

Technical Bulletin

Model
6 Cyl.

Group
6

Subject
**Possible Water Entry Areas
on Targa Vehicles**

Part Identifier
60xx

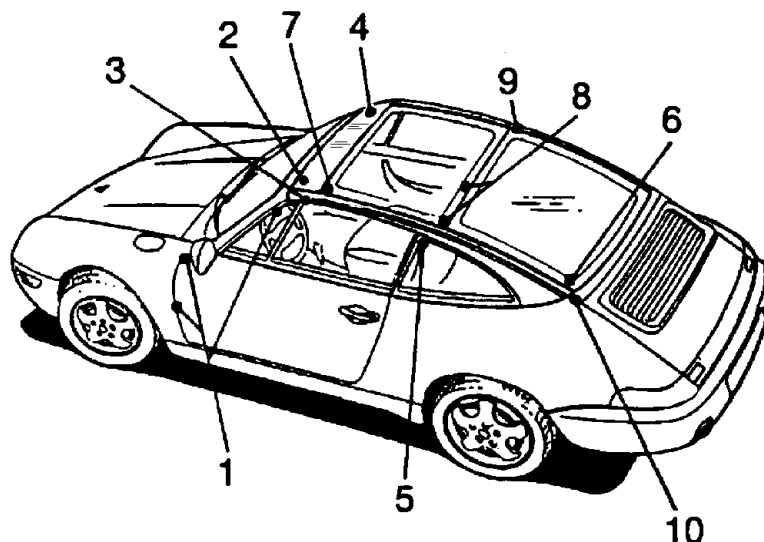
Number
9601

ATTENTION: Service Manager / Service Technician

Models Affected: *911 Targa, Model Year 1996*

General Information: The following information contains procedures relating to the repair of water leaks in the 1996 911 Targa. After finish production each Targa model is comprehensively tested for water leaks. However, should a customer complain of water leaks, the procedures in this information can be used for repairs.

Possible water entry areas include:



- 1 - Water entry on the left and right door seal.
- 2 - Water entry above the left and right "A" pillar - windshield frame/ roof module.
- 3 - Water entry on the formed seal piece of the left and right top door seal / "A" pillar.
- 4 - Water entry on the air deflector.
- 5 - Water entry on the left and right "B" pillar.
- 6 - Water entry on the rear / "C" pillar, left and right sides.
- 7 - Water entry on the left and right side glass roof seals.
- 8 - Water entry on the top of the rear window, left and right sides.
- 9 - Water entry at the transition ramp rear window inside bracket.
- 10 - Water entry on the rear body center piece, left and right sides.

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Testing Procedures:

Before performing the sealing repairs for water leaks, the entire vehicle must be cleaned thoroughly. When repairing water leaks, the area of suspected leakage must be accurately located and repaired according to the procedures outlined on the following pages. At the same time all relevant seals are to be checked for correct seating and also the water drain tubes should be checked for blockage and cleared if necessary.

Where water enters on the inside of the vehicle is often not the same location as where it enters on the outside of the vehicle. Water can run through seals, body compartments etc. and exit in a different area. For this reason the area of the water leak must be correctly identified before repairs begin.

Procedure for identifying water entry areas:

- Removal of the front windshield frame cover:
Remove the dome light assembly and disconnect the wires.
Remove the sun visors and pull the windshield frame cover to the rear.
- Removal of the rear inside cover:
Remove the four screws and pull the cover out toward the front.
- Removal of the rear left and right lower covers:
Remove the cover mounting screws and pull the cover off.
- Removal of the rear left and right upper covers:
Remove the plastic cap from the screw on the "B" pillar.
Remove this screw and the screw on the wheel well. Pull off cover.
- Removal of left and right "B" pillar cover:
Remove the plastic cap on the screw on the lower "B" pillar and the coat hook cover.
Remove both screws on the "B" pillar and remove cover.
- Removal of the left and right inner roof covers:
Remove the front nut and the rear plastic cover. Slide the cover approximately 40 mm to the rear and remove cover.

Water Testing:

Water testing must be carried out properly. Testing should simulate as closely as possible natural rainfall. Duration of the test should be approximately 5 minutes because some leaks do not appear immediately. Avoid powerful jet spraying, as this does not accurately simulate natural conditions.



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Procedures for repairing water leaks:

Area #1 Water entry on the left and right door seal.

Possible causes:

- No water drainage within the door seal.
- The stepped bridge presses the water drain in the door seal shut.
- Not enough pressure on the door seal in the area of the front quarter window.

Repair:

- Check the water drainage of the door seal in the area of the lower door hinge (water drains from inside of seal). If necessary, provide increased drainage by repositioning the seal.
- Replace damaged door seal. Assure correct sealing in the area of the upper "A" pillar (see area #3 - water drainage).
- Rework the seam depth and/or door seal slot in the area of the stepped bridge. Adjust the quarter window and/or door window.

Area #2 Water entry above the left and right "A" pillar - windshield frame / roof module water channel on the windshield frame seal.

Possible cause:

- Incorrect position of the water channel in the windshield frame seal.

Preparation:

- Remove the windshield frame cover and inside roof cover.
- Open and remove wind deflector (held with 4 screws).

Repair:

- The complete water channel must enter into the guide rail and be slightly bent to the outside. It must not protrude on the side (arrow 1, figure 1). The sides must be bent without kinks slightly to the top.

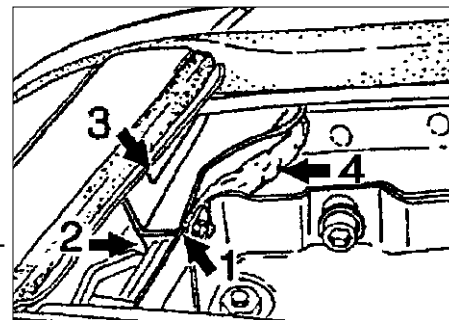


Figure 1

The end piece (arrow 2, figure 1) must point straight to the bottom into the guide. The drip pan which is located below the side wind deflector (sheet metal strip, arrow 3, figure 1) must go into the water channel and lay on the side of the channel. The water channel can be adjusted by installing butyl sealing strips or similar material (arrow 4, figure 1). All areas of the channel must be even without any kinks. The rear end of the butyl sealing strip must connect with the guide rail on the inside of the side wall (arrow 1, figure 1)

Note:

A space of approximately 2 mm must be present between the butyl sealing strip and the sun screen rolling shaft. If the distance is too small, butyl material may wrap around the rolling shaft and affect its operation.



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Area #3 **Water entry on the formed seal piece of the left and right top door seal / "A" pillar transition of the water drainage pipes of the windshield frame seal and the roof frame to the formed piece on the door seal.**

Possible cause:

- The transition of the water drain pipes of the seal and the roof frame to the formed piece on the door seal (area of "A" pillar) does not exist.

Preparation:

- Remove the inside covers of the windshield and roof frame.

Repair:

- Remove the holding bracket for the door seal formed piece on the inside (if installed).
- Remove the 4 bolts from the door seal bracket on the roof frame.
Pull the seal off in the area of the "A" pillar.
- Remove the sealing material from the bottom of the seal and seal base.
- Install a clamp (part number 999 507 542 01, arrow 1, figure 2) onto the plastic hose of the windshield frame seal. This prevents the plastic drain hose from moving to the top when installing the door seal.
- Install a 2 mm wide strip of sealing butyl around the metal drain pipe (arrow 2, figure 2) of the roof frame.
- Lay butyl material on top of the formed piece on the door seal (arrows A and B, figure 3).

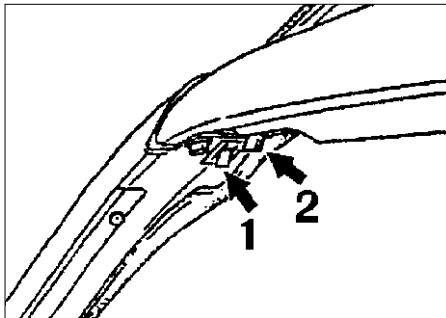


Figure 2

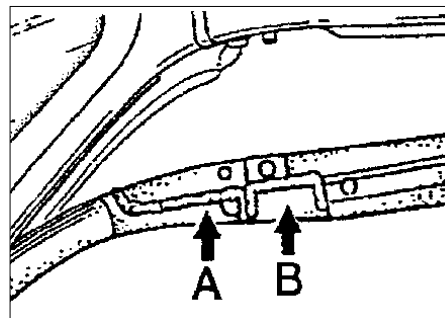


Figure 3

- A - Butyl sealer 5 mm dia.
Length approx. 110 mm
- B - Butyl sealer 2 x 5 mm
Length approx. 70 mm



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- Reinstall the door seal. Ensure that the water drain pipe is properly installed in the opening of the door seal and the butyl seals are not moved.
- Secure the door seal onto the roof frame with the bracket.
- Reinstall the holding bracket (part number 993 562 571 00, arrow, figure 4) for the door seal on the inside.
- The holding bracket (part number 993 562 571 00) must be service installed since it was not done in production. This bracket should be installed as shown (arrow figure 5) to a 3 mm hole drilled into the roof frame.

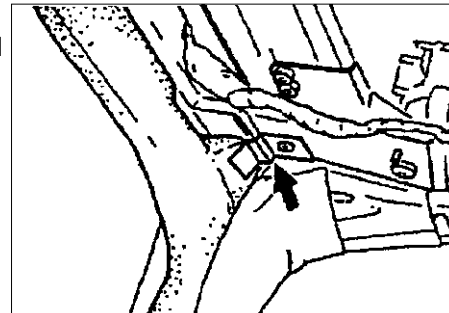


Figure 4

CAUTION: Drill only through the first sheet metal layer. Otherwise, leaks may result!!

- Fill the hole with body sealer and install the bracket with a sheet metal screw (4 mm dia. by 6 mm long). Install the door seal into the correct position and set the bracket into place. Bend the bracket to the outside until the teeth of the bracket contact and hold the door seal rubber.

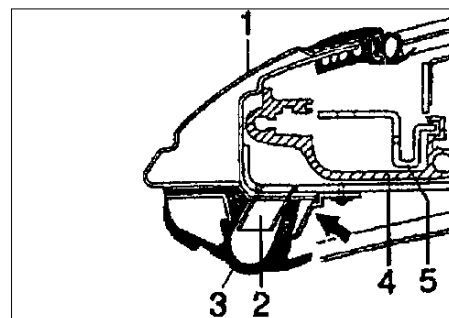


Figure 5

- 1 - Roof frame
- 2 - Water drainage pipe
- 3 - Door seal
- 4 - Guide rail
- 5 - Carrier bracket in the guide rail

Position the holding bracket to the center of the drain pipe of roof frame and flush with the bottom edge of the roof frame.

Note: It is recommended that after repairs are completed in areas #2 and #3, water tests be performed. For this, the wind deflector must be installed. If water leaks are still present, the sealed areas can be reworked. As an additional procedure, the roof frame in the front can be sealed from the inside. Proceed as follows:

- Remove the outside bolt for the roof module on the windshield frame (arrow figure 6) and the first bolt for the glass roof guide rail behind the wind deflector.
- Dry out the roof frame completely using compressed air. Force sealer (part number 999 915 400 40) through the outer bolt hole of the roof frame until it emerges from the guide rail bolt hole.
- Reinstall both bolts and allow the sealer to cure for 8 hours at room temperature. Only after this time should a water test be performed.

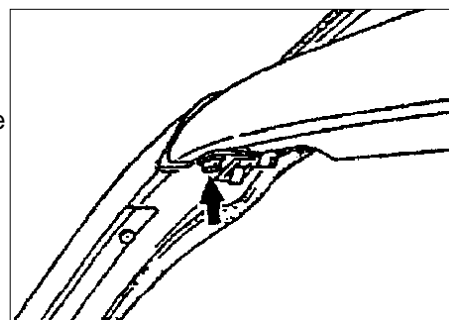


Figure 6

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Area #4 Water entry on the air deflector

Possible cause:

Insufficient pressure on the air deflector seal by the air deflector. The lip of the side seals (left and right) touches the bracket ends of the air deflector.

Repair:

- Adjust the air deflector as follows:

With the air deflector open, loosen the left and right holding nut (arrow 1, figure 7). Adjust the air deflector within the elongated slots so that in the closed position the deflector places a light preload on the seals.

The air deflector must be even with the glass roof and the side trim after adjustments. Tighten the left and right holding nuts to 5.5 Nm (4 ftlb).

- Trim the wind deflector seal lip on the left and right sides (arrows, figure 8) for a length of 115 mm (dimension A in figure 8). Approximately 1 mm should be removed. This will eliminate the possibility of the sealing lip touching the air deflector bracket causing water to run over the seal onto the air deflector bracket and into the passenger compartment.

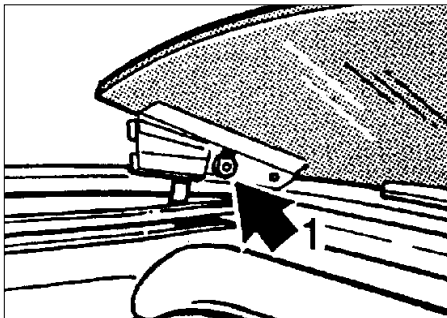


Figure 7

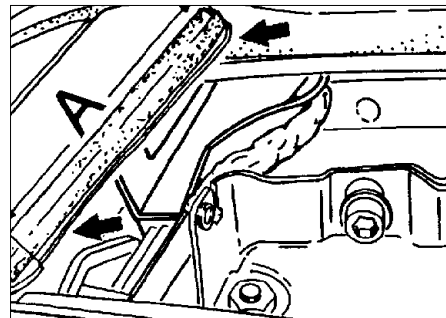


Figure 8

Area #5 Water entry on the top of the left and right "B" pillar.

Possible cause:

A gap in the upper corner of the "B" pillar and roof frame.

Preparation:

- Remove the inside covers for the windshield frame, rear wall, "B" pillar and roof frame.

Repair:

- Close the gap on the "B" pillar (arrows, figure 9) to the roof frame in the area above the coat hook using body sealer.

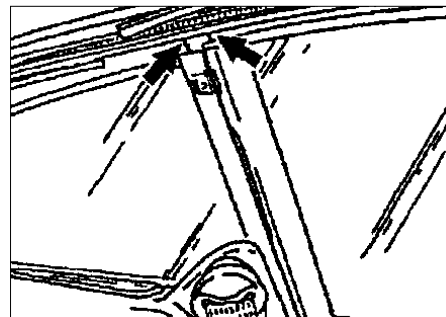


Figure 9



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Area #6 Water entry in the rear "C" pillar area on the left and right sides.

Possible cause:

- The guide rail leaks at the lower end (arrow 1, figure 10).
- The water drainage pipes (arrows 2 and 3, figure 10 and 11) maybe damaged or incorrectly installed.
- The water drainage connector (arrow 4, figure 10 - drainage from the rear window) may be leaking.

Preparation:

- Remove the inside covers for the windshield frame, rear wall and roof frame.

Repair:

- Seal the area of the guide rail unit with body sealer (arrow 1, figure 10).
- Correct the installation or if needed, replace the drain pipes (arrows 2 and 3, figure 10 and 11).
- Seal the drainage connector with body sealer (arrow 4, figure 10).

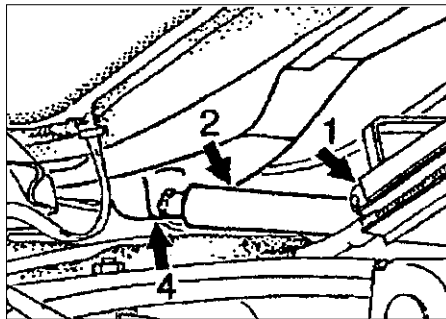


Figure 10

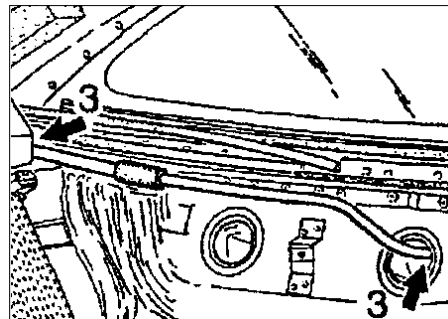


Figure 11

Area #7 Water entry on the left and right side glass roof seal.

Possible cause:

- Possible openings on the corners of the glass roof seal. Water can run through the seal toward the rear and enter the passenger compartment.

Repair:

- Close the open ends of the glass roof seal using rubber cord (part number 999 911 088 50) 7mm dia., 45 mm in length (arrow, figure 12).

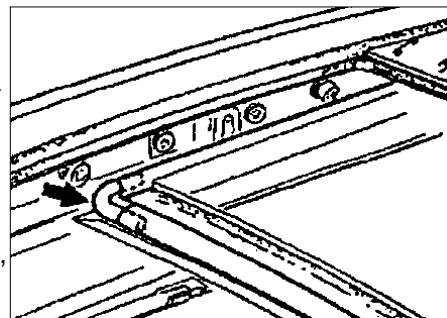


Figure 12

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Area #8 **Water entry on top of the rear window on the left and right sides.**

Possible cause:

- Improper sealing of the rear window frame at the front upper area (arrow 1, figure 13).
- Possible openings on the front corners and / or the transition between the rear window and side seals (arrow 2, figure 13).

Repair:

- Close any gaps using body sealer.

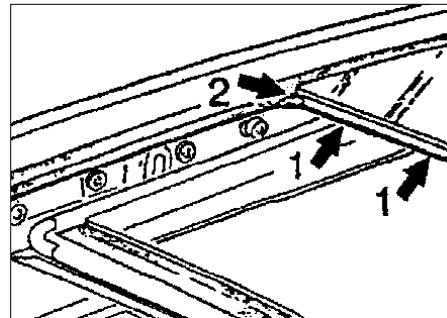


Figure 13

Area #9 **Water entry at the transition ramp rear window inside bracket above the roof frame left and right sides.**

Possible cause:

Insufficient sealing of the transition ramp.

Repair:

- Press sealing material between the roof frame and the rear window inside bracket (arrow figure 14).

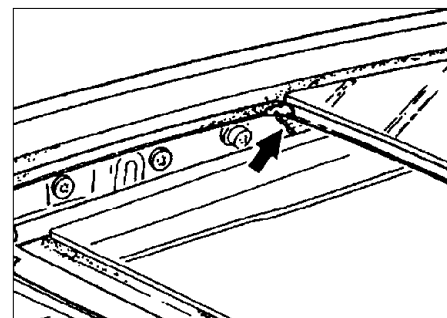


Figure 14



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Area #10 **Water entry on the rear body center panel at the side seam connections to the left and right side members.**

Possible cause:

- Inadequate sealing.

Repair:

- Seal the gap between the rear body center panel (arrows, figure 14) and side members from the outside using silicone free body sealer. Depending on the body color, a light or dark sealer should be used which can be painted.

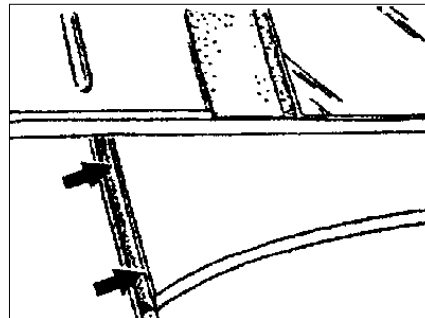


Figure 1

- Angle the tip of the sealer cartridge. Start at the bottom of the seam and apply the sealer. Remove any excessive sealer.
- After approximately 30 minutes drying time, paint over the sealer in the vehicle exterior color.

General Information: After completion of all sealing repairs, water test the vehicle. Reinstall all removed components. Road test the vehicle.

Literature: Refer to the 911 Carrera Workshop Manual (993) Volume 5, Supplement "Targa" and the Introduction Brochure.

Parts Information:	999 507 542 01	Clamp	(X2)
	993 562 571 00	Bracket	(X2)
	900 145 093 07	Screw	(X2)
	N 011 664 5	Washer	(X2)
	993 562 573 00	Water drain (left)	(X1)
	993 562 574 00	Water drain (right)	(X1)
	999 915 400 40	Sealer	----
	999 911 088 50	Terostat band	----
	000 043 101 00	Butyl sealing strip	----

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