
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	08-06-2015
Validity	Models with M278 engine and after the engine number 2789xx 30 128000
Reason for change	

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.

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.