Technical Service Bulletin

19 Coolant pipe seepage on turbocharger

19 17 88 2036167/7 May 26, 2017. Supersedes Technical Service Bulletin Group 19 number 17-82 dated March 21, 2017 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A8, S6, S7, S8	2013 - 2015	All	4.0 T

Condition

REVISION HISTORY		
Revision	**Date**	**Purpose**
7	-	Revised header data (Removed models and model years) Revised *Service* (Removed MY16 SVM from SVM table)
6	03/21/2017	Revised *Service* (Updated SVM code)
5	12/06/2016	Revised header data (Added models and model years)

Customer concern states one of the following conditions:

- The low coolant level light is illuminated
- The coolant level is too low
- A black crust is visible on the turbocharger coolant lines

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Technical Background

There may be slow coolant loss from the connections at the coolant feed pipe and the coolant return pipe. High temperatures cause the coolant to become encrusted on the connection flange of the turbocharger (Figure 1).

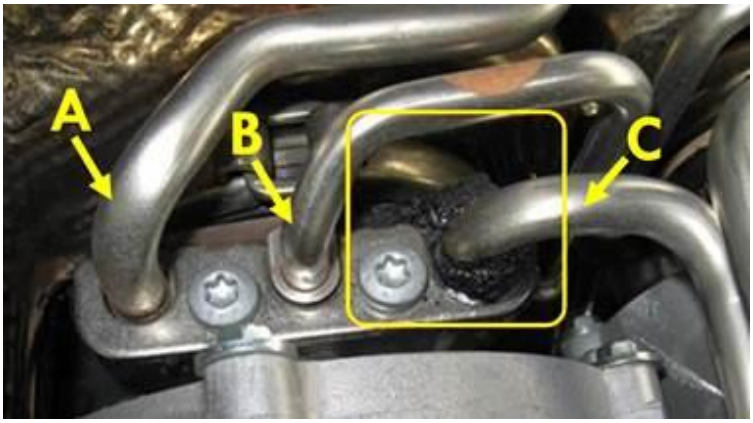

Figure 1. *Black, encrusted coolant residue (outlined area), coolant feed pipe (A), oil feed pipe (B), and coolant return pipe (C).*

The resulting heat after switching off the engine can, under special operating conditions, lead to very high temperatures on the coolant seals of the turbocharger. This can damage the O-ring.

Production Solution

Optimized temperature-resistant O-rings on the coolant connection of the turbocharger together with an extended operating period of the auxiliary cooling pump after switching off the engine.

Service

Replace the respective O-rings on the coolant supply and return pipes according to the table listed below:

Coolant line position	Part number of coolant pipe	Part number of optimized O-ring	Size of O-ring / thickness
Cylinder bank 2, supply	079145909F Original pipe	WHT006335A	2.0 mm (blue)
Cylinder bank 1, supply	079145910F Original pipe	WHT006335A	2.0 mm (blue)
Cylinder bank 2, return	079145947E Original pipe	WHT006335A	2,0 mm (blue)
Cylinder bank 1, return	079145948F Original pipe	WHT006335A	2.0 mm (blue)
Cylinder bank 2, supply	079145909H Replacement pipe	WHT006537	2.8 mm (black)

Cylinder bank 1, supply	079145910H Replacement pipe	WHT006537	2.8 mm (black)
Cylinder bank 2, return	079145947G Replacement pipe	WHT006537	2.8 mm (black)
Cylinder bank 1, return	079145948H Replacement pipe	WHT006537	2.8 mm (black)

Note: The O-ring assignment can be based on one part number on the coolant pipes, as there is no mixed installation allowed. The original coolant pipes had a 2.5 mm O-ring groove which require the 2.0 mm (blue) O-rings. The later/replacement coolant pipes had larger 3.5 mm groove which require the 2.8 mm (black) O-rings. Special tool 3371 can be used to measure the thickness of the O-ring groove to determine the correct O-ring fitment. Replacing the coolant pipes is not allowed!

For the replacement of the two O-rings for the coolant supply pipes we recommend the following pipe position to allow access to remove and replace the O-rings (Figure 2).

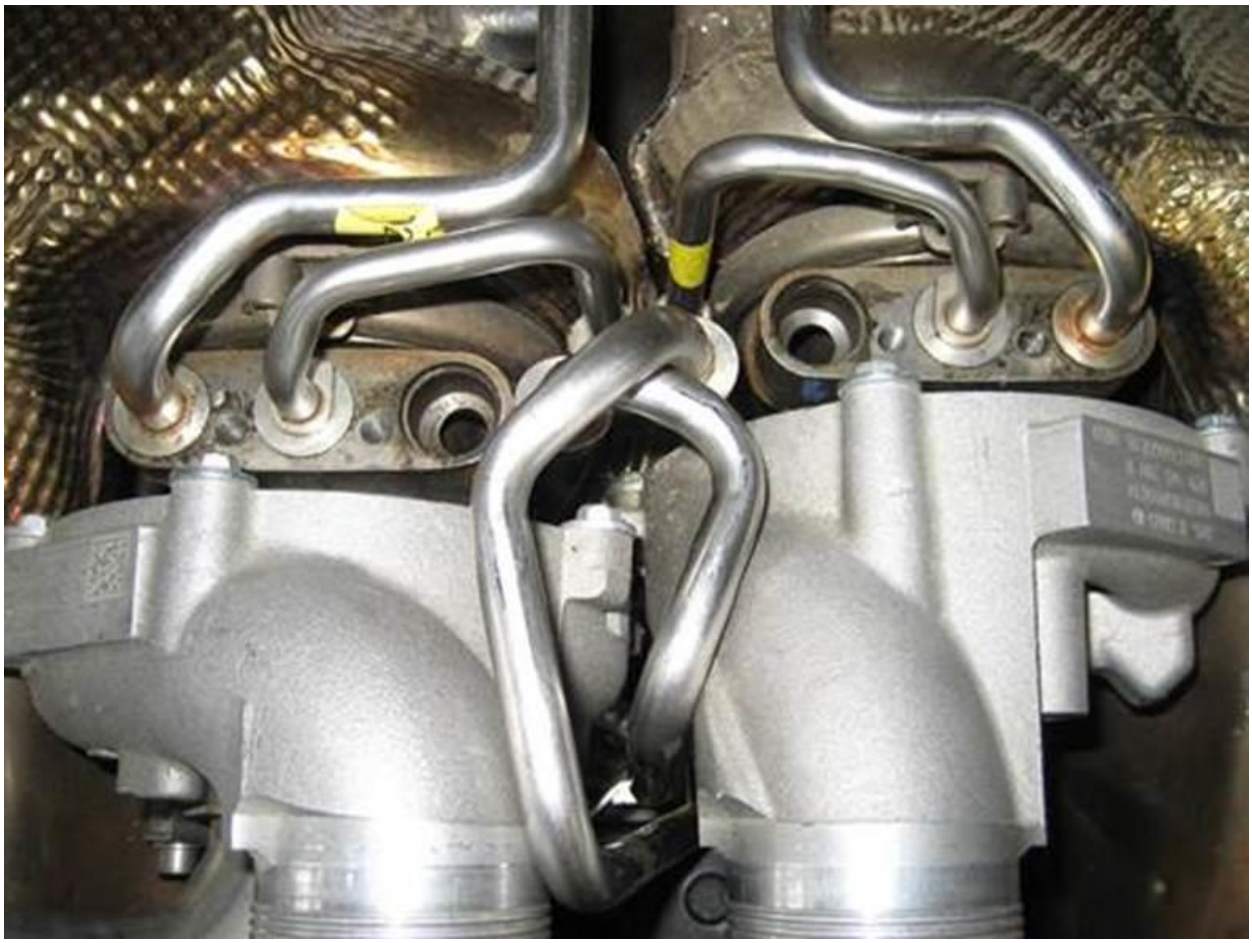

Figure 2. *Recommended pipe position.*

1. Clean the intake ports for the coolant pipes on the top of the turbochargers, the ports should be clean and dry before installing the coolant pipes with the O-rings. The new O-rings are coated with a lubricating agent and should be installed dry.
2. Replace the oil feed pipe O-rings. Coat lightly with clean engine oil, do not allow engine oil to touch the coolant O-rings.
3. Install the pipe retaining plate and secure loosely, attach pipe retainer brackets and torque retaining plate bolts to 9 nm and reassemble intake pipes and hoses.
4. Fill the new coolant additive in the cooling system according to manufacturer guidelines. Observe the mixture ratio and filling-up procedure.
5. Only mix distilled water with coolant additives. Distilled water provides optimum corrosion protection.
6. The filling procedure outlined in ElsaPro must be followed. It is important that the vacuum-down, filling and bleeding processes for the specific vehicle being repaired are used.
7. New software in the engine control module (ECM), J623 (address word 0001) addressed the condition.

8. Follow all instructions in TSB 2011732: *00 Software Version Management (SVM), operating instructions*.
9. Update the engine control module (ECM), J623 (address word 0001) using the SVM action code as listed in the table below if necessary:

Model	Engine	Old Software Part Number	Old Software Version (or lower)	New Software Part Number	New Software Version (or higher)	SVM Code Input
S6/S7 MY13	4.0TFSI	4G0906014B	0008	4G0906014B	0009	01A225
S6/S7 MY13	4.0TFSI	4G0906014	0011	4G0906014	0012	01A225
S6/S7 MY13	4.0TFSI	4G0906014A	0007	4G0906014A	0008	01A225
S6/S7 MY14	4.0TFSI	4G0906014E	0005	4G0906014E	0006	01A225
S6/S7 MY15	4.0TFSI	4G0906014E	0005	4G0906014E	0006	01A225
A8 4.0TFSI MY13-14	4.0TFSI	4H0906014	0007	4H0906014	0008	01A225
A8 4.0TFSI MY13-14	4.0TFSI	4H0906014A	0005	4H0906014A	0006	01A225
A8 4.0TFSI MY13-14	4.0TFSI	4H0906014B	0004	4H0906014L	0005	01A225
A8 4.0TFSI MY13-14	4.0TFSI	4H0906014C	0004	4H0906014C	0005	01A225
A8 4.0TFSI MY13-14	4.0TFSI	4H0906014D	0004	4H0906014D	0005	01A225
A8 4.0TFSI MY13-14	4.0TFSI	4H0906014H	0005	4H0906014H	0006	01A225
A8 4.0TFSI MY13-14	4.0TFSI	4H0906014L	0004	4H0906014L	0005	01A225
A8 4.0TFSI MY15	4.0TFSI	4H0906014G	0007	4H0906014G	0008	01A225
A8 4.0TFSI MY15	4.0TFSI	4H0906014J	0005	4H0906014J	0006	01A225

A8 4.0TFSI MY15	4.0TFSI	4H0906014K	0004	4H0906014K	0005	01A225
S8 MY13	4.0TFSI	4H0907557B	0004	4H0907557E	0004	01A225
S8 MY14	4.0TFSI	4H0907557E	0003	4H0907557E	0004	01A225
S8 MY15	4.0TFSI	4H0907557C	0005	4H0907557C	0006	01A225
S8 MY15	4.0TFSI	4H0907557D	0005	4H0907557D	0006	01A225

10. Check the software version number of the engine control module:

- Software version included in table: update the engine control module with **SVM code 01A225.**
- Software version not included in table: already optimized or not available, only replace the O-rings.

Warranty

Claim Type:	• 110 up to 48 Months/50,000 Miles. • G10 for CPO Covered Vehicles – Verify Owner. • If vehicle is outside any warranty, this Technical Service Bulletin is informational only.		
Service Number:	1961		
Damage Code:	0050		
Labor Operations:	Coolant pipes O-rings and oil feed pipe O-rings (Includes drain and fill cooling system.)	1961 5299	140 TU
	Check software level in ECM only (with no update needed)	2470 0199	Max 10 TU
	Check software level in ECM and perform update	2470 2599	Max 50 TU
Diagnostic Time:	GFF	No allowance	0 TU
	Road test prior to service procedure	No allowance	0 TU
	Road test after service procedure	0121 0004	10 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 #2036167/7

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
N 91056801	Upper oil feed pipe O-ring 12 x 2 mm	2
WHT006335A	O-ring coolant supply and return 2.0 mm (blue) order depending on lines installed on vehicle.	4
WHT006537	O-ring coolant supply and return 2.8 mm (black) order depending on lines installed on vehicle.	4
WHT005529	Intake pipe O-rings	2
G 013A8J1G	Coolant additive	1
Outside material	Distilled water (obtain locally)	As needed (Max $10.00)

Tool Number	Tool Description
3371	Gauge – Gap Adjustment Tool
V.A.G 1274/8	Adapter
V.A.G 1274/10	Adapter
VAS 6096	Cooling system charge unit
T10007 A	Refractometer
	Approved Battery Charger

Additional Information

The following Technical Service Bulletin(s) will be necessary to complete this procedure:

- TSB 2011732 *00 Software Version Management (SVM), operating instructions*.

Technical Service Bulletin

All parts and service references provided in this TSB (2036167) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.