

Engine runs rough, possible misfire, CEL might be on, possible engine ticking noise

Topic number	LI01.30-P-061835
Version	1
Design group	01.30 Cylinder head
Date	08-05-2015
Validity	Models with M278 engine and after the engine number 2789xx 30 128000
Reason for change	
Reason for block	

Complaint:

Check engine light is on. Misfire DTCs are set in the ME engine control module. Engine runs rough, poor fuel economy and lack of power. Engine might be making ticking noise while idling and during acceleration.

Cause:

The complaint might be potentially related to worn valve guide(s) in either cylinder head.

Remedy:

To diagnose the situation:

- Perform compression and leak down tests.
- Borescope combustion chambers and observe any abnormalities in the cylinder or at valve areas.

If it is determined that the complaint might be related to valve / cylinder head, remove the cylinder head to confirm it. Check for elongated valve seats and inspect valve guides.

If abnormal or worn and issue relates to the left cylinder head (left bank) do not disassemble the cylinder head any further. Open a PTSS case for information only and enter in the case text this LI number and "TIMS Issue Id# 201409002008" with request to forward the case to engineering.

Note:

The PTSS case must be absolutely open for issues related to the left cylinder head (left bank).

At the same time order the cylinder head and all internal components (relates only to the left cylinder head - left bank).

Replace the entire cylinder head with internal components (valves, springs, camshafts, etc.) and forward the removed, undisturb cylinder head with all parts to QEC.

Note:

QEC requested parts must be returned to the designated test center in accordance with the warranty parts return requirements section found in the policy and procedures manual.

Symptoms
Power generation / Engine management / Engine running / Poor fuel economy
Power generation / Engine management / Engine running / Cuts out intermittently
Power generation / Engine management / Engine running / Runs rough/shakes
Power generation / Engine management / Engine management indicator lamp / Engine diagnosis / lit
Power generation / Engine management / Engine performance / No/poor output

Power generation / Engine management / Engine performance / Cuts off
Power generation / Engine management / Engine performance / Poor acceleration

Control unit/fault code		
Control unit	Fault code	Fault text
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10) (S (222), CLS (218), E (212), GL/GLS (166), SL (231), S (217), E (207), M/GLE (166))	P030085	Combustion misfiring has been detected. There is a signal above the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10) (S (222), CLS (218), E (212), GL/GLS (166), SL (231), S (217), E (207), M/GLE (166))	P030585	Combustion misfiring of cylinder 5 has been detected. There is a signal above the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10) (S (222), CLS (218), E (212), GL/GLS (166), SL (231), S (217), E (207), M/GLE (166))	P030685	Combustion misfiring of cylinder 6 has been detected. There is a signal above the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10) (S (222), CLS (218), E (212), GL/GLS (166), SL (231), S (217), E (207), M/GLE (166))	P030885	Combustion misfiring of cylinder 8 has been detected. There is a signal above the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10) (S (222), CLS (218), E (212), GL/GLS (166), SL (231), S (217), E (207), M/GLE (166))	P030785	Combustion misfiring of cylinder 7 has been detected. There is a signal above the permissible limit value.

Validity		
Vehicle	Engine	Transmission
*	278	*

Full model designation breakdown		
Vehicle	Engine	Transmission
166.073	278.928	722.909
166.073	278.928	725.031
166.073	278.928	725.032
166.073	278.928	725.033

XENTRY

166.871	278.912	722.909
166.871	278.912	725.031
166.872	278.928	722.909
166.872	278.928	725.031
166.872	278.928	725.032
166.872	278.928	725.033
166.873	278.928	722.909
166.873	278.928	725.031
166.873	278.928	725.032
166.873	278.928	725.033
207.373	278.922	722.909
207.473	278.922	722.909
212.073	278.922	722.909
212.073	278.922	725.011
212.073	278.922	725.032
212.073	278.922	725.033
212.091	278.922	722.967
212.091	278.922	725.021
212.273	278.922	722.909
212.273	278.922	725.011
212.273	278.922	725.032
212.273	278.922	725.033
212.291	278.922	722.967
212.291	278.922	725.021
216.373	278.920	722.909
216.394	278.920	722.967
217.382	278.929	722.909
217.382	278.929	725.011
217.384	278.910	722.967
217.385	278.929	722.967
217.385	278.929	725.041
218.373	278.922	722.909
218.373	278.922	725.011
218.391	278.922	722.967
218.391	278.922	725.041
218.973	278.922	722.909
218.973	278.922	725.011
218.991	278.922	722.967
218.991	278.922	725.041
221.073	278.932	722.909
221.094	278.932	722.967
221.173	278.932	722.909
221.194	278.932	722.967

XENTRY

222.082	278.929	722.909
222.082	278.929	725.011
222.085	278.929	722.967
222.085	278.929	725.041
222.182	278.929	722.909
222.182	278.929	725.011
222.184	278.910	722.967
222.184	278.910	725.041
222.185	278.929	722.967
222.185	278.929	725.041
222.982	278.929	722.909
222.982	278.929	725.011
222.984	278.910	725.041
222.985	278.929	722.967
222.985	278.929	725.041
231.473	278.927	722.909
231.473	278.927	725.011