



## STAR ONLINE PUBLICATION



**Case Number:** S1925000008 REV. C

**Release Date:** July 2021

**Symptom/Vehicle Issue:** Malfunction Indicator Lamp (MIL) Illumination. Diagnostic Trouble Codes (DTCs) P208B – Reductant Pump 1 Control Performance, and/or P20E8 – Reductant Pressure Too Low, Set.

**Discussion:** Some customers may experience a MIL illumination. Upon further inspection, you may find DTCs P208B and/or P20E8 set in the PCM.

In addition, you may encounter these DTCs soon after installing a new Diesel Exhaust Fluid pump and/or tank.

The primary cause of these DTCs have been found to be from the following areas.

- Air pockets trapped in the internal tank filter during vehicle assembly.
- External leaks in the DEF system. Mainly from the DEF Supply line connections.
- Possible faulty DEF injector

If you receive a vehicle with this DTC, please follow the following repair procedure in addition to performing normal diagnostics

### **Repair Procedure:**

1. Prior to clearing the DTCs, obtain a Vehicle Scan Report and save it for your records.

**NOTE: It may be necessary to remove the DEF Tank shield in order to properly inspect for signs of DEF leaks.**

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.

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2. Closely inspect the DEF supply line connections at the pump and injector to ensure there are no leaks. Look for signs of wetness, and/or crystallization around the connections indicating a leak. Please see (Figure 1, and 2.). Repair any leaks before proceeding with the rest of this procedure.



Figure 1.

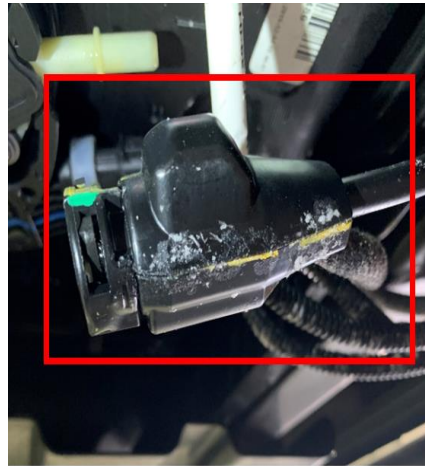


Figure 2.

3. If the DTCs set during PDI or immediately after DEF tank/pump replacement, perform the “DEF System Bleed” procedure below. If not, proceed to Step 4.
4. Using wiTECH, perform a “DEF Dosing Injection Quantity” test in accordance with published service information. During the initial stages of the routine, the system will attempt to build pressure before beginning to dose. Did the routine abort for failure to build pressure prior to dosing?  
**Yes>>>** Replace the DEF pump in accordance to published service information. Perform the “DEF System Bleed” procedure below.  
**NO>>>** Proceed to Step 5.
5. Capture the amount of DEF injected during the routine in accordance with service information. Is the amount of DEF captured during the routine between 26-35 ml?

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**Yes>>>** The system is currently operating as designed at this time. Do not replace any parts. Engineering is currently investigating the root cause of false failures of this DTC.

**NO>>>** Replace the DEF injector in accordance to service information procedures. No further action is required.

### DEF System Bleed Procedure:

**NOTE:** If the DEF system is frozen, it may be best to have the vehicle sit inside overnight to thaw.

**NOTE:** The exhaust must reach full operating temperature before the system will attempt to dose.

1. Start and run the vehicle for approx. 30 minutes to allow it to warm up
2. Drive the vehicle at speeds greater than 30 mph for approximately 30 minutes. During the drive, attempt several hard turns as well as several aggressive braking and acceleration events to get the fluid to slosh inside the tank.

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