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Case Number: S241800012 Rev. A

Release Date: November 2024

Symptom/Vehicle Issue: Mil On/Check Engine Lamp (CEL) On, Engine Runs Rough

Customer Complaint/Technician Observation: Customer's complaint may include Mil on/CEL on and/or briefly flashing MIL/CEL after a cold start. Upon further investigation, the technician may find DTC P0300 - Multiple Cylinder Misfire set in the Powertrain Control Module (PCM) with no other DTCs present. Additionally, the customer may also complain of the engine running rough briefly upon engine start-up.

Discussion: If the above conditions are present, check the freeze frame report for certain data to determine if the condition occurred during a cold engine start (more than 6 hours since engine was shut off). Look for the following data:

- Engine Coolant Temp and Ambient Temp should be within approximately 20 degrees F (10 degrees C)
- Vehicle Speed 0 MPH
- Time Since Engine Start less than 30 seconds

If the above condition exists, perform the procedures below:

- Allow the vehicle to sit for at least 6 hours, then capture a data recording (using manual trigger) of a cold engine start up using WiTech. Use the template titled "2025_36_DT_DEALERSHIP_MISFIRE_TEMPLATE_2". Once data recordings are taken, please email the recordings (.JSON files) to jim.sayen@stellantis.com. If a P0300 is set during the cold start, clear the DTC.

This document does not authorize warranty repairs. This communication documents a record of past experiences. STAR Online does not provide any conclusions about what is wrong with the vehicle. Rather, it captures all previous cases known that appear to be similar or related to the vehicle symptom / condition. You are the expert, and you are responsible for deciding on the appropriate course of action.

Contact STAR Center, or your Technical Assistance Center Via TechCONNECT or eCONTACT ticket if no solution is found



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- Perform the following drive cycle:
 - Start the engine and push the ESS-Off button.
 - Drive to a nearby freeway or highway where sustained driving is possible.
 - Drive at the posted speed limit until the displayed engine oil temperature reaches 85C (185F).
 - Return to the dealership.
 - Once in a service bay or parking spot, allow the vehicle to idle while still in Drive (using the brake) for 5 minutes.
 - Shift to Park and continue to idle for an additional 5 minutes.
 - Use WiTech to perform a fuel adaptive reset. Go to PCM>Misc. Functions>Reset Memory>click “continue”>choose “Fuel Adaptives” from the drop-down menu>click “continue”>follow any on-screen instructions.
 - Use WiTech to perform a Cam/Crank Relearn procedure. Go to PCM>Misc. Functions> Cam/Crank Relearn>follow any on-screen instructions.
 - Ensure that the 12V battery is fully charged. Fully charged = as >80% SOC (State of Charge).

Engineering is investigating this condition at this time. Return the vehicle to the customer.

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