

Technical Service Bulletin



50 Creaking noises heard when body twists during braking or steering maneuvers

50 23 12 2062633/2 March 17, 2023. Supersedes Technical Service Bulletin Group 50 number 21-06 dated March 19, 2021, for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A4	2017 – 2023	All	Not Applicable
A4 allroad, S4, A5, A5 Cabriolet, A5 Sportback, S5, S5 Cabriolet, S5 Sportback,	2018 – 2023		
RS 5	2018 – 2019 2021 – 2023		
RS 5 Sportback	2019 2021 - 2023		

Condition

REVISION HISTORY		
Revision	Date	Purpose
2	-	Revised Header (Model Year 2023 added) Revised <i>Warranty</i> (SRT change) Revised <i>Required Parts and Tools</i> (Change in cavity wax material)
1	03/20/2021	Initial publication

Customer states:

- A creaking type noise is heard in the floor area.
- The noise can be generated during strong braking or steering maneuvers where the vehicle body is twisted.

Workshop findings:

Diagnosis locates the source of the noise from the floor area specifically radiating from the footwell to the area under the seat.

Technical Background



During a cornering or hard braking maneuver the longitudinal member reinforcement plate 'P' over the threaded console 'T' can make contact at point 'U' (Figure 1).



Figure 1. Cutaway view of the longitudinal member.

Production Solution

There has been an improvement in the construction of the longitudinal member assembly.

Service

1. Duplicate the noise on a test drive preferably with the customer so that the conditions under which this symptom presents are clearly identified. Also determine from which side of the vehicle the noise originates. If this noise is duplicated on the test drive confirmation that the source of the noise is from the longitudinal member and that the repair described in this TSB will be effective can be achieved as follows.
2. Begin your diagnosis by loosening the frontmost bolt on the subframe mounting as indicated in Figure 2. The bolt only needs to be loosened several turns but not removed.



Figure 2. Front most bolt on subframe to be loosened.



Note:

As specified in the repair manual, it is necessary to replace all loosened subframe bolts at the conclusion of the entire repair.

3. In many cases an audible 'cracking' noise can be heard in the course of loosening and tightening the subframe bolt (Figure 3).



Figure 3. Loosening the front most subframe bolt.

4. Test drive the vehicle.
 - If there is no change or elimination of the noise achieved during this diagnostic step, the repair in this TSB will not be effective and diagnosis must continue outside the scope of this repair procedure.
 - If the noise characteristics do, in fact, change or if the noise is eliminated proceed as follows.
5. Duplication of this noise is difficult when the vehicle is cold. If you suspect that the cold is preventing duplication of this symptom warm up the longitudinal member/body in the area of the rear transverse link bolted connection with a hot air blower set for an outlet temp of approximately 550°C (1022 °F) (Figure 4).





Figure 4. Warming the area of the body near the rear transverse link.

6. Warm the surface to approximately 65 °C (149°F) (Figure 5).



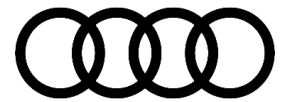
Figure 5. Surface temperature warmed to 65° C (149°F).

7. Allow the surface temperature to cool to approximately 30 °C (86°F) then test drive the vehicle again (Figure 6).



Figure 6. Surface temperature cooled to approximately 30° C (86°F).

8. Merely lowering the vehicle from the hoist can immediately elicit the noise symptom after this warming process.



9. With the symptom confirmed, remove the front middle underbody trim 'B', front underbody trim 'C', and the underbody trim 'D' (Figure 7).



Figure 7. Underbody trim to be removed.

10. In order to provide appropriate access to the affected area inside the longitudinal member begin by unscrewing the four sheet nut fasteners 'F' for the heat shield from their studs. Bend the heat shield slightly away from the longitudinal member (Figure 8). Remove grommet 'E'.



Figure 8. Gaining access to the longitudinal member.



11. Remove grommet 'H' from the longitudinal member (Figure 9).



Figure 9. Remove grommet 'H'.

12. Because bolt 'G' was loosened in the diagnosis process it must be replaced. Replace bolt 'G' using the installation and tightening procedure in ElsaPro. Remove the impact protector 'K'. Pry out clip 'I' from the impact protector and remove it from the longitudinal member (Figures 10 - 11).



Figure 10. Remove impact protector.

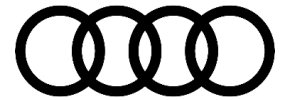


Figure 11. *Impact protector removed.*

13. By shining a flash light through the opening 'K' from the now removed impact protector you can see the upper round hole 'M' (Figure 12) in the longitudinal member reinforcement plate 'N' (Figure 13) when viewed through hole 'L' (hole from grommet 'E' from Figure 8).



Figure 12. *Access for improvised tool.*



14. Figure 13 shows the view through hole 'L' when illuminated through hole 'K' (Figure 12). This is the path through which you will insert an improvised chisel.

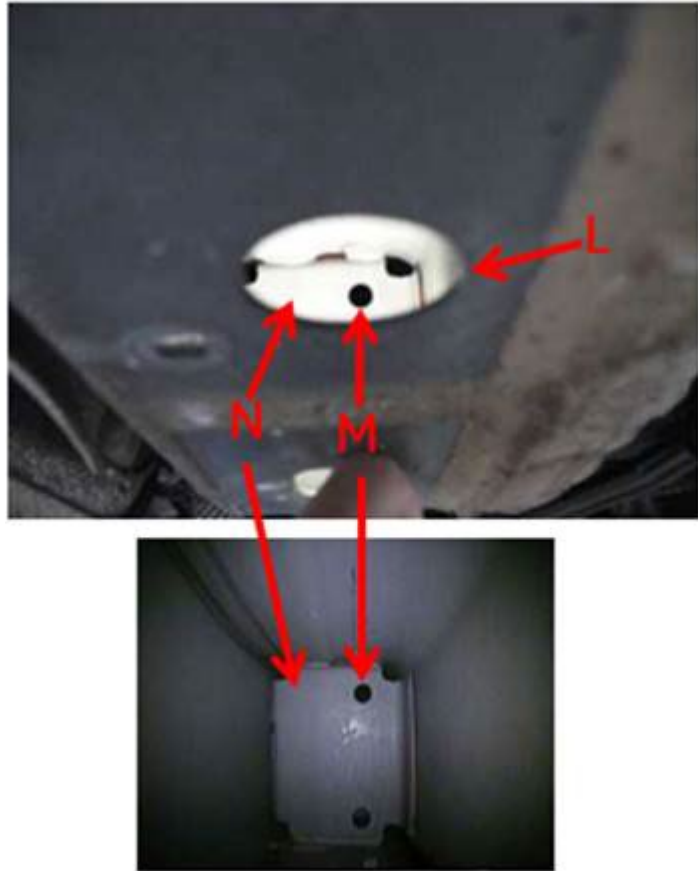


Figure 13. Access hole 'M' and access hole in longitudinal member reinforcement.

15. An improvised tool for this modification will be necessary. Begin fabricating this tool by obtaining a steel rod 10mm in diameter and 50cm long (Figure 14). Grind the tip of one end of the rod into a chisel shape. The length of the grind should be 15mm +/-3mm on each side as shown in Figure 14.

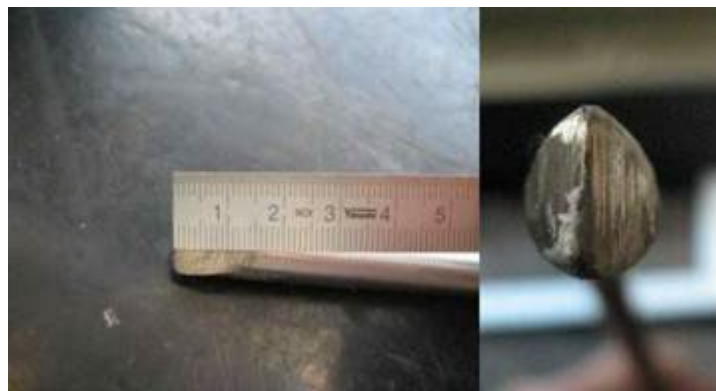


Figure 14. Ground tip of steel rod.



16. Mount one end of the rod into a vice 11cm deep with the chisel shape parallel to the ground (Figure 15).



Figure 15. 50cm long x 10mm steel rod.

17. A bend will be created 11cm deep from the chisel end (Figure 16).



Figure 16. Rod inserted in a vice 11cm from the chisel end.



18. Bend the steel bar at the 11cm apex until a distance of 43 mm +/- 3 mm is created between the axis of the longer end of the rod and the axis of the shorter end of the rod at its tip (Figure 17).



Figure 17. Bend created 43mm from the axis of the long end of the steel rod.

19. Measure and verify this distance (Figure 18).

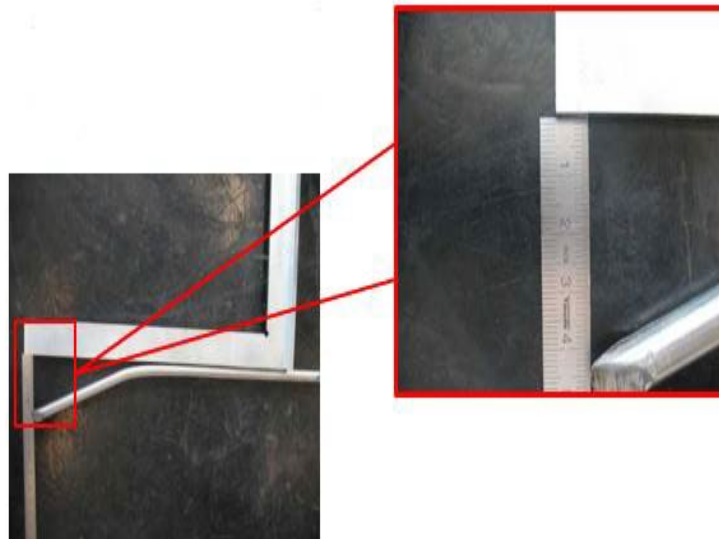


Figure 18. Verifying distance of 43mm in the bend.



20. Insert the chisel end of the steel rod 'A' into the body opening 'L' in the longitudinal member (Figure 19).



Figure 19. Insert the steel rod.

21. Now feed steel rod 'A' through hole 'M' (upper hole) in the reinforcement plate (Figure 20).



Figure 20. Feeding the steel rod through the reinforcement plate.



22. The chisel end of the steel rod is to be fed far enough to engage the front reinforcement plate 'P' at point 'O' such that it is lodged into the gap between reinforcement plate 'P' and the wall of the longitudinal member 'R' (Figure 21).

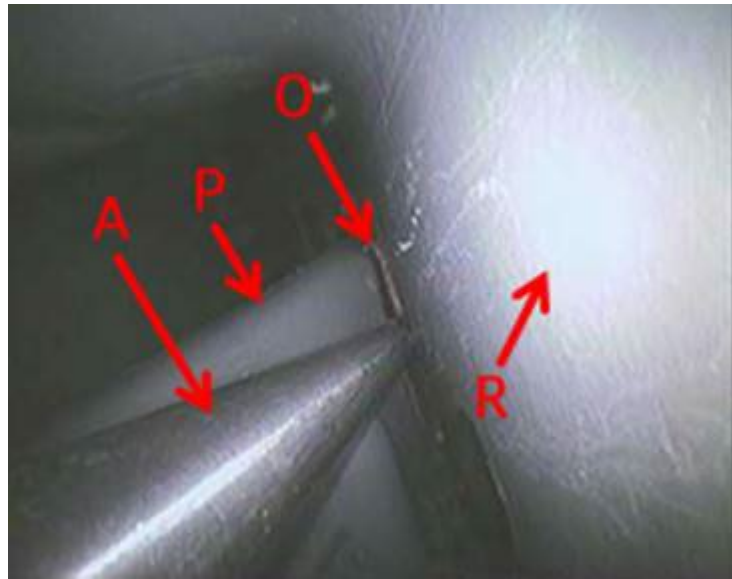


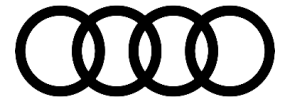
Figure 21. Engaging the chisel end of the steel rod inside the longitudinal member.



23. If the steel rod bend angle and chisel point orientation are created as described the tool will reach the appropriate point of contact when it is guided into the holes in the longitudinal member as described (Figure 22).



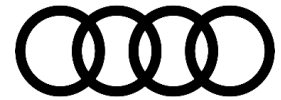
Figure 22. Cutaway view of the longitudinal member illustrating the steel rod positioning.



24. The chisel end of the steel rod must be inserted as shown in Figure 23 with the wedge engaged consistent with the space formed by the longitudinal member support to the longitudinal member housing.



Figure 23. The chisel end of the steel rod properly engaged with the reinforcement plate.



25. Figure 24 shows an incorrect engagement of the chisel end.



Figure 24. Incorrect engagement of the chisel end.

26. Using a marker mark the point at which the steel rod makes contact with the longitudinal member. Then make a mark 10mm – 15mm rearward of that contact point on the steel rod (Figure 25).



Figure 25. Marking the steel rod.



27. Using a hammer drive the steel rod a distance of 10 mm. Then pull the bending tool out of the longitudinal member again (Figure 26).



Figure 26. Steel rod driven forward at least 10mm.

28. As a result, a distance of approximately 3 mm is created between reinforcement plate 'P' and the longitudinal member 'R'. Separating this point of contact eliminates the noise generation (Figure 27).

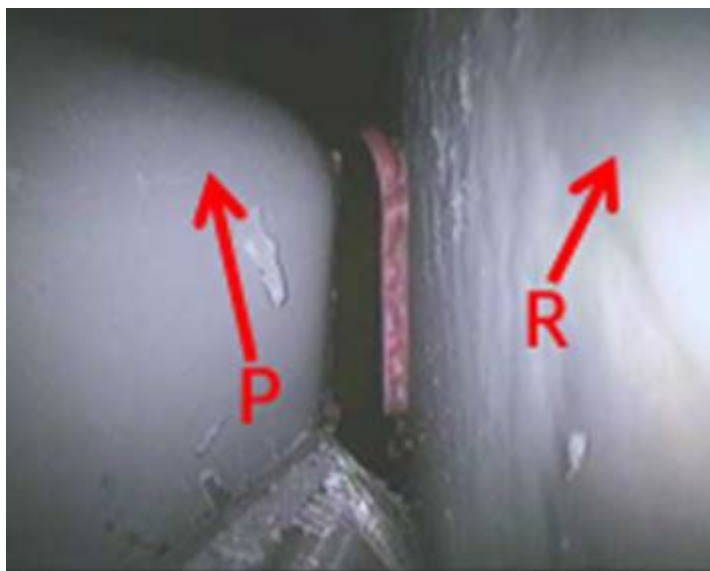


Figure 27. 3mm gap created between reinforcement plate and longitudinal member.



29. All points that were contacted and / or struck are likely have had their corrosion protective layer compromised. Because of this thoroughly coat all areas with cavity wax way (Figure 28).



Figure 28. Cavity wax applied.

30. Cavity wax can be applied through the openings shown in figure 28. The separation point in the longitudinal member can be accessed through hole 'S' (Figure 29).

Reassemble the vehicle as per the repair manual.

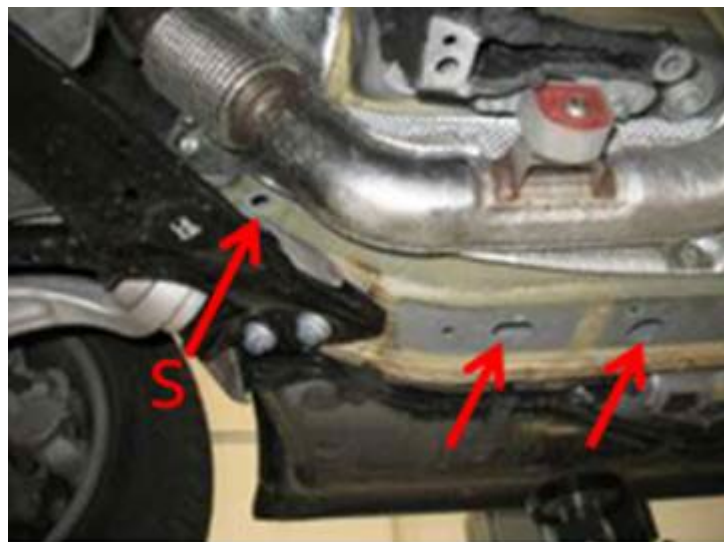


Figure 29. Access opening for cavity wax application.

31. Perform a final test drive to confirm elimination of the noise by duplicating the driving conditions specified by the customer. Ensure that the noise has been eliminated to the customer's satisfaction by driving with the customer at the time they take possession of the vehicle after repair.

Warranty

Technical Service Bulletin




Claim Type:	<ul style="list-style-type: none"> • 110 up to 48 Months/50,000 Miles. • If the vehicle is outside any warranty, this Technical Service Bulletin is informational only. 		
Service Number:	5079		
Damage Code:	0010		
Labor Operations:	Check longitudinal member	5079 0199	40 TU
	Modify longitudinal member	5079 4199	100 TU
	Or		
	Modify both longitudinal members	5079 4299	130 TU
Diagnostic Time:	GFF	No allowance	0 TU
	3 Road tests prior to the service procedure	0121 0199	30 TU
	Road test after the service procedure	0121 0004	10 TU
Claim Comment:	As per TSB 2062633/2		

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

Always check with your Parts Department and/or ETKA for the latest information and parts bulletins.		
Part Number	Part Description	Quantity
See ETKA	Fasteners, Bolts, Nuts, and Screws as needed per the Repair Manual	See ETKA/ELSA



<p>D 321 M15 M1</p>	 <p>Anti-Corrosion Wax</p>	<p>01</p>
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Or the following alternative product available from the Top Service Supplies and Touch Up Paint estore:

<p>08852 3M™ Cavity Wax</p>	 <p>Cavity Wax</p>	<p>Shop Supply</p>
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See ETKA	 Bolt hex head	02
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Additional Information

All parts and service references provided in this TSB (**2062633**) are subject to change and/or removal.
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