

Technical Service Bulletin



42 Light cracking or rubbing noises from suspension strut when steering

42 13 18 2021771/3 June 10, 2013. Supersedes Technical Service Bulletin Group 40 number 10-10 dated September 10, 2010 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A3	2006 - 2011	All	Not Applicable
TT	2008 - 2011	All	Not Applicable

Condition

REVISION HISTORY		
Revision	Date	Purpose
3	-	Revised <i>Warranty</i> (Updated labor operations)
2	9/10/2010	Revised header data (Added MYs) Revised <i>Condition</i>
1	4/23/2010	Original publication

Light cracking or rubbing noises when steering.

- The noise emanates from the front suspension strut mounting.
- The complaint occurs most often when the vehicle is maneuvered at slow speeds (e.g., parking) or when the steering wheel is turned while the vehicle is not moving.
- The noise is not caused by extreme load on only one suspension strut (e.g., slowly driving uphill while turning the steering wheel).

Technical Background

There are six possible causes for this condition, listed below (A - F).

- A) The shock absorber buffer can chafe the cap of the suspension strut tube when steering. This is the most frequent cause.
- B) The boot is incorrectly fastened, or it is deformed.
- C) The coil spring is not correctly positioned on the stop of the spring retainer.



Figure 1. An incorrectly positioned coil spring.

- D) There is a burr on the lower end of the coil spring, which can cause noises in the lower spring retainer (Figure 2).



Figure 2. A burr on the end of the coil spring.

- E) The dimensions of the lower spring eye are incorrect. As a result, the spring does not rest correctly on the spring retainer and causes abrasion (Figure 3).

This cause is only applicable to MY 2008 Audi TT vehicles with S-line suspension (PR - 1BV), with chassis numbers up to TRU***8J81027428.



Figure 3. Abrasion on the spring retainer.

- F) Unfavorable tolerances increase forces on the axial grooved ball bearing (Figure 4, 5). An indication for this cause is that the suspension strut bearing (Figure 4, 6) cannot be turned against the suspension strut assembly. This check must be performed with the strut assembly removed.

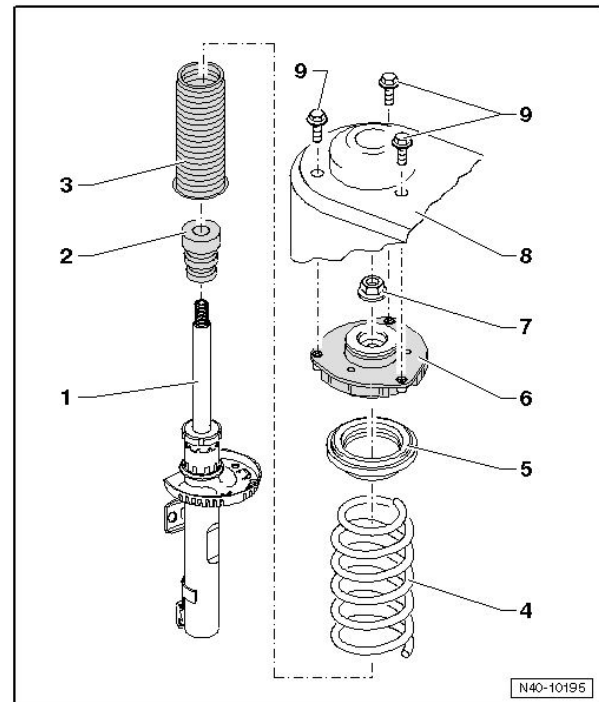


Figure 4. Front strut assembly overview.

Production Solution

Not applicable.

Service

1. Locate the strut assembly that is producing the noise:

- Remove the coupling rod (Figure 5, 2) for the stabilizing bar (Figure 5, 36) on one side.
- Attempt to reproduce the noise.

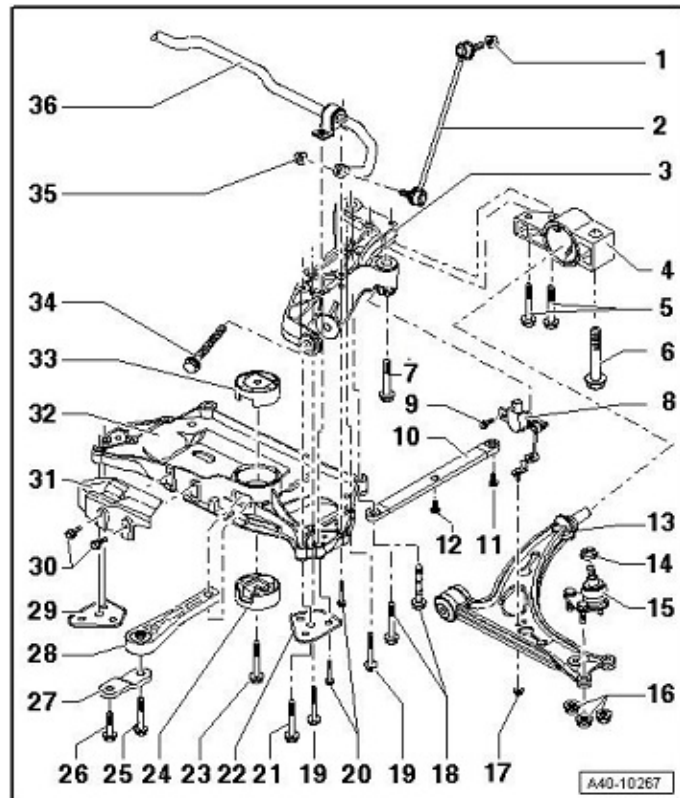


Figure 5. Front suspension component overview



Tip: This TSB does not apply to noises coming from front suspension while maneuvering (steering) at slow speeds in reverse uphill. This causes extreme loads on only one strut assembly thus this noise is considered normal.

2. Determine which cause from A - F (listed in *Technical Background*) is the cause of the noise by performing the steps below. Check to see if the noise is gone after performing each step. Do not proceed with the other steps if the noise issue is resolved.

To determine if the noise is from cause A:

- Lubricate the bump stop by following the procedure in TSB 2021724, *Loud cracking or rubbing noises when steering (cars without Audi magnetic ride suspension)*.

To determine if the noise is from cause B:

- Correctly install the boot on the upper mountings and on the lower damper by following the procedure in

TSB 2021724, *Loud cracking or rubbing noises when steering (cars without Audi magnetic ride suspension).*

To determine if the noise is from cause C:

- Turn the spring so that the end of the spring rests against the stop:
 - First, remove the affected strut assembly from the vehicle: Chassis >> Suspension, Wheels, Steering >> 40 Front Suspension >> Removal and Installation >> Suspension Strut.
 - Next, compress the spring and rotate it to the correct position. It is not necessary to remove the spring for this procedure: Chassis >> Suspension, Wheels, Steering >> 40 Front Suspension >> Disassembly and Assembly >> Suspension Strut.

To determine if the noise is from cause D:

- Remove the burr(s) at the end of the spring(s):
 - First, remove the affected strut assembly from the vehicle: Chassis >> Suspension, Wheels, Steering >> 40 Front Suspension >> Removal and Installation >> Suspension Strut.
 - Disassemble the strut assembly, remove the burr at the end of the spring, and paint any exposed metal on the spring and spring plate: Chassis >> Suspension, Wheels, Steering >> 40 Front Suspension >> Disassembly and Assembly >> Suspension Strut.

To determine if the noise is from cause E:

- Cause E is only applicable to MY 2008 Audi TT vehicles with S-line suspension (PR - 1BV), with chassis numbers up to TRU***8J81027428:
 - Replace the coil springs on both sides.

To determine if the noise is from cause F:

- If repairs for causes A - E did not eliminate the noise, replace the spring (Figure 6, 4), the axial grooved ball bearing (Figure 6, 5), and the suspension strut bearing (Figure 6, 6) on the affected strut assembly.



Tip: For MY 2008 Audi TT vehicles with S-line suspension (PR - 1BV), with chassis numbers up to TRU***8J81027428, do not replace the spring, as instructed above. Only replace the axial grooved ball bearing and the suspension strut bearing.

- Remove the burr at the end of the spring and paint any exposed metal on the spring and spring plate.

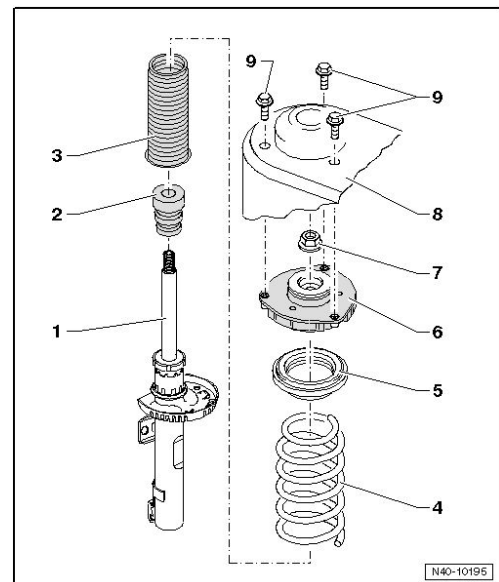


Figure 6. Front strut assembly overview.

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Warranty

Claim Type:	Use applicable claim type. If vehicle is outside any warranty, this Technical Service Bulletin is informational only.		
Service Number:	4086		
Damage Code:	0020		
Labor Operations:	Causes C, D, and F: A3 only		
	Remove and install 1 suspension strut	4085 1900	130 TU
	Remove and install 1 coil spring	4075 1950	30 TU
	or		
	Remove and install 2 suspension struts	4085 2000	190 TU
	Remove and install 2 coil springs	4075 2000	50 TU
	Causes C, D, and F: TT only		
	Remove and install 1 suspension strut	4085 1900	130 TU
	Remove and install 1 coil spring	4075 1950	30 TU
	or		
	Remove and install 2 suspension struts	4085 2000	220 TU
	Remove and install 2 coil springs	4075 2050	50 TU
	Cause E: MY 2008 Audi TT vehicles with S-line suspension (PR - 1BV), with chassis numbers up to TRU***8J81027428 only		
	Remove and install 2 suspension struts	4085 2000	220 TU
	Remove and install 2 coil springs	4075 2050	50 TU

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Diagnostic Time:	GFF	No allowance	0 TU
	Road test prior to service procedure	0121 0002	10 TU
	Road test after service procedure	0121 0004	10 TU
	Technical diagnosis at dealer's discretion (Refer to Section 2.2.1.2 and Audi Warranty Online for DADP allowance details)		
Claim Comment:	As per TSB #2021771/3		

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.

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.

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