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

Topic number	LI54.18-P-057927
Version	5
Design group	54.18 Cable harnesses
Date	06-04-2015
Validity	All models with engine 270 All models with engine 274
Reason for change	Validity 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 contacts.

Remedy:

If all the test steps stored in Xentry Diagnostics have been performed and no component faults were found, the following work must be carried out:

- Check the contacts 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 contact spring (here MLK1.2) from the electrics case, otherwise the contact could be damaged!
- Disconnect engine control unit (N3/10) "plug connectors - F and M" once and reconnect.

If the fault reoccurs, or if this is a reoccurrence of the same fault, the relevant female contacts of the engine control unit connector "M" or "F" must be replaced.

The repair may only be performed by specialist personnel and the instructions in the attachment must be followed!

Notes:

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

Please do not replace any components!

Attachments	
File	Description
651,270,274_Tausch Kontaktbuchse_german.pdf	Instructions: Replace female contact - German
651,270,274_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)	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)	P210184	The throttle valve actuator has a malfunction. There is a signal below the permissible limit value.
ME - Motor electronics 'MED40' for combustion engine 'M274' (N3/10)	P210100	The throttle valve actuator has a malfunction. _
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)	P210128	The throttle valve actuator has a malfunction. The signal offset is outside the permissible range.
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)	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)	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)	P013084	Oxygen sensor 1 (cylinder bank 1) has an electrical fault. There is a signal below the permissible limit value.
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)	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)	P210185	The throttle valve actuator has a malfunction. There is a signal above the permissible limit value.
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. _

Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC

XENTRY

A 021 545 01 26		Female contact MCP1.2 ----- 0.5-0.75 mm ²		For engine control unit connector M/F - See attachment	X
A 021 545 05 26		Female contact MCP1.2 ----- 0.25-0.35 mm ²		For engine control unit connector M/F - See attachment	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 attachment	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 repair methods		Parts
WS00.19-P-0006B	220 589 04 99 00 Wiring harness repair kit, supplement for passenger cars		Parts
WS00.19-P-0002B	220 589 02 99 00 Wiring harness repair kit		Parts

Validity		
Vehicle	Engine	Transmission
*	270	*
*	274	*