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ROOF OPENING PANEL

WATER INGRESS DIAGNOSTICS (G2683993)

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DIAGNOSIS AND TESTING

PRINCIPLE OF OPERATION

For a detailed description of the roof opening panel system and operation, refer to the relevant description and operation section of the workshop manual.

INSPECTION AND VERIFICATION

1. Verify the customer concern.
2. Visually inspect for obvious signs of mechanical or electrical damage.
3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step
4. If the cause is not visually evident, verify the symptom and refer to the Symptom Chart.

SYMPTOM CHART

SYMPTOM	POSSIBLE CAUSES	ACTION
Water ingress from roof opening panel - Front and Rear Fixed Glass Panels	■ Breaks in seals or adhesive beads	■ Identify the area of the leak (see procedures outlined below). Remove the roof opening panel glass. Remove the existing adhesive bead and reapply using the correct bonding procedure
Water ingress from roof opening panel - Sliding Central Glass Panel	■ Debris in the channels /guides ■ Drain tube(s) blocked ■ Damage to the roof opening panel glass seal ■ Roof opening panel not correctly aligned	■ Check and clear any debris in the channels/guides ■ Check drain tube(s) and unblock as required ■ Check for damage to the roof opening panel glass seal ■ Check roof opening panel alignment and rectify as required

WATER INGRESS FROM ROOF OPENING PANEL

NOTE:

If water leaks are noted at the front end of the headliner, this may be as a result of water ingress from the pano roof glass OR water ingress from the windshield. To correctly identify the point of water ingress, lower the headliner and look for evidence of water ingress both from the windshield and the pano roof glass BEFORE continuing with the diagnostics described below. For guidance on diagnosis of windshield water ingress, see separate section in this manual (REFER to: Section 501-11 Glass, Frames and Mechanisms - Diagnosis and Testing - Windshield Water Ingress Diagnostics).

If the customer reports water leaks from (or around) the roof opening panel, the cause can be established using the checks described below. A systematic and logical procedure is required to locate water leaks. Before beginning extensive checks, a thorough visual inspection must be completed. For further information on leak detection processes and equipment, see Section 501-25 Body Repairs - Water Leaks.

Water Test: Roof opening panel - front and rear fixed glass panels



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NOTES:

- The image above is NOT vehicle specific
- DO NOT use a high pressure water hose for water testing.

- Complete the water test with a second person present (in the passenger compartment).
- Use variable washer nozzles (concentrated water jet to fine spray mist).
- Lower the headliner to give clear access to the interior sections of the roof opening panel glass inside the vehicle.
- The outer trims must be raised carefully using a plastic wedge.
- Start in the front section and spray water over the whole area, working backward in stages.
- The leak should be located from inside by a second assistant.
- Where possible, note the specific nature of the water ingress. Photograph the leak point and attach both the photo and a written description of the location and nature of the water ingress/leak point to the Electronic Product Quality Report (EPQR).
- Remove the roof opening panel fixed glass panel(s). Remove the existing adhesive bead and reapply using the correct bonding procedure.

Roof opening panel - sliding central glass panel



NOTES:

- In the case of the sliding central glass panel, the rubber seals and the lock actuator or latch mechanism must be checked first of all.
- Make sure to follow the diagnostic steps outlined below to rectify any issues with water ingress around the roof opening panel first, BEFORE resorting to any alternative action (for example, replacement of the roof opening panel frame assembly).
- Check the seals on the sliding central glass panel, rectify as necessary (for diagnostics for roof opening panel seals, see the "Wind Noise" diagnostics in the Roof Opening Panel Diagnosis and Testing Section).
- Check the correct adjustment of the sliding central glass panel, adjust as necessary, replace any worn or damaged components as necessary.
- Check the internal seal of the roof opening panel frame, realign or install as necessary.
- Check the water drain channels and holes for blockages, clear blockages as necessary.
- The roof opening panel frame incorporates drain holes in each front corner allowing water to drain through the A-pillars and each rear corner allowing water to drain through the roof panel channels. Check the drainage system for unhindered flow and rectify as required.

DIAGNOSTIC TROUBLE CODE(S) (DTC) INDEX

For a list of diagnostic trouble code(s) that could be set on this vehicle, please refer to Section 100-00.