

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

REFERENCE:	TSB: 14-005-24 GROUP: 18 - Vehicle Performance	Date:	June 28, 2024	REVISION:	14-003-23
VEHICLES AFFECTED:	<p>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 a 6.7L I6 Cummins HO Turbo Diesel engine (Sales Code ETM).</p>	MARKET APPLICABILITY:			
		<input checked="" type="checkbox"/> NA		<input type="checkbox"/> MEA	
		<input type="checkbox"/> SA		<input type="checkbox"/> IAP	
		<input type="checkbox"/> EE		<input type="checkbox"/> CH	
CUSTOMER SYMPTOM:	<p>**Customers must experience a Malfunction Indicator Lamp (MIL) illumination and the vehicle must exhibit/set the following Diagnostic Trouble Code (DTC):**</p> <ul style="list-style-type: none"> ● P203E-00 - Reductant Level Sensor 1 Circuit Intermittent-Erratic. <p>Customers may also experience one or more of the following:</p> <ul style="list-style-type: none"> ● 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. ● Not following the proper DEF fill procedure and overfilling the tank.** 				
CAUSE:	DEF fluid freezing				

This bulletin supersedes Technical Service Bulletin (TSB) 14-003-23, date of issue April 15, 2023, which should be removed from your files. All revisions are highlighted with **asterisks**** and include an updated Customer Symptom statement, Labor Description and Repair Procedure.**

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 - Reprogram **(2 - Skilled)**	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	Module, Urea Pump/Level Unit	Service Kit
1	68621194AA	Valve, Vent	
9 (AR)	68035704AC	Fluid, Diesel Exhaust - 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. ****Loosen the hose clamp on the Grade Vent Valve (GVV) hose and replace the GVV from the DEF tank Fig. 1.**

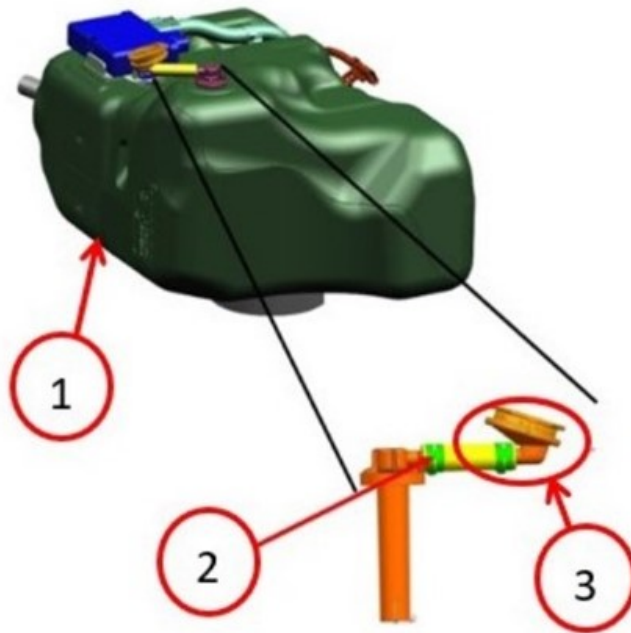


Fig. 1
DEF Tank Assembly

- 1 - DEF Tank
- 2 - Hose Clamp
- 3 - GVV

2. 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.

NOTE: After repairing, the DEF fluid level must be at or above the level it was at when the customer brought the vehicle in for service.

3. Refill the DEF tank.

NOTE:

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

4. Reprogram the DCU with the latest software. If issues arise when flashing a module using the wiTECH Diagnostic Application, please submit a ticket to the Helpdesk. The helpdesk can be found within the Help menu.**
5. Clear all DTCs that may have been set in any module 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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