

Fault codes for combustion misfiring shortly after cold start

Topic number	LI07.08-P-058759
Version	3
Design group	07.08 Control modules
Date	06-16-2014
Validity	Model 222 and 166 with engine 278
Reason for change	The ME - engine control unit software update for model GL450 MY 2014 is not presently available
Reason for block	

Complaint:

Engine diagnosis warning lamp (check engine light - CEL) lights up in instrument cluster.

Fault codes relating to combustion misfiring are logged in the fault memory of the engine control unit.

In rare cases the engine may be in a limp-home mode. Otherwise there are no other engine performance issues.

Cause:

Combustion misfire detection with unfavorable combination of combustion data assignments and component tolerances.

Remedy:

1. If other faults concerning the ignition, fuel supply or wiring harness contacts are present in addition to the faults relating to combustion misfiring, then these must be processed first and general misfiring causes must be considered as well.
2. Check the fault freeze frame data of the combustion misfires in relation to time of occurrence after engine start and coolant temperature (injector performance data might be also used as a reference).
3. If the time of occurrence is less than 120 seconds after engine start and at the same time the coolant temperature is below 45°C, please proceed as follows:
 - S550 (model series W222): Update the software of the engine control unit. It is no longer necessary to replace injector(s) on this model and this complaint.
 - GL550 (model series X166 - 166.873): Update the software of the engine control unit. It is no longer necessary to replace injector(s) on this model and this complaint.
 - GL450 (model series X166 - 166.872): Replace injector(s) of the cylinder(s) logging the fault (the engine control unit software update is not available at this time for this model).

Note: All available add-on must be installed on the Xentry Diagnostics unit.

Symptoms
Power generation / Engine management / Engine management indicator lamp / Engine diagnosis / lit

Control unit/fault code		
Control unit	Fault code	Fault text
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030884	Combustion misfiring of cylinder 8 has been detected. There is a signal below the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030485	Combustion misfiring of cylinder 4 has been detected. There is a signal above the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	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)	P030284	Combustion misfiring of cylinder 2 has been detected. There is a signal below the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030584	Combustion misfiring of cylinder 5 has been detected. There is a signal below the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030785	Combustion misfiring of cylinder 7 has been detected. There is a signal above the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030700	Combustion misfiring of cylinder 7 has been detected. _
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030784	Combustion misfiring of cylinder 7 has been detected. There is a signal below the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030185	Combustion misfiring of cylinder 1 has been detected. There is a signal above the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030385	Combustion misfiring of cylinder 3 has been detected. There is a signal above the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030600	Combustion misfiring of cylinder 6 has been detected. _
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030200	Combustion misfiring of cylinder 2 has been detected. _
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030400	Combustion misfiring of cylinder 4 has been detected. _
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030384	Combustion misfiring of cylinder 3 has been detected. There is a signal below the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030500	Combustion misfiring of cylinder 5 has been detected. _
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030684	Combustion misfiring of cylinder 6 has been detected. There is a signal below the permissible limit value.

ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	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)	P030000	Combustion misfiring has been detected. _
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030100	Combustion misfiring of cylinder 1 has been detected. _
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030084	Combustion misfiring has been detected. There is a signal below the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030285	Combustion misfiring of cylinder 2 has been detected. There is a signal above the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030484	Combustion misfiring of cylinder 4 has been detected. There is a signal below the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	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)	P030184	Combustion misfiring of cylinder 1 has been detected. There is a signal below the permissible limit value.
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	P030800	Combustion misfiring of cylinder 8 has been detected. _
ME - Motor electronics 'MED177' for combustion engine 'M276' (N3/10)	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)	P030300	Combustion misfiring of cylinder 3 has been detected. _

Parts							
Part number	ES1	ES2	Designation	Quantity	Note	EPC	Other make part
A 278 070 06 87			Injector	1		X	
A 276 072 01 43			Seal pack	4		X	

Work units				
Op. no.	Operation text	Time	Damage code	Note
54-1011	PERFORM QUICK TEST		07291 73	

54-0650	MAINTAIN ON-BOARD ELECTRICAL SYSTEM VOLTAGE FOR TESTING AND DIAGNOSIS WORK		54575 90	For S550 / S500 and GL550
07-6943	REPLACE INJECTOR (LEFT BANK)		07291 73	GL450 only: If the defective injector is in the left bank.
07-6944	REPLACE INJECTOR (RIGHT BANK)		07291 73	GL450 only: If the defective injector is in the right bank.

Validity		
Vehicle	Engine	Transmission
GL (166)	278	*
S (222)	278	*

Full model designation breakdown		
Vehicle	Engine	Transmission
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
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
222.185	278.929	722.967
222.185	278.929	725.041