

## Engine diagnosis warning lamp is active; throttle valve actuator fault and/or oxygen sensor fault stored

Topic number	LI54.18-P-057927
Version	2
Design group	54.18 Cable harnesses
Date	03-07-2014
Validity	Model 117, 176, 246 with engine 270
Reason for change	Remedy adapted
Reason for block	

### Complaint:

Engine diagnosis warning lamp is active.

One or more of the faults listed under 'Control unit / Fault code' relating to the throttle valve actuator (M16/6) and/or oxygen sensor (G3/1 and/or G3/2) are stored in the engine control unit.

### Cause:

The fault entry could have been caused by occasional transition resistance at connectors.

### Remedy:

If all the test steps for these DTCs in Xentry Diagnosis have been performed and NO component faults were found, the following repair steps must be carried out:

1. Check the connector pins of the affected component(s) (M16/6 and/or G3/1, G3/2) for widening/damage! Make sure that testing is performed using the correct test lead (Use ONLY MLK1.2) from the electricial test lead kit, otherwise the contact could be damaged!
2. Disconnect engine control unit (N3/10) "plug connectors - F and M" once and reconnect.
3. If the fault reoccurs, or if a vehicle returns with the same fault, the relevant female pins at the engine control unit connector "M" or "F" must be replaced. This repair may only be performed by a technician with job codes:
  - 516: System Technician
  - 514: Diagnostic technician
  - 512: Teamleader
  - 510: Shop foreman

When performing this repair the attached instructions must be followed!

### Notes:

Contact enhancer or cleaner must never be used on contacts on the engine wiring harness. The use of contact cleaners can cause consequential damage!

Attachments	
File	Designation
651,270_117,176,246_Tausch Kontaktbuchse_german.pdf	Instructions: Replace female contact - German
651,270_117,176,246_Change female contact_english.pdf	Instructions: Replace female contact - English

Symptoms
Power generation / Engine management / Engine management indicator lamp / Engine diagnosis / lit
Power generation / Engine management / Engine performance / Goes into limp-home mode
Power generation / Engine management / Engine performance / No/poor output

Control unit/fault code		
Control unit	Fault code	Fault text
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P213629	The values from position sensors "A/C" of the throttle valve are implausible relative to each other. There is an invalid signal.
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P013812	Oxygen sensor 2 (cylinder bank 1) has a short circuit to positive. There is a short circuit to positive.
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P213500	The values from the position sensors of the throttle valve are implausible relative to each other. _
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P213800	The values from the position sensors of the accelerator pedal are implausible relative to each other. _
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P262600	The trimming resistor connection of oxygen sensor 1 (cylinder bank 1) has an electrical fault or open circuit. _
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P213700	The values from position sensors "B/C" of the throttle valve are implausible relative to each other. _
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P013504	The heater for oxygen sensor 1 (cylinder bank 1) has an electrical fault. There is an internal fault.
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P014013	The signal of oxygen sensor 2 (cylinder bank 1) does not change. There is an open circuit.
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P014100	The heater for oxygen sensor 2 (cylinder bank 1) has an electrical fault. _
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P013711	Oxygen sensor 2 (cylinder bank 1) has a short circuit to ground. There is a short circuit to ground.
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P013084	Oxygen sensor 1 (cylinder bank 1) has an electrical fault. There is a signal below the permissible limit value.

Parts							
Part number	ES1	ES2	Designation	Quantity	Note	EPC	Other make part

A 021 545 01 26		Female contact MCP1.2 ----- 0.5-0.75mm <sup>2</sup>		For engine control unit connector M/F - See attach- ment	X	
A 021 545 05 26		Female contact MCP1.2 ----- 0.25-0.35 mm <sup>2</sup>		For engine control unit connector M/F - See attach- ment	X	
A 007 989 07 85		Fabric tape		See attachment	X	
A 004 997 98 90		Cable tie		For engine control unit connector M/F - See attach- ment	X	

Work units				
Op. no.	Operation text	Time	Damage code	Note
			598BM 74	Connector/line M for gasoline engine control unit
			59781 74	Connector/line for mixing chamber/ throttle valve
			59034 74	Connector/line for oxygen sensor upstream of catalytic converter
			59033 74	Connector/line for oxygen sensor downstream of catalytic converter

WIS-References			
Document number	Title	Note	Allocation
AR00.19-P-0120A	Remove contacts from connectors, couplings		Parts
AR00.19-P-0100A	Wiring harness general re- pair methods		Parts
WS00.19-P-0006B	220 589 04 99 00 Wiring harness repair kit, supple- ment for passenger cars		Parts
WS00.19-P-0002B	220 589 02 99 00 Wiring harness repair kit		Parts

Validity		
Vehicle	Engine	Transmission
117.342	270	*
117.343	270	*
117.344	270	*
117.346	270	*
246.242	270	*
246.243	270	*
246.244	270	*

# XENTRY

246.247	270	*
A (176)	270	*