
Check Engine Light on and/or "Remaining starts [X]" displayed in the Instrument Cluster

Topic number	LI49.20-P-057619
Version	7
Design group	49.20 Exhaust aftertreatment unit
Date	10-30-2013
Validity	GLK-250 with OM651
Reason for change	Updated test steps

Complaint:

Check Engine Light illuminated and/or "Remaining starts [X]" displayed in Instrument Cluster (IC)

Attachments	
File	Designation
OM651 642 CEL P2BAAFA questionnaire.pdf	Driving profile for DTC P2BAAFA

Cause:

CEL with DTC(s):

- P13DF00: "The AdBlue® system has a malfunction"
- P2BAAFA: "The emission limit for the NOx concentration has been exceeded (AdBlue® consumption is too low)"

OR

CEL on with DTC(s) and a limited number of starts displayed in the IC

- P13DF00: "The AdBlue® system has a malfunction"
- P2BAAFA: "The emission limit for the NOx concentration has been exceeded (AdBlue® consumption is too low)"
- P13E300: "The number of possible engine starts is limited due to a malfunction in the AdBlue® system."

Remedy:

A Special Procedure is available in SDS version 09/13 with add-on 3166.

If DTC P2BAAFA is Current or Stored in the CDI, follow the tests steps associated with this DTC.

If DTC has been erased and has not returned, the test steps can be accessed by following the path below:

CDI control unit ==> Special Procedure ==> Test for DTC P2BAAFA.

Test Prerequisites:

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- Vehicle should be placed on lift
 - Battery charger connected
 - The utilized SDS should have fully charged batteries capable of powering the SDS for an approximate 25 – 45 minute road test.
 - Check AdBlue level and top off in necessary
 - Check and document DTCs in the CDI control unit
 - Check and update CDI control unit software if available
 - Check and document the actual value of temperature sensor upstream of SCR Cat.
 - o CDI # Actual values # SCR # Select continue on the right lower corner of the screen.

Test steps:

1. Click on the Special Procedure tab from the CDI page in XENTRY
2. Select the Test for P2BAAFA from the menu on the left side of the screen
3. Select Function Chain menu item
4. Follow the test steps as described in Xentry
 - a. When you get to the step to check the temperature sensor upstream of SCR Cat B16/15, if you receive a communication error, select abort. This will reroute to a wiring check of the temperature sensor. If step 4 was ok you can select yes to this test and move forward with your test
 - b. You will not receive a green check mark for Visual leak check or Dynamic pump test when the test is passed.
5. After the Function Chain is complete, the system will reroute the system back to the test screen for P2BAAFA.
6. Follow the remaining test steps in the following order:
 - a. Resetting of warning message "Fault in AdBlue system" in multifunction display

Note you may encounter an indication of an error. The screen indicates an option to select either "Repeat" or "Abort". Select "Repeat" to continue.

 - b. Resetting the adaptation values
 - c. Regeneration of Diesel Particulate Filter (2 regenerations MUST be performed)

Note SDS must be taken on road test to perform regenerations (SDS will provide instructions)
7. Activation of function "System Check"

8. Collation of diagnosis performance data

9. Return to fault code display and erase DTC if any exist

It is possible that the CEL may illuminate during the regeneration drive cycles. It should be ignored and the regeneration drives should be completed. The fault which causes the CEL to illuminate will be erased after each regeneration drive is complete.

If there is a Current and Stored DTC after the procedure is complete, it may be necessary to reset the NOx sensor adaptation via: SCR ==> Adaptation.==> Resetting the NOx sensor adaptation. After this step return to CDI and recheck DTC's. If the DTC's are still Current and Stored, erase the codes and recheck. The codes should clear.

Symptoms
Power generation / Engine management / Engine management indicator lamp / Engine diagnosis / lit
Power generation / Exhaust system / AdBlue / AdBlue consumption / Too low

Control unit/fault code		
Control unit	Fault code	Fault text
CDI - Motor electronics 'CR42' for combustion engine 'OM651' (N3/9) (GLK (204), C (204), E (212), CLS (218), E (207))	P13DF00	The AdBlue® system has a malfunction.
CDI - Motor electronics 'CR42' for combustion engine 'OM651' (N3/9) (GLK (204), C (204), E (212), CLS (218), E (207))	P13E300	The number of possible engine starts is limited due to a malfunction in the AdBlue® system.
CDI - Motor electronics 'CR42' for combustion engine 'OM651' (N3/9) (GLK (204), C (204), E (212), CLS (218), E (207))	P2BAAFA	The emission limit for the NOx concentration has been exceeded (AdBlue® consumption is too low).