

Technical Service Bulletin (TSB)

Engine Control Module (ECM) Capacitor Leak

REFERENCE:	TSB: 18-072-23 GROUP 18 - Vehicle Performance	Date:	June 6, 2023	REVISION:	-
VEHICLES AFFECTED:	2023 (DD) RAM 3500 Cab Chassis 2023 (DJ) RAM 2500 Pickup 2023 (DP) RAM 4500/5500 Cab Chassis 2023 (D2) RAM 3500 Pickup This bulletin applies to vehicles built on or after December 05, 2022 (MDH 1205XX) on or before April 26, 2023 (MDH 0426XX) equipped with a 6.7L I6 Cummins Turbo Diesel (Sales Codes ETL, ETM or ETN).			MARKET APPLICABILITY: ☒ NA ☒ SA ☒ EE ☒ MEA ☒ IAP ☐ CH	
CUSTOMER SYMPTOM:	Customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find that the one or more of the following Diagnostic Trouble Codes (DTCs) have been set: • P0642 - Sensor Reference Voltage 1 Circuit Low. • P0652 - Sensor Reference Voltage 2 Low. • P06D3 - Sensor Reference Voltage 5 Circuit Low. • P0102 - Mass Air Flow Sensor "A" Circuit Low. • P0750 - Shift Solenoid 1 Control Circuit - Open. • P0755 - Shift Solenoid 2 Control Circuit - Open. • P0706 - Transmission Range Sensor Rationality. • P0765 - Shift Solenoid "D". • P0770 - Shift Solenoid "E". • P2761 - Torque Converter Clutch Pressure Control Solenoid Control Circuit-Open. In addition, the customer may experience the following: • An engine no crank/start.				
CAUSE:	Internal Engine Control Module (ECM) issue.				

This Technical Service Bulletin (TSB) has also been released as a Rapid Service Update (RSU) 23-160, date of issue June 06, 2023. All applicable RSU VINs have been loaded. To verify this RSU 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 RSU will expire 18 months after the date of issue.

REPAIR SUMMARY:

This bulletin involves performing an extended idle test and possibly replacing the ECM.

CLAIMS DATA:

Labor Operation No:	Labor Description	Skill Category	Labor Time
08-19-04-95	Perform Extended Idle Test (2 - Skilled)	1 - Engine Repair And Performance	0.2 Hrs.
08-19-04-96	Perform Extended Idle Test and Replace ECM/PCM (Aisin Transmission Only) (2 - Skilled)	1 - Engine Repair And Performance	1.5 Hrs.

Labor Operation No:	Labor Description	Skill Category	Labor Time
08-19-04-97	Perform Extended Idle Test and Replace ECM/PCM (68RFE Transmission Only) (2 - Skilled)	1 - Engine Repair And Performance	1.7 Hrs.
Failure Code	ZZ	Service Action	

SPARE PARTS:

Qty	Part No.	Description	Notes
1 (AR)	68575279AA	Module , Engine Controller - Diesel	

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 a customer's VIN is listed in VIP or your RSU VIN list, perform the repair. If any vehicle not on the VIN list exhibits any of the symptom listed above in the customer symptom section, perform the Extended Idle Procedure.

CAUTION! Due to the fact that the vehicle may be left unattended for up to three hours (180 minutes) during this Extended Idle Procedure, every precautionary measure must be taken to ensure that the vehicle cannot be stolen and that no person comes in contact with the hot exhaust, or hot exhaust gases during this Extended Idle Procedure.

- Is the vehicle on the RSU VIN list?
 - YES>>> Proceed to [Step 2](#).
 - NO>>> This bulletin does not apply. Further diagnosis may be needed.
- Ensure the vehicles Low Fuel Warning Light is not on. **In the event the Low Fuel Warning Light is on, add three gallons of Ultra Low Sulfur diesel fuel in the fuel tank.**
- Park the vehicle on a nonflammable surface such as concrete.

WARNING! The vehicle will enter a catalyst regeneration mode during this idle test and exhaust temperatures will be elevated. Do not perform this procedure on flammable surfaces such as grass or adjacent to property that may be damaged by the exhaust gases, or in a location with pedestrian traffic.

- Apply the parking brake.
- Place the transmission into park.
- Ensure that the hood remains closed during the stationary regeneration operation.
- Connect the wiTECH to the vehicle, check and clear any DTCs. Disconnect the scan tool.
- Start the engine (if the vehicle is not already running). **Ensure the Heating, Ventilation and Air Conditioning (HVAC) is in the off position.**
- Allow the engine to idle for the vehicle time specified below:
 - Cab Chassis - Idle for two hours.
 - 2500 and 3500 Pickup - Idle for three hours.

NOTE: During the idle time the engine will enter a catalyst regeneration mode and the engine RPM will be elevated to 1,000 RPM. When the engine RPM returns to normal idle, the regeneration mode has completed or aborted.

Cab Chassis vehicles: Will idle for approximately one hour and then will enter catalyst regeneration for approximately 45 minutes.

2500 and 3500 Pickup vehicles: Will idle for approximately two hours and then will enter catalyst regeneration for approximately 45 minutes.

NOTE: Avoid applying the brake pedal while the vehicle is idling at 1,000 RPM in Catalyst Regeneration. Catalyst Regeneration will be paused if the brake pedal is pressed during this time. If by accident the brake pedal is pressed, allow the engine to continue to idle and the Catalyst Regeneration will resume on its own.

10. Once the idle time is complete, shut the engine off.
11. Connect the wiTECH and restart the engine. Check for any DTCs.

NOTE: If the vehicle stalled, will not start or DTCs are present, save a VSR to provide to STAR if the ECM needs to be replaced.

12. Did the vehicle stall during the Extended Idle Procedure, or will the vehicle not start after it has been shut down?
 - YES>>> Call the STAR center for concurrence to replace the ECM. Proceed to [Step 1](#) of the Repair Procedure.
 - NO>>> Proceed to [Step 13](#).
13. Were any of the following DTCs present:
 - P0642 - Sensor Reference Voltage 1 Circuit Low.
 - P0652 - Sensor Reference Voltage 2 Low.
 - P06D3 - Sensor Reference Voltage 5 Circuit Low.
 - P0102 - Mass Air Flow Sensor "A" Circuit Low.
 - P0750 - Shift Solenoid 1 Control Circuit - Open.
 - P0755 - Shift Solenoid 2 Control Circuit - Open.
 - P0706 - Transmission Range Sensor Rationality.
 - P0765 - Shift Solenoid "D".
 - P0770 - Shift Solenoid "E".
 - P2761 - Torque Converter Clutch Pressure Control Solenoid Control Circuit-Open.
 - **YES>>> Call the STAR center for concurrence to replace the ECM.** Proceed to [Step 1](#) of the Repair Procedure.
 - **NO>>> This bulletin has been completed. Use Perform Extended Idle Test LOP (08-19-04-95) to close the active RSU.**

SPECIAL TOOLS/EQUIPMENT:

Description	Ref. No.	Notes
wiTECH or Equivalent	—	—

REPAIR PROCEDURE:

1. Replace the ECM. Refer to the detailed service procedures available in DealerCONNECT> Service Library under: Service Info> 08 - Electrical / 8E - Electronic Control Modules / Module, Powertrain Control, (PCM) 6.7L Diesel / Removal and Installation. Or refer to the detailed service procedures available in DealerCONNECT> Service Library under: Service Info>08 - Electrical / 8E - Electronic Control Modules / Module, Powertrain Control (PCM) / Removal and Installation.
2. Clear all DTCs that may have been set.

POLICY:

Reimbursable within the provisions of the warranty.

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