

## BlueTec 4/5 - "Implausible NOx sensor measurement value" - MR fault code 1 42 37

Topic number	G14.40-N-041508
Version	3
Design group	14.40 Exhaust-gas Aftertreatment, AdBlue
Date	03-08-2011
Validity	Vehicles with code (MS4) BlueTec 4 or code (MS5) BlueTec 5 and code (KD6) NOx sensor
Reason for change	Notes added to operation step 5 regarding the deletion of the fault memory.
Reason for block	

### Complaint:

The MIL lamp (Malfunction Indicator Lamp) in the Instrument is flashing and the message "MR - Service Required" appears in the display (see Attachment 1).

In addition, "Engine power reduced" may also be appear in the display.

Fault code 1 42 37 "Implausible NOx sensor measurement value" is stored in the fault memory of the engine control (MR) control unit.

Attachments	
File	Designation
Anlage 1 MIL_Lampe.pdf	MIL = Malfunction indicator lamp

### Cause:

There are several reasons why the engine control (MR) control unit may evaluate the NOx values as implausible or too low.

1. Software version in engine control (MR) control unit.
2. Exhaust pipe cracked or leaky.
3. NOx sensor is not correctly installed on catalytic converter or is loose.
4. NOx sensor is faulty.

Attachments	
File	Designation
Anlage 4 Softwareversion Motorsteuengerat prufen.pdf	Check engine control unit software version in the control unit version menu of Star Diagnosis

### Remedy:

The troubleshooting procedure comprises the following tests:

1. Check the software version in the engine control (MR) control unit.

Check the software version in the engine control (MR) control unit with Star Diagnosis, see Attachment 4.

Is the software version of the engine control (MR) control unit higher than V10?

YES: Continue with step 2

NO: Install the download MR 1\_35 onto the MR control unit . The download is available with Star Diagnosis DVD 09/10. Continue with test step 5)

Exception: For the Atego with engine 900.9XX (4-cylinder) up to engine end no. 712350: Download MR1\_29. Please observe TIPS document GI14.40-N-042307!

2. Check exhaust pipe for leaks.

Exhaust pipe cracked or leaky ?

YES: Replace exhaust pipe Continue with test step 5.

NO: Continue with test step 3.

3. Check location of the NOx sensor on the reduction catalytic converter ?

NOx sensor installed correctly ?

YES: Continue with test step 4.

NO: Install the NOx sensor correctly. Continue with test step 5.

4. Replace the NOx sensor
5. Erase fault memory.

Reset the fault memory in the engine control (MR) control unit as per AR07.15-W-3100A (see Attachment 2).

Note: Since Star Diagnosis update 11/10, the menu item "Delete emissions-relevant fault code" has not been displayed under "Actuations SCR exhaust aftertreatment system". Remedy added: When performing a guided troubleshooting procedure, deliberately answer a question "incorrectly"; then, after being prompted to rectify the fault, you will asked to delete the fault memory. As of Star Diagnosis version 03/11, the menu item "Delete emissions-relevant fault code" will be available again under "Actuations SCR exhaust aftertreatment system".

Attachments	
File	Designation
Anlage 2 Fehlerspeicher uber FDOK loschen.pdf	Star Diagnosis screens for erasing the fault memory.
Anlage 3 BlueTec-Prufkoffer.pdf	Test kit with refractometer, pipette, silicone lines, narrow-neck bottle, test tube
Fragenbogen NOx-Control.pdf	NOx control questionnaire - German version
en_Questionnaire on NOx_Control.pdf	NOx control questionnaire - English version
es_Cuestionario Control de NOx.pdf	NOx control questionnaire - Spanish version
fr_Questionnaire t_moin NOx.pdf	NOx control questionnaire - French version
it_Questionario NOx-Control.pdf	NOx control questionnaire - Italian version
pt_Question_rio Controle-NOx.pdf	NOx control questionnaire - Portuguese version

Symptoms
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Power generation / Engine management, display message / Engine management / Engine control MR shows fault code /

Communication/information / Information display / Displays fault code / Multifunction display / Multifunction display / Displays /

## Control unit/fault code

Control unit	Fault code	Fault text
MR engine control, MR engine control (PLD) (MRSKR) (Eco-nic,Actros 2,3,Atego II,Axor II)	4237	The measurement value of the NOx sensor is implausible.

## Work units

Op. no.	Operation text	Time	Damage code	Note
			49012 07	If the exhaust pipe is cracked.
			14429 38	If the NOx sensor was not installed correctly.
			14429 73	If the software in the engine control (MR) control unit has been updated.

## WIS-References

Document number	Title	Note	Allocation
AR14.40-W-2038A	Remove/install NOx sensor.	Engine model series 500	Remedy
AR14.40-W-2038B	Remove/install NOx sensor	Engine 457	Remedy
AR14.40-W-2038C	Remove and install NOx sensor	Engine model series 900	Remedy
SI00.00-W-0108A	Revisions to testing and repair work due to introduction of NOx sensor/OBD NOx Control	Valid for all model series	Remedy
SI00.00-W-0109A	Introduction of NOx Control on-board diagnosis (OBD)	Valid for all model series	Remedy
AR07.15-W-3100A	Reset current OBD NOx Control fault code and torque limitation in engine control (MR) control unit	Valid for all model series	Remedy
AR14.40-W-2038R	Remove and install NOx sensor	Engine 926 in the Zetros model	Remedy