Engine diagnosis warning lamp lights up - "Check AdBlue" or "No start in XXX km/miles" appears in instrument cluster - Fault codes concerning AdBlue system stored in engine control unit

Topic number	LI49.20-P-053539
Version	2
Design group	49.20 Exhaust aftertreatment unit
Date	06-09-2015
Validity	Model 164 / 166 / 212 / 221 / 251 with engine 642 and SA code U42 (BlueTEC (SCR) diesel exhaust treatment) Model 166 / 204 / 212 with engine 651 and SA code U42 (BlueTEC (SCR) diesel exhaust treatment) Model 463 with engine 642 and SA code MC7 (Engine OM 642 D 30 BlueTEC)
Reason for change	Layout revised
Reason for block	

Complaint:

Engine diagnosis warning lamp lights up.

"Check AdBlue" or "No start in XXX km (miles)" appears in the instrument cluster and one or more fault codes concerning the AdBlue system are stored in the engine control unit.

Cause:

A distinction is made in the fault codes between system fault codes and cause fault codes.

Possible system fault codes are: 16D300, 16D400, 16D500, 15EA00, 15EB00, 15EC00, 16CE00, 16CF00, P13DF00, P13E300, P13E400, P13E500, P13DF09.

These system fault codes are always shown together with at least one cause fault code in the engine/SCR control unit. The quick test must not be erased otherwise the information on the cause fault code will be lost.

Important: If an active system error is present, the AdBlue tank must not be filled.

After processing the cause fault(s), the AdBlue fill level must be checked. If the fill level is correct, then it does not need to be topped up to rectify the fault!!

Remedy:

The cause fault code must first be rectified in the engine control unit with the guided Xentry Diagnostics test in order to enable the system fault code "AdBlue" to be erased.

Note: The latest Xentry Diagnostics DVD must be installed.

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Once all the cause faults have been rectified, the quick test can be erased.

Note: When the quick test has been erased, the existing system fault code and the combined message "Check Ad-Blue" or "No start in XXX km" will remain active.

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To erase the system fault code and the combined message, proceed as follows:

- Check that the engine and BlueTec control unit software is up to date

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Note for vehicles with engine 642 (except model series 463): With add-ons 3505, 3605, 3622 (DVD01/14) and 3506, 3606, 3623 (DVD03/14), new engine control unit software is available for vehicles with modification year (YoM) codes 801 and 802 which supports the resetting of system faults via Xentry Diagnostics.

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Note for vehicles with engine 651 or 642 with YoM code 803 and higher: Resetting of system faults via Xentry Diagnostics is generally supported.

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Procedure: Resetting a system fault code with Xentry Diagnostics

Proceed as follows:

=> Launch the guided test behind the system fault code and then immediately click on the link "Reset warning message...".

If "Completed successfully" is shown, the system fault can be erased. An additional adaptation test drive is no longer required.

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It is only necessary to perform an adaptation test drive to erase the system fault code if the message "Reset not completed successfully" appears.

The adaptation test drive must be performed according to the following criteria:

1. Warm up the vehicle for approx. 10 min (coolant temperature at least 80°C/176°F, catalytic converter temperature at least 250°C/482°F)

2. Drive for 30 min as consistently as possible between 80 km/h (50 mph) and 120 km/h (75 mph) with occasional coasting phases.

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Then check whether the fault is set to "stored".

If so, erase the fault; the message in the instrument cluster disappears.

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If not, perform an adaptation test drive according to the following profile:

1. Drive for 5 min at a constant speed (no throttle blips, no acceleration) between 80km/h (50 mph) and 90 km/h (56 mph).

2. After 5 min gradually increase the speed to 100 - 110 km/h (62 - 68 mph) and then coast for approx. 15s - 25s. After the coasting phase, gradually accelerate again to 100 - 110 km/h (62 - 68 mph) and repeat the procedure another 5 times.

If the message in the instrument cluster continues to appear, stop the vehicle and switch off the ignition for 5 minutes (ignition key removed, no diagnostic equipment connected).

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If the system fault is still stored in the quick test or if the message is still active in the instrument cluster, please open a PTSS case and attach all required documentation.

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

Control unit/fault code		
Control unit	Fault code	Fault text
CDI - Motor electronics 'CDI6BIN5EU6' for combustion engine 'OM642' (N3/9) (CR6BIN5EU6) (E (212),G (463))	16D400	The remaining driving distance is limited due to a malfunction in the AdBlue® system.
CDI 6BIN5EU6-Common Rail Diesel Injection (CDI6BIN5EU6) (M (164),R (251),GL (164),G (463))	16CF00	The test of the AdBlue system has not yet been carried out.Frequency counter 'Possible engine starts' is active.
CDI 6BIN5EU6-Common Rail Diesel Injection (CDI6BIN5EU6) (M (164),R (251),GL (164),G (463))	16CE00	The test of the AdBlue system has not yet been carried out.Frequency counter 'Possible engine starts' is active.
CDI 6BIN5EU6-Common Rail Diesel Injection (CDI6BIN5EU6) (M (164),R (251),GL (164),G (463))	15EC00	The fill level of the AdBlue tank is too low or there is a fault in the AdBlue system.
CDI - Motor electronics 'CDI6BIN5EU6' for combustion engine 'OM642' (N3/9) (CR6BIN5EU6) (E (212),G (463))	16D300	The remaining driving distance is limited due to a malfunction in the AdBlue® system.
CDI - Motor electronics 'CDI6BIN5EU6' for combustion engine 'OM642' (N3/9) (CR6BIN5EU6) (E (212),G (463))	16CE00	The AdBlue® system has not yet been tested. The frequency counter 'Possible engine starts' is active.
CDI 6BIN5EU6-Common Rail Diesel Injection (CDI6BIN5EU6) (M (164),R (251),GL (164),G (463))	15EA00	The fill level of the AdBlue tank is too low or there is a fault in the AdBlue system.
CDI - Motor electronics 'CDI6BIN5EU6' for combustion engine 'OM642' (N3/9) (CR6BIN5EU6) (E (212),G (463))	16CF00	The AdBlue® system has not yet been tested. The frequency counter 'Possible engine starts' is active.

CDID 3-Common Rail Diesel Injection (CDID3) (S (221))	P13E400	The remaining driving distance is limited due to a malfunction in the AdBlue system.
CDI - Motor electronics 'CDI6BIN5EU6' for combustion engine 'OM642' (N3/9) (CR6BIN5EU6) (E (212),G (463))	15EC00	The fill level of the AdBlue® tank is too low or there is a fault in the AdBlue® system.
CDID 3-Common Rail Diesel Injection (CDID3) (S (221))	P13DF00	The AdBlue system has a malfunction.
CDI 6BIN5EU6-Common Rail Diesel Injection (CDI6BIN5EU6) (M (164),R (251),GL (164),G (463))	15EB00	The fill level of the AdBlue tank is too low or there is a fault in the AdBlue system.
CDI 6BIN5EU6-Common Rail Diesel Injection (CDI6BIN5EU6) (M (164),R (251),GL (164),G (463))	16D500	The test of the AdBlue system has not yet been carried out.Engine start is not possible.
CDI - Motor electronics 'CDI6BIN5EU6' for combustion engine 'OM642' (N3/9) (CR6BIN5EU6) (E (212),G (463))	16D500	Starting the engine is not possible due to a malfunction in the AdBlue® system.
CDI - Motor electronics 'CDI6BIN5EU6' for combustion engine 'OM642' (N3/9) (CR6BIN5EU6) (E (212),G (463))	15EB00	The fill level of the AdBlue® tank is too low or there is a fault in the AdBlue® system.
CDI 6BIN5EU6-Common Rail Diesel Injection (CDI6BIN5EU6) (M (164),R (251),GL (164),G (463))	16D300	The test of the AdBlue system has not yet been carried out.The remaining driving distance is limited.
CDI 6BIN5EU6-Common Rail Diesel Injection (CDI6BIN5EU6) (M (164),R (251),GL (164),G (463))	16D400	The test of the AdBlue system has not yet been carried out.The remaining driving distance is limited.
CDID 3-Common Rail Diesel Injection (CDID3) (S (221))	P13E500	Starting the engine is not possible due to a malfunction in the AdBlue system.
CDI - Motor electronics 'CDI6BIN5EU6' for combustion engine 'OM642' (N3/9) (CR6BIN5EU6) (E (212),G (463))	15EA00	The fill level of the AdBlue® tank is too low or there is a fault in the AdBlue® system.

Validity		
Vehicle	Engine	Transmission
166.003	651	*
166.004	651	*
212.001	651	*
212.002	651	*

212.003	651	*
212.004	651	*
212.005	651	*
212.024	642	*
212.026	642	*
212.027	642	*
212.082	651	*
212.097	651	*
212.098	651	*
212.202	651	*
212.203	651	*
212.205	651	*
212.224	642	*
212.226	642	*
212.227	642	*
212.282	651	*
212.298	651	*
E (212)	642	*
G (463)	642.886	*
G (463)	642.970	*
GL (164)	642	*
GLK (204)	651	*
M (164)	642	*
M/GLE (166)	642	*
R (251)	642	*
S (221)	642	*

Full model designation breakdown		
Vehicle	Engine	Transmission
164.120	642.940	722.902
164.121	642.820	722.902
164.122	642.940	722.902
164.124	642.820	722.902
164.125	642.820	722.902
164.822	642.940	722.902
164.823	642.822	722.903
164.824	642.820	722.902
164.825	642.820	722.902
166.003	651.960	722.908
166.003	651.960	725.031
166.004	651.960	722.908
166.004	651.960	725.031

166.023	642.826	722.903
166.023	642.826	725.031
166.024	642.826	722.903
166.024	642.826	725.031
204.901	651.916	711.653
204.901	651.916	722.908
204.901	651.916	722.996
204.902	651.916	711.653
204.902	651.916	716.658
204.902	651.916	722.908
204.904	651.912	722.965
204.982	651.912	722.965
204.984	651.912	722.965
204.984	651.912	722.967
204.997	651.912	722.965
212.001	651.924	711.653
212.001	651.924	722.646
212.001	651.924	722.908
212.001	651.924	725.011
212.002	651.924	711.653
212.002	651.924	716.656
212.002	651.924	722.646
212.002	651.924	722.908
212.002	651.924	725.011
212.003	651.924	711.670
212.003	651.924	722.646
212.003	651.924	722.908
212.003	651.924	725.011
212.004	651.924	711.670
212.004	651.924	722.646
212.004	651.924	722.908
212.004	651.924	725.011
212.005	651.925	711.653
212.005	651.925	716.656
212.005	651.925	722.694
212.005	651.925	722.996
212.005	651.925	725.011
212.020	642.850	722.902
212.021	642.852	711.670
212.021	642.852	722.903
212.021	642.852	725.011
212.023	642.852	711.670
212.023	642.852	722.903

212.023	642.852	725.011
212.024	642.850	711.670
212.024	642.850	722.902
212.024	642.850	725.011
212.025	642.850	711.670
212.025	642.850	722.902
212.025	642.850	725.011
212.025	642.856	711.670
212.025	642.856	722.902
212.025	642.856	725.011
212.026	642.852	711.670
212.026	642.852	722.903
212.026	642.852	725.011
212.027	642.852	711.670
212.027	642.852	722.903
212.027	642.852	725.011
212.082	651.924	722.965
212.089	642.856	722.962
212.093	642.858	722.966
212.093	642.858	725.021
212.094	642.858	722.966
212.094	642.858	725.021
212.097	651.924	722.965
212.098	651.924	724.208
212.202	651.924	711.653
212.202	651.924	716.656
212.202	651.924	722.646
212.202	651.924	722.908
212.202	651.924	725.011
212.203	651.924	711.670
212.203	651.924	722.646
212.203	651.924	722.908
212.203	651.924	725.011
212.205	651.925	711.653
212.205	651.925	716.656
212.205	651.925	722.694
212.205	651.925	722.996
212.205	651.925	725.011
212.220	642.850	722.902
212.221	642.852	711.670
212.221	642.852	722.903
212.221	642.852	725.011
212.223	642.852	711.670

212.223	642.852	722.903
212.223	642.852	725.011
212.224	642.850	711.670
212.224	642.850	722.902
212.224	642.850	725.011
212.225	642.850	711.670
212.225	642.850	722.902
212.225	642.850	725.011
212.226	642.852	711.670
212.226	642.852	722.903
212.226	642.852	725.011
212.227	642.852	711.670
212.227	642.852	722.903
212.227	642.852	725.011
212.282	651.924	722.965
212.289	642.856	722.962
212.293	642.858	722.966
212.293	642.858	725.021
212.294	642.858	722.966
212.294	642.858	725.021
212.298	651.924	724.208
221.022	642.930	722.902
221.026	642.862	722.903
221.080	642.932	722.962
221.083	642.868	722.966
221.122	642.930	722.902
221.126	642.862	722.903
221.180	642.932	722.962
221.183	642.868	722.966
251.020	642.950	722.902
251.021	642.872	722.903
251.022	642.950	722.902
251.023	642.872	722.903
251.026	642.950	722.902
251.122	642.950	722.902
251.123	642.872	722.903
251.124	642.870	722.902
251.125	642.870	722.902
251.126	642.950	722.902
463.303	642.970	722.902
463.306	642.886	722.902
463.306	642.970	722.902
463.336	642.886	722.902

463.340	642.970	722.902
463.341	642.970	722.902
463.346	642.886	722.902

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