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GROUP: Vehicle Performance

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THIS BULLETIN SUPERSEDES SERVICE BULLETIN 18-022-16, DATED MARCH 04, 2016, WHICH SHOULD BE REMOVED FROM YOUR FILES. ALL REVISIONS ARE HIGHLIGHTED WITH **ASTERISKS**** AND INCLUDES ADDITIONAL DIAGNOSTIC TROUBLE CODES (DTCs) AND LOP.**

FOR HELP WITH USING wiTECH FOR ECU FLASH REPROGRAMMING, CLICK ON THE APPLICATION'S "HELP" TAB.

THE wiTECH SOFTWARE IS REQUIRED TO BE AT THE LATEST RELEASE BEFORE PERFORMING THIS PROCEDURE.

SUBJECT:

Flash: 6.7L Diagnostic And System Improvements

OVERVIEW:

This bulletin involves selectively erasing and reprogramming the Engine Control Module (ECM) with new software.

MODELS:

2013	(DD)	Ram 3500 Chassis Cab
2013	(DP)	Ram 4500/5500 Chassis Cab

NOTE: This bulletin applies to vehicles equipped with a 6.7L Cummins engine (Sales Code ETK).

SYMPTOM/CONDITION:

Several software improvements are available for vehicles equipped with a Cummins 6.7L Turbo Diesel. These improvements are separated into the following categories:

NOTE: There will be a choice between two calibrations. One for vehicles that utilize an ammonia sensor and one for vehicles that have had the ammonia sensor removed. Be sure to select the correct software based on vehicle configuration.

These DTCs have been changed from a one trip fault to a two trip fault:

- P0201 - P0206 - Fuel Injector X Circuit/Open.
- P049D - EGR Control Position Exceeded Learning Limit.

This DTC has been changed from a two trip fault to a one trip fault:

- U12A4 - Lost Communication With Ammonia Sensor.

Improvements to prevent or reduce unnecessary Malfunction Indicator Lamp (MIL) illumination for:

- **P1477 - Intake Air Diverter Valve Position Sensor Circuit Shorted To Ground.
- P218F - Reductant No Flow Detected.
- P242F - Diesel Particulate Filter Restriction - Ash Accumulation.
- P2459 - Diesel Particulate Filter Regeneration Too Frequent.
- P20EE - Selective Catalytic Reduction (SCR) NOx Catalyst Efficiency Below Threshold - Bank 1 (For ammonia sensor equipped vehicles).**
- P1C55 - NOx Sensor Intermittent - Bank 1 Sensor 1 (For ammonia sensor delete systems only).
- P205E - (Diesel Exhaust Fluid) Reductant Tank Temperature Sensor Circuit Intermittent (setting when the block heater is plugged in).
- U110E - Lost Ambient Temperature Message.
- P20E8 - (Diesel Exhaust Fluid) Reductant Pressure Too Low.
- P2281 - Air Leak Between MAF and Throttle Body.
- U3017 - Control Module Timer/Clock Performance.
- U1421 - Implausible Ignition Key Off Time Received.
- P0128 - Thermostat Rationality. In cold ambient temperatures.
- P0087 - Fuel Rail Pressure Too Low.
- P0544 - Exhaust Gas Temperature Sensor Circuit - Bank 1 Sensor 1.
- P2002 - Diesel Particulate Filter Efficiency Below Threshold.
- P061A - Level 2 Torque Performance.
- P0234 - Turbocharger Overboost condition.
- P026A - Charge Air Cooler Efficiency Below Threshold.
- P0299 - Manifold Pressure Sensor Out of Range Low.
- P0544 - Exhaust Gas Temperature (EGT) Sensor Circuit - Bank 1 Sensor 1.
- P0562 - Battery Voltage Low.
- P2201 - After-treatment NOx Sensor Circuit Performance - Bank 1 Sensor 1.
- P24A5 - EGR Cooler Bypass Bank 1 Control Stuck.
- P249E - Closed Loop SCR Reductant Injection Control At Limit - Flow Too High.

Other updates:

- **Ambient Air Temperature (AAT) improvements.
- On Board Diagnostic (OBD) test results block fix.
- Cap urea dosing at low temperatures.
- SCR heating time strategy change.
- Nitrous Oxide (NOx) gases sensor dew point delay (For ammonia sensor delete systems only).**
- SCR efficiency scan tool test improvement.
- Various urea system calibration changes, cold weather system improvements and dosing heater thaw times.
- Various additional wiTECH data and system test additions or improvements.
- Cruise control system improvements.
- System enhancements to starter lockout feature.
- Fuel filter minder system calibration enhancements.

- Exhaust brake switch operation improvements.
- Charging system improvements for dual alternator applications.
- Erroneous “Service Exhaust System - see dealer” message setting with the ignition in the “Run” position, with engine not running.
- Remove MIL for DTC P1C70 - SCR Error Detected - Engine Disabled.
- Wait To Start (WTS) bulb check timing improvements (1 second).
- Set PTO maximum speed to 2,000 RPM.
- Allow mobile PTO operation in neutral.
- Frozen CAC diagnostic improvement.
- WiTECH - Reset fix (PTO request on pickup).
- WiTECH - road governor speed upper limit adjustment.
- SCR performance test fix.

DIAGNOSIS:

Using a Scan Tool (wiTECH) with the appropriate Diagnostic Procedures available in TechCONNECT, 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 listed above or if the technician finds the DTCs, perform the Repair Procedure.

REPAIR PROCEDURE:

CAUTION: There will be a choice between two calibrations. One for three sensor configuration that utilizes an ammonia sensor and one for two sensor configuration for vehicles that have had the ammonia sensor removed. Be sure to select the correct software based on your configuration.

NOTE: If DTC U1601 is present, the ECM 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.

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. Reprogram the PCM 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. After reprogramming, turn the ignition off to power down the ECM. The key must remain off for a minimum of 75 seconds.
3. 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 allows them to be cleared.

NOTE: If DTCs U05A5 - Implausible Data Received From Ammonia Sensor or U12A4 - Lost Communication With Ammonia Sensor are set after the repair then the PCM has the incorrect calibration installed. Reprogram the PCM with the correct calibration.

4. Perform the PCM Configuration routine in wiTECH located in the PCM “Misc. Functions” menu tab.
5. Verify the Dosing Control Unit (DCU) software is up to date in accordance with the service procedures and labor times outlined in all applicable published service bulletins.

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Skill Category	Amount
**18-19-04-FR	Module, Engine Control (ECM) - Reprogram, (Without Ammonia Sensor) 0 - Introduction	10 - DIESEL	0.4 Hrs.
18-19-04-FS	Module, Engine Control (ECM) - Reprogram, (With Ammonia Sensor) 0 - Introduction	10 - DIESEL	0.4 Hrs.**

NOTE: The expected completion time for the flash download portion of this procedure is approximately 14 minutes. Actual flash download times may be affected by vehicle connection and network capabilities.

FAILURE CODE:

The dealer must choose which failure code to use. If the customer came in with an issue and if the dealer finds a software update to correct that issue, use failure code CC, for all other use failure code RF.

- If the customer’s concern matches the SYMPTOM/CONDITION identified in the Service Bulletin, failure code CC is to be used.
- If an available flash is completed while addressing a different customer concern, failure code RF is to be used.

CC	Customer Concern
RF	Routine Flash