

Technical Service Bulletin (TSB)

Flash: Powertrain Control Module (PCM) Updates

REFERENCE:	TSB: 18-008-24 GROUP: 18 - Vehicle Performance	Date:	January 25, 2024	REVISION:	18-055-22 REV. A
VEHICLES AFFECTED:	2020 (DD) RAM 3500 Cab Chassis 2020 (DP) RAM 4500/5500 Cab Chassis This bulletin applies to vehicles equipped with a 6.7L I6 Cummins Turbo Diesel Engine (Sales Code ETN).			MARKET APPLICABILITY: ☒ NA ☐ MEA ☐ SA ☐ IAP ☐ EE ☐ CH	
CUSTOMER SYMPTOM:	Customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find one or more of the following Diagnostic Trouble Codes (DTCs) have been set: • P0506-00 - Idle Control System RPM - Lower Than Expected. • P0607-00 - ECU Internal Performance. • P20E8-00 - Reductant Pressure Too Low. • P0301-00 - Cylinder 1 Misfire. • P0302-00 - Cylinder 2 Misfire. • P0303-00 - Cylinder 3 Misfire. • P0304-00 - Cylinder 4 Misfire. • P0305-00 - Cylinder 5 Misfire. • P0306-00 - Cylinder 6 Misfire. • P0299-00 - Turbocharger Underboost. • P1D73-00 - AGS Performance. • P0626 - Generator Field Control Circuit High. • P218F - Reductant No Flow Detected. • P2002 - Diesel Particulate Filter Efficiency Below Threshold. • P24A5 - EGR Cooler Bypass Bank 1 Control Stuck. • P0191 - Fuel Rail Pressure Sensor Circuit Performance. • P0461 - Fuel Level Sensor 1 Performance. • P0401 - EGR System Performance. • P20EE - SCR NOx Catalyst Efficiency Below Threshold - Bank 1. • P061A - Level 2 Torque Performance. • P061B - Internal Control Module Torque Calculation Performance. • P061E - Internal Control Module Brake Signal Performance. • P062C - ETC Level 2 MPH Performance. • P0106 - Manifold Absolute Pressure Sensor Performance (In extreme cold ambient temperatures). • P0116 - Engine Coolant Temperature Sensor Performance. • P0420 - Catalyst System Efficiency Bank 1. • P1507 - Crankcase Filter Restriction. • P203F - Reductant Level Too Low. • P226C - Turbocharger Boost Control "A" Slow Response (In extreme cold ambient temperatures). • P2579 - Turbocharger Speed Sensor Circuit. • U0101 - Lost Communication with TCM. • U02A3 - Lost of Communication with PM Sensor. • U3017 - Control Module Timer/Clock Performance. Customers may also experience one or more of the following:				

	• Power Take Off (PTO) allows E-Stop to work in any gear. • PTO that is remote started may prevent PTO cancellation in cab from disabling remote start. • Harsh downshift clunk during exhaust brake deceleration. • Diesel Exhaust Fluid (DEF) gauge erratic when DEF level is low. • Stall when putting in reverse in cold ambient temps. • Engine stumble during engine warm up. • Unstable idle when A/C compressor cycles. • Oil life monitor resets after PCM flash. • DEF level gauge inaccurate. • Message “Regen in progress will take up to 70 Minutes” remains in Electronic Vehicle Information Center (EVIC) when aborting manual regeneration process. • Excessive DEF consumption. • Poor idle at times when engaging cab heat feature. In addition, the following enhancements are included: • **Long engine crank improvement. • Prevents the Instrument Panel Cluster (IPC) from jumping when moving from the virtual sensor to the actual sensor at low tank levels. • Prevents a harsh 6-4 gear kick-down shift in rolling hills with exhaust brake ON. • Idle instability improvements.** • Engine oil pressure switch modification. • Cold start improvements. • Oil change monitor improvement for severe duty operation. • Engine warm up protection improvement to help promote better oil delivery to engine bearings during cold starts. • PTO intermittently turns off with no DTCs. • Transmission Overall Shift Schedule improvements. • wiTECH Fuel Injector Cutoff test fix. • wiTECH Mass Air Flow (MAF) data parameter improvement. • Enabling wiTECH Particulate Matter (PM) Sensor Regeneration Test in PCM “Misc Functions”. • wiTECH Fuel System Run-Up Test improvement. • wiTECH Fan Actuation Test improvement. • Smart exhaust brake operation improvement. • Improved shift quality and engine performance when in 4LO. • Idle shutdown timer system improvement.
CAUSE:	PCM software.

This bulletin supersedes Technical Service Bulletin (TSB) 18-055-22 REV. A, date of issue May 24, 2022, which should be removed from your files. All revisions are highlighted with **asterisks**** and include new software enhancements and LOP.**

NOTE: This calibration update is only for vehicles that have had the updated CP3.3 design High-Pressure Fuel Injection Pump installed. All other calibrations to support the CP4 design pump have been deactivated. DO NOT perform this calibration update unless recall Y78 has been performed first.

REPAIR SUMMARY:

This bulletin involves reprogramming the PCM with the latest available software.

CLAIMS DATA:

Labor Operation No:	Labor Description	Skill Category	Labor Time
18-19-04-TL	Module, Engine Control (ECM) - Reprogram (0 - Introduction)	10 - Diesel	0.4 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.

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 a symptom/condition or if the technician finds a DTC listed above, perform the repair procedure.

SPECIAL TOOLS/EQUIPMENT:

Description	Ref. No.	Notes
wiTECH or Equivalent	—	—

REPAIR PROCEDURE:

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.

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

NOTE: The only calibration available will be for the updated CP3.3 design high-pressure fuel injection pump [Fig. 1](#). Please ensure that recall Y78 has been completed first before proceeding with this update.

1. Inspect the high-pressure fuel injection pump [Fig. 1](#) to verify which pump is currently installed on the vehicle. **Also review the vehicle VIP report to see if campaign Y78 has been performed.**

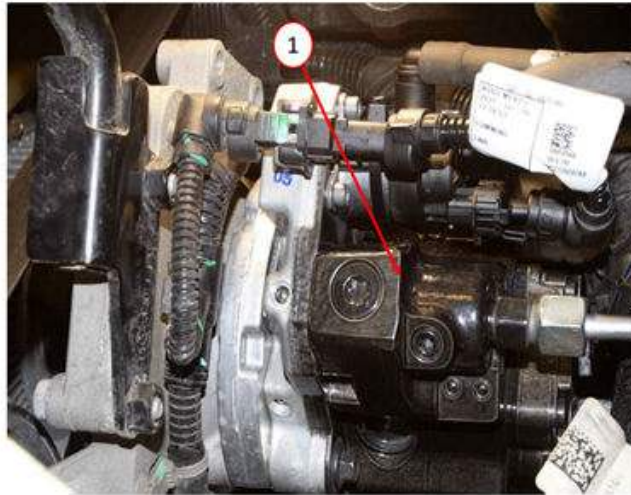


Fig. 1

New Design CP3.3 Design Fuel Injection Pump

1 - New ICP3.3 Design High-Pressure Fuel Injection Pump From Top View

2. Does the VIP report indicate that Y78 has been performed and is the vehicle equipped with the new design fuel injection pump released under the campaign?
 - YES >>> Proceed to [Step 3](#).
 - NO >>> **Perform the Y78 campaign first.** Once the campaign is performed, new pump installed and PCM updated, the PCM will have all of the updates listed in this document. **This Bulletin does not apply.**
3. Reprogram the PCM/ECM with the latest software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the application's "HELP" tab.
4. 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.
5. Using wiTECH, perform the "Oil Life Restore" procedure located in the ECM "Misc Functions".

POLICY:

Reimbursable within the provisions of the warranty.

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