



**NUMBER:** 18-023-21

**GROUP:** 18 - Vehicle Performance

**DATE:** February 24, 2021

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**This bulletin supersedes Technical Service Bulletin (TSB) 18-015-17 REV. B, date of issue October 25, 2017, which should be removed from your files. All revisions are highlighted with **\*\*asterisks\*\*** and include additional Diagnostic Trouble Codes (DTCs), enhancements and LOP**

**This Technical Service Bulletin (TSB) has also been released as a Rapid Response Transmittal (RRT) 16-041. All applicable Sold and Un-Sold RRT VINs have been loaded. To verify this RRT service action is applicable to the vehicle, use VIP or perform a VIN search in DealerCONNECT/Service Library. All repairs are reimbursable within the provisions of warranty. This RRT will expire 18 months after the date of issue.**

**SUBJECT:**

Flash: Powertrain Control Module (PCM) Updates

**OVERVIEW:**

This bulletin involves reprogramming the Engine Control Module/Powertrain Control Module (ECM/PCM) with the latest available software.

**MODELS:**

|      |      |                 |
|------|------|-----------------|
| 2016 | (DJ) | RAM 2500 Pickup |
| 2016 | (D2) | RAM 3500 Pickup |

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

**NOTE: This bulletin applies to vehicles equipped with a 6.7L I6 Cummins Turbo Diesel Engine (Sales Code ETK).**

**SYMPTOM/CONDITION:**

The customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find one or more of the following DTCs.

- **\*\*P20EE - SCR NOx Catalyst Efficiency Below Threshold - Bank 1.**
- P1C54 - SCR NOx Catalyst Missing.
- P229F - Aftertreatment NOx Sensor Circuit Performance - Bank 1 Sensor 2.
- P207F - Reductant Quality Performance.
- P2002 - Diesel Particulate Filter Efficiency Below Threshold.
- P2201 - Aftertreatment NOx Sensor Circuit Performance - Bank 1 Sensor 1.
- P202E - (Diesel Exhaust Fluid) Reductant Injector Performance.
- P0300 - Multiple Cylinder Misfire.
- 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.
- P249E - Closed Loop SCR Reductant Injection Control At Limit - Flow Too High.
- P0401 - EGR System Performance.
- P0128 - Thermostat Rationality.\*\*
- P218F - Reductant No Flow Detected.
- U0001-00 - CAN C BUS.
- P24A5 - EGR Cooler Bypass Bank 1 Control Stuck.
- P1451 - Diesel Particulate Filter System Performance.
- P229E - NOx Sensor Circuit - Bank 1 Sensor 2.
- P2281 - Air Leak Between MAF and Throttle Body.
- P0218 - Transmission High Temperature Operation Activated (68RFE Only).
- P0868 - Line Pressure Low, MIL Action (68RFE Only).
- U110E - Lost Ambient Temperature Message.
- P205E - (Diesel Exhaust Fluid) Reductant Tank Temperature Sensor Circuit Intermittent (setting when the block heater is plugged in).

The following Diagnostic Trouble Codes (DTCs) have been changed from a one trip fault to a two trip fault:

- P0421 - Catalyst 1 Efficiency Below Threshold Bank 1.
- P2280 - Air Flow Restriction / Leak Between Air Cleaner And MAF.
- P203C - (Diesel Exhaust Fluid) Reductant Level Sensor Circuit Low.
- P208D - (Diesel Exhaust Fluid) Reductant Pump Control Circuit High.

In addition to addressing the above DTCs, the following powertrain system improvements/enhancements are also included in this software release:

- \*\*Allows a technician to restore the Electronic Serial Number (ESN) if it has been lost or if an ECM has been changed.
- Service test only to check the fan clutch.\*\*
- Fuel pressure override test improvement for wiTECH.
- AC pressure sensor error threshold change.
- No crank, No start fix.
- Improvement to correct engine feels like low or reduced power.
- Engine Noise Improvements.
- Engine Hesitation Improvement.
- Improved Engine Fuel Economy.
- Reduction in engine noise during regeneration at idle.
- 68RFE Transmission Overall Shift Quality Improvements.
- Test results fix for partial range misfire (68RFE Only).
- Ambient Air Temperature Improvements.
- Stationary Desoot with wiTECH Fix.
- OBD Misfire Monitoring Improvement (68RFE Only).

### **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 the symptom/condition or if the technician finds any of the DTCs listed above, 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.

**NOTE:** If DTC U1601 is present, the ECM/PCM P/N did not update or the engine did not start after the flash, then the flash may have been unsuccessful. Restart the flash update.

1. 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.
2. Is this vehicle equipped with the 68RFE automatic transmission?
  - YES>>> Proceed to [Step 3](#) of the Repair Procedure.
  - NO>>> Turn ignition key "OFF" for 75 seconds then proceed to [Step 5](#) of the Repair Procedure.
3. Place the ignition in the "OFF" position for 10 minutes.
4. Perform the transmission "Quicklearn" procedure. Follow the detailed service procedures available in DealerCONNECT/Service Library, Service Info Section 08 - Electrical > 8E - Electronic Control Modules > Module, Transmission Control > Standard Procedure > Quicklearn.
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.
6. Perform the PCM Configuration routine in wiTECH located in the PCM "Misc. Functions" menu tab.

**POLICY:**

Reimbursable within the provisions of the warranty.

**TIME ALLOWANCE:**

| Labor Operation No: | Description   | Skill Category | Amount     |
|---------------------|---|----------------|------------|
| **18-19-04-MN       | Module, Engine Control (ECM) Reprogram, (M/T & Aisin)<br>(1 - Semi-Skilled)                 | 10 - Diesel    | 0.4 Hrs.   |
| 18-19-04-MP         | Module, Engine Control (ECM) - Reprogram, Quicklearn 68RFE Only (A/T)<br>(1 - Semi-Skilled) | 10 - Diesel    | 0.6 Hrs.** |

**NOTE:** The expected completion time for the flash download portion of this procedure is approximately 15 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 |
|----|------------------|