

**AIR CONDITIONING INOPERATIVE****TECHNICAL SERVICE BULLETIN**

Reference Number(s): GROUP 87, NO. 10-05 (2020124/3), Date of Issue: August 24, 2010

AUDI: A4 2009 - 2011; A5, S5 2008 - 2011; A5 Cabriolet 2010 - 2011; A6 2005 - 2011; A8 2004 - 2010

GROUP: 87 - Air Conditioner

Superseded Bulletin(s): GROUP 87, NO. 10-01, Date of Issue: April 23, 2010

**SUBJECT****Air conditioning inoperative**

87 10 05 2020124/3 August 24, 2010. Supersedes Technical Service Bulletin Group 87 number 10-01 dated April 23, 2010.

**APPLICABLE MODELS AND YEARS**

| Model(s)     | Year        | VIN Range | Vehicle-Specific Equipment |
|--------------|-------------|-----------|----------------------------|
| A4           | 2009 - 2011 | All       | Not Applicable             |
| A5, S5       | 2008 - 2011 | All       |                            |
| A5 Cabriolet | 2010 - 2011 | All       |                            |
| A6           | 2005 - 2011 | All       |                            |
| A8           | 2004 - 2010 | All       |                            |

**CONDITION**

Air conditioning is inoperative.

The HVAC blower functions normally.

**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 J519 Central Electrics Control unit to Sensor G395 is pinched or cut. This affects the A4/S4, A5/S5 Coupe and Cabriolet, and Audi Q5 vehicles. The A6 and A8 are not affected by this type of failure.

**Tip:** Sensor G395 is a LIN slave of Vehicle Electrical System Control Module J519. Vehicle Electrical System Control Module J519 transfers the information provided by the sensor via the comfort data bus to Climate Control Module J255.

**PRODUCTION SOLUTION**

An improved A/C Pressure/Temperature Sensor G395 was introduced into series production and the wiring manufacturer's processes were optimized.

## SERVICE

### FOR A4/S4 (8K), A5/S5 COUPE/CABRIO (8T/8F), AUDI Q5, & A6, & A8

If DTCs are stored in the J255 Climate Control Module for the G395 pressure sensor, then check the system pressures and refrigerant volume.

- If system pressures and refrigerant volume are low, check for refrigerant leaks at G395. If a leak is found, then replace the G395.
- If the system pressure and refrigerant volume are correct, perform guided fault finding. If an implausible pressure value is found in MVB 1, field 4, then replace G395.
  - **A4/S4, A5/S5, Q5, A6:** Use improved part number **4H0 959 126**.
  - **A8:** See ETKA for part number.

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

### ONLY FOR A4/S4 (8K), A5/S5 COUPE/CABRIO (8T/8F), AUDI Q5

1. Check for these three DTC codes:
  - **DTC** (Vehicle Electrical System Control Module - J519- Please check DTC memory) in Climate Control Module J255, address 08.
  - **DTC** (A/C Pressure/temperature Sensor -G395- Incorrect Signal) in Climate Control Module J255, address 08.
  - **DTC** (A/C Pressure/temperature Sensor -G395- No signal/communication) in Vehicle Electrical System Control Module J519, address 09.

Perform steps 2-6 only if all three DTCs are stored.

**Tip:** The LIN cable connecting the J519 Vehicle Electrical System Control module to the G395 Pressure Sensor could be pinched or cut if all of the codes are stored.

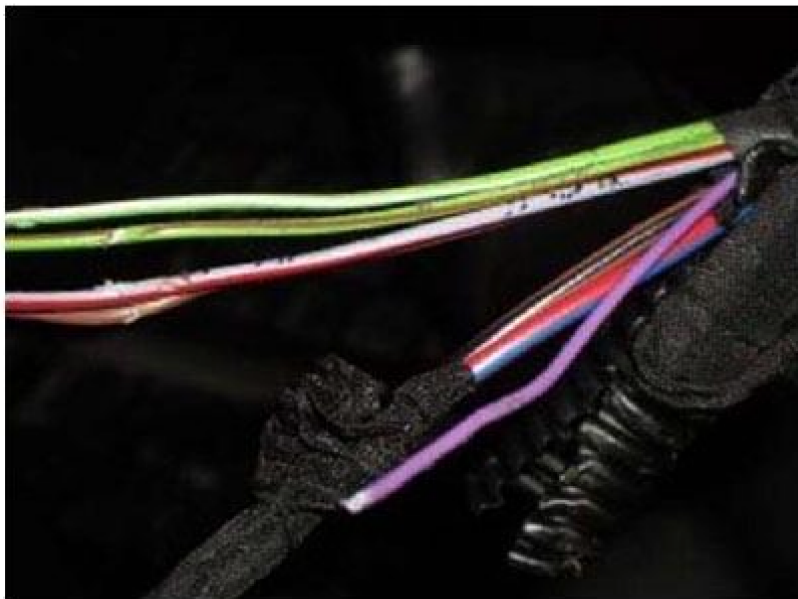
2. Check the LIN cable connecting the J519 Central Electrics Control unit to the G395 pressure sensor according to guided fault finding.
3. Check the wire terminals in the connector at the G395 pressure sensor for proper attachment, possible corrosion, and for any pins that may be pushed back or widened.
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 (**Fig. 1**).



**Fig. 1: Wire Harness In Driver Footwell Area**

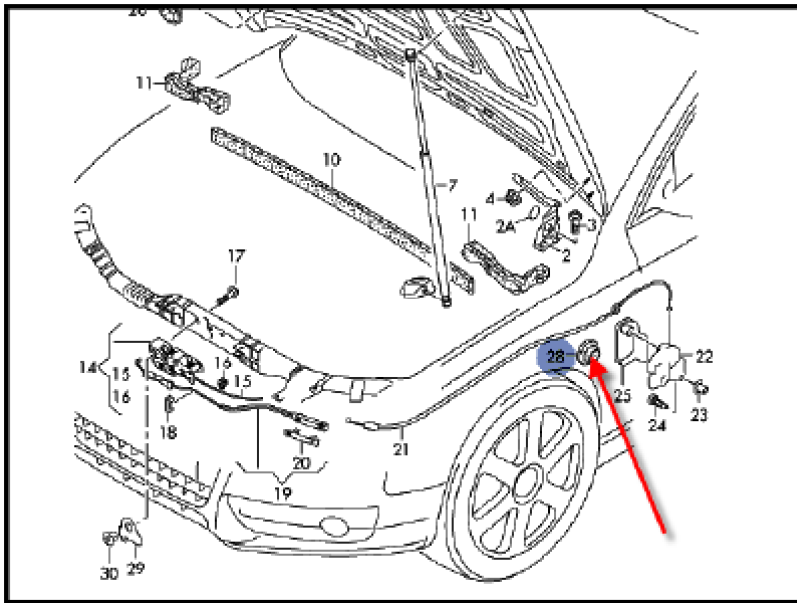
The second known section is in the wire harness located under the driver's side headlight (**Fig. 2**).



**Fig. 2: Wire Harness Under Driver's Side Headlight**

6. If a cut wire is found, then 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 so that it enters the interior of the vehicle through the driver's side fender/lower A-pillar area through the grommet indicated in **Fig. 3** and **Fig. 4**.

**Tip:** Do not route the wire through the same opening used by the existing wire harness.



**Fig. 3: Grommet In Driver's Side Fender/Lower A-Pillar Area Used For Pass-Through For New Overlay Wire**

- b. Seal off the opening around the wire with Butyl sealant to prevent water intrusion.



**Fig. 4: Seal Off Access Hole In Grommet With Butyl Sealant**

**WARRANTY**

**WARRANTY INFORMATION**

|                    |   |
|--------------------|---|
| <b>Claim Type:</b> | Use applicable claim type. If vehicle is outside any warranty, this Technical |
|--------------------|---|

**2008 Audi A6****AIR CONDITIONING INOPERATIVE**

|                          |  |              |   |
|--------------------------|--|--------------|---|
|                          | Service Bulletin is informational only.  |              |   |
| <b>Service Number:</b>   | 8709   |              |   |
| <b>Damage Code:</b>      | 0010   |              |   |
| <b>Labor Operations:</b> | Use applicable labor operations appropriate for the necessary repair as specified in ElsaWeb.                                |              |   |
| <b>Diagnostic Time:</b>  | GFF  | 0150 0000    | Time stated on diagnostic protocol not to exceed 50 TU. |
|                          | Road test prior to service procedure   | No allowance | 0 TU  |
|                          | Road test after service procedure  | No allowance | 0 TU  |
|                          | Technical diagnosis at dealer's discretion<br>(Refer to Section 2.2.1.2 and Audi Warranty Online for DADP allowance details) |              |   |
| <b>Claim Comment:</b>    | As per TSB #2020124/3  |              |   |

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****PARTS INFORMATION**

| <b>Part Number</b> | <b>Part Description</b>                                 | <b>Quantity</b> |
|--------------------|---|-----------------|
| 4H0 959 126        | Pressure sensor - A4/S4, A5/S5 Coupe/Cabrio, Q5, and A6 | 1               |
| See ETKA           | Pressure sensor - A8                                    | 1               |

**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.