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Symptom/Vehicle Issue: Malfunction Indicator Lamp Illumination (MIL). Diagnostic Trouble Code (DTC) P203E – Reductant Level Sensor 1 Circuit Intermittent-Erratic Set.

Discussion: Some customers may experience a MIL illumination. Upon further investigation, a technician may find DTC P203E set in the Powertrain Control Module (PCM) memory.

If you receive a vehicle with this DTC, check to see if the DEF tank was just recently filled prior to the DTC setting. P203E will set if the tank is overfilled resulting in no air space above the DEF Fluid in the tank.

The DEF level sensors on these applications are integrated into the tank assembly and use an ultrasonic frequency signal to detect fluid level. The air space above the fluid is crucial to bounce the UF signals back to the level sensor for proper level detection.

NOTE: When draining the DEF tank, take all necessary precautions when removing the DEF tank filler neck from the tank. A large volume of fluid will be drained from the tank quickly until the DEF level falls below the level of the filler neck.

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, eCONTACT or Service Library entry if no solution is found.



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If you suspect that the tank might be overfilled, drain 2-3 gallons of fluid from the tank. Once drained, you will need to perform a specific drive cycle to clear the message, and ensure the vehicle is repaired.

NOTE: When performing the drive cycle to clear the message, please drive as steadily as possible at highway speeds. Avoid excessive stop and go, large bumps, or excessive curves in the road to prevent fluid slosh in the DEF tank. Excessive fluid slosh in the tank will delay the monitor from passing leading to inability to clear the message.

To clear the “Service DEF” message, and ensure the vehicle is repaired, please drive the vehicle under the following operating conditions.

- Steady state driving at highway speeds for a minimum of 15 minutes with minimal stopping and starting to reduce DEF Tank sloshing.
- Ambient Temperature Greater Than 39°F (4°C).
- DEF Tank Temperature (as reported by the temperature sensor) Greater Than 39°F (4°C).
- DEF Tank Temperature (as reported by the Urea Quality Sensor) 39°F (4°C).

If the DTC goes stored, and the “Service DEF” message on the EVIC no longer appears, top off the DEF tank to the proper level, and release it back to the customer. DO NOT replace the DEF tank assembly if this DTC was caused by overfilling of the tank.

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