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Document Information

Location: Powertrain Engine - Engine

Topic: "Engine System Fault" Warning Message on Drivers Display

Condition: Whilst driving - Disappeared after ignition cycle

Diagnostic Trouble Codes:

ECM:

P217700 - Fuel System Adaptions (Multiplicative): Adaptive values reach the limit (bank 1): Max Fault

P217900 - Fuel System Adaptions (Multiplicative): Adaptive values reach the limit (bank 2): Max Fault

Measure

Whilst these fault codes should indicate an air leak or fuel system issue, it is also possible that certain driving styles may cause a fuel adaption DTC to log in the ECM on a healthy system.

Short_term_fuel_trim_Bank1_Diag	4.69 %
Long_term_fuel_trim_Bank1_Diag	-6.25 %
Short_term_fuel_trim_Bank2_Diag	4.69 %
Long_term_fuel_trim_Bank2_Diag	-3.13 %

In the ECM actual values, this will be evident by the Short-Term fuel trim being positive (Adding Fuel) and the Long-Term Fuel trim being negative (Taking away Fuel).

In the event of a customer complaint for Engine System Fault warning message and the above fault codes are logged in the engine ECU, carry out the following;

- Air leak pressure test as per SIS DA-RM-05F002-00-001 - Pressure test engine air system. If smoke tester special tool is available it is recommended to use it as is more likely to identify potential minor leaks in the intake system.
- Ensure the vehicle is on the latest software level.
- Clear all the fault codes.
- Road test the vehicle.
- If the warning message or MIL light is returned, please raise a Technical Request and provide copy of the engine ECU actual values under the following conditions;
 - a) On a warm (but not too hot engine) - i.e. perform a cold start, then warm up until Coolant Temp is approx. 80° C
 - b) Clear faults (which will reset the fuel adaptations)
 - c) Idle for 5 minutes (record actual values every 1 minute)
 - d) Test drive the vehicle again on steady drive e.g. motorway (60mph / 1600rpm / 7th Gear) and record actual values every 1 minute for approximately 5 minutes.
 - e) Return to idle, record actual values once more.

Parts Information

N/A

Attachments

N/A

KA Update Information

21/04/2021 KA Review

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