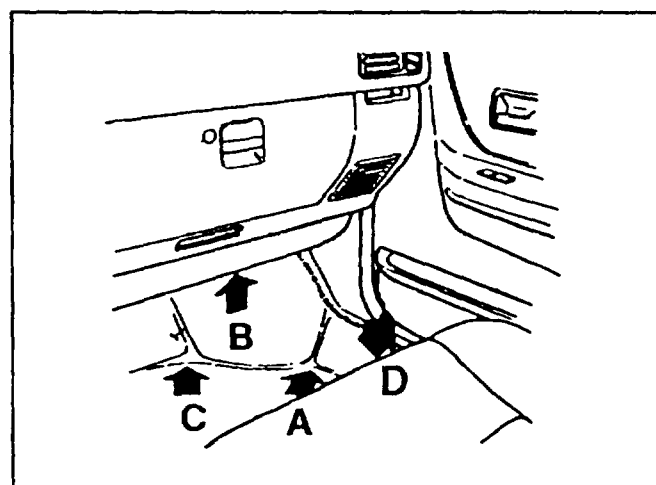
**Figure 1: Beltline Molding Location**



**Figure 2: Locating Source of Front Water Leak**

6. Note which area the water enters the vehicle. Refer to the appropriate location's repair procedure. **Figure 3.**

- AREA A: KICK PANEL (pages 3 and 4)  
AREA B: UNDER DASH (pages 4 and 5)  
AREA C: CORNER OF FIREWALL  
AND INNER FENDER (page 5)  
AREA D: OVER SILL PLATE (page 6)



**Figure 3: Possible Water Leak Areas**

### Repair Procedure

#### AREA A: KICK PANEL

1. Remove kick panel and inspect.
2. Make sure that the door electrical harness boot and the sunroof drain hose grommet are seated. Check that the sunroof drain hose is not kinked and extends through the lower kick panel.

Figure 4.

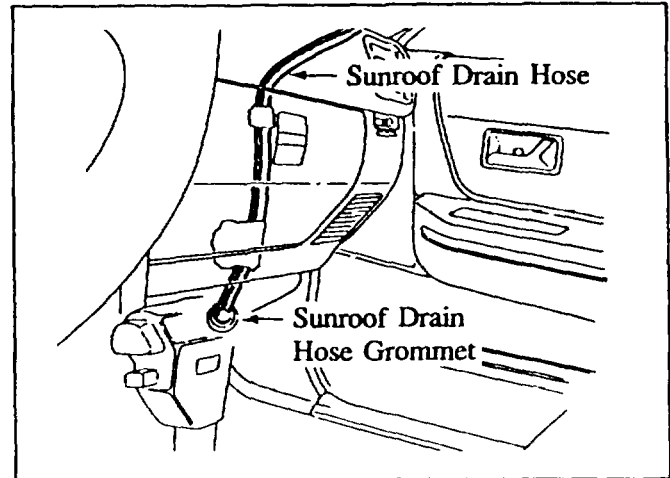


Figure 4: Checking the Sunroof Drain Hose

3. Remove the drip-rail molding and inspect rain-rail seams for missing sealer or pinholes. Seal any suspected sealer defects. Figure 5.
4. Open the sunroof. Using a squeeze bottle filled with water, pour water down the front drain holes. Check for signs of leakage at the sunroof drain tube-to-drain hose.

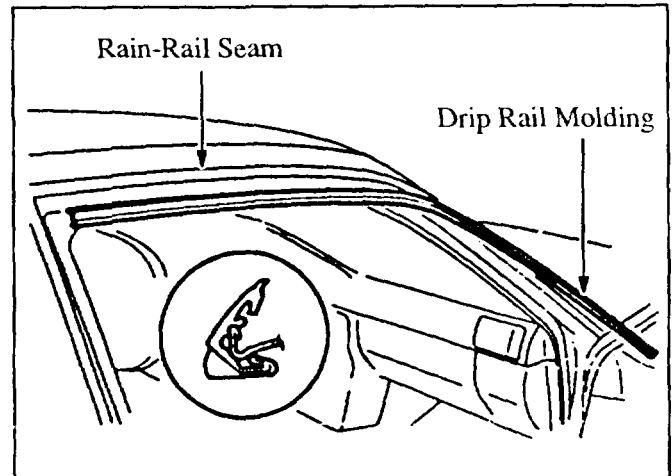


Figure 5: Drip Rail Molding

5. If the leak is still present, remove cap and screw from the front windshield header. Remove the "A" pillar side molding. Check the drain hose for kinks. Figure 6.
6. If necessary, reposition the hose so that there are no loops, kinks or pinched areas. Repeat the water test. Make sure that the sunroof drains properly with no leaks. Figure 7.

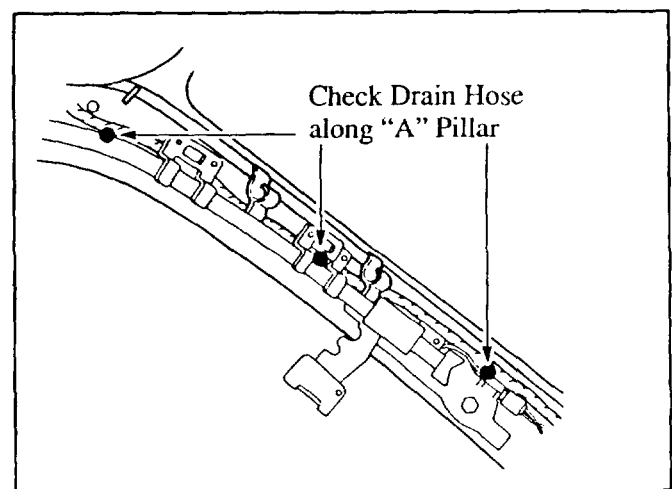


Figure 6: Checking Front Drain Hose

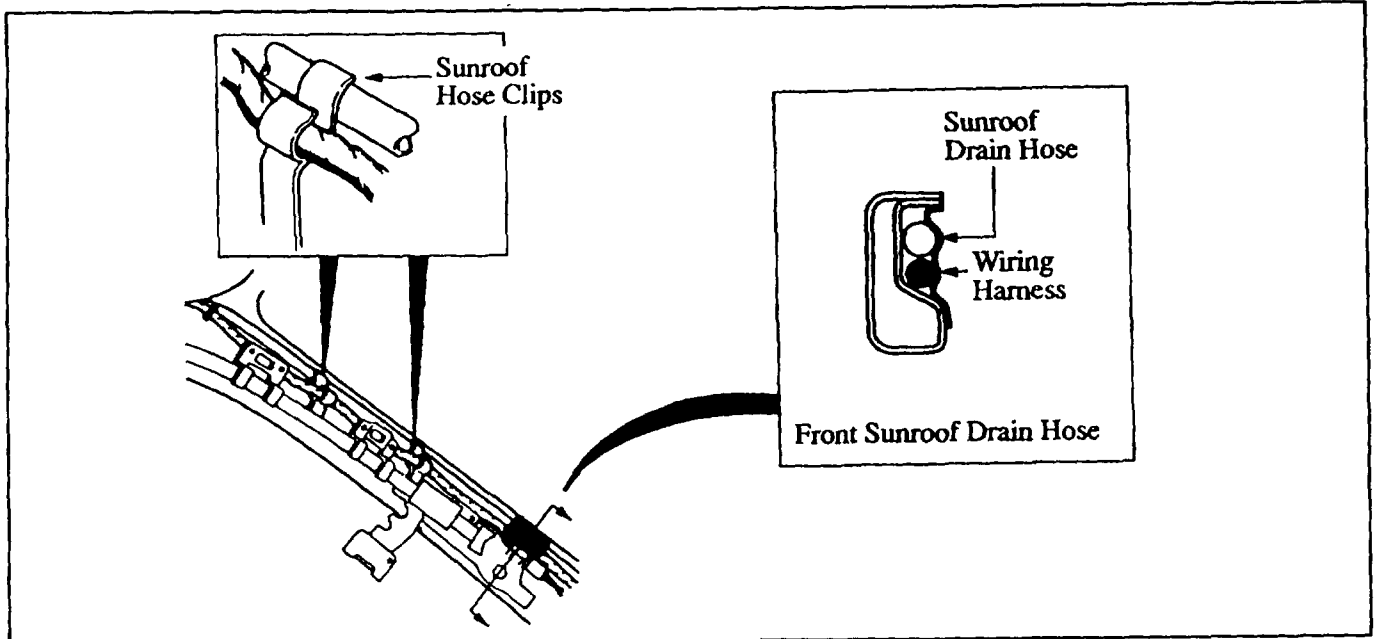


Figure 7: Checking Front Drain Hose

7. If necessary, remove the damaged section of hose. Install a replacement piece of hose with a 9.5mm (3/8 inch) outside diameter which provides a tight fit to the existing hose.

#### AREA B: UNDER DASH

1. Confirm that the upper cowl drain plug (black tube) has been modified (the dimension of the drain hole has been enlarged to 10mm). Also confirm that there are no obstructions and that the plug drains properly.
2. Using a mechanic's mirror, look for signs of water leakage under the dash (e.g. water/washer solvent stains).
3. Set the heater control air intake control lever to the first position. Remove the blower fan (3 screws) and look for water entering the blower motor opening.
4. Check all grommets shown in Figure 8 for leaks by spraying water on each one. Replace any grommets that leak.

**Note:** Apply silicone sealer to the bottom of the grommet during installation.

5. If the grommets do not leak, seal the baffle seam by reaching up through the blower motor opening and seal the areas indicated in Figure 8.
6. If water is leaking from the the firewall, check for studs and grommets that might be loose or improperly seated on the engine side of the firewall. If necessary, remove, redress, and reinstall the studs. Retap the holes and, if necessary, replace the bolts. Apply sealer to the threads before installing the bolts. Apply silicone sealer to the bottom of the grommets prior to installation.

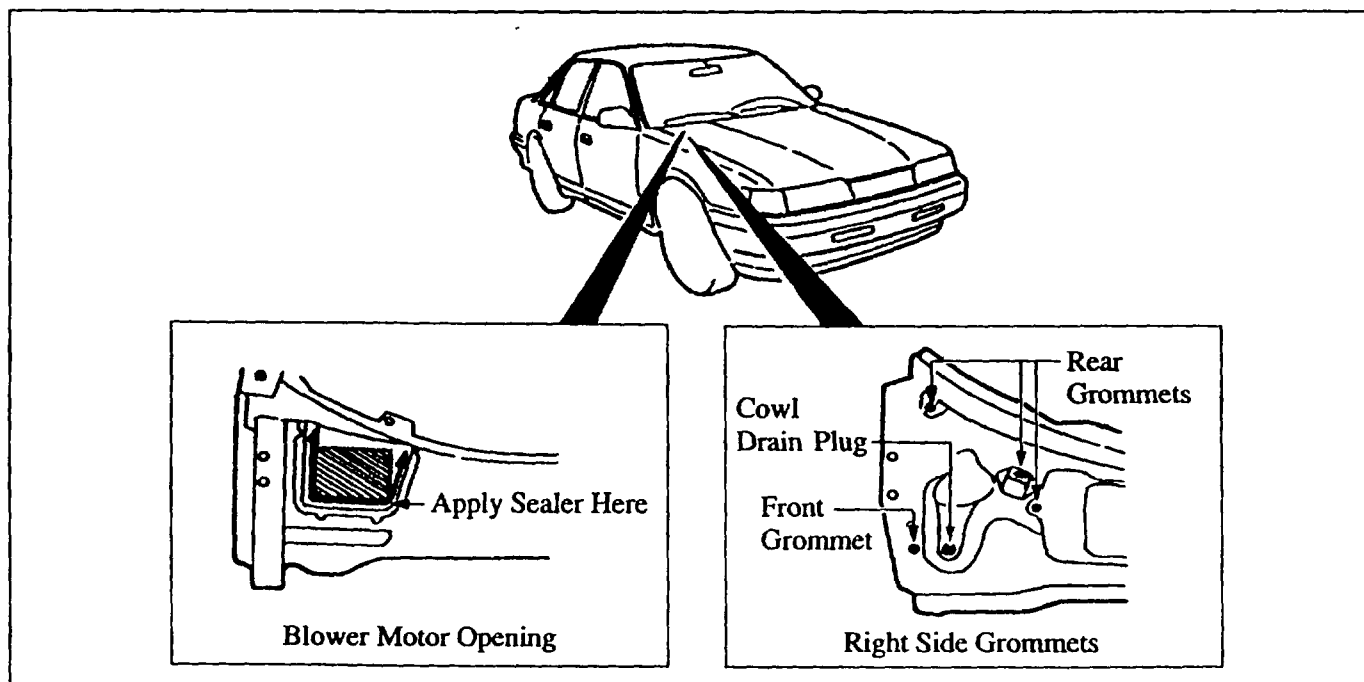


Figure 8: Checking Right Side Cowl for Leaks

7. If a leak is found, remove the black plastic cowl vent, then remove the foam strip from the underside.

**Note:** Before installing the new foam pads, make sure to apply sealer to both sides of the pad.

8. Reinstall the black plastic cowl vent. Perform a water leak test by directing water around the outer edges of the cowl vent. Inspect for water leakage or moisture.

#### AREA C: CORNER OF FIREWALL AND INNER FENDER

1. Lift carpet and pad, and feel for water. If water is present, remove windshield wipers and cowl plate. Check for missing sealer or holes among the lower "A" pillar-to-cowl seam. Apply sealer to any suspected areas. Figure 9.

**Note:** This procedure should only be done by experienced body shop personnel.

2. Remove the door jamb nut and bolt, also remove the four (4) upper fender bolts. Using a mechanics mirror, inspect sealer hidden by the upper fender for skips and pinholes. Figure 9.

**Note:** The illustration shows the fender removed. Complete fender removal is not required.

**Caution:** Use care when moving fender for inspection and resealing body seams. Do not allow the fender to buckle.

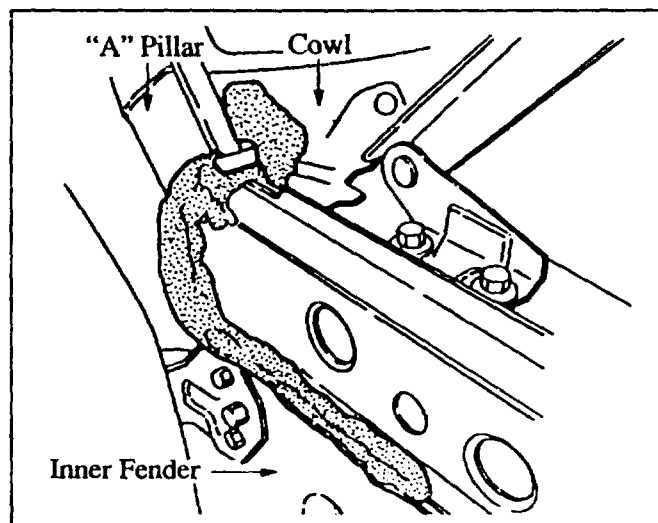
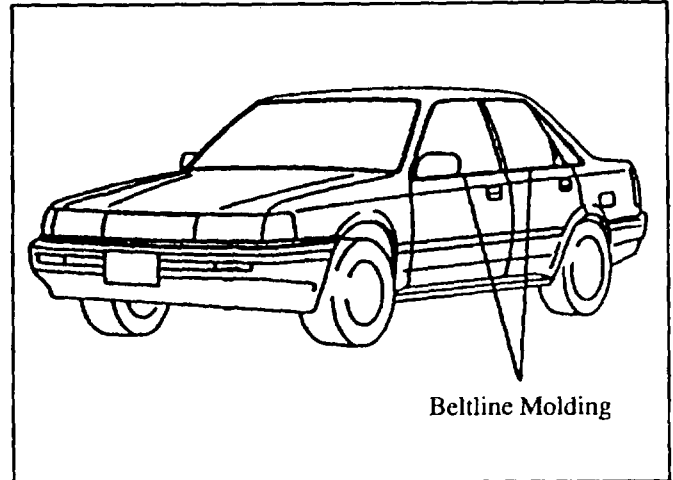


Figure 9: View of Adequate Body Sealer

**AREA D: OVER SILL PLATE**

1. While an assistant directs water along the beltline molding, inspect for water entering from over the plastic sill plate. **Figure 10.**
2. If water is entering over the sill plate, remove the door panel and check that the plastic sheeting Butyl sealer is pressed firmly against the door frame. Also, check that no gaps are present between the sheet metal and the plastic.
3. Confirm that the door drain holes are draining properly and are not obstructed.

**Note:** If Butyl sealer is hard or non-pliable, new sealer will need to be applied to the plastic sheeting to properly seal water leaking from these areas.

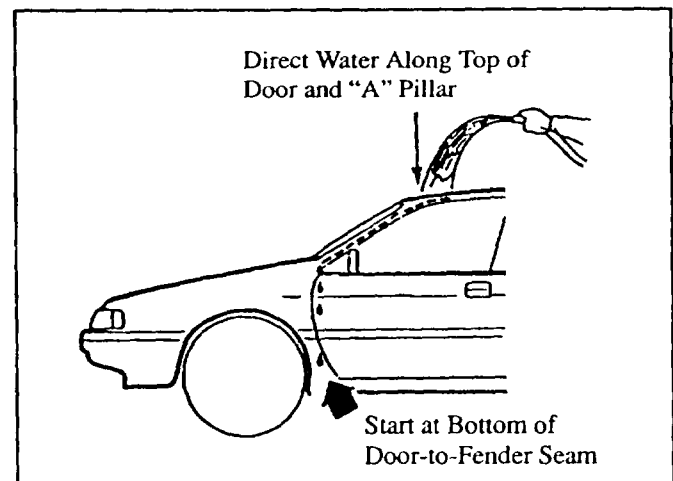


**Figure 10:** Area of Beltline Molding

**LOCATION II: LEFT FRONT SIDE OF PASSENGER COMPARTMENT****Location of Water Leak Source**

1. Remove the dash undercover, scuff plate and kick panel. Pull back the carpet and pad. Remove the front seat, carpet, and pad if necessary.
2. At least 12 minutes should be spent during initial hose testing, because the water may have to move through several body seams before being detected.
3. Turn the water pressure to the hose so that a 12" to 18" stream of water is present while the hose is in a vertical position.
4. Get inside the vehicle and use a flashlight to help locate the water entry point.
5. With the door closed, watch for water leaks during the hose test. Have an assistant slowly direct the water stream up from the bottom portion of the door-to-fender seam then up the "A" pillar to the top of the door and around the windshield. Next, have the assistant slowly direct water along the window beltline molding (if the vehicle is a four door, perform this test on both the front and rear doors.) **Figures 10 and 11.**

**Note:** Do not direct water into blower motor opening (under cowl panel.)



**Figure 11:** Locating Source of Front Water Leak

6. Note which area the water enters the vehicle. Refer to the appropriate location's repair procedure. **Figure 12.**

AREA A: KICK PANEL (pages 7)  
AREA B: UNDER DASH (pages 7 and 8)  
AREA C: CORNER OF FIREWALL  
AND INNER FENDER (page 8)  
AREA D: OVER SILL PLATE (pages 8 and 9)

### Repair Procedure

#### AREA A: KICK PANEL

1. Follow the same repair procedure described for the right front side of the passenger compartment.
2. Run water on the antenna. Make sure the antenna tube is intact on the bottom of the power antenna motor and water drains properly (for models equipped with power antenna.)
3. If necessary, position the hose so there are no loops, kinks or pinched areas. If the hose cannot be corrected or is out, remove the damaged section of hose. Install a replacement piece of hose (4.7 mm [3/16 in.] outside diameter) which provides a tight fit to the existing hose.
4. If the leak persists, inspect the antenna bezel molding and gasket for correct sealing and mounting. Confirm that the mounting screw is fully seated and that the gasket is firmly contacting the roof sheet metal. **Figure 13.**

#### AREA B: UNDER DASH

1. Using a mechanic's mirror, look for signs of water leakage under the dash.
2. Check the cowl grommet for leaks by spraying water on it. Replace the grommet if it leaks. Apply sealer to the bottom side of the grommet during installation. **Figure 14.**

**Note:** Only one grommet is located in an area where it may cause a water leak.

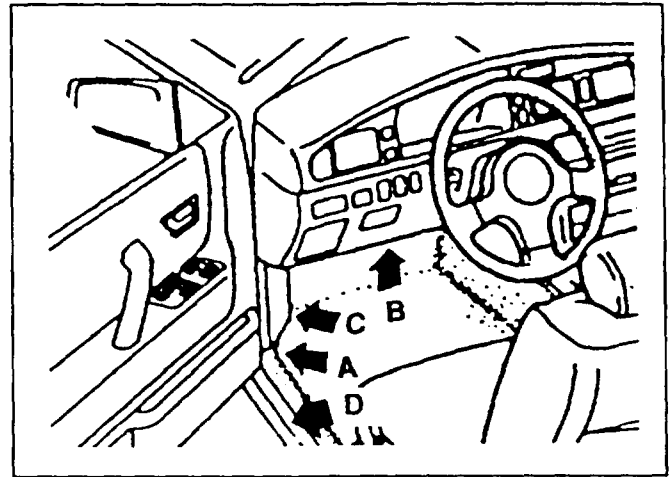


Figure 12: Possible Water Leak Areas

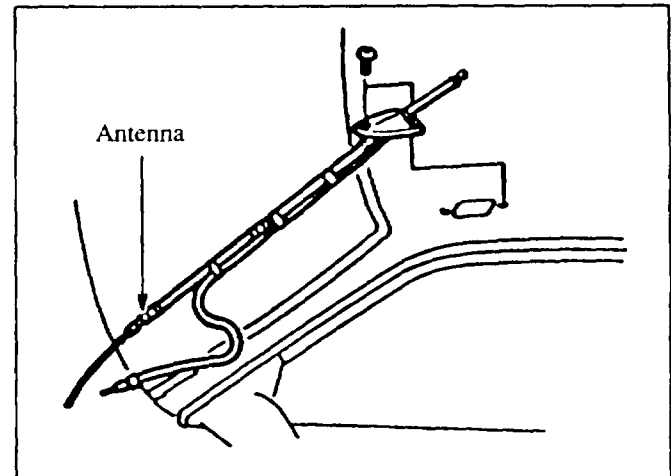


Figure 13: Inspecting Antenna Bezel

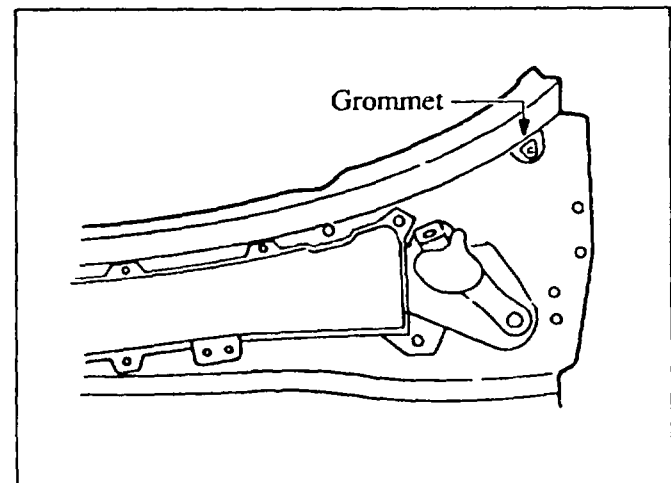


Figure 14: Left Side Grommet

3. If water is leaking from the firewall, check for improperly seated studs, loose grommets, and cross-threaded bolts on the engine side of the firewall.
4. If necessary, remove the studs, clean the threads and reinstall. Remove cross-threaded or high bolts, retap holes and, if necessary, replace bolts. Be sure to apply sealer to the threads before installing the bolts. Finally, replace any loose grommets.
5. Remove the black plastic cowl vent, direct a stream of water at each stud and, if any leaks are found, apply sealer.

#### AREA C: CORNER OF FIREWALL AND INNER FENDER

1. Lift carpet and pad and feel for water. If water is present, remove windshield wipers and cowl plate. Check for missing sealer or holes along the lower "A" pillar-to-cowl seam. Apply sealer to any suspected areas. **Figure 15.**

**Note:** This procedure should only be done by experienced body shop personnel.

2. Remove the door jamb nut and bolt, also remove the four (4) upper fender bolts. Using a mechanic's mirror, inspect sealer hidden by the upper fender for skips and pinholes. **Figure 15.**

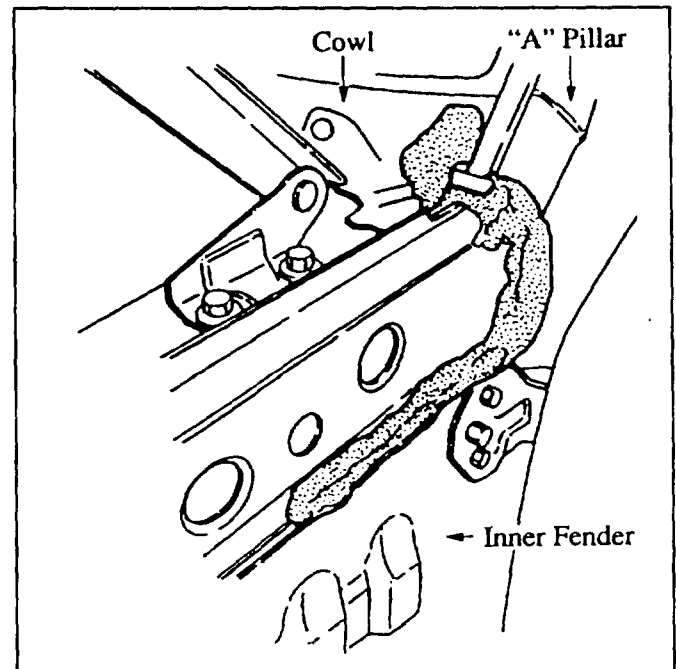
**Note:** The illustration shows the fender removed. Complete fender removal is not required.

**Caution:** Use care when moving fender for inspection and resealing body seams. Do not allow the fender to buckle.

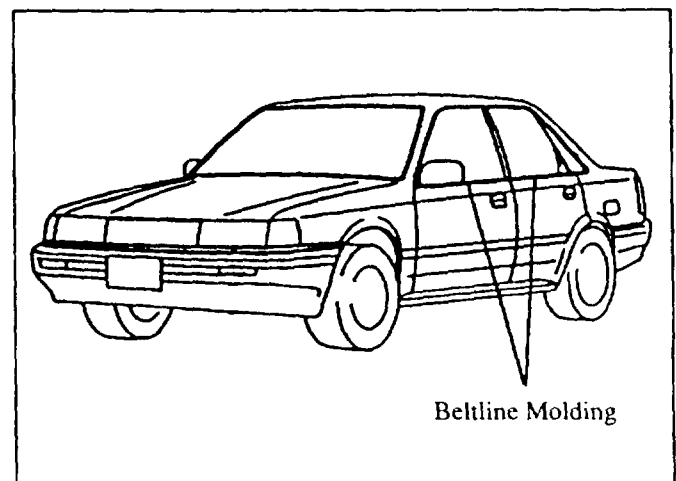
3. Also inspect the antenna bezel molding for correct sealing and mounting as described in the repair section of AREA A (page 7).

#### AREA D: OVER SILL PLATE

1. While an assistant directs water along the beltline molding, inspect for water entering from over the plastic sill plate. **Figure 16.**
2. If water is entering over the sill plate, remove the door panel and check that the plastic sheeting Butyl sealer is pressed firmly against the door frame. Also, check that no gaps are present between the sheet metal and the plastic.



**Figure 15:** View of Adequate Body Sealer



**Figure 16:** Area of Beltline Molding



3. Confirm that the door drain holes are draining properly and are not obstructed.

**Note:** If Butyl sealer is hard or non-pliable, new sealer will need to be applied to the plastic sheeting to properly seal water leaking from these areas.

### LOCATION III: TRUNK COMPARTMENT AND UNDER REAR SEAT

#### Location of Water Leak Source

1. At least 12 minutes should be spent during initial hose testing, because the water may have to move through several body seams before being detected.
2. Turn the water pressure to the hose so that a 12" to 18" stream of water is present while the hose is in a vertical position.
3. Carpet, side panels and rear seat bottom may have to be removed to locate the source of the leaks.
4. Lower the rear seat backs. From inside the vehicle, close the door and, using a flashlight, look for water leaks during the hose test.
5. Have an assistant direct the water stream over the entire rear of the vehicle, concentrating on the following areas: **Figure 17.**
  - Along the deck lid to body gap.
  - Up each "C" pillar and across the upper portion of the rear window.
  - Along the key lock cylinder, rear deck lid finisher and combination lamps.
  - Along the fuel filler door-to-body gap.
6. Have an assistant direct the water stream over the entire inner wheel well area concentrating on the following areas:
  - Inner wheel well-to-quarter panel seam and bumper plug. **Figure 18.**
  - Inner wheel well-to-trunk floor pan seam. **Figure 19.**
  - Inner wheel well-to-floor pan seam (to check for leakage under the rear seat.)

**Note:** Direct a heavy stream of water where the rocker panel meets the inner wheel well (to check for leakage into the rocker panel). **Figure 17.**

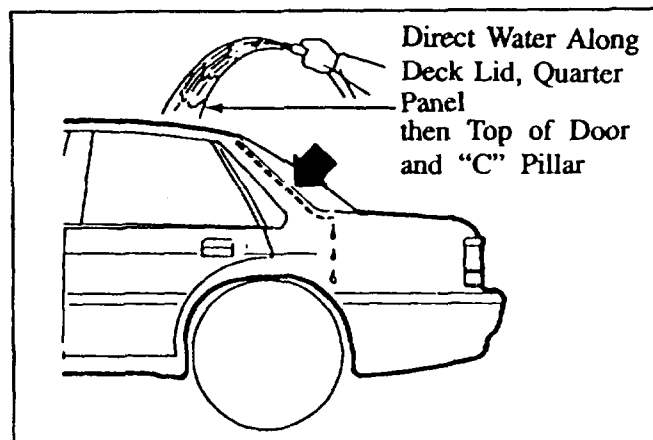


Figure 17: Locating Source of Rear Water Leak

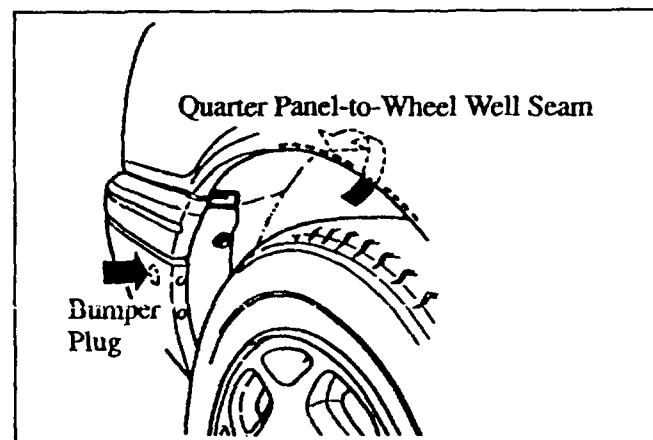


Figure 18: Bumper Plug and Wheel Test Area

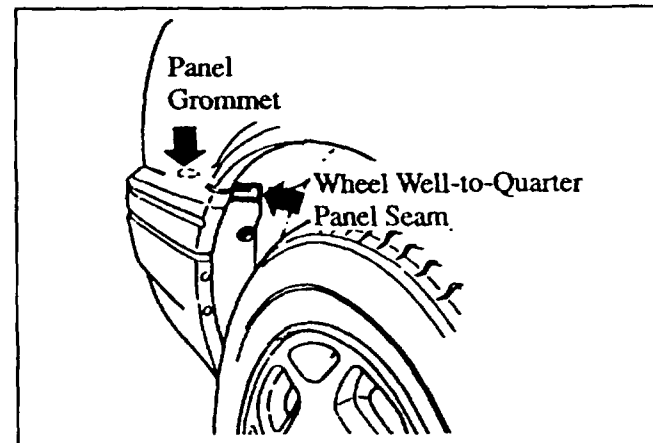


Figure 19: Wheel Well-to-Quarter Panel Seam

7. Note which area the water enters the vehicle. Refer to the appropriate location's repair procedure. **Figure 20.**

AREA A: INTERIOR TRUNK END PANEL TRIM (PLASTIC) AND/OR TRUNK WEATHERSTRIP - ALSO REAR COMBINATION LAMPS AREA (pages 10 and 11)

AREA B: INNER WHEEL WELL-TO-TRUNK FLOOR PAN SEAM (pages 11 and 12)

AREA C: STORAGE WELLS (RIGHT OR LEFT) BEHIND WHEEL WELL (page 12)

AREA D: INNER WHEEL WELL-TO-FLOOR PAN (UNDER REAR SEAT) AND INSIDE THE ROCKER PANELS (page 12)

AREA E: KEY LOCK CYLINDER (page 13)

8. If water is collecting in storage wells, check the drain holes for debris or undercoating.

**Note:** Do not seal up the drain holes at the bottom of area C.

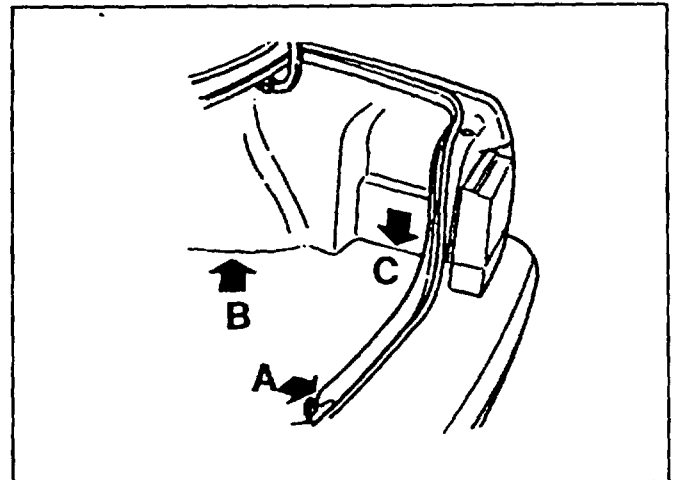
#### Repair Procedure

AREA A: INTERIOR TRUNK END PANEL TRIM (PLASTIC) AND/OR TRUNK WEATHERSTRIP - ALSO REAR COMBINATION LAMPS AREA

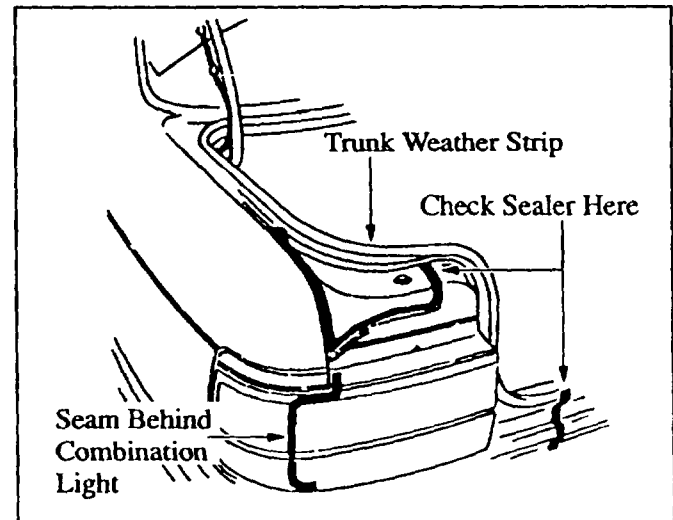
1. If water is running down over the interior trunk end-panel trim or over/under the trunk weatherstrip, pull up the trunk weatherstrip and check grey sealer material and any body seams near the linkage area. Confirm that grey sealer covers the top of the flange in one solid strip. Check for pin holes, missing sealer or burrs. **Figure 21 and Figure 22.**

2. If water is located behind the interior trunk end-panel trim or carpet, remove the trim panel. Direct a stream of water at the rear of the vehicle and pinpoint the location of the leak. Check the body seams for any pinholes or missing sealer. **Figure 21.**

3. If pinholes and/or missing sealer are found in step 2, add a non-hardening grey body seam sealer to fill in the empty spots and reinstall the trunk weatherstrip. Make sure the trunk weatherstrip is routed under the latch striker and press it firmly in place. Retest for water leaks.



**Figure 20:** Locating Possible Water Leak Areas



**Figure 21:** Inspecting Rear Trunk Area

4. If the leak is from the combination lamp(s) area, confirm that the mounting studs/nuts are tight and the assemblies are not cracked. Check end panel-to-quarter panel seams for any pinholes or missing sealer. If the leak continues, remove the combination lamp(s) and gasket(s). Install a new gasket to the combination lamp(s). Figure 21.

**Note:** Before installing the new gasket, apply sealer to both sides of the gasket. Also, confirm body-to-combination lamp surfaces are flush and no burrs are present.

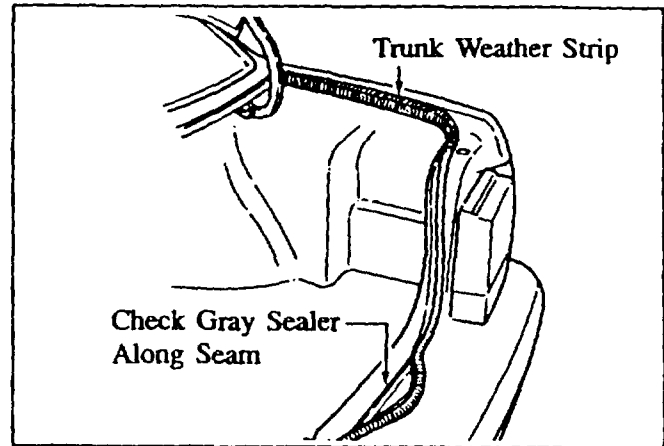


Figure 22: Checking Grey Sealer Under Trunk Weatherstrip

#### AREA B: INNER WHEEL WELL-TO-TRUNK FLOOR PAN SEAM

1. If water leaks into the forward area of the trunk, make sure that the weatherstrip is properly seated and not leaking. Figure 23.
2. If no problems are found, check all trunk opening seams and the inner wheel well-to-trunk floor pan seam for missing sealer or pin holes. Seal any suspected areas and retest for leaks. If no problems are found, go to step 3.

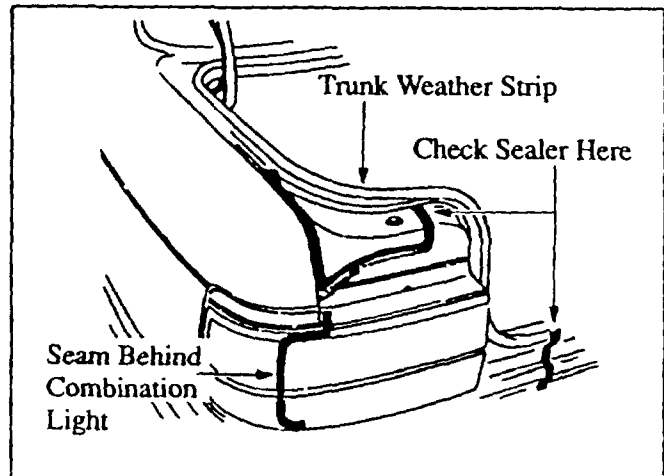


Figure 23: Inspecting Rear Trunk Area

3. If necessary, remove the rear shoulder seat belt mounts and inside "C" pillar trim panel(s). Remove the mounting nuts. Next, remove the rear window glass side molding. Figures 24 and 25.

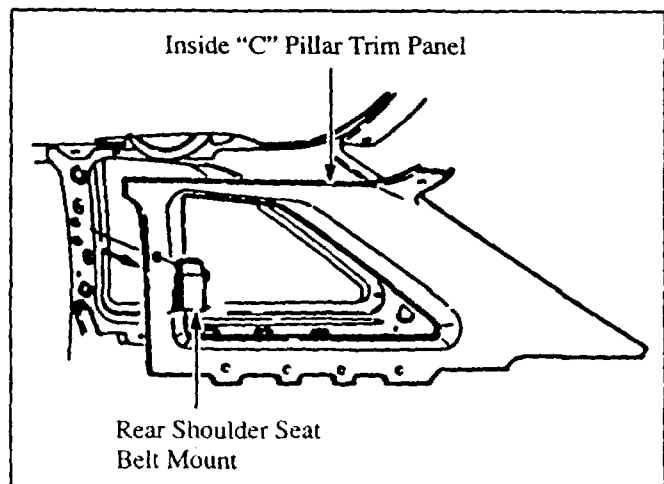


Figure 24: Removing Inside "C" Pillar Trim Panel

4. Check the condition of the rear window sealer in this area. Use a flashlight to find small pinholes. Check extractor side molding mounting hardware for missing or damaged sealer or gaskets. Apply sealer to all mounting points as necessary. **Figure 25.**

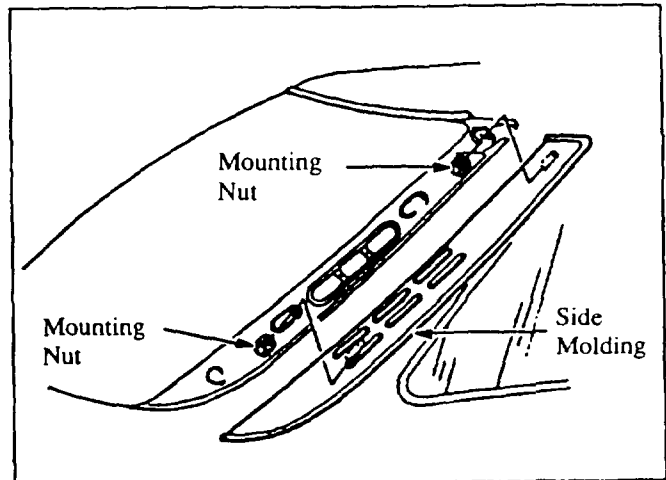


Figure 25: Removing Rear Window Glass Side Molding

#### AREA C: STORAGE WELLS (RIGHT OR LEFT) BEHIND WHEEL WELL

1. If water is collecting in storage wells, check drain holes for dirt or undercoating.

**Note:** Do not seal up drain holes at the bottom of the storage wells.

2. Check for any leaks at the grommet and plug between the quarter panel and bumper. Examine seams for missing sealer or pin holes. Seal any suspected defects. **Figures 26 and 27.**
3. Check for any leaks at the fuel filler neck-to-body in the left quarter. If moisture is present, remove the filler neck.

4. Apply sealer to both sides of the gasket and reinstall.

#### AREA D: INNER WHEEL WELL-TO-FLOOR PAN (UNDER REAR SEAT) AND INSIDE THE ROCKER PANELS

1. Remove rear seat bottom and lift carpet.
2. Check for any leaks due to pin holes or missing sealer along the inner wheel well-to-body seam.
3. Remove the plastic sill plates and confirm that there is no water being retained inside the rocker panel.
4. If water is present, seal the inner wheel well-to-rocker panel seam.

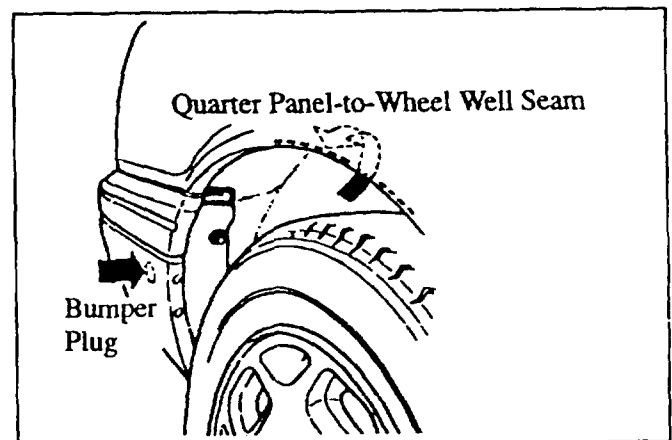


Figure 26: Bumper Plug and Wheel Test Area

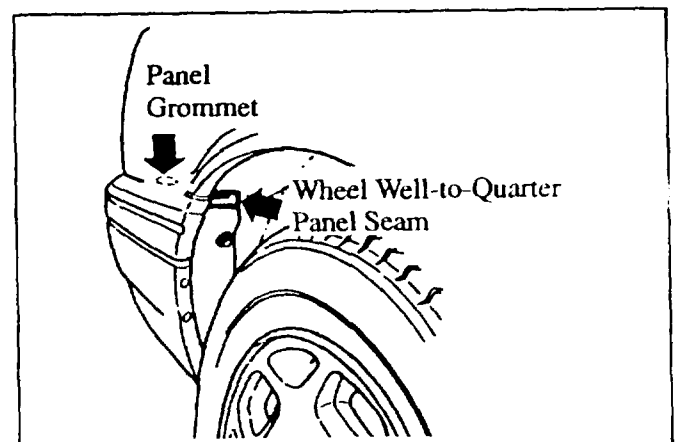


Figure 27: Wheel Well-to-Quarter Panel Seam

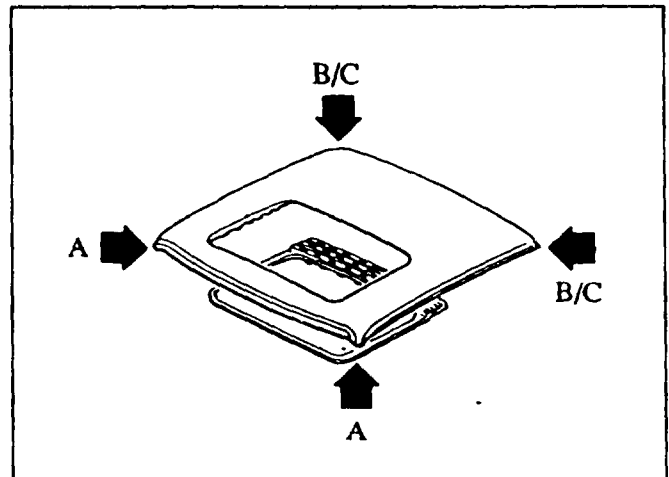
**AREA E: KEY LOCK CYLINDER**

1. If the leak occurs at the key lock cylinder, remove or replace gasket.
2. After installing the gasket, seal around the key lock cylinder-to-deck lid area from the inside with silicone.

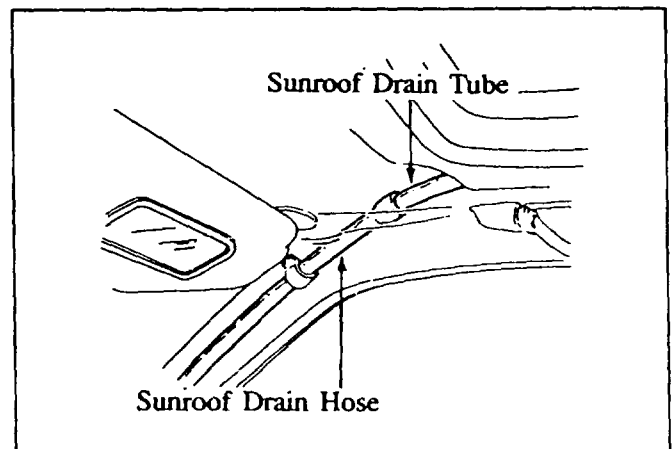
**LOCATION IV: SUNROOF OR HEADLINER AREA****Location of Water Leak Source**

1. Have an assistant help locate the exact point of water entry.
2. Turn the water pressure to the hose so that a 12" to 18" stream of water is present while the hose is in a vertical position.
3. Make sure the sunroof is completely closed. If necessary, readjust sunroof. (See Workshop Manual Section S.)
4. Run water over the sunroof and note in which area the water enters the vehicle. Refer to the appropriate location's repair procedure. **Figure 28.**

- AREA A:** FORWARD HEADLINER AREA (page 13)
- AREA B:** REAR PASSENGER COMPARTMENT AREA (page 14)
- AREA C:** REAR HEADLINER OR SUNROOF SLIDING PANEL (pages 14 and 15)

**Figure 28:** Locating Source of Top Water Leaks**AREA A: FORWARD HEADLINER AREA**

1. Open the sunroof and make sure that the sunroof drain tubes are intact and that no holes are present. If welds are damaged or have holes, repair or replace the sunroof frame.
2. If welds and drain tubes are OK, remove the front header and side trim pieces. Remove the headliner retainer clips (2 metal and 1 plastic per side), sunroof welt, and sun visor.
3. Carefully lower the headliner. Using a flashlight, check that the drain hose tubes are attached to the sunroof frame. **Figure 29.**
4. Direct a small stream of water into sunroof drain holes to make sure the drain tubes do not leak. If leaking is present, check for damaged hoses.
5. If the hoses are damaged, install a replacement piece of hose which provides a tight fit to the existing hose. The outside diameter of the replacement hose should be 9.5mm (3/8 in).

**Figure 29:** Checking Front Drain Hose and Tube

**AREA B: REAR PASSENGER COMPARTMENT AREA**

1. Remove rear header trim, rear shoulder mounts, and inside "C" pillar trim panel(s). **Figure 30.**

**Hint:** Leave lower attaching screws in place and tilt "C" pillar trim back.

**Caution:** Do not use too much force when pulling on the "C" pillar trim. Permanent damage (white stress marks) may result.

2. Make sure sunroof drain hose grommets are seated. Check that the sunroof drain hose is not kinked and extends through the outer rear side molding.
3. Open the sunroof and, using a squeeze bottle filled with water, pour water down the rear drain holes. Check for signs of leakage at the sunroof drain tube-to-drain hose.
4. If necessary, position the hose so that there are no loops, kinks or pinched areas. Check for kinks at the drain hose clip. Repeat the water test. Make sure that the sunroof drains properly and does not leak. **Figure 31.**
5. If necessary, install a new hose.
6. If hose routing is OK and hose is intact, check for leaks at the rear window.

**AREA C: REAR HEADLINER OR SUNROOF SLIDING PANEL**

1. Remove the rear header trim, rear shoulder seatbelt mounts, and inside "C" pillar trim panel(s). **Figure 30.**

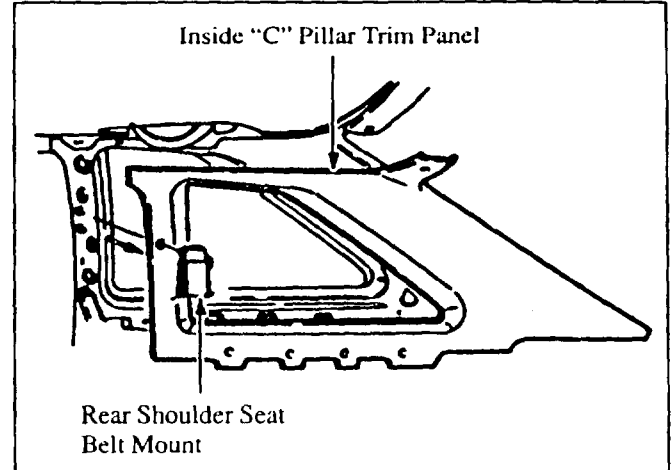
**Hint:** Leave lower attaching screws in place and tilt "C" pillar trim back.

**Caution:** Do not use too much force when pulling on the "C" pillar trim. Permanent damage (white stress marks) may result.

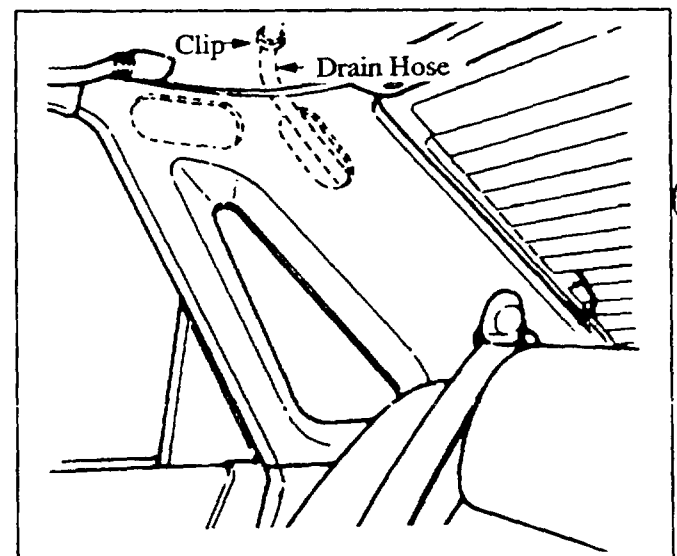
2. Remove headliner retaining clips (1 plastic and 3 metal per side.)

**Caution:** Do not remove the 2 center plastic retaining clips.

3. Make sure that the drain hose routing is correct. Check for damage along the drain hoses by pulling down the headliner.



**Figure 30:** Removing Inside "C" Pillar Trim Panel



**Figure 31:** Rear Sunroof Drain Hose

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4. Check that the drain hoses are attached to the sunroof drain tubes. Replace hose(s) as necessary. Check for kinks at the drain hose clip. **Figure 31.**

**Caution:** Use care when pulling the headliner down. If it is pulled too far, the headliner will be permanently detached from the hidden bracket.

5. Check if welds around the rear sunroof drain tubes are intact and drain properly. With the sunroof closed, direct water over the sunroof and check for leaks at the drain tubes. If the welds are damaged or have holes, repair or replace the sunroof frame.

#### **WARRANTY INFORMATION**

Warranty Type Code: A  
 Customer Comment Code: 6D  
 Damage Code: 38  
 Part No. of Main Cause: 5555 WA 0010  
 Operation No.: See Chart Below  
 Labor Hours: See Chart Below  
 Location Code: Applicable location code necessary. Codes found in SRT microfiche or Warranty Policies and Procedures Manual.

PROCEDURE	OPERATION NUMBER	LABOR HOURS
Water Testing	YY0064RX	0.5
Repair of Right Front Side of Passenger Compartment	YY0033RX	Not to exceed 0.9
Repair of Left Front Side of Passenger Compartment	YY0034RX	Not to exceed 0.9
Repair of Trunk Compartment and Under Rear Seat	YY0035RX	Not to exceed 0.9
Repair of Sunroof or Headliner Area	YY0036RX	Not to exceed 0.9

**Note:**

- Water testing and labor hours for each area are not to exceed four (4) entries.
- Enter each area of water entry as a separate problem. Each problem should have a different location code.
- Subsequent repairs to the same area will be denied.