AIR CONDITIONING INOPERATIVE

TECHNICAL SERVICE BULLETIN

Reference Number(s): GROUP 87, NO. 15-69 (2020124/13), Date of Issue: August 24, 2015


GROUP: 87 - Air Conditioner

Superceded Bulletin(s): GROUP 87, NO. 14-49, Date of Issue: April 25, 2014


APPLICABLE MODELS AND YEARS

<table>
<thead>
<tr>
<th>Model(s)</th>
<th>Year</th>
<th>VIN Range</th>
<th>Vehicle-Specific Equipment</th>
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<td>A4</td>
<td>2009-2012</td>
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<td>S5 / RS 5</td>
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<td>A5 Cabriolet</td>
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<td>Q5</td>
<td>000001 - 999999</td>
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</table>
CONDITION

- Air conditioning is inoperative.
- The HVAC blower functions normally.
- Battery discharged; however, when charged, there is no bus silence when vehicle ignition is off.

TECHNICAL BACKGROUND

- The A/C pressure/temperature sensor, G395, leaks refrigerant. This causes sensor G395 to show an incorrect or implausible value when reading MVBs. An incorrect signal or a low refrigerant level in the system can cause the air conditioning compressor to deactivate.
- The LIN cable connecting the vehicle electrical system control module, J519, to sensor G395 is pinched or cut. This affects the A4/S4, A5/S5 Coupe and Cabriolet, and Q5 vehicles. The A6 and A8 are not affected by this type of failure.
- The pressure sensor G395/G65 sends an incorrect signal that prevents bus silence and the battery is discharged.

Tip: Sensor G395 is a LIN slave of the vehicle electrical system control module. The vehicle electrical system control module transfers the information provided by the sensor via the comfort data bus to the climate control module, J255.

PRODUCTION SOLUTION

An improved sensor G395 was introduced into series production and the wiring manufacturer's processes were optimized.

SERVICE

For A4/S4 (8K), A5/S5 Coupe/Cabriolet (8T/8F), Q5, A6, A7, A8, R8:

If DTCs for sensor G395 are stored in the climate control module, J255, then check the system pressures and refrigerant volume.

- If system pressures and refrigerant volume are low, check for refrigerant leaks at sensor G395. If a leak is found, then replace sensor G395.

- If the system pressure and refrigerant volume are correct, perform guided fault finding (GFF). If an implausible pressure value is found in MVB 1, field 4, then replace sensor G395.

Tip: Install only the improved G395. See part numbers in Required Parts And Tools.

Only for A4/S4 (8K), A5/S5 Coupe/Cabriolet (8T/8F), Q5:
1. Check the diagnostic fault memory for two possible DTC scenarios:

**DTC Scenario 1**

08 - Climate Control Module - J255:

1. DTC 00457 - Vehicle Electrical System Control Module - J519 - Please check DTC memory

2. DTC 00256 - A/C Pressure/temperature Sensor - G395 - Incorrect Signal

-AND-

09 - Vehicle Electrical System Control Module - J519:

1. DTC 00256 - A/C Pressure/temperature Sensor - G395 - No signal/communication

**DTC Scenario 2**

08 - Climate Control Module - J255:

1. DTC 00457 - Vehicle Electrical System Control Module - J519 - Please check DTC memory

2. DTC 00256 - A/C Pressure/temperature Sensor - G395 - Incorrect Signal

-AND-

09 - Vehicle Electrical System Control Module - J519:

1. DTC 01592 - Air Quality Sensor - G238 - No signal/communication

2. DTC 00256 - A/C Pressure/temperature Sensor - G395 - No signal/communication

If scenario 1 is the case, perform step 7.

If scenario 2 is the case, perform steps 2-6.

**Tip:** The existing LIN cable connecting the vehicle electrical system control module to sensor G395 could be pinched or cut if scenario 2 is the case.

2. Check the LIN cable connecting the vehicle electrical system control module to sensor G395 according to GFF.

3. Check the wire terminals in the connector at sensor G395 for proper attachment, possible corrosion, and for any pins that may be pushed back or widened.

4. Check to make sure there is proper voltage going to the sensor and verify the ground is not intermittently open (wiggle test).

5. Check the integrity of the wire harness.

There are two known sections in the wiring harness that can be affected, but the potentially affected areas are not limited to these two known sections. One of the known
sections is in the driver's footwell area where the wire harness enters the interior of the car from the engine bay (Figure 1).

![Figure 1. Wire harness in driver footwell area.](image)

The second known section is in the wire harness located under the driver's side headlight (Figure 2).

![Figure 2. Wire harness under driver's side headlight.](image)

6. If a cut wire is found, install an overlay wire for the LIN bus signal. Do not attempt to repair the existing wire harness.

   a. Route the new LIN bus wire from the vehicle electrical system control module, J519, to the sender for sensor G395 so that it enters the interior of the vehicle through the driver's side fender/lower A-pillar area through the grommet indicated in the images at right (Figures 3 and 4).

   **Tip:** Do not route the wire through the same opening used by the existing wire harness.
Tip: The LIN bus between the vehicle electrical system control module and sensor G395 may contain a junction point shared with other modules depending on the vehicle. Ensure that the junction points are maintained when routing the overlay.

On vehicles with a charisma switch (ride selection switch located on the instrument panel) route the new cable of the sender for sensor G395 to junction B549 (Figure 5, red arrow).
b. Seal off the opening around the wire with Butyl sealant to prevent water intrusion (Figure 6).

7. Replace the sender for sensor G395 and the o-ring.

**WARRANTY**

**WARRANTY INFORMATION**

<table>
<thead>
<tr>
<th>Claim Type:</th>
<th>Use applicable claim type. If vehicle is outside any warranty, this Technical Service Bulletin is informational only.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Number:</td>
<td>8757</td>
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<tr>
<td>Damage Code:</td>
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</tbody>
</table>
| Labor Operations: | Repair front left wiring loom 9715 9999 165 TU  
                     | 8703 1700 50 TU                                                                                               |
Drain and refill refrigerant (if necessary)

Check front left wiring loom 9715 9999 175 TU

**For MY 2003-2010 A8 and MY 2005-2011 A6 only:**

Replace A/C pressure/temperature sensor (G395) 8709 1999 MAX 50 TU

**For all other vehicles:**

Replace A/C pressure/temperature sensor (G395) 8709 XXXX XX TU (See Elsa)

**Diagnostic Time:**

GFF 0150 0000 Time stated on diagnostic protocol (MAX 50 TU)

Road test prior to service procedure No allowance 0 TU

Road test after service procedure No allowance 0 TU

**Claim Comment:**

As per TSB #2020124/13

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**

**PARTS INFORMATION**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Part Description</th>
<th>Quantity</th>
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<tbody>
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<td>4H0959126A</td>
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<tr>
<td>7H0820896</td>
<td>O-ring</td>
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**ADDITIONAL INFORMATION**

All parts and service references provided in this TSB (2020124) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.