Blue smoke after engine start or slight oil leakage at turbocharger

Topic number	LI09.40-P-055396
Version	4
Design group	09.40 Turbocharger
Date	08-28-2014
Validity	Vehicles with engine 271.8 EVO
Reason for change	Request for PTSS case creation with video attachment for repeat complaints
Reason for block	

Complaint:

Shortly after engine start a clearly visible cloud of blue smoke can emerge from the rear muffler of the exhaust system.

Slight oil leakage at turbine housing.

NOTE:

This smoke cloud dissipates immediately and does not necessarily reappear at every restart.

This can occur in some cases when a cold engine is started after the vehicle has been parked for several hours.

Attachments	
File	Description
V-clamp.JPG	V-Clamp location

Cause:

When the engine is switched off, oil can continue to run out of the cylinder head via the oil feed line and can therefore seep into the bearing housing. In isolated cases capillary action can cause small residual oil quantities to overflow onto the turbine wheel and V-clamp (connection of the two turbine housing halves). After a long idle period this can lead to slight oil leakage at the V-clamp or to blue smoke problems when the cold engine is restarted.

Remedy:

The turbocharger does not need to be replaced; it is sufficient to install a new banjo bolt with integral valve.

1.) Detach small shield of turbocharger (see attachment for installation location of bolts).

2.) Remove oil feed line in accordance with WIS document AR09.40-P-6020-13EVO steps 1, 2 and 3

3.) Replace previous banjo bolt with banjo bolt with integral valve A0019972401. Observe tightening torque as per WIS document AR09.40-P-6020-13EVO! (6 Nm + 90°)

4.) Install in the reverse order

Note: The banjo bolt must be renewed each time it is removed.

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If the problem reoccurs after installation of the banjo bolt, a PTSS case must be created and a video of the smoke cloud attached before further repairs are performed. The file size must not exceed 5 MB.

Attachments	
File	Description
Screwings_turbocharger_screening_plate.jpg	Shield - Installation location of bolts

Symptoms
Power generation / Exhaust system / Exhaust system function / Exhaust gas causes pollution
Power generation / Engine lubrication/oil cooling / Engine lubrication/oil cooling leaks / External oil loss
Power generation / Exhaust system / Exhaust system function / Fumes/blue smoke
Power generation / Exhaust system / Exhaust system function / Fumes/white smoke
Power generation / Exhaust system / Exhaust system function / fumes/black smoke

Parts

Part number	ES1	ES2	Designation	Quantity	Note	EPC	Other make part
A 001 997 24 01			Banjo bolt	1	Must be renewed each time it is unscrewed	X	
N 000000 006513			Sealing ring	2	Banjo bolt	X	
A 023 997 85 48			O-ring	1	Crankcase	X	

Work units

Op. no.	Operation text	Time	Damage code	Note
18-9011	204 OPCODE- REMOVE/INSTALL OIL LINE (FEED LINE) AT TURBOCHARGER			Cannot claim both 18-9010 & 18-9011 opcodes
18-9010	172 OPCODE- REMOVE/INSTALL, SEAL OIL FEED LINE FOR TURBOCHARGER, LOCATION:.....			Cannot claim both 18-9010 & 18-9011 opcodes
			18366 04	

Validity

Vehicle	Engine	Transmission
172.447	271.861	*
172.448	271.861	*
204.047	271.860	*
204.048	271.860	*
204.049	271.820	*
204.247	271.860	*

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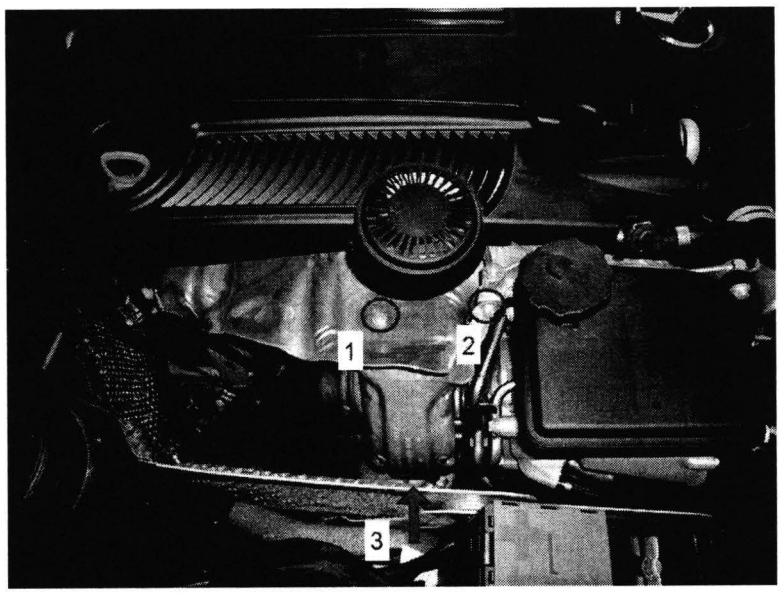
204.248	271.860	*
204.249	271.820	*
204.347	271.860	*
204.348	271.860	*
204.349	271.820	*
207.347	271.860	*
207.348	271.860	*
207.447	271.860	*
207.448	271.860	*
212.047	271.860	*
212.048	271.860	*
212.147	271.860	*
212.148	271.860	*
212.247	271.860	*
212.248	271.860	*

Attachments

Screwings_turbocharger_screening_plate.jpg:



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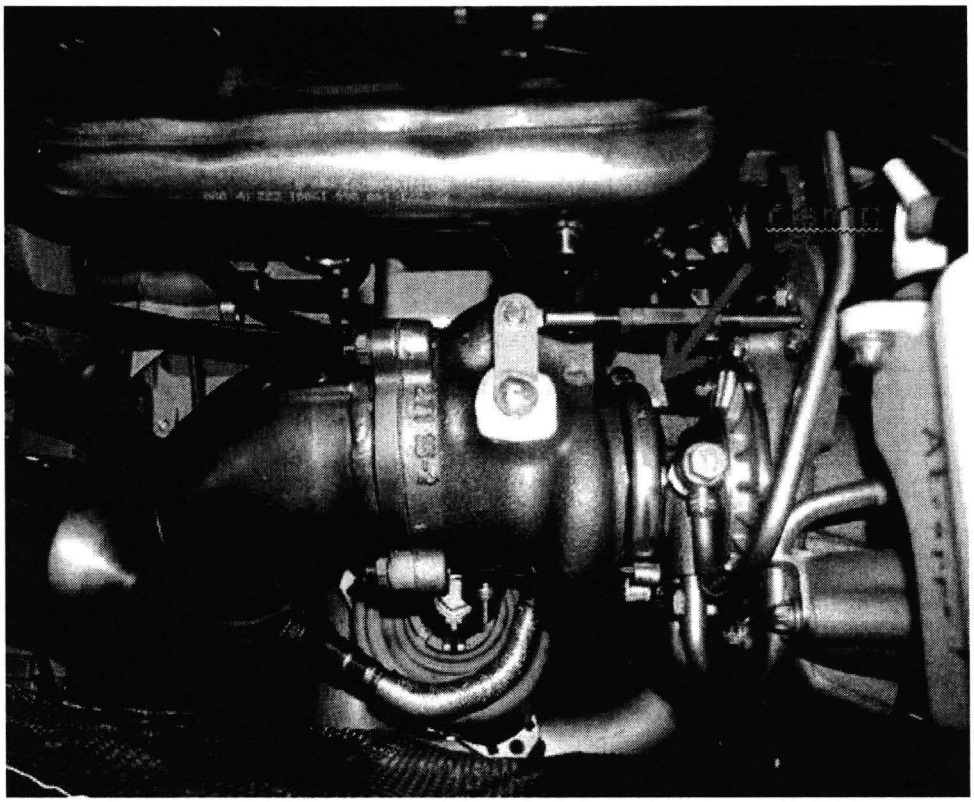
V-clamp.JPG:



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