

Technical Service Bulletin



01 MIL on (DTC P0456 (EVAP emission control system small leak detected))

01 16 59 2040924/2 April 20, 2016. Supersedes Technical Service Bulletin Group 01 number 16-51 dated January 13, 2016 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
Q7	2014 - 2015	All	3.0L engine

Condition

REVISION HISTORY		
Revision	Date	Purpose
2	-	Revised Service (Added images, added documentation instructions)
1	1/13/2016	Initial publication

- MIL on.
- **DTC P0456** (EVAP Emission Contr. Sys. (very small leak) Leak Detected) is stored in the engine control module (ECM), J623 (address word 01).
- Drivability is not affected.

Technical Background

The leak detection pump (LDP) is a vacuum-driven, ECM-controlled, diaphragm pump. In order for the LDP to operate, the engine must be running and vacuum must be applied to the vacuum switch on the LDP. The LDP pressurizes the EVAP system and monitors any pressure drop within a specified amount of time in order to detect a leak.

DTC P0456 can be stored due to either of the following conditions:

- Static or sporadic air leaks in the EVAP system.
- Static or sporadic air leaks in the LDP.

Production Solution

Not applicable.

Service

1. Visually inspect the EVAP system for any loose connections or damaged parts. If found, repair the loose connections and/or replace the damaged parts.
2. Connect KLI9210 and turn knob to "Hold". Before proceeding, have a stopwatch ready.
3. Perform basic settings 70/71 test. Monitor the pressure increase and record the max value. (The max pressure should be between 9-13 inch/water.)
4. Monitor and **document** the pressure drop within six minutes (Figure 1):
 - Record the beginning pressure and take a photograph of the stopwatch and gauge for documentation.
 - As soon as the pressure stops increasing, start the stopwatch and turn the ignition off.
 - At max pressure, and after six minutes, take another photograph of the stopwatch and gauge for documentation.



Figure 1. Examples of photos showing pressure gauge at beginning of test (A) and after test (B).

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5. If the pressure drops by 4 inch/water or more within 6 minutes during test (fail):

Use the chart (Figure 2) to determine pass (less than 4) or fail of test (more than 4 inch/water drop):

1. **If test failed**, have tool 3094 ready to be installed and perform basic settings 70/71 test again.
2. As soon as max pressure is reached, install tool 3094 between the filter and LDP to prevent any air flow:
 - If the pressure now holds, replace LDP.
 - If the pressure drops at the same rate, find the leak using a smoke tester and/or through the application of soapy water on all lines and connections (Note that a small leak is more likely to be found with soapy water and a larger leak with the smoke tester). Repair as needed.

If the pressure drops less than 4 inch/water during test (pass):

- If this is the first time DTC P0456 has appeared for this vehicle, clear the DTC and release the vehicle.
- If the vehicle has been in with DTC P0456 before, contact TAC for instructions.

Max Pressure Example	Pass (between)	Fail (less than)
13	13 - 9.5	9
12.5	12.5 - 9	8.5
12	12 - 8.5	8
11.5	11.5 - 8	7.5
11	11 - 7.5	7
10.5	10.5 - 7	6.5
10	10 - 6.5	6
9.5	9.5 - 6	5.5
9	9 - 5.5	5

Figure 2. Chart to determine pass or fail of test.

Important: Enter pressure values (max pressure and pressure after 6 minutes) into warranty claim comments. If part is requested by WPRC, add hard copy of pictures of pressure test to the documentation.

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Warranty

Claim Type:	Use applicable claim type. If vehicle is outside any warranty, this Technical Service Bulletin is informational only.		
Service Number:	2048		
Damage Code:	0040		
Labor Operations:	EVAP system pressure test	2048 0199	70 TU
	Leak detection pump remove+reinstall (If necessary)	2048 1950	20 TU
	Rear wheel housing liner remove+reinstall (If necessary)	6676 1900	40 TU
Diagnostic Time:	GFF – Checking and clearing fault codes included in existing labor operations	0150 0000	Time stated on diagnostic protocol (Max 50 TU)
	Technical diagnosis at dealer's discretion (Refer to Section 2.2.1.2 and Audi Warranty Online for DADP allowance details)		
Claim Comment:	As per TSB #2040924/2		

Required Parts and Tools

Part Number	Part Description	Quantity
7L8906271A	Leak detection pump*	1 (If necessary)

*Always check with your Parts Department and service manuals for the latest information.

Tool Number	Tool Description
3094	Hose clamps

Additional Information

All parts and service references provided in this TSB (2040924) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.