TECHNICAL SERVICE BULLETIN

NUMBER: 18-008-21 REV. A

GROUP: 18 - Vehicle Performance

DATE: May 14, 2021

This bulletin supersedes Technical Service Bulletin (TSB) 18-008-21, date of issue February 2, 2021, which should be removed from your files. All revisions are highlighted with **asterisks and include additional Diagnostic Trouble Codes (DTCs), Symptom/Conditions and LOP.**

SUBJECT:

Flash: Powertrain Control Module (PCM) Updates

OVERVIEW:

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

MODELS:

2020	(DT)	RAM 1500 Pickup

NOTE: This bulletin applies to vehicles within the following markets/countries: North America.

NOTE: This bulletin applies to vehicles equipped with a 3.0L V6 Turbo Diesel Engine GEN 3 (Sales Code EXH) and 8-Speed Automatic 8HP75 Transmission (Sales Code DFV).

SYMPTOM/CONDITION:

Customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find that one or more of the following DTCs have been set:

- **P225D-00 - Nox Sensor 1/1 Performance - Signal Stuck Low.
- P249C-00 - Excessive Time To Enter Closed Loop Reductant Injection Control.
- P065A - Generator System Performance.
- P00F4-00 - Humidity Sensor Circuit Low.
- Improved VGT cleaning to reduce false failures for P00AF field issue.
- P0106-00 - Manifold Absolute Pressure Sensor Performance.
- P20FB-00 - Reductant Pump 2 Control Performance.
- P200A-00 - Intake Manifold Runner Performance - Bank 1.
- P200B-00 - Intake Manifold Runner Performance - Bank 2.
- P2610 - PCM Internal Engine Off Timer Performance.**
- Change DTC number from P0101-00 to P0109-00 - Mass Air Flow Sensor Performance.
- P015E - Excessive Time to Enter Closed Loop Fuel Timing Control.
- P0534-00 - AC Refrigerant System A Charge Loss.
- P26FB-00 - EGR Cooler Bypass Control Stuck Closed Bank 1.
- P04DB-00 - Crankcase Ventilation System Disconnected.
- P204F-00 - Reductant System Performance.
- P2D2D-00 - Cold Start Intake Manifold Runner Performance Bank 1.
- P2D2E-00 - Cold Start Intake Manifold Runner Performance Bank 2.
- P2199-00 - Intake Air Temperature Sensor 1 / 2 Correlation.
- P22FA-00 - NOX Sensor Performance - Slow Response High To Low Bank 1 Sensor 1.

- P2002-00 - Diesel Particulate Filter Efficiency Below Threshold.
- P0087-00 - Fuel Rail Pressure Too Low.
- P0128-00 - Thermostat Rationality **(additional software enhancement)**.
- P0300-00 - Multiple Cylinder Misfire **(cold ambient temperature)**.
- P0301-00 - Cylinder 1 Misfire **(cold ambient temperature)**.
- P0302-00 - Cylinder 2 Misfire **(cold ambient temperature)**.
- P0303-00 - Cylinder 3 Misfire **(cold ambient temperature)**.
- P0304-00 - Cylinder 4 Misfire **(cold ambient temperature)**.
- P0305-00 - Cylinder 5 Misfire **(cold ambient temperature)**.
- P0306-00 - Cylinder 6 Misfire (cold ambient temperature).
- P01CB-00 - Cylinder 1 Injection Timing Performance - Over Retarded.
- P01CC-00 - Cylinder 1 Injection Timing Performance - Over Advanced.
- P01CD-00 - Cylinder 2 Injection Timing Performance - Over Retarded.
- P01CE-00 - Cylinder 2 Injection Timing Performance - Over Advanced.
- P01CF-00 - Cylinder 3 Injection Timing Performance - Over Retarded.
- P01D0-00 - Cylinder 3 Injection Timing Performance - Over Advanced.
- P01DL-00 - Cylinder 4 Injection Timing Performance - Over Retarded.
- P01D2-00 - Cylinder 4 Injection Timing Performance - Over Advanced.
- P01D3-00 - Cylinder 5 Injection Timing Performance - Over Retarded.
- P01D4-00 - Cylinder 5 Injection Timing Performance - Over Advanced.
- P01D5-00 - Cylinder 6 Injection Timing Performance - Over Retarded.
- P01D6-00 - Cylinder 6 Injection Timing Performance - Over Advanced.
- P020A-00 - Cylinder 1 Injection Timing.
- P020B-00 - Cylinder 2 Injection Timing.
- P020C-00 - Cylinder 3 Injection Timing.
- P020D-00 - Cylinder 4 Injection Timing.
- P020E-00 - Cylinder 5 Injection Timing.
- P020F-00 - Cylinder 6 Injection Timing.
- P0524 - Engine Oil Pressure Too Low **(cold ambient temperature)**.
- U0100 - Lost Communication With ECM/PCM.
- P049B - EGR B Flow Insufficient Detected.

Customers may experience the following:

- **Unstable idle in high altitudes.
- Reduced remote start idle speed set point from 1,850 to 1,400 RPM, to Improved idle quality & combustion stability.
- Cluster flashes erroneous message ″Press Brake and Push Button to Start” during unstable idle.**
- Slow acceleration when pressing the pedal (i.e. the vehicle does not accelerate speedily when the pedal is depressed).
- A loud fan is heard at low speeds and during an active regeneration.
- ″Oil Change Required″ message remains on after resetting the Oil Life Monitor.
- Hard start and rough idle when cold and at high altitude.

In addition, the following software enhancements are also available:

- **Cruise Set Speed displays differently than the speed cruise was set to.
- Eliminate battery overcharging / gassing risk.
- Reduced remote start idle speed set point from 1,850 to 1,400 RPM, to Improved idle quality & combustion stability.
- Improvement of combustion stability for cold start drive offs.
- Air control optimization to avoid turbo surge during high idle maneuver.**

- Improvement for cruise control.
- Improvement in interaction of remote start and Stop/Start.
- Urea system updates.
- Improved air flow sensor calibrations.
- Updated service tool calibrations.
- Calibration update for selective catalytic converter adaptation adjustment factor.
- Turning on Selective Catalytic Reduction (SCR) adaptation strategy for emissions robustness.

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 are present, record the issues on the repair order and repair as necessary before proceeding further with this bulletin.

If a customer describes the symptom/condition listed above or if the technician finds DTCs, perform the Repair Procedure.

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.

1. Using wiTECH create a Vehicle Scan Report (VSR), and save it, the VSR will be needed later on in this repair.
2. Reprogram the PCM with the latest available software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the application's "HELP" tab.
3. Cycle ignition off for three minutes to properly complete the PCM update.
4. Check the VSR you collected in step 1, and verify if those DTCs listed below are present.
   - P01CB-00 - Cylinder 1 Injection Timing Performance Over Retarded.
   - P01CC-00 - Cylinder 1 Injection Timing Performance Over Advanced
   - P01CD-00 - Cylinder 2 Injection Timing Performance Over Retarded.
   - P01CE-00 - Cylinder 2 Injection Timing Performance Over Advanced.
   - P01CF-00 - Cylinder 3 Injection Timing Performance Over Retarded.
   - P01D0-00 - Cylinder 3 Injection Timing Performance Over Advanced.
   - P01D1-00 - Cylinder 4 Injection Timing Performance Over Retarded.
   - P01D2-00 - Cylinder 4 Injection Timing Performance Over Advanced.
   - P01D3-00 - Cylinder 5 Injection Timing Performance Over Retarded.
   - P01D4-00 - Cylinder 5 Injection Timing Performance Over Advanced.
   - P01D5-00 - Cylinder 6 Injection Timing Performance Over Retarded.
   - P01D6-00 - Cylinder - 6 Injection Timing Performance Over Advanced.
   - P020A-00 - Cylinder 1 Injection Timing.
   - P020B-00 - Cylinder 2 Injection Timing.
   - P020C-00 - Cylinder 3 Injection Timing.
   - P020D-00 - Cylinder 4 Injection Timing.
   - P020E-00 - Cylinder 5 Injection Timing.
   - P020F-00 - Cylinder 6 Injection Timing.

5. Were any of the listed DTCs found?
   - YES>>> Perform the ″Reset Zero Fuel Quantity Calibration″. Proceed to Step 6.
   - NO>>> Proceed to Step 7.
6. Using wiTECH perform a ″Reset Zero Fuel Quantity Calibration″ routine. This routine can be found in PCM Misc Functions.
7. 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.

TIME ALLOWANCE:

Labor Operation No:	Description	Skill Category	Amount
**18-19-04-MT	Module, Powertrain Control (PCM) - Reprogram (0 - Introduction)	10 - Diesel	0.3 Hrs.**

NOTE: The expected completion time for the flash download portion of this procedure is approximately 8 minutes. Actual flash download times may be affected by vehicle connection and network capabilities.

FAILURE CODE:
The dealer must use failure code CC with this Service Bulletin.

- If the customer’s concern matches the SYMPTOM/CONDITION identified in the 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 Service Bulletin flash/reprogramming conditions.

CC	Customer Concern