

Technical Service Bulletin



39 Oil leak at sealing cap on rear final drive, sport differential

39 23 51 2064024/3 February 6, 2023. Supersedes Technical Service Bulletin Group 39 number 22-47 dated April 29, 2022, for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
SQ5	2020 – 2021	All	V8 with Sports Differential
S4, S5, S5 Cabriolet, S5 Sportback, RS 5, RS 5 Sportback, A6, S6, RS 6 Avant, A7, S7, RS 7, A8, SQ5, SQ5 Sportback, SQ7, SQ8, RS Q8	2021		

Condition

REVISION HISTORY		
Revision	Date	Purpose
3	-	Revised <i>Warranty</i> (Added GFF)
2	04/29/2022	Revised <i>Header</i> (Added S4, S5, RS5, and SQ5)
1	08/26/2021	Initial publication

Customer states:

- There is an oil leak from the rear of the vehicle.



Workshop findings:

- An oil leak is confirmed from the top of the differential near the output flanges.
- One or both of the sealing caps are missing from the pressure limiting valves (Figures 1 - 3).



Figure 1. Missing sealing cap viewed with a pocket mirror.

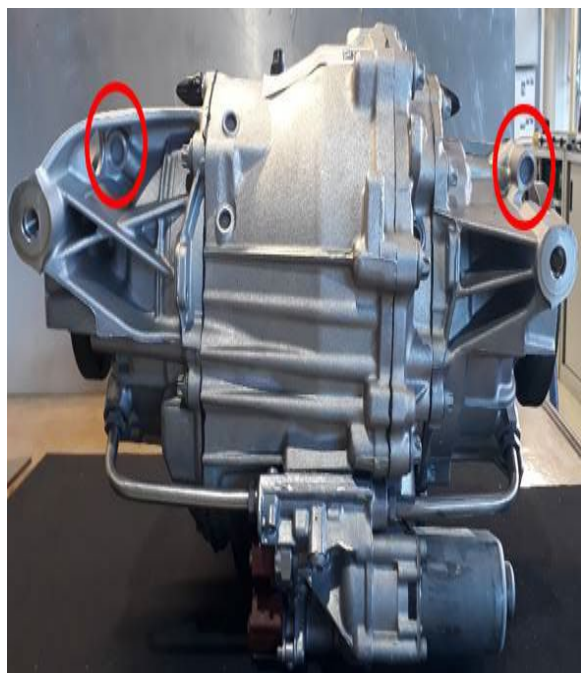


Figure 2. Location of sealing caps on the OD3 differential.

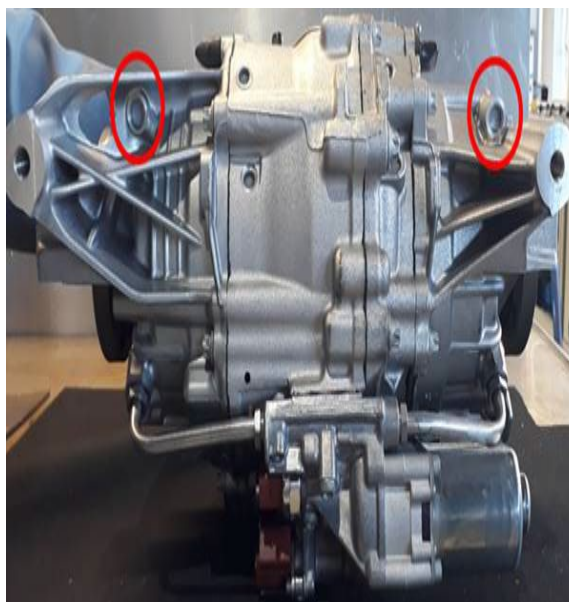


Figure 3. Location of sealing caps on the OBX differential.



Technical Background

Not applicable.

Production Solution

Not applicable.

Service

If the leak can be confirmed to be from a missing sealing cap, then perform the following repair.

The following parts are required to perform the repair:

- Repair Kit 0BX 598 080 contains two sealing caps and one special installation drift for the repair.
- Locking fluid, 10ml D 154 100 A1.
- Silicone adhesive sealant, 50ml D 176 501 A1.

1. Following the Elsa Repair Manual instructions remove the differential from the vehicle and place it on a suitable working surface.



Note:

The clutch valves can be damaged if subjected to impact. Place a rubber mat or hard foam slab underneath the differential.

2. Clean the rear differential around the pressure limiting valve (sealing cap missing) with a clean cloth. If only one sealing cap is missing, do not attempt to remove the installed cap.



Note:

The bolt head on the pressure limiting valve (hexagon socket head bolt in the hole) must not be turned.



Note:

Chemical agents (brake clean etc.) must not enter the system. Do not let chemical agents get into the exposed pressure limiting valve.



Tip: Steps 3 to 7 must be performed within 5 minutes (due to hardening of locking fluid).



3. Place the new sealing cap on a drift and coat it lightly with locking fluid around the outside edge (red arrow Figure 4).

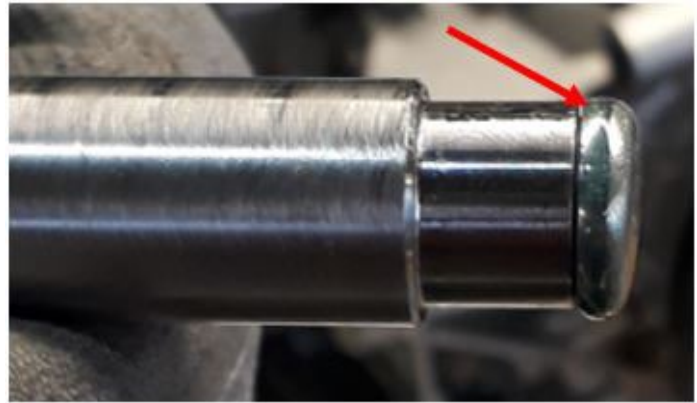


Figure 4. Sealing cap on a drift.

4. Knock sealing cap onto pressure limiting valve using a drift and soft-faced hammer at a right angle to machined surface of housing until it reaches its stop. When it reaches its stop, a dull sound can be heard and a spring-back effect can be felt at the hammer (Figure 5).



Figure 5. Installing sealing cap

5. Remove excess locking fluid with a clean cloth.
6. Perform a visual check to see whether the sealing cap has been installed evenly around the entire circumference.
7. Perform a check measurement with a caliper gauge. The measurement from the machined surface of the housing (the red area in Figure 6) to the upper collar of the sealing cap (green arrows in Figure 6).

This measurement must be performed in three locations at intervals of 120° and a minimum dimension of 1.00 mm and a deviation of no more than 0.3 mm must be ensured.

In the event of deviations from the minimum dimension or the maximum deviation being exceeded, the sealing cap can be knocked carefully in with the drift and soft-faced hammer if necessary.



Note:

It is not permitted to remove a sealing cap that has already been installed.

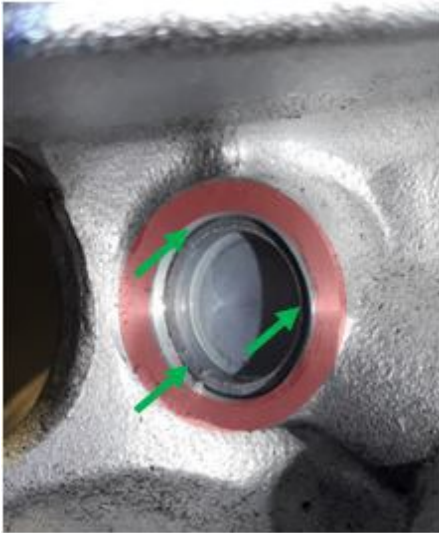


Figure 6. Measurement locations.



Figure 7. Performing measurement.

8. If both sealing caps were missing, then follow the above instructions in steps 3 through 7 to install the 2nd cap.

The following section of the repair instructions must be performed both for the renewed sealing caps and for sealing caps that are still fitted from the factory. The sealing caps for pressure limiting valves on both sides must be bonded on.

9. After a drying time of at least 30 minutes, clean the area around the sealing caps of the pressure limiting valves (both sides) using a clean cloth (lightly coated with brake cleaner if necessary).
10. Both sealing caps must be bonded over the entire surface using the silicone adhesive sealant. A layer of skin forms and then hardens (Figures 8 - 9). A drying time of at least 30 minutes must be ensured before reinstallation into the vehicle.

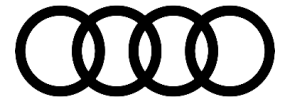


Figure 8. Silicone adhesive sealant example 1.

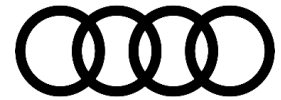


Figure 9. Silicone adhesive sealant example 2.

11. Following the repair manual, reinstall the differential into the vehicle. Take care not to touch the silicone sealant as it takes a long time to completely harden.
12. Check ATF level of differential in accordance with Elsa Repair Manual and top up if necessary.

Warranty

Claim Type:	<ul style="list-style-type: none"> • 110 up to 48 Months/50,000 Miles. • G10 for CPO Covered Vehicles – Verify Owner. • If the vehicle is outside any warranty, this Technical Service Bulletin is informational only. 		
Service Number:	3989		
Damage Code:	0050		
Labor Operations:	Remove and install rear final drive	3988 19XX	See SRT with associated operations



	Seal housing for the rear final drive	3989 5199	90 TU
	Check and top up ATF for the rear final drive	0156 3599	20 TU
Diagnostic Time:	GFF – Checking and clearing fault codes included in existing labor operations	0150 0000	Time stated on diagnostic protocol (Max 20 TU)
	Road test prior to service procedure	No allowance	0 TU
	Road test after service procedure	0121 0004	10 TU
Claim Comment:	As per TSB 2064024/3		

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.

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
0BX598080	Repair kit for sealing cap	01
D154100A1	Locking fluid 10ml	01
N 90281802	Seal Bolt with seal ring	01
D176501A1	Silicone adhesive sealant 50ml	0.5

Additional Information

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