

# Technical Service Bulletin



## 87 Various HVAC system malfunctions, DTC B11AF07 and/or B109207 stored in the climatronic module or the BCM 1

87 23 37 2055257/6 January 17, 2023. Supersedes Technical Service Bulletin Group 87 number 20-03 dated February 19, 2020, for reasons listed below.

| Model(s)                                                                              | Year        | VIN Range | Vehicle-Specific Equipment |
|---------------------------------------------------------------------------------------|-------------|-----------|----------------------------|
| A4, A4 allroad, and Q7                                                                | 2017 – 2019 | All       | Not Applicable             |
| S4, A5, A5 Cabriolet, A5 Sportback, S5, S5 Cabriolet, S5 Sportback, RS 5, Q5, and SQ5 | 2018 – 2019 |           |                            |
| RS 5 Sportback, and Q8                                                                | 2019        |           |                            |

## Condition

| REVISION HISTORY |            |                                                                                                                                                                        |
|------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Revision         | Date       | Purpose                                                                                                                                                                |
| 6                | -          | Revised <i>Warranty</i> (Updated Labor Operations)                                                                                                                     |
| 5                | 02/19/2020 | Revised <i>Service</i> (Addition of a software update and additional system checks)                                                                                    |
| 4                | 12/09/2019 | Revised <i>Production Solution</i> (Elimination of the reference to the supplier Magna)<br>Revised <i>Service</i> (Elimination of the reference to the supplier Magna) |

### Customer states:

- The customer describes a problem with the HVAC system, specifically with the airflow and ventilation system or temperature controls, which is not responding to commands or is slow to react.

### Workshop findings:

One or more of the following DTCs for the HVAC adjustment motors are stored in the climatronic control module, J255 (address word 0008), or the central electric module 1 (BCM 1), J519 (address word 0009).

The adjustment motor DTCs will indicate a mechanical fault with the adjustment motors. For example:

- DTC B11AF07** (regulator motor of fresh air flap, mechanical fault).
- DTC B109207** (regulator motor of air recirculation flap, mechanical fault).

The DTCs could be logged as sporadic or static.



## Technical Background

The HVAC adjustment motor is blocked mechanically at its end stop and cannot move.

## Production Solution

There has been a gradual change to an alternative supplier of the HVAC adjustment motors in production.

## Service

1. With the ignition on (with battery charger or engine running), set the HVAC control to full LO on the driver's side, full HI on the passenger's side and in AUTO, 3-zone (Figure 1).



**Figure 1.** Starting HVAC control setting.

2. For all vehicles below (except Q8), update the software of the Front A/C Display Control Head using the SVM code 08A031.

| Model                                                     | Old Target Data Container Number | Old Target Data Container Version (or lower) | New Target Data Container Number (or higher) | New Target Data Container Version (or higher) | SVM Code Input |
|-----------------------------------------------------------|----------------------------------|----------------------------------------------|----------------------------------------------|-----------------------------------------------|----------------|
| A4, Allroad, A5 Coupe, A5 Sportback, A5 Cabriolet, and Q5 | 8W0820043N                       | 0095                                         | 8W0820043N                                   | 0101                                          | 08A031         |
|                                                           | 8W0820043S                       | 0251                                         | 8W0820043S                                   | 0262                                          | 08A031         |
|                                                           | 8W0820043T                       | 0251                                         | 8W0820043T                                   | 0262                                          | 08A031         |
|                                                           | 8W0820043F                       | 0095                                         | 8W0820043F                                   | 0101                                          | 08A031         |
| Q5                                                        | 8W0820043R                       | 0241                                         | 8W0820043R                                   | 0254                                          | 08A031         |
| Q7                                                        | 4M0820043T                       | 0112                                         | 4M0820043T                                   | 0122                                          | 08A031         |
|                                                           | 4M0820043R                       | 0112                                         | 4M0820043R                                   | 0122                                          | 08A031         |
|                                                           | 4M0820043Q                       | 0112                                         | 4M0820043Q                                   | 0122                                          | 08A031         |

3. After the update run the adjustment motor end stop adaptation in *Guided Functions >> Basic Settings*.
4. Recheck the DTC memory. If a DTC such as B11AF07 (regulator motor of fresh air flap, mechanical fault) or DTC B109207 (regulator motor of air recirculation flap, mechanical fault) are present in the climatronic control module in 'static' status, replace the HVAC adjustment motor with the part number 4M0 820 511 A.
5. Clear DTC memory and run a functional check of all the adjustment motors by changing the settings using the HVAC control. After each functional test wait at least 5 seconds to allow the system to achieve the desired result. Adjust the settings as follows:

6. Auto, 72° f (22° c), Sync (Figure 2).



**Figure 2.** Auto, 72° f (22° c), Sync.

7. Auto, LO, Sync (Figure 3).



**Figure 3.** Auto, LO, Sync.

8. Auto, HI, Sync (Figure 4).



**Figure 4.** Auto, HI, Sync.

9. Auto, 72° f (22° c), Sync, air recirculation mode (Figure 5).



**Figure 5.** Auto, 72° f (22° c), Sync, air recirculation mode.

10. 72° f (22° c), Sync, max defrost (Figure 6).



**Figure 6.** 72° f (22° c), Sync, max defrost.

11. 72° f (22° c), Sync, air distribution to footwell, medium blower speed (Figure 7).



**Figure 7.** 72° f (22° c), Sync, air distribution to footwell, medium blower speed.

12. 72° f (22° c), Sync, air distribution to central vent, medium blower speed (Figure 8).



**Figure 8.** 72° f (22° c), Sync, air distribution to central vent, medium blower speed.

13. Recheck the DTC memory. Any additional adjustment motors with this malfunction will store DTC B11AF07 (regulator motor of fresh air flap, mechanical fault) or DTC B109207 (regulator motor of air recirculation flap, mechanical fault) as 'static'. If this is the case, replace the HVAC adjustment motor with the part number 4M0 820 511 A.

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14. If all adjustments function correctly and no DTC's are stored or DTC's are sporadic and can be successfully erased, this update and functional check are complete.

## Warranty

|                          |                                                                                                                                                                                                                                    |              |                                                     |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------|
| <b>Claim Type:</b>       | <ul style="list-style-type: none"><li>• 110 up to 48 Months/50,000 Miles.</li></ul> G10 for CPO Covered Vehicles – Verify Owner.<br>If the vehicle is outside any warranty, this Technical Service Bulletin is informational only. |              |                                                     |
| <b>Service Number:</b>   | 8720                                                                                                                                                                                                                               |              |                                                     |
| <b>Damage Code:</b>      | 0040                                                                                                                                                                                                                               |              |                                                     |
| <b>Labor Operations:</b> | Functional check of adjustment motors                                                                                                                                                                                              | 8704 0299    | 20 TU                                               |
|                          | Refer to the applicable SRTs for the positioning motor remove and reinstall using ElsaPro                                                                                                                                          | See SRT      | See SRT                                             |
| <b>Diagnostic Time:</b>  | GFF                                                                                                                                                                                                                                | 0150 0000    | Time stated on the diagnostic protocol (Max 100 TU) |
|                          | Road test prior to the service procedure                                                                                                                                                                                           | No allowance | 0 TU                                                |
|                          | Road test after the service procedure                                                                                                                                                                                              | No allowance | 0 TU                                                |
| <b>Claim Comment:</b>    | As per TSB 2055257/6                                                                                                                                                                                                               |              |                                                     |

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. |                         |                 |
| <b>Part Number</b>                                                                                  | <b>Part Description</b> | <b>Quantity</b> |



|            |                                                                                                           |               |
|------------|-----------------------------------------------------------------------------------------------------------|---------------|
| 4M0820511A | <br>Motor for adjustment | As necessary  |
| See ETKA   | Fasteners, Bolts, Nuts, and Screws as needed per the Repair Manual                                        | See ETKA/ELSA |

## Additional Information

All parts and service references provided in this TSB (**2055257**) are subject to change and/or removal.  
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