

Technical Service Bulletin (TSB) Diesel Exhaust Fluid (DEF) Fluid Freezing

REFERENCE:	TSB: 14-003-23 GROUP 14 - Fuel System	Date:	April 15, 2023	REVISION:	-
VEHICLES AFFECTED:	2019 - 2022 (DJ) RAM 2500 Pickup 2019 - 2022 (D2) RAM 3500 Pickup 2019 - 2022 (DD) RAM 3500 Cab Chassis 2019 - 2022 (DP) RAM 4500/5500 Cab Chassis This bulletin applies to vehicles equipped with the 6.7L I6 Cummins Turbo Diesel engine (Sales Codes ETL and ETN) or the 6.7L I6 Cummins HO Turbo Diesel engine (Sales Code ETM).			MARKET APPLICABILITY: ☒ NA ☐ SA ☐ EE ☐ MEA ☐ IAP ☐ CH	
CUSTOMER SYMPTOM:	Customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find the following Diagnostic Trouble Code (DTC) has been set: P203E-00 - Reductant Level Sensor 1 Circuit Intermittent-Erratic.				
CAUSE:	- Repeated freeze/thaw cycles of the urea tank to cause solid DEF crystals to form and settle on the focus tube, blocking the level sensor signal. - Rapid temperature swings from below freezing to above freezing causing an incomplete thaw of the DEF tank. When the vehicle is powered on, the diagnostic is enabled due to thawed DEF at the tank bottom surface, but the fluid in the center is still partially frozen. - Customer not following the proper DEF fill procedure and is overfilling the tank.				

REPAIR SUMMARY:

This bulletin involves replacing the urea delivery module and grade vent valve and updating the Dosing Control Unit (DCU) software.

CLAIMS DATA:

Labor Operation No:	Labor Description	Skill Category	Labor Time
25-08-12-92	Urea Delivery Module/ Grade Vent Valve - Replace / DCU - Repro- gram (0 - Introduction)	14 - Fuel System (Diesel Engine)	1.10 Hrs.
Failure Code	CC	Customer Concern	

The dealer must use failure code CC with this Technical Service Bulletin.

- If the customer's concern matches the SYMPTOM identified in the Technical Service Bulletin, failure code CC is to be used.
- When utilizing this failure code, the 3C's (customer's concern, cause and correction) must be provided for processing Technical Service Bulletin flash/reprogramming conditions.

SPARE PARTS:

Qty	Part No.	Description	Notes
1	68457124AD	Urea Delivery Module Service Kit	
1	68621194AA	Grade Vent Valve	
9 (AR)	68035704AC	DEF 1 Gallon	

DIAGNOSIS:

Using a Scan Tool (wiTECH) with the appropriate Diagnostic Procedures available in DealerCONNECT/Service Library, verify all related systems are functioning as designed. If DTCs or symptom conditions, other than the ones listed above are present, record the issues on the repair order and repair as necessary before proceeding further with this bulletin.

If the customer describes any of the symptoms listed above in the customer symptom section, perform the Repair Procedure.

SPECIAL TOOLS/EQUIPMENT:

Description	Ref. No.	Notes
wiTECH or Equivalent	—	—

REPAIR PROCEDURE:

1. Remove the DEF tank. Refer to the detailed service procedures available in DealerCONNECT> Service Library under: Service Info> 25 - Emissions Control / Diesel Exhaust Fluid Emissions / Tank, Diesel Exhaust Fluid / Removal (Fig. 1) .

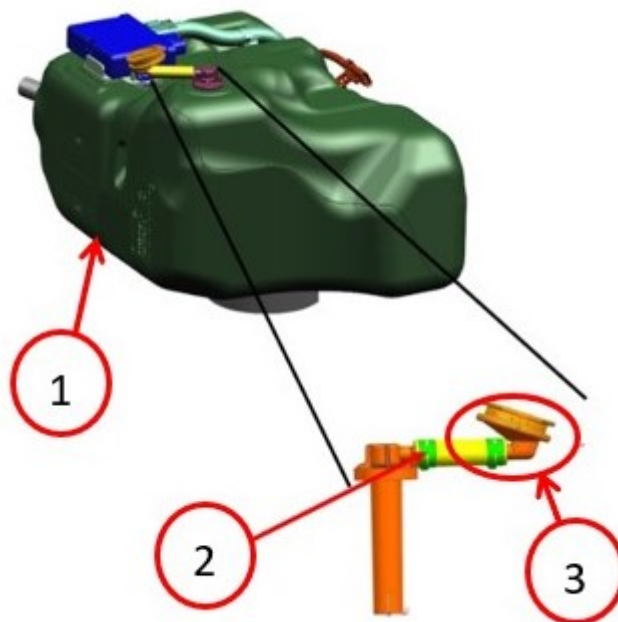


Fig. 1
DEF Tank Assembly

- 1 - DEF Tank
 - 2 - Hose Clamp
 - 3 - Grade Vent Valve (GVV)
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2. Loosen the hose clamp on the GVV hose and remove the GVV from the DEF tank.
3. Remove and replace the DEF Tank Grade Vent Valve with the new GVV (Fig. 2) .



Fig. 2
Grade Vent Valve

4. Replace the Urea Delivery Module with the supplied kit. Refer to the detailed service procedures available in DealerCONNECT> Service Library under: Service Info> 25 - Emissions Control / Diesel Exhaust Fluid Emissions / Assembly, Diesel Exhaust Fluid Pump / Removal and Installation.
5. Install the DEF tank. Refer to the detailed service procedures available in DealerCONNECT> Service Library under: Service Info> 25 - Emissions Control / Diesel Exhaust Fluid Emissions / Tank, Diesel Exhaust Fluid / Installation.

NOTE: After repairing, the DEF fluid level must be at or above the level it was at when the customer dropped it off.

6. Refill DEF tank fluid.

NOTE: If this flash process is interrupted/aborted, the flash should be restarted.

NOTE: Install a battery charger to ensure battery voltage does not drop below 13.2 volts. Do not allow the charging voltage to climb above 13.5 volts during the flash process.

7. Reprogram the DCU with the latest software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the application's "HELP" tab.
8. Clear any DTCs that may have been set in any modules due to reprogramming. The wiTECH application will automatically present all DTCs after the flash and allow them to be cleared.

POLICY:

Reimbursable within the provisions of the warranty.

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