



Technical Service Bulletin

87 Air conditioning system: cooling output insufficient, leak on air conditioning system evaporator

87 24 81 2064077/5 July 27, 2024. Supersedes Technical Service Bulletin Group 87 number 24-70 dated March 29, 2024 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A4, A4 allroad, and Q7	2017 – 2025	All	Not Applicable
S4, A5, A5 Cabriolet, A5 Sportback, S5, S5 Cabriolet, S5 Sportback, Q5, and SQ5	2018 – 2025		
RS 5	2018 – 2019 2021 – 2025		
A6, A7, A8, and Q8	2019 – 2025		
RS 5 Sportback	2019 2021 – 2025		
A6 allroad, S6, S7, S8, Q5 e quattro, SQ7, SQ8, and RS Q8	2020 – 2025		
A8 e quattro	2020 – 2021		
RS 6 Avant, RS 7, A5 Sportback, and SQ5 Sportback	2021 – 2025		
A7 e quattro	2021 – 2022		
e-tron GT, RS e-tron GT, Q4 e-tron, and Q4 Sportback e-tron	2022 – 2025		

Condition

REVISION HISTORY		
Revision	Date	Purpose



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5	-	Revised header (Remove TT, Q3, A3, R8 and e-tron models, add MY 2025) Revised <i>Technical Background</i> (Change problem description and images) Revised <i>Production Solution</i> (Restate solution) Revised <i>Service</i> (Restate service, remove images, add photo documentation requirement) Revised <i>Warranty</i> (Change labor operation, remove GFF allowance)
4	03/29/2024	Revised header (Remove Model Year 2018 A8) Revised <i>Warranty</i> (GFF allowance restriction to BEV and PHEV vehicles only removed)
3	10/23/2023	Revised <i>Warranty</i> (Add GFF allowance for BEV and PHEV vehicles)

Customer states:

The air conditioning does not cool the interior.

The cooling output of the air conditioning system is insufficient.

Workshop findings:

The customer statement can be reproduced.

The refrigerant circuit is not filled with the required amount of refrigerant.

Technical Background

- 1 An insufficient amount of refrigerant is usually caused by leaks in the refrigerant circuit.

On the vehicles listed in this TSB, the evaporator of the air conditioning system is a potential source of a leak. It is fitted in the air conditioning unit and is not easily accessible from outside (Figure 1).



Figure 1. Air conditioning unit / evaporator.



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2 Without direct access to the evaporator, the following are possible ways to detect a leak in the evaporator:

3 Electronic leak detector:

· Check whether the electronic leak detector finds refrigerant on the center vents (Figure 2). To do this, select the following air conditioner settings: Blower on lowest level and air distribution set to dash panel vents.



Figure 2. Electronic leak detector at center vents.

4 Leak detection additive:

· If a leak detection additive is put into the refrigerant circuit, deposits of the additive will appear on the condensation drain after the air conditioner has been operated at high load for a sufficient time (Figure 3).



Figure 3. Leak detection additive at condensation drain.

5 You can also check this on the vehicle's underbody (Figure 4).



Figure 4. Leak detection additive under vehicle.

6 Leak test for refrigerant circuits R134a, R1234yf and R744 with forming gas (calibration gas):



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For further information on the exact procedure and the tools required to carry out the leak test, please refer to the Training module ATP 611 05_2022: SoST - Leak test on the refrigerant circuit R134a, R1234yf and R744 in the Audi Knowledge Tank (AKT).

7

WARNING

For vehicles with refrigerant R744 only the “Leak test with forming gas” method is allowed.

8

NOTICE

Should the evaporator for the Q5 be confirmed leaking by way of this diagnostic procedure and replacement of the evaporator is performed it is necessary to loosen and refasten the Relay and Fuse Carrier 3 -SR3- (shown in figure 5, position 1) in the course of the repair. During reassembly of the vehicle it is *critically important* that this relay and fuse carrier in particular be reinstalled in its correct original position. Failure to reinstall the Relay and Fuse Carrier 3 precisely will result in water intrusion and subsequent component damage.

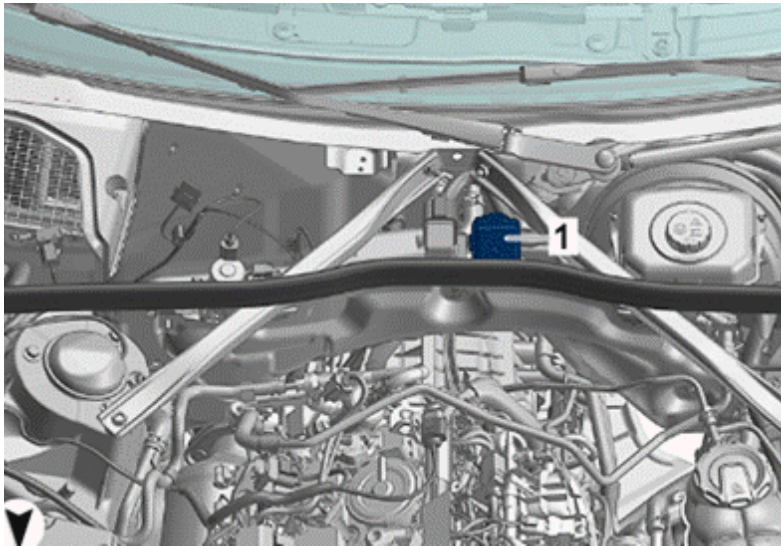


Figure 5. Relay and fuse carrier 3 -SR3-.

Production Solution

Gradual introduction of optimized production process in series production.

Service

If a leak is determined on the evaporator, replace the evaporator.



Important: Check the refrigerant circuit for leaks after completing the work.

Any further leaks must be dealt with according to the instructions in the Workshop Manual.



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Please take photos of the customers' concern and upload them to DOC-IT with the repair order.

Photos should:

Have a date stamp and VIN reference.

Be taken in focus and with sufficient light.

Warranty

Claim Type:	110 Up to 48 Months/50,000 Miles. G10 for CPO Covered Vehicles – Verify Owner. If the vehicle is outside of any warranty, this Technical Service Bulletin is informational only.		
Service Number:	8760		
Damage Code:	0050		
Labor Operations:	Check evaporator	8760 0199	Time necessary for diagnosis supported by punch time
	Remove and install evaporator	8760 19xx	See SRT with associated operations
Diagnostic Time:	GFF	No allowance	0 TU
	Road test prior to the service procedure	No allowance	0 TU
	Road test after the service procedure	No allowance	0 TU
Claim Comment:	As per TSB 2064077/5		

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 part and service references provided in this TSB (**2064077**) are subject to change and/or removal. Always check with your Parts Department and/or ETKA for the latest information and parts bulletins. Please check the Repair Manual for fasteners, bolts, nuts, and screws that require replacement during the repair.

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