



October 2022

Dealer Service Instructions for:

Safety Recall Z87 / NHTSA 22V-642 Powertrain Control Module

NOTE: 4500/5500 Cab Chassis repairs can only be performed by BusinessLink Dealers. Non BusinessLink Dealers should not order parts or perform the repair.

Remedy Available

2022 **(DJ) Ram 2500 Pickup**
(DD) Ram 3500 Cab Chassis
(DP) Ram 4500/5500 Cab Chassis
(D2) Ram 3500 Pickup

NOTE: This recall applies only to the above vehicles equipped with a 6.7L Diesel Engine (sales codes ETL/ETM/ETN).

NOTE: Some vehicles above may have been identified as not involved in this recall and therefore have been excluded from this recall.

IMPORTANT: Some of the involved vehicles may be in dealer new vehicle inventory. Federal law requires you to complete this recall service on these vehicles before retail delivery. Dealers should also consider this requirement to apply to used vehicle inventory and should perform this recall on vehicles in for service. Involved vehicles can be determined by using the VIP inquiry process.

Subject

The Powertrain Control Module (PCM) on about 5,000 of the above vehicles may have been built with a misaligned capacitor which could create a short to ground and cause an internal PCM loss of communication. An internal loss of communication could result in a loss of motive power, which can cause a vehicle crash without prior warning.

Repair

Replace and reprogram the PCM.

Alternate Transportation

Dealers should attempt to minimize customer inconvenience by placing the owner in a loaner vehicle if the vehicle must be held overnight.

Service Procedure

A. Powertrain Control Module Removal Procedure

1. Disconnect the Intelligent Battery Sensor (IBS) wire harness connector (Figure 1).
2. Loosen the ground terminal nut and remove the negative battery cable with IBS from the battery and isolate it.

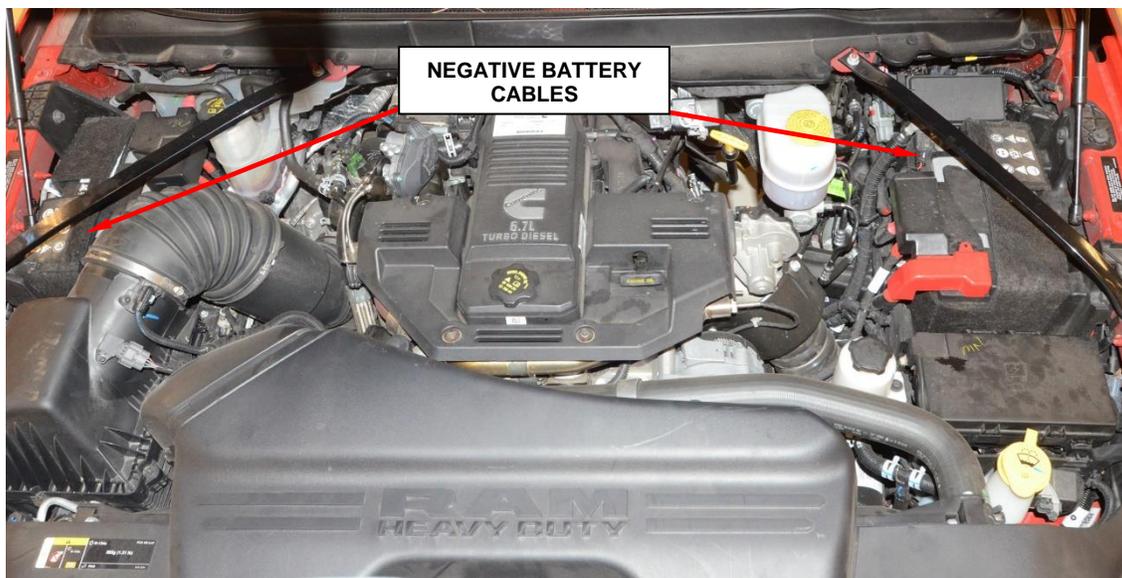


Figure 1 – Negative Battery Cables

3. Raise and support the vehicle.
4. Remove the left front tire and wheel.
5. Remove the left wheelhouse splash shield screws and remove the splash shield (Figure 2).



Figure 2 – Wheelhouse Splash Shield

Service Procedure [Continued]

6. Loosen the charge air cooler hose from the air flow control valve.
7. Remove the fasteners securing the transmission wire harness to the PCM (Figure 3).
8. Remove the fasteners securing the engine wire harness to the PCM (Figure 3).

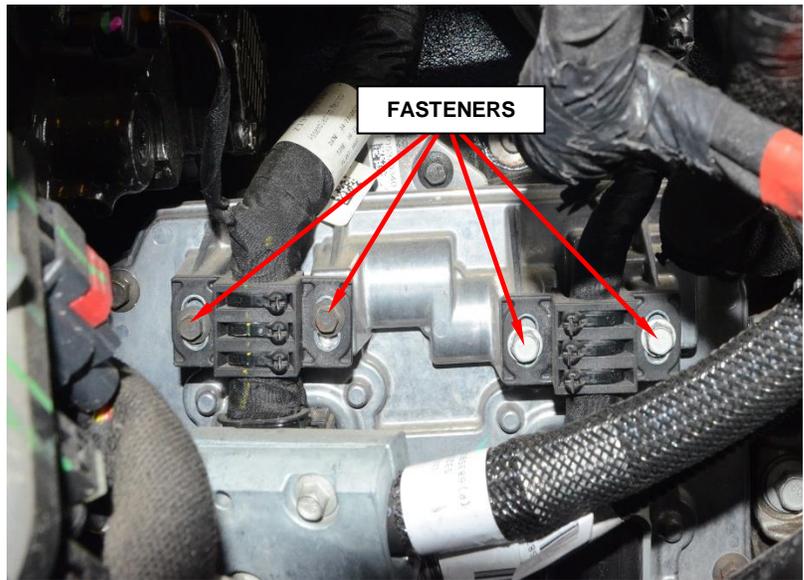


Figure 3 – Wire Harness

9. Disconnect the engine (1) and transmission (2) wire harness connectors from the PCM (Figure 4).

CAUTION: If the connector latch is packed with dirt or debris, clean connector latch first with electrical contact cleaner otherwise damage to the connector housing may result when trying to open a dirty connector.

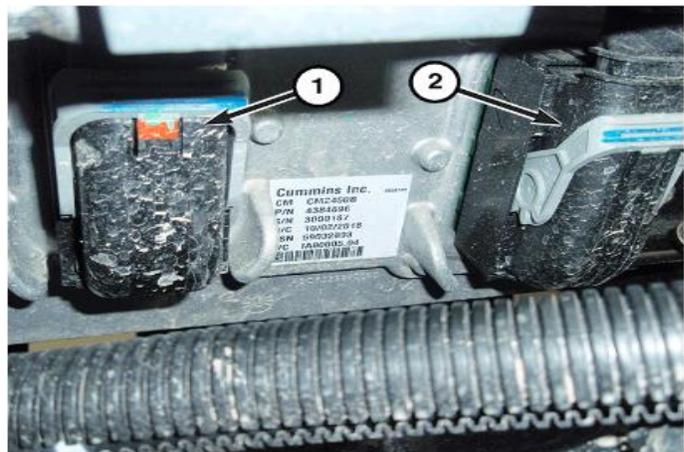


Figure 4 - Connectors

Service Procedure [Continued]

10. Remove the (4) fasteners attaching the PCM to the engine block bracket (Figure 5).

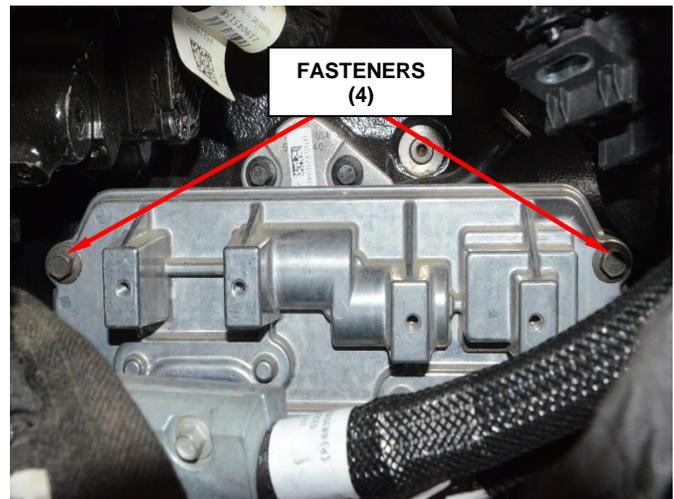


Figure 5 – PCM Fasteners

11. Rotate the PCM as shown and remove the PCM (Figure 6).

12. Proceed to section **B.**
Powertrain Control
Module Installation
Procedure

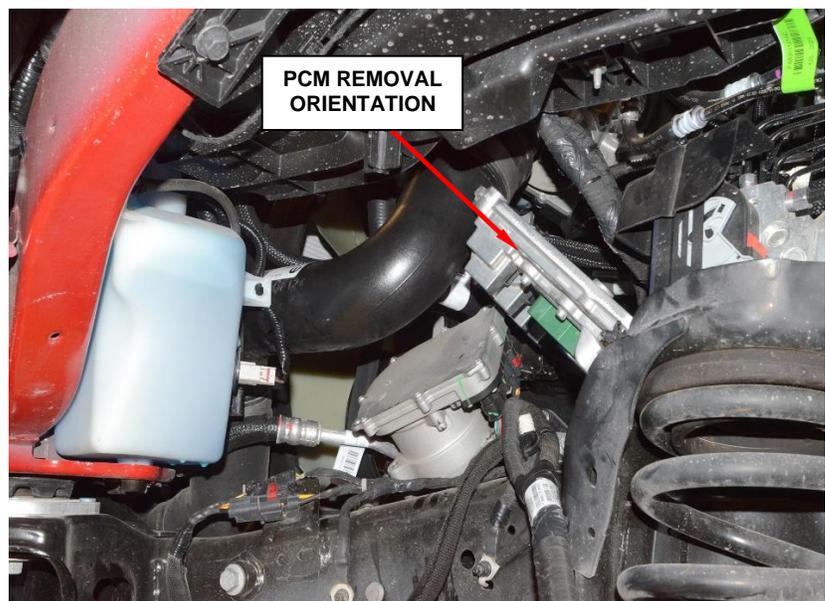


Figure 6 – PCM Removal

Service Procedure [Continued]**B. Powertrain Control Module Installation Procedure**

NOTE: Do not apply paint to the PCM or a poor ground will result.

1. Align and install the PCM to the mounting bracket and tighten the fasteners to 24N·m (18ft. Lbs.) (Figure 5).
2. Check pins in wire harness connectors for corrosion, damage or dirt intrusion. Also, check all the PCM pins for being bent. Repair as necessary. Damaged, dirty, bent or corroded pins could result in poor conductivity, causing intermittent electrical issues or DTCs.
3. Clean pins in the wire harness connectors with an electrical contact cleaner.
4. Connect the engine and transmission wire harness connectors to the PCM and rotate the latches closed (Figure 4).
5. Install the fasteners securing the engine wire harness to the PCM and tighten them securely.
6. Install the fasteners securing the transmission wire harness to the PCM and tighten them securely.
7. Install the charge air cooler hose to the air flow control valve.
8. Install the wheelhouse splash shield.
9. Install the push-pins and install the screws tighten the screws securely.
10. Install the left front tire and wheel and tighten the wheel lug nuts in a star pattern to to Cone Lug 176N·m (130ft. Lbs.) Flanged Lug 175N·m (129ft. Lbs.).
11. Lower the vehicle and reconnect the negative battery cable with IBS to the negative post and tighten to 7N·m (62In. Lbs.).
12. Proceed to section: **C. Reprogramming the PCM Procedure**

Service Procedure [Continued]

C. Reprogramming the PCM Procedure

CAUTION: Do not interrupt the software update process in any way once it has begun. It may cause permanent damage to the PCM which will require replacement.

NOTE: The wiTECH scan tool must be used to perform this recall. The wiTECH software is required to be at the latest release level before performing this procedure.

1. Open the hood. Install a battery charger and verify that the charging rate provides 13.0 to 13.5 volts. Do not allow the charger to time out during the flash process. Set the battery charger timer (if so equipped) to continuous charge.

NOTE: Use an accurate stand-alone voltmeter. The battery charger volt meter may not be sufficiently accurate. Voltages outside of the specified range will cause an unsuccessful flash. If voltage reading is too high, apply an electrical load by activating the park or headlamps and/or HVAC blower motor to lower the voltage.

2. Connect the wiTECH micro pod II to the vehicle data link connector.
3. Place the ignition in the “**RUN**” position.
4. Open the wiTECH 2.0 website.
5. Enter your “**User id**” and “**Password**” and your “**Dealer Code**”, then select “**Sign In**” at the bottom of the screen. Click “**Accept**”.
6. From the “**Vehicle Selection**” screen, select the vehicle to be updated.
7. Manually enter the VIN.

Service Procedure [Continued]

8. From the “**Action Items**” screen, select the “**Topology**” tab.
9. From the “**Topology**” tab, select the “**PCM**” module icon.
10. From the PCM tab, select the PCM flash part number. Read the flash special instructions page. Select “**OK**” to continue.
11. From the flash ECU agreement page, agree to terms by checking the box.
12. Select “**Flash ECU**” and then follow the wiTECH screen instructions to complete the flash.
13. Clear all DTC’s.
14. From the “Home” screen, select “**ECU View**”.
15. Select “**PCM**”.
16. Select “**Misc. functions**”.
17. Select “**Check PCM VIN**” and follow the on-screen instructions. When complete, select “Finish”.
18. Navigate back to the home screen and select the Body Control Module (**BCM**).
19. Select the “**Misc. Functions**” menu.
20. Run the “**Immobilizer ECU Replace**” routine.
21. Key **OFF** ignition for a minimum of 60 seconds (1 minute) and then Key **ON** ignition for a minimum of 60 seconds (1 minute) after running the Immobilizer ECU replace routine.
22. Select **PCM**, then **Misc. Function**.
23. Select **PCM Configuration**.

Service Procedure [Continued]

24. Select “**Oil Life Restore**” follow screen prompts.
25. Return to the topology screen.
26. Select **ABS module icon**.
27. Select **Misc. functions**.
28. Perform the “**Brake Pedal Calibration**” procedure as follows:
 - a. Park the vehicle on level ground.

NOTE: When performing the Brake Pedal Calibration Learn routine, make sure the brake pedal is NOT pressed.

NOTE: Not all PCM’s support the Brake Pedal Learn. If the PCM supports, it the routine will be available.

- b. With the scan tool, under the ABS “Miscellaneous Functions” menu, select and run the “Brake Pedal Learn” routine.

NOTE: Due to the PCM/ TCM programming procedure, a DTC may be set in other ECU’s within the vehicle. Some DTCs may cause the MIL to illuminate. From the "Home" screen select "System View". Then select "All DTC's". Press "Clear All Stored DTC's" if there are any DTC's shown on the list.

NOTE: After Programming the PCM, the vehicle needs to be test driven for coolant temperature to reach 180 degrees Fahrenheit and then allow for 10 minutes (68 RFE) or 90 seconds (Aisin) power down to allow the Exhaust Gas Recirculation (EGR) system auto-zero to store and then key ON for it to learn.

29. Remove the wiTECH micro pod II from the vehicle, disconnect the battery charger from the vehicle.
30. Return the vehicle to the customer.

Completion Reporting and Reimbursement

Claims for vehicles that have been serviced must be submitted on the DealerCONNECT Claim Entry Screen located on the Service tab. Claims paid will be used by FCA to record recall service completions and provide dealer payments.

Use the following labor operation number and time allowance:

	Labor Operation Number	Time Allowance
Replace and Reprogram PCM	08-Z8-71-82	1.4 hours
Replace and Reprogram PCM (68 RFE Transmission Equipped)	08-Z8-71-83	1.5 hours
Floor Plan Reimbursement	95-95-95-97	Calculate See Below

Floor Plan Reimbursement represents the vehicle’s average daily allowance (see table below) multiplied by the number of days the vehicle was in dealer inventory and not available for sale. This reimbursement is limited to the number of days from the date of the stop sale to the date that the remedy was made available. Note: If the vehicle was received by your dealership (KZX date) AFTER the stop sale date, you will use the KZX date instead of the stop sale date. For this Recall, the stop sale was initiated on **09/02/2022** and the remedy was made available on **10/13/2022**, therefore, the number of days cannot exceed **41** days.

Vehicle	Average Daily Allowance
2022 (DJ) Ram 2500 Pickup	██████
2022 (DD) Ram 3500 Cab Chassis	██████
2022 (DP) Ram 4500/5500 Cab Chassis	██████
2022 (D2) Ram 3500 Pickup	██████

NOTE: See the Warranty Administration Manual, Recall Claim Processing Section, for complete recall claim processing instructions.

Dealer Notification

To view this notification on DealerCONNECT, select “Global Recall System” on the Service tab, then click on the description of this notification.

Owner Notification and Service Scheduling

All involved vehicle owners known to FCA are being notified of the service requirement by first class mail. They are requested to schedule appointments for this service with their dealers. A generic copy of the owner letter is attached.

Vehicle Lists, Global Recall System, VIP and Dealer Follow Up

All involved vehicles have been entered into the DealerCONNECT Global Recall System (GRS) and Vehicle Information Plus (VIP) for dealer inquiry as needed.

GRS provides involved dealers with an updated VIN list of their incomplete vehicles. The owner’s name, address and phone number are listed if known. Completed vehicles are removed from GRS within several days of repair claim submission.

To use this system, click on the “**Service**” tab and then click on “**Global Recall System.**” Your dealer’s VIN list for each recall displayed can be sorted by: those vehicles that were unsold at recall launch, those with a phone number, city, zip code, or VIN sequence.

Dealers must perform this repair on all unsold vehicles before retail delivery. Dealers should also use the VIN list to follow up with all owners to schedule appointments for this repair.

Recall VIN lists may contain confidential, restricted owner name and address information that was obtained from the Department of Motor Vehicles of various states. Use of this information is permitted for this recall only and is strictly prohibited from all other use.

Additional Information

If you have any questions or need assistance in completing this action, please contact your Service and Parts District Manager.

This notice applies to your vehicle,

[Model Year and Model]

VIN XXXXXXXXXXXXXXXXXX

Z87/NHTSA 22V-642

LOGO

VEHICLE PICTURE

YOUR SCHEDULING OPTIONS

- 1. RECOMMENDED OPTION**
Call your authorized Chrysler / Dodge / Jeep® / RAM BusinessLink / Dealership
- 2. Call the FCA Recall Assistance Center at 1-800-853-1403.** An agent can confirm part availability and help schedule an appointment
- 3. Visit recalls.mopar.com, scan the QR code below, or download the Mopar Owner's Companion App.**

QR Code

Get access to recall notifications, locate your nearest dealer, and more through this website or Mopar Owner's Companion App. You will be asked to provide your Vehicle Identification Number (VIN) to protect and verify your identity. The last eight characters of your VIN are provided above.

DEALERSHIP INSTRUCTIONS

Please reference Safety Recall Z87.

IMPORTANT SAFETY RECALL

Powertrain Control Module

Dear [Name],

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act.

FCA US LLC has decided that a defect, which relates to motor vehicle safety, exists in certain [2022 Model Year (DD) Ram 3500 Cab Chassis, (DJ) Ram 2500 Pickup, (DP) Ram 4500/5500 Cab Chassis and (D2) Ram 3500 Pickup] vehicles.

It is extremely important to take steps now to repair your vehicle to ensure the safety of you and your passengers.

WHY DOES MY VEHICLE NEED REPAIRS?

Your vehicle ^[1] may have been built with a Powertrain Control Module (PCM) with a misaligned capacitor which could create a short to ground and cause an internal PCM loss of communication. An internal loss of communication could result in a loss of motive power, which can cause a vehicle crash without prior warning.

HOW DO I RESOLVE THIS IMPORTANT SAFETY ISSUE?

FCA US will repair your vehicle ^[2] free of charge (parts and labor). To do this, your dealer will replace and reprogram the Powertrain Control Module. The estimated repair time is about 45 minutes. In addition, your dealer will require your vehicle for proper check-in, preparation, and check-out during your visit, which may require more time. Your time is important to us, so we recommend that you schedule a service appointment to minimize your inconvenience. Please bring this letter with you to your dealership.

**TO SCHEDULE YOUR FREE REPAIR,
CALL YOUR CHRYSLER, DODGE, JEEP OR RAM DEALER TODAY**

WHAT IF I ALREADY PAID TO HAVE THIS REPAIR COMPLETED?

If you have already experienced this specific condition and have paid to have it repaired, you may visit www.fcarecallreimbursement.com to submit your reimbursement request online. ^[3] Once we receive and verify the required documents, reimbursement will be sent to you within 60 days. If you have had previous repairs performed and/or already received reimbursement, you may still need to have the recall repair performed.

We apologize for any inconvenience, but are sincerely concerned about your safety. Thank you for your attention to this important matter.

Customer Assistance/Field Operations
FCA US LLC



Mr. Mrs. Customer
1234 Main Street
Hometown, MI 48371

[1] If you no longer own this vehicle, please help us update our records. Call the FCA Recall Assistance Center at 1-800-853-1403 to update your information.

[2] If your dealer fails or is unable to remedy this defect without charge and within a reasonable time, you may submit a written complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Ave., S.E., Washington, DC 20590, or you can call the toll-free Vehicle Safety Hotline at 1-888-327-4236 (TTY 1-800-424-9153), or go to safercar.gov.

[3] You can also mail in your original receipts and proof of payment to the following address for reimbursement consideration: FCA Customer Assistance, P.O. Box 21-8004, Auburn Hills, MI 48321-8007, Attention: Recall Reimbursement.

Note to lessors receiving this recall notice: Federal regulation requires that you forward this recall notice to the lessee within 10 days.