

C63/GTx 177/178 Check Engine Light on with Misfire DTC's. Engine Running Roughly

Topic number	LI54.21-P-062006
Version	5
Function group	54.21 Control units / basic modules
Date	05-11-2018
Validity	Model 190.3## Model 190.4## Model 205.#8#
Reason for change	Typo on step numbering
Reason for block	

Complaint:

Engine running rough / Fault code entry

Possible fault codes:

P030885 - Combustion misfiring of cylinder 8 was detected.
P030285 - Combustion misfiring of cylinder 2 was detected.
P030785 - Combustion misfiring of cylinder 7 was detected.
P030185 - Combustion misfiring of cylinder 1 was detected.
P030585 - Combustion misfiring of cylinder 5 was detected.
P030385 - Combustion misfiring of cylinder 3 was detected.
P030485 - Combustion misfiring of cylinder 4 was detected.
P030685 - Combustion misfiring of cylinder 6 was detected.
P030022 - Combustion misfiring was detected

Cause:

Diagnostic data too sensitive.

Attachments	
File	Description
IMG_3273.JPG	Example image of ceramic damage on spark plug
20150609_105958.jpg	Example image of electrode damage on spark plug

Remedy:

Perform the Following:

1) Smoke test intake/exhaust and check for leaks. NOTE: The intakes to the turbochargers as well as the tubes from the turbochargers to the intercoolers must be tested.

- Repair as necessary.
- If no leaks are found, or repair does not remedy complaint proceed to step (2).

2) Inspect ignition coils and verify they are PN: A 177 906 95 00.

- Replace as necessary.
- If all coils are PN A 177 906 95 00 swap the coil(s) of the misfiring cylinder(s) with those of cylinder(s) that are not misfiring and road test the vehicle.
 - If the misfires move with the coils, replace the coils and the spark plugs on original misfiring cylinders

XENTRY TIPS

- If the misfires do not move with coils, proceed to step (3)
- 3) Perform a Xentry guided high pressure fuel test from cold start and obtain the injector performance data, and initial quick test with fault freeze
- If the test fails for either bank, replace the high pressure fuel pump for that bank.
 - If the test passes for both banks, road test the car with ECO start/stop disabled and allow the vehicle to achieve operating temperature
 - Shut the vehicle down and observe the fuel pressures on the left and right banks at t=0, t=30 minutes, t=60 minutes, and t>120 minutes
 - If at any time the fuel pressure drops below the minimum value and/or a large differential exists between the left and right banks, boroscope the cylinders on the bank with low fuel pressure and determine if one or more of the injectors is leaking.
 - If the fuel pressure remains within acceptable limits proceed to step (4)
 - If one or more of the injectors is leaking, open a PTSS case and upload pictures of the leaking injector(s) taken with the boroscope as well as the information collected via Xentry thus far.
 - Replace the leaking injector(s)
 - Update the IMA coding for the new injectors in their respective cylinders via Xentry
 - Perform an engine adaptation drive
 - Upload the new injector performance data and quick test to the case
 - Road test the vehicle. If the complaint is no longer present the PTSS case can be closed and the vehicle released.

4) Open PTSS Case if Above do not Remedy the Complaint:

Include in the case:

1. All Data from step (3)
2. MED1775 Control Unit Log
3. Software update check for ME and Transmission control units
4. Engine Performance Data
5. Injector Performance Data
6. Graphical Readout of Fault Counter from Cold Start
7. Mechanical Compression Test of ALL Cylinders NOTE: A PICOscope compression test is also acceptable if a mechanical compression tester is not available
8. Leakdown Test of ALL cylinders
9. Boroscope of MISFIRING Cylinder(s)
 - Important: Before performing the boroscope examination, it is imperative that the engine be left to sit until cold and that the piston is at BDC.

Symptoms
Power generation / Engine management / Engine running / Runs rough/shakes
Power generation / Engine management / Indicator lamp / Engine diagnosis / lit

Control unit/fault code		
Control unit	Fault code	Fault text
N3/10 - Motor electronics 'MED1775' for combustion engine 'M177' (ME), N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME) (GLC (253), G (463), E (213), S (217), S (222), C (205), AMG GT (190))	P030385	Combustion misfiring of cylinder 3 has been detected. There is a signal above the permissible limit value.
N3/10 - Motor electronics 'MED1775' for combustion engine 'M177' (ME),	P030885	Combustion misfiring of cylinder 8 has been detected. There is a signal above the permissible limit value.

XENTRY TIPS

N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME) (GLC (253), G (463), E (213), S (217), S (222), C (205), AMG GT (190))		
N3/10 - Motor electronics 'MED1775' for combustion engine 'M177' (ME), N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME) (GLC (253), G (463), E (213), S (217), S (222), C (205), AMG GT (190))	P030285	Combustion misfiring of cylinder 2 has been detected. There is a signal above the permissible limit value.
N3/10 - Motor electronics 'MED1775' for combustion engine 'M177' (ME), N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME) (GLC (253), G (463), E (213), S (217), S (222), C (205), AMG GT (190))	P030585	Combustion misfiring of cylinder 5 has been detected. There is a signal above the permissible limit value.
N3/10 - Motor electronics 'MED1775' for combustion engine 'M177' (ME), N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME) (GLC (253), G (463), E (213), S (217), S (222), C (205), AMG GT (190))	P030485	Combustion misfiring of cylinder 4 has been detected. There is a signal above the permissible limit value.
N3/10 - Motor electronics 'MED1775' for combustion engine 'M177' (ME), N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME) (GLC (253), G (463), E (213), S (217), S (222), C (205), AMG GT (190))	P030185	Combustion misfiring of cylinder 1 has been detected. There is a signal above the permissible limit value.
N3/10 - Motor electronics 'MED1775' for combustion engine 'M177' (ME), N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME) (GLC (253), G (463), E (213), S (217), S (222), C (205), AMG GT (190))	P030022	Combustion misfiring has been detected. The signal amplitude is greater than the maximum amplitude.
N3/10 - Motor electronics 'MED1775' for combustion engine 'M177' (ME), N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME) (GLC (253), G (463), E (213), S (217), S (222), C (205), AMG GT (190))	P030685	Combustion misfiring of cylinder 6 has been detected. There is a signal above the permissible limit value.

XENTRY TIPS

N3/10 - Motor electronics 'MED1775' for combustion engine 'M177' (ME), N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME) (GLC (253), G (463), E (213), S (217), S (222), C (205), AMG GT (190))	P030785	Combustion misfiring of cylinder 7 has been detected. There is a signal above the permissible limit value.
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Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
			54575 90	Use the appropriate damage code according to the cause