

Diagnostic Sheet

FROM: After Sales - TSO

TO: Maserati Network



MC20 Misfire or Engine Irregularities - Diagnostic Sheet

DATE: JULY 28 2022

The purpose of this Diagnostic Sheet is to provide the Dealer Network with a guideline on how to diagnose in case of engine misfire or irregularities, highlighting the importance of refraining from disassembling the Central (Pre-Chamber) spark plugs unless instructed to do so.

MODELS: M240 V6 RWD and M182 V6 RWD

ISSUE: Engine malfunctions and irregularities, e.g. misfire and irregular engine speed at idle.

DTCs in ECUs: possible DTCs in ECM:

- P13D1-00 (\$13D100) Fuse on Ion-current module bank1 broken
- P13D0-00 (\$13D000) Fuse on Ion-current module bank2 broken
- P0301-00 (\$030100) Cylinder 1 Misfire Detected
- P0306-00 (\$030600) Cylinder 6 Misfire Detected
- P0303-00 (\$030300) Cylinder 6 Misfire Detected
- P0304-00 (\$030400) Cylinder 4 Misfire Detected
- P0302-00 (\$030200) Cylinder 2 Misfire Detected
- P0305-00 (\$030500) Cylinder 5 Misfire Detected
- P0300-00 (\$030000) Multiple Cylinder Misfire
- P2F23-00 (\$2F2300) DFC for misfire detection lateral miss spark
- P2F2D-00 (\$2F2D00) DFC for misfire detection lateral miss spark
- P2F27-00 (\$2F2700) DFC for misfire detection lateral miss spark
- P2F29-00 (\$2F2900) DFC for misfire detection lateral miss spark
- P2F25-00 (\$2F2500) DFC for misfire detection lateral miss spark
- P2F2B-00 (\$2F2B00) DFC for misfire detection lateral miss spark
- P2F22-00 (\$2F2200) DFC for misfire detection prechamber miss spark
- P2F2C-00 (\$2F2C00) DFC for misfire detection prechamber miss spark
- P2F26-00 (\$2F2600) DFC for misfire detection prechamber miss spark
- P2F28-00 (\$2F2800) DFC for misfire detection prechamber miss spark
- P2F24-00 (\$2F2400) DFC for misfire detection prechamber miss spark
- P2F2A-00 (\$2F2A00) DFC for misfire detection prechamber miss spark

Please read and review this bulletin first before starting the procedure. Contact your Regional AfterSales Manager (RAM) or the Technical Support Helpdesk if you have any questions. (Maseratitechsupport@maserati.com)

Thank You for your continued support and cooperation.

Maserati Americas
Aftersales Dept.

Diagnostic Procedure

1. If any of the DTCs in the section **DTCs in ECUs** are set in ECM ECU, save the ECM DTCs+Parameters in PDF format, then clear ECM DTCs.
2. Perform Spark Plugs cleaning (See **page 4**)
3. Perform a Road Test to verify if the anomaly can be duplicated again. Save a new ECM DTCs+Parameters Scan Report in PDF format.
4. If any engine malfunction occurs during the Road Test, please verify the condition of the lateral spark plugs.

Note: See illustration below **Figure 1**. lateral spark plugs are highlighted with the ● symbol. Do not disassemble the central (Pre-Chamber) spark plugs, highlighted with the ● symbol.

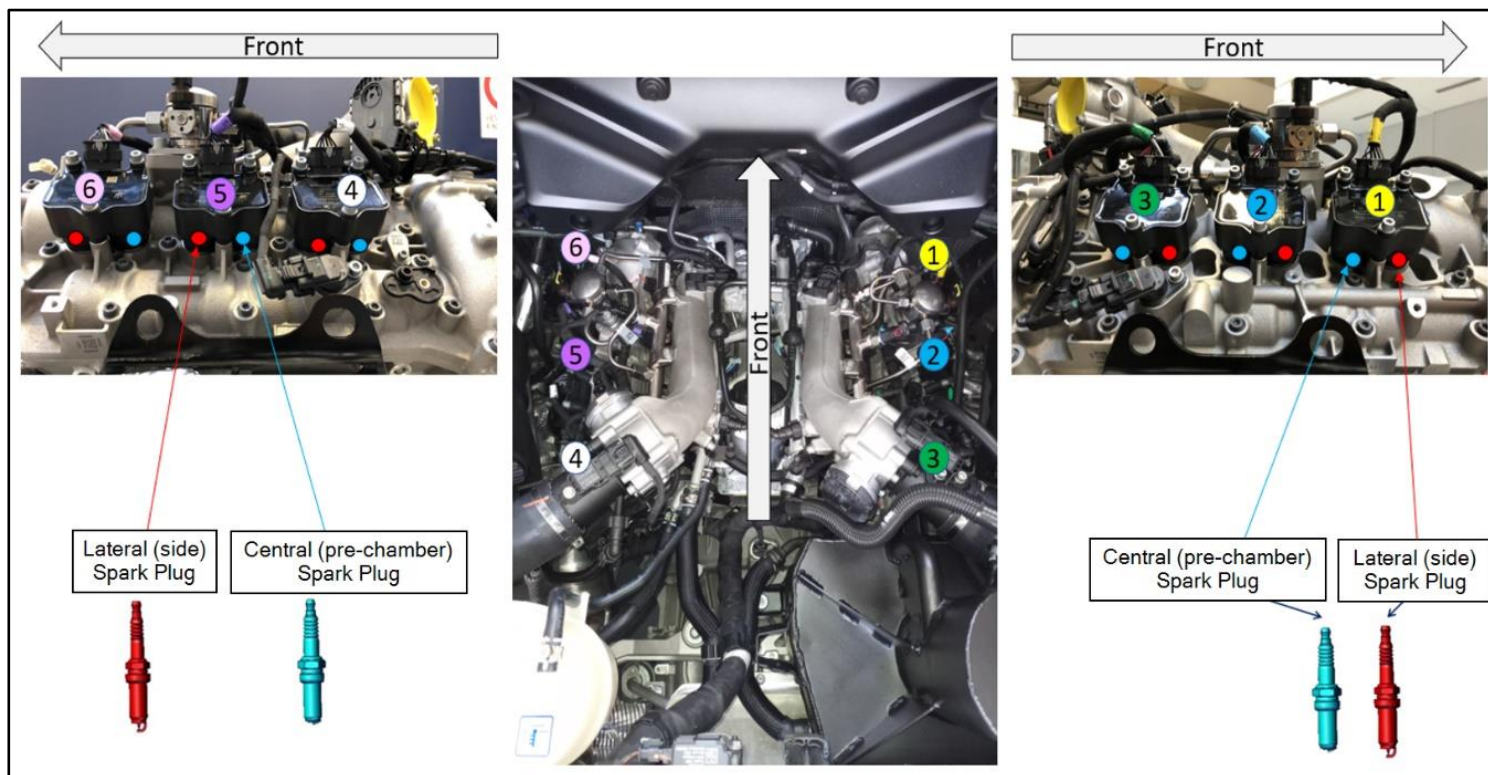
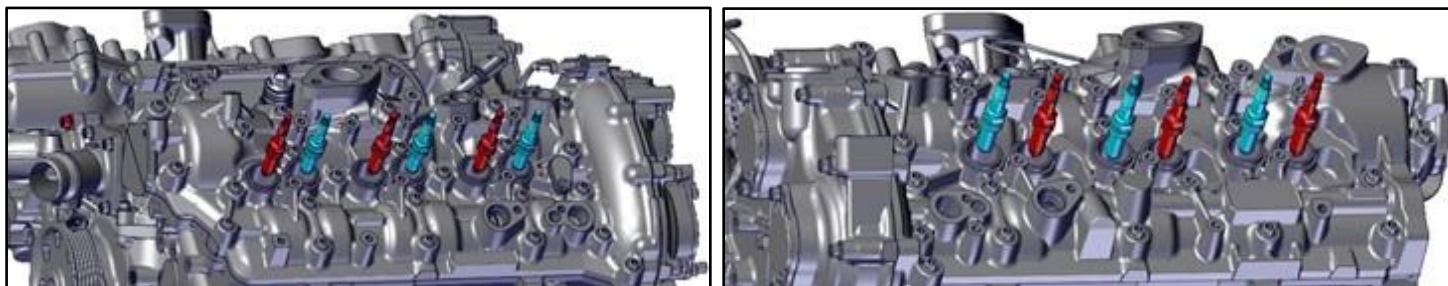


Figure 1: cylinders numbering and identification of Lateral (side) Spark Plugs vs Central (Pre-Chamber) Spark Plugs.

Figure 2: Below is an overview of the Left-Hand Cylinder Bank and of the Right-Hand Cylinder Bank.



5. Disassemble the Lateral (side) Spark Plugs only, as described in Procedure **01.90.005-15**
6. Mark the cylinder number on the Lateral (side) Spark Plugs using an inked marker.
7. Visually inspect all the Lateral (side) Spark Plugs, for fouling or breakage.
8. Take 3 detailed photos of each Spark Plug. (See examples of detailed pictures in **Figure 3** below)

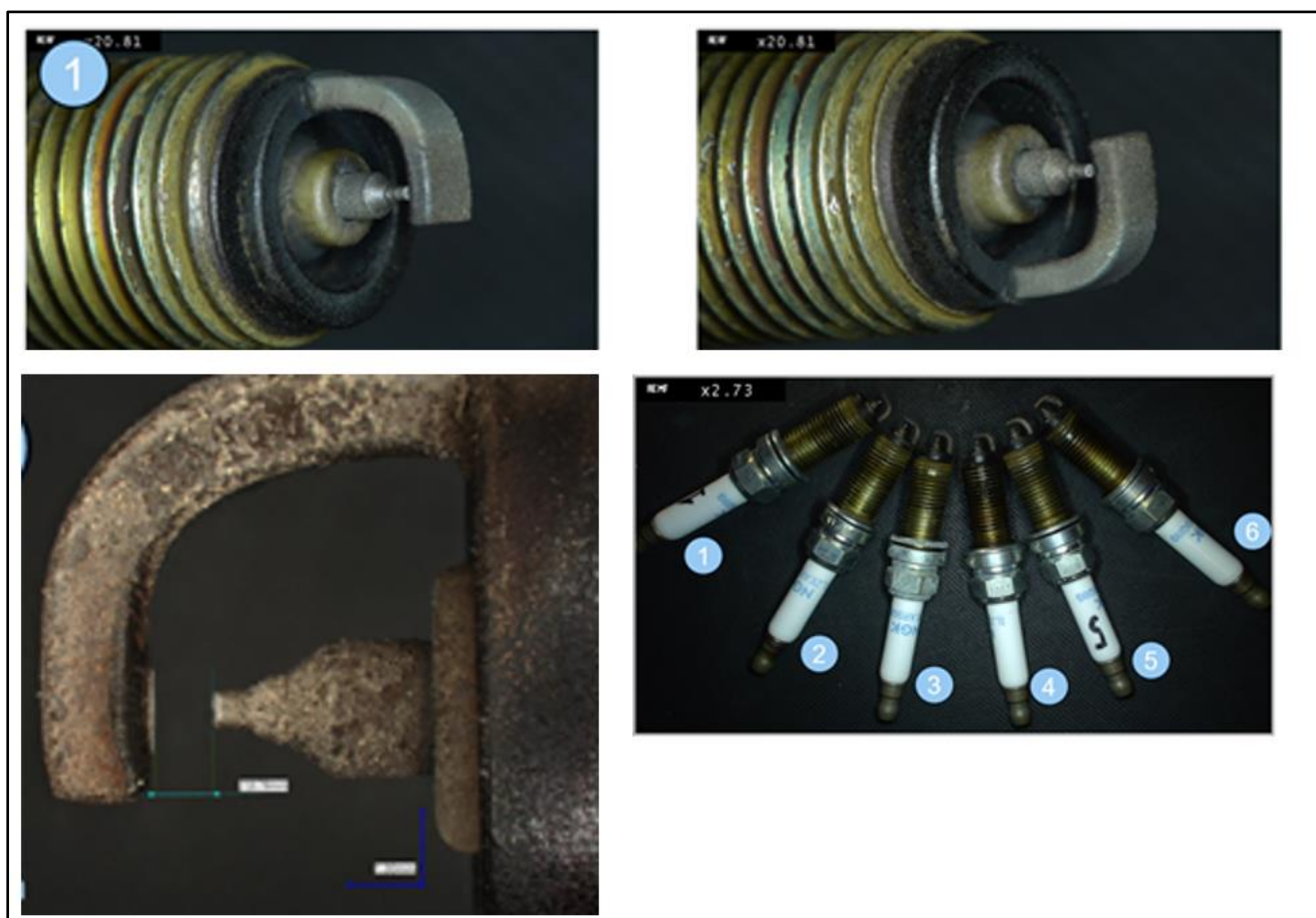


Figure 3: Examples of detailed pictures of all the Lateral Spark Plugs (bottom right) and detailed pictures (top and bottom left).

9. Open a BOL as "SUPPORT REQUEST" and attach, and report all the information collected throughout all the above checks and await further instructions.

Sparkplug Cleaning Procedure

1. Start the engine.
2. Warm up the engine at idle (approximately 10 minutes, depending on environmental conditions)
Please follow the cluster indication to check the engine status:]



3. Connect the MDEVO and wait until "Vehicle View" has finished scanning.
4. Clear DTCs only for ECM: **ECM => DTCs => Clear ECU DTC**
The only DTC permitted is P0350 - Ignition Coil Primary/Secondary Circuit.
In case of other DTCs present, please submit a Blue On Line as Support Request for additional investigation needed.
5. Start the diagnosis **ECM => Active Diagnosis => GPF Service Regeneration**
Preconditions:
 - a. Engine ON
 - b. Gear N or P
 - c. Warm engine (70°C < Coolant Temperature < 108°C)
 - d. Pedals not pressed (accelerator and brake)
 - e. Speed = 0
 - f. Exhaust component not too hot (GPF < 850°C)



The Malfunction Indicator Light (MIL) should switch on when the ignition device is in the ON position and switch off soon after the engine is started (NOTE: the MIL may not shut off immediately).

If the MIL starts blinking, the GPF Service Regeneration can be executed.

If the MIL remains lit Solid ON, the GPF Service Regeneration must be stopped (go to step 7): please submit a Blue On Line as Support Request for additional investigation needed.

6. Wait for **5 minutes** Attention: in this phase, the engine runs at 3000 rpm.
7. Stop the diagnosis **after 5 minutes** by pressing the brake pedal. Then, shut the engine OFF.