

febi 186633



To fit:

Mazda CX3 2015>, CX5 I 2011 > 2016, CX5 II 2016>, Mazda2 III 2014 > 2022, Mazda3 III 2013 > 2019, Mazda6 III 2012>, MX30 2020>

Engines 1.5i, 2.0i, 2.5i



EN

Ignition Coil

Problem

Vehicle symptoms include a lack of engine power and an inconsistent idle, combined with the engine malfunction indicator lamp being illuminated on the instrument cluster. Engine Control Unit (ECU) diagnostics will reveal the following possible fault codes:

P0300 - Misfire Detected.

P0301 - Misfire Detected – cylinder 1

P0302 - Misfire Detected – cylinder 2

P0303 - Misfire Detected – cylinder 3

P0304 - Misfire Detected – cylinder 4

Over time the insulation found between the primary and secondary coil windings is degraded by heat and vibration. This deterioration causes fractures to form in the secondary coil windings, leading it to overheat and fail, resulting in a misfire.

Note: There is a known issue which affected some pre-2017 vehicles fitted with ignition coils manufactured by Yumebishi.

Solution

First, use suitable diagnostic equipment to identify which ignition coil is causing the misfire. Alternatively, this can be diagnosed manually by removing each spark plug and systematically testing the coils to establish which is not firing correctly.

Each ignition coil is required to provide a high voltage to bridge the electrode gap. If the ignition coil insulation is degraded, additional load will be placed upon the system. Therefore, when the faulty ignition coil has been identified, it is wise to check the condition of the plugs themselves as they too can deteriorate with age, further increasing the load on the system.

Disconnect the battery and replace the failed ignition coil (or coils) with febi Ignition Coil 186633 and spark plugs as necessary. Finally, reconnect the battery and clear any fault codes using a suitable diagnostic tool.

Note: If the vehicle is used in extreme cold climates, or undertakes mostly short journeys, the engine oil level should also be checked. If found to be exceeding the maximum recommended level, the vehicle could be over fuelling, also known as bore wash. This will require a software update to the ECU. The engine oil filter and oil will also require replacement if the vehicle displays this issue.

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