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

Topic number	LI54.18-P-057927
Version	1
Design group	54.18 Cable harnesses
Date	12-03-2013
Validity	Model 117, 176, 246 with engine 270
Reason for change	
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:

- Disconnect engine control unit "plug connector - F and M" check pin tension of all pins in the ME connectors. - Locate the ground points W11, W9 and W3/2 in the area of the left front strut tower, remove ground nut and eyelet, clean threadsground stud and threads inside of nut. Use compressed air to clean the eyelet and nut. After all are clean re-secure ground. Observe AH00.19-P-1000-20A, GF00.19-P-2000IAA.

- 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!

If damage/widening is found, the female contacts must be replaced.

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!

If the fault reoccurs, please open PTSS case so it can be escalated.

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.

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
			54664 74	Engine compartment ground point

WIS-References			
Document number	Title	Note	Allocation
AH00.19-P-1000-20A	Nut for ground connections		Cause
GF00.19-P-2000IAA	Location and assignment of ground points		Cause
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
246.242	270	*
246.243	270	*
246.244	270	*
246.247	270	*
A (176)	270	*
CLA (117)	270	*