



# Technical Service Bulletin

## 87 Air conditioning inoperative; DTC 00457, 00256, 01592

87 24 74 2020124/14 April 29, 2024. Supersedes Technical Service Bulletin Group 87 number 15-69 dated August 24, 2015 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A6	2007 - 2014	All	Not Applicable
A6 Avant	2007 - 2011		
S6	2007 - 2011 2013 - 2014		
A5, and S5	2008 - 2014		
R8	2008 - 2013 2014		
A4, A4 Avant, and Q5	2009 - 2014		
S4, A5 cabriolet, S5 Cabriolet	2010 - 2014		
A8	2011 - 2014		
R8 Spyder	2011 - 2012 2014		
R8 GT, and R8 GT Spyder	2012		
A7	2012 - 2014		
RS 5, RS 5 Cabriolet, S7, Q5 Hybrid, and SQ5	2013 - 2014		

## Condition

REVISION HISTORY		
Revision	Date	Purpose
14	-	Revised header (Corrected model codes and model years). Revised <i>Warranty</i> (Changed damage code, corrected labor operations) Revised <i>Required Parts and Tools</i> (Update sensor part number)
13	08/24/2015	Revised <i>Required Parts and Tools</i> (Added sensor seal)



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12	4/25/2014	Revised <i>Warranty</i> (Changed damage code, corrected labor operations)
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- 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, 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*.**



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**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:

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

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

**-AND-**

09 - Vehicle Electrical System Control Module – J519:

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

## **DTC Scenario 2**

08 - Climate Control Module - J255:

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

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

**-AND-**

09 - Vehicle Electrical System Control Module – J519:

DTC 01592 - Air Quality Sensor –G238- No signal/communication

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).



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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.*

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.*

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.

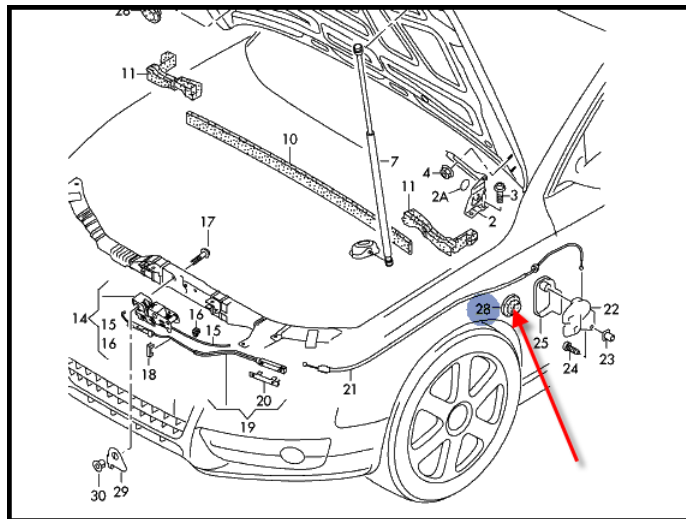


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- a. Route the new LIN bus wire from the vehicle electrical system control module, J519, to the sender for sensor G395 so that it enters the interior of the vehicle through the driver's side fender/lower A-pillar area through the grommet indicated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



**Figure 3.** Grommet in driver's side fender/lower A-pillar area used for pass-through for new overlay wire.



**Figure 4.** Access hole in grommet.

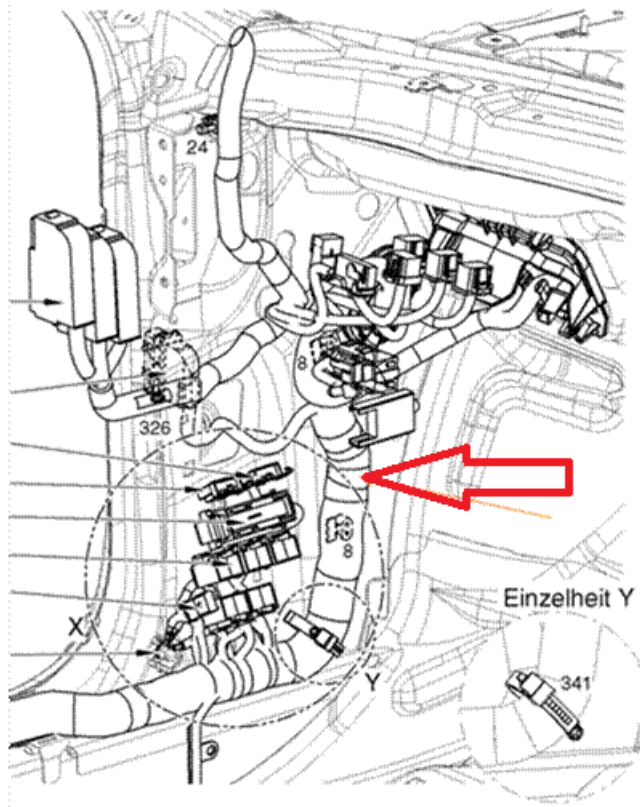


**Tip:** The LIN bus between the vehicle electrical system control module and sensor G395 may contain a junction point shared with other modules depending on the vehicle. Ensure that the junction points are maintained when routing the overlay.



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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).



**Figure 5.** Cable routing with charisma switch option.

- b. Seal off the opening around the wire with Butyl sealant to prevent water intrusion (Figure 6).



**Figure 6.** Access hole in grommet to be sealed with Butyl sealant.

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



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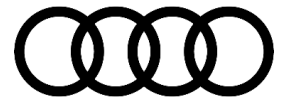
## Warranty

<b>Claim Type:</b>	<ul style="list-style-type: none"> <li>• 110 Up to 48 Months/50,000 Miles.</li> <li>• G10 for CPO Covered Vehicles – Verify Owner.</li> <li>• If vehicle is outside of any warranty, this Technical Service Bulletin is informational only.</li> </ul>		
<b>Service Number:</b>	8757 – Pressure sensor inspection / replacement or refrigerant circuit repairs		
	9715 – Electrical wiring inspection and repairs		
<b>Damage Code:</b>	0040 - Pressure sensor inspection / replacement or refrigerant circuit repairs		
	0033 - Electrical wiring inspection and repairs		
<b>Labor Operations:</b>	Check front left wiring loom	9709 0199	175 TU
	Repair front left wiring loom	9709 4199	165 TU
	Drain and refill refrigerant (if necessary)	8703 1700	See SRT with associated operations
	Replace A/C pressure/temperature sensor (G395)	8709 XXXX (See Elsa)	See SRT with associated operations
<b>Diagnostic Time:</b>	GFF	0150 0000	Time stated on the diagnostic protocol (Max 50 TU)
	Road test prior to service procedure	No allowance	0 TU
	Road test after service procedure	No allowance	0 TU
<b>Claim Comment:</b>	As per TSB 2020124/14		

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

Part Number	Part Description	Quantity
4H0959126C	Pressure sensor	1
7H0820896	O-ring	1



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## Additional Information

All parts and service references provided in this TSB (2020124) are subject to change and/or removal.

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