



## STAR ONLINE PUBLICATION



**Case Number: S2418000015**

**Release Date: November 2024**

**Symptom/Vehicle Issue:** Unexpected Operation of the ICE (Internal Combustion Engine) Instead of Electric Operation

**Customer Complaint/Technician Observation:** Please note that Engine Oil Dilution may occur in MHEV (Mild Hybrid Electric Vehicle) vehicles. This condition can cause the situation described above.

### **Discussion:**

MHEV vehicles may exhibit the phenomenon of Engine Oil Dilution. Engine Oil Dilution occurs when fuel is deposited in the oil pan, increasing the amount of liquid (oil diluted with petrol) in the ICE (Internal Combustion Engine).

This phenomenon occurs when the vehicle is often driven for only a few kilometres, especially in low ambient temperature conditions. Oil dilution can be reduced by allowing the ICE to operate at a temperature above ~80°C. This allows petrol to evaporate from the crankcase and re-enter the ICE for combustion.

When the control system detects oil dilution, it forces the ICE to remain running as far as possible. Therefore, the driver may first experience the unavailability of the Stop & Start function, then the unavailability of the electric propulsion.

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



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Finally, the customer may receive a message requesting an oil change, as the dilution can no longer be corrected by running the ICE.

To overcome this phenomenon, the vehicle has a strategy that inhibits the operation of the electric motor when the engine oil regeneration (elimination of dilution) is in progress. The electric motor will start working again when the oil regeneration has reached optimal values.

It is recommended to drive with the ICE engine running for a period of 60 consecutive minutes once a month, especially in low temperature conditions. For example, when driving in extra-urban areas (activating the eAuto Off function or D mode depending on the vehicle driven)

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