Fault code P245997, P246397, P245900, P246385 or P246309 stored in engine control unit

Topic number	LI49.20-P-059246
Version	1
Design group	49.20 Exhaust aftertreatment unit
Date	06-23-2014
Validity	Model 117 with engine 651 Model 176 with engine 651 Model 204 with engine 651 Model 212 with engine 651 Model 207 with engine 651 Model 218 with engine 651 Model 172 with engine 651 Model 246 with engine 651 Model 166 with engine 651 Model 221 with engine 651
Reason for change	USA included in distribution.
Reason for block	

Complaint:

Check Engine Light on.

The following fault codes are stored in the engine control unit:

Fault code P245997

The regeneration frequency of the diesel particulate filter is not OK. System function is restricted

Fault code P246397

The soot content of the diesel particulate filter is not OK, the system function is restricted

Fault code P245900

The soot content of the diesel particulate filter is not OK

Fault code P246309

The soot content of the diesel particulate filter is not OK. There is a component fault

Fault code P246385

The soot content of the diesel particulate filter is not OK. There is a signal above the permissible limit.

Cause:

The following causes may produce these fault codes.

For example:

- Deviation detected in emission sensor system or sensor wiring

- Deviation detected in a component, which results in an excessive amount of engine soot development. (For example, intake air system, injector, HFM-SFI)

Notes:

The fault code for the regeneration frequency of the diesel particulate filter (DPF) appears when the vehicle is regenerated unusually often or for too long. Normal regeneration intervals (driving distances between two regeneration periods) are 250 km (City driving) and 500 km (Highway driving). The duration of a regeneration period generally lies between 15 and 25 minutes.

The fault code for the soot content of the diesel particulate filter appears, when the engine timing has calculated an excessively high soot load. A high soot load does not necessarily actually exist. It could also be that faults in the sensor system erroneously detect a high soot level, although the loading of the diesel particulate filter is actually OK.

Remedy:

For these fault codes there are guided tests in XENTRY, which have to be fully processed.

The following test steps are to be processed for the above-mentioned fault codes:

1. Acquisition performance data

2. Plausibility check of component B28/8 (DPF differential pressure sensor)

3. Compression test

4. Check installation height of fuel injectors

If there are any deviations, check whether too many sealing rings or none at all have been installed.

5. Check charge air system for leaks

6. Check exhaust system for leaks

7. Plausibility check of temperature sensors in exhaust system

8. Check electrical lines and connectors for emissions sensor system.

Note:

Faulty solder points can lead to transition resistances.

Important information on wiring of the emissions sensor system as well as for cable harness (crimping, position and soldering of Z-connector sleeves) is available in the TIPS document "Differential pressure sensor and/or exhaust temperature sensor has a malfunction" in Group 54.18 (Only affects model series 204, 207, 212 up to production 08/2011).

9. Perform wipe test on the exhaust tailpipes.

To do so use a suitable cloth (e.g. fleece cloth) and check whether the inside of the exhaust tailpipes have soot deposits

(See attachment for picture examples).

• If the cloth becomes black or gray, open the connecting point downstream of the DPF. If the exhaust pipe on the DPF outlet is carbon-fouled, the monolith broken out or if a white crust is visible on the monoliths, open a TIPS case and coordinate any further courses of action with your relevant market support.

(Please attach all the test results/performance data to the TIPS case).

• If no discoloration is visible on the cloth, perform a visual inspection at the DPF inlet. If the DPF inlet is oiled up or the honeycomb structure of the monolith is partly/completely sealed with soot, open a PTSS case for further assistance.

(Please attach all the test results/performance data to the PTSS case).

Note:

If the diesel particulate filter is replaced, this then has to undergo teach-in with XENTRY. Regeneration while driving is not necessary.

In a warranty case all test results should be submitted along with the diesel particulate filter.

10. If no damage can be found to the diesel particulate filter, regeneration must be performed while driving, following the test instructions.

11. Acquisition of diagnostic performance data, acquisition of data on completion of repair work

Notes:

Please note that for the complete repair the damage code must relate to the component causing the damage.

If faults are not recognizable, contact your relevant market support through the TIPS case module to coordinate further courses of action.

Replacement of the diesel particulate filter is not permissible in this case.

Attachments	
File	Description
Wischprobe_swipe sample.JPG	Wipe test
Trennstelle nach DPF Austritt cutting point after DPF outlet.JPG	Connecting point after DPF outlet
Sichtkontrolle DPF_KAT Eintritt_visual control DPF_KAT entrance.JPG	Visual inspection of DPF/CAT inlet

Symptoms
Power generation / Engine management / Engine management indicator lamp / Engine diagnosis / lit

Validity		
Vehicle	Engine	Transmission
117.301	651	*
117.303	651	*
207.302	651	*

207.303	651	*
207.402	651	*
207.403	651	*
212.001	651	*
212.002	651	*
212.003	651	*
212.004	651	*
212.005	651	*
212.082	651	*
212.097	651	*
212.098	651	*
212.202	651	*
212.203	651	*
212.205	651	*
212.282	651	*
212.298	651	*
218.303	651	*
218.903	651	*
246.200	651	*
246.201	651	*
246.203	651	*
246.207	651	*
A (176)	651	*
C (204)	651	*
GLK (204)	651	*
M (166)	651	*
S (221)	651	*
SLK (172)	651	*