

# Technical Service Bulletin



## 60 Sunroof drain hose leaks

60 13 21 2030593/2 March 13, 2013. Supersedes Technical Service Bulletin Group 60 number 12-20 dated August 27, 2012 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
Audi Q7	2007 - 2010	All	Not Applicable

## Condition

REVISION HISTORY		
Revision	Date	Purpose
2	-	Revised <i>Warranty</i> (updated TUs)
1	8/27/2012	Initial publication

Evidence of water intrusion into the cabin of a vehicle equipped with a Panorama sunroof is found.

## Technical Background

Any of the water drain hoses can be either incorrectly installed (causing an obstruction) or the drain hose itself could have a defect causing a leak. In either case, water may not be channeled away from the sunroof frame and to the vehicle exterior. In most cases, these malfunctions can be found in the upper section of the drain hose. In the case of front sunroof drain hose malfunctions at the upper section of the drain hose, the repair has been to replace the drain hose. Replacing the drain hose is invasive and labor-intensive because it is necessary to remove and reinstall the instrument panel and structure to complete the procedure.

## Production Solution

Introduction of a front sunroof drain hose repair kit (**4L0877719**) for repair of leaks in the upper section of the drain hose.

## Service



### Note:

This repair kit is only to be used to repair front sunroof drain hoses that have malfunctions in the upper section, and replacement of the entire hose is not necessary. During this procedure, it is necessary to also inspect the rear sunroof drain hoses for leaks or obstructions. Water leaks or obstructions in the rear drain hoses must be repaired by replacement of the entire hose.

It is not necessary to remove the complete headliner. After removal of the pillar trim, sun visors, grab handles, etc., access to the drain hoses will be possible.

The following describes the work procedure for the installation of the repair kit for the front sunroof drain hoses:

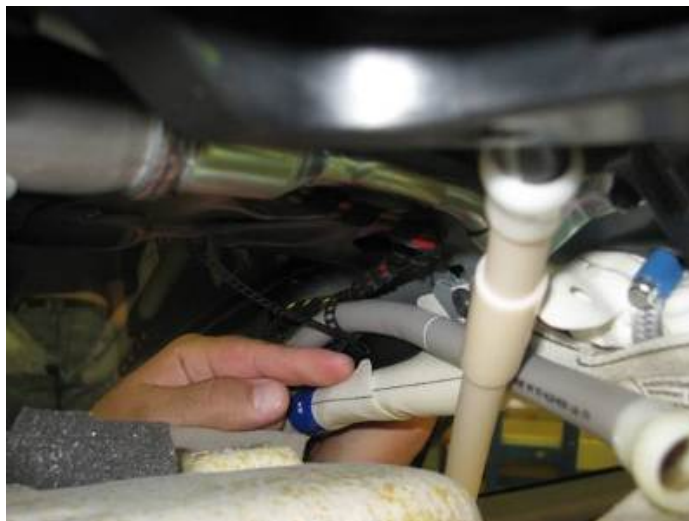
1. Disconnect the original drain hose from the sunroof frame.

Attach the repair section in its place (Figure 1).



*Figure 1. Disconnect original drain.*

2. Open the existing cable ties along the A-pillar (Figures 2, 3, and 4).



*Figure 2. Open existing ties along A-pillar.*



*Figure 3. Open existing ties along A-pillar.*



**Figure 4.** Open existing ties along A-pillar.

3. Route the repair section through the cable ties and reattach (Figures 5 and 6).



**Figure 5.** Routing the repair section through the cable ties.



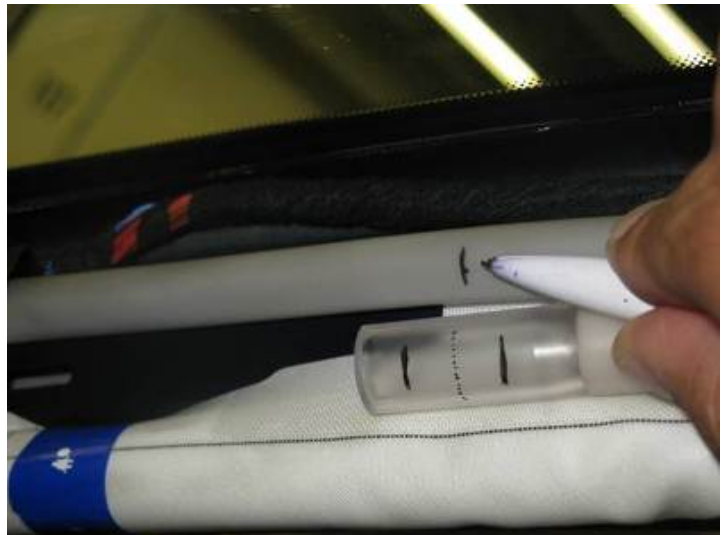
**Figure 6.** Routing repair section and attaching.

4. Align both hoses next to one another (Figure 7).



**Figure 7.** Align both hoses.

5. Mark the original hose at half the length of the union on the repair section as shown (Figure 8).



**Figure 8.** Marked at half the length of the union.

6. Cut the original hose at the mark you made in step 5 (Figures 9 and 10).



**Figure 9.** Cut the hose.



**Figure 10.** Cut hose.

7. Test that there is no leak or obstruction in any part of the lower section of the original hose by inserting a funnel with a small nozzle (~12mm – 13mm in diameter) into the open section of the lower hose enough so as to create a watertight seal, but not to excessively distort the hose. Slowly pour 200ml – 300ml of water into the funnel (Figure 11).



**Figure 11.** Fitting of the funnel and water testing the lower section of the hose.

8. Carefully inspect the water flow and check that there are absolutely no additional leaks into the cabin or obstructions preventing proper flow in the lower section of the hose (Figure 12).



**Figure 12.** Inspect for any additional leaks or obstructions.



**Note:**

Should any additional leaks or obstructions be found, it will be necessary to replace the entire hose. The repair kit cannot be used in this case. If the lower section of the hose tests OK, continue with step 9.

9. Push the end of the lower section into the union to the half-way mark (Figure 13).



*Figure 13. Lower section of hose inserted into the union.*



10. Cut a strip of duct tape (or equivalent) approximately 10 cm long and 5 cm wide (Figure 14).



*Figure 14. Duct tape and measurement.*

11. Wrap the tape around the connection as shown (Figure 15).



**Figure 15.** Wrap tape around connection.

12. Carefully and accurately route the drain hose in the original path and through the retaining clips along the 'A' pillar.
13. Test the repair by pouring approximately 200ml of water into the drain channels of the sunroof frame (Figure 16).



**Figure 16.** Test by pouring 200ml of water into the drain channels.

14. Monitor the flow and check for water tightness of the repair.
15. Reassemble the interior trim.

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## Warranty

<b>Claim Type:</b>	Use applicable claim type. If vehicle is outside any warranty, this Technical Service Bulletin is informational only.		
<b>Service Number:</b>	6048		
<b>Damage Code:</b>	0050		
<b>Labor Operations:</b>	<b>2-Zone Climate Control System:</b>		
	Headliner remove and reinstall	7084 1900	330 TU
	<b>If repairing front sunroof drain hoses only:</b>		
	Front sunroof drain hoses - repair	6048 9999	40 TU
	<b>If replacing rear sunroof drain hoses only:</b>		
	Replace rear sunroof drain hoses	6048 9999	100 TU
	<b>If repairing both front and replacing both rear sunroof drain hoses:</b>		
	Repair front and Replace rear sunroof drain hoses	6048 9999	140 TU
	<b>-OR-</b>		
	<b>4-Zone Climate Control System:</b>		
	Headliner remove and reinstall	7084 1900	330 TU
	<b>If repairing front sunroof drain hoses only:</b>		
	Front sunroof drain hoses - repair	6048 9999	40 TU
	<b>If replacing rear sunroof drain hoses only:</b>		
Replace rear sunroof drain hoses	6048 9999	130 TU	

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	<b>If repairing both front and replacing both rear sunroof drain hoses:</b>		
	Repair front and Replace rear sunroof drain hoses	6048 9999	170 TU
<b>Diagnostic Time:</b>	GFF	No allowance	0 TU
	Road test prior to service procedure	No allowance	0 TU
	Road test after service procedure	No allowance	0 TU
	Technical diagnosis at dealer's discretion (Refer to Section 2.2.1.2 and Audi Warranty Online for DADP allowance details)		
<b>Claim Comment:</b>	As per TSB #2030593/2		

All warranty claims submitted for payment must be in accordance with the *Audi Warranty Policies and Procedures Manual*. Claims are subject to review or audit by Audi Warranty.

## Required Parts and Tools

Part Number	Part Description	Quantity
4L0877719	Water drain hose – Repair kit front	2
4L0877233A	Water drain hose – Left rear	1
4L0877234A	Water drain hose – Right rear	1

## Additional Information

All parts and service references provided in this TSB are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.