



October 2019

Dealer Service Instructions for:

Customer Satisfaction Notification V87 Motor-Generator Unit (MGU)

Remedy Available

2019 (DT) RAM 1500 Pickup

NOTE: This campaign applies only to the above vehicles equipped with a 5.7L eTorque Engine (sales code EZL).

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

IMPORTANT: Some of the involved vehicles may be in dealer new vehicle inventory. Dealers should also consider this requirement to apply to used vehicle inventory and should perform this campaign on vehicles in for service. Involved vehicles can be determined by using the VIP inquiry process.

Subject

The flex cable within the Motor-Generator Unit (MGU) on about 219 of the above vehicles is not latched to the Printed Circuit Board (PCB). This issue will illuminate the check engine light, low battery light, and potentially set several P-Codes. The vehicle will lose charging of the battery due to the inoperative MGU. Depending on the state of battery charge, the vehicle has 15 – 40 minutes of driving time before a vehicle stall. The vehicle will be unable to re-start.

Repair

Replace the MGU on all of the above mentioned vehicles.

Parts Information

<u>Part Number</u>	<u>Description</u>
CCAkv871AA	Part Package

Each package contains the following components:

<u>Quantity</u>	<u>Description</u>
1	Motor-Generator Unit

Dealers should order the MGU for each vehicle at the time appointments are scheduled to assure that the part is available when the customer arrives.

Parts Return

No parts return required for this campaign.

Special Tools

The following special tools are required to perform this repair:

- NPN wiTECH micro pod II
- NPN Laptop Computer
- NPN wiTECH Software

Service Procedure

MGU Removal Procedure

1. Disconnect the negative battery cable.
2. Using a suitable tool, rotate the spring tensioner **clockwise** to the fully unloaded position (Figure 1 and Figure 2).

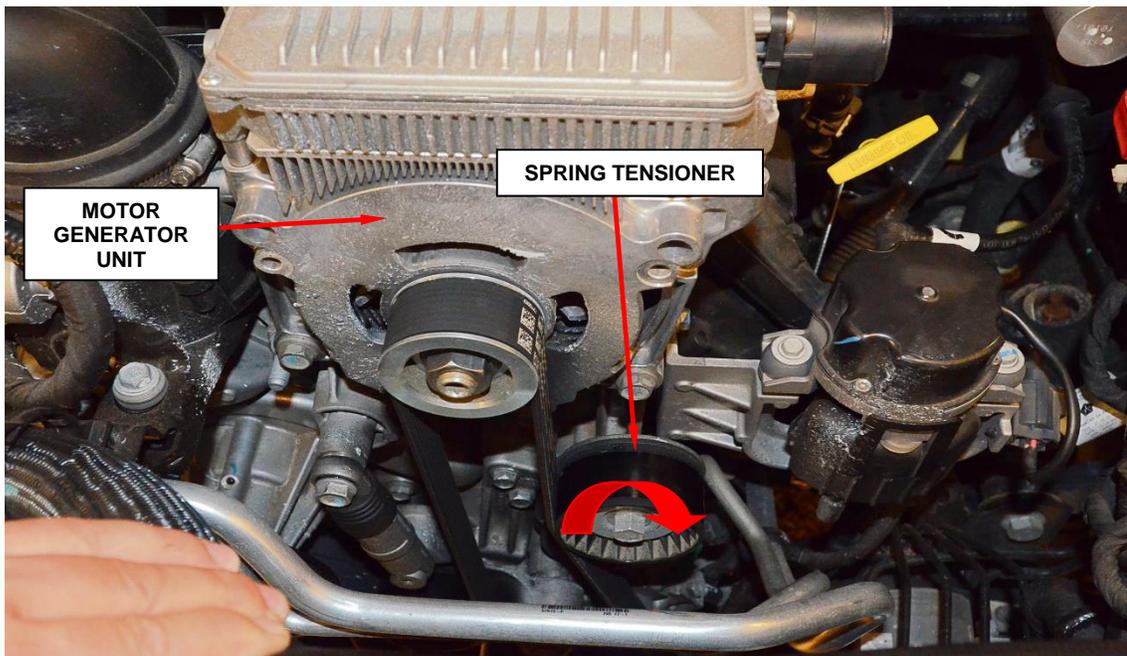


Figure 1 – Spring Tensioner

3. Install a locking device, such as a 5/32 drill bit or a 9/64 Allen hex in the belt tensioner lock pin hole (Figure 2).

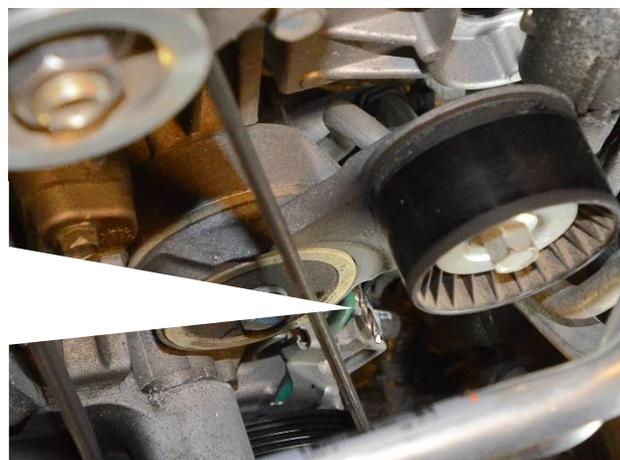
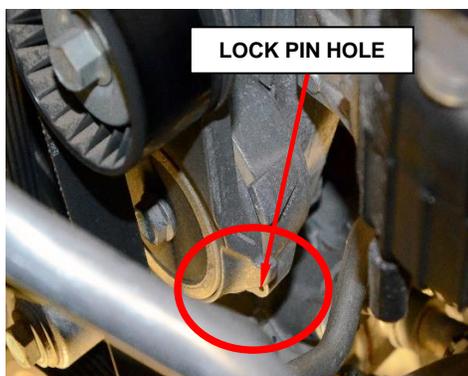
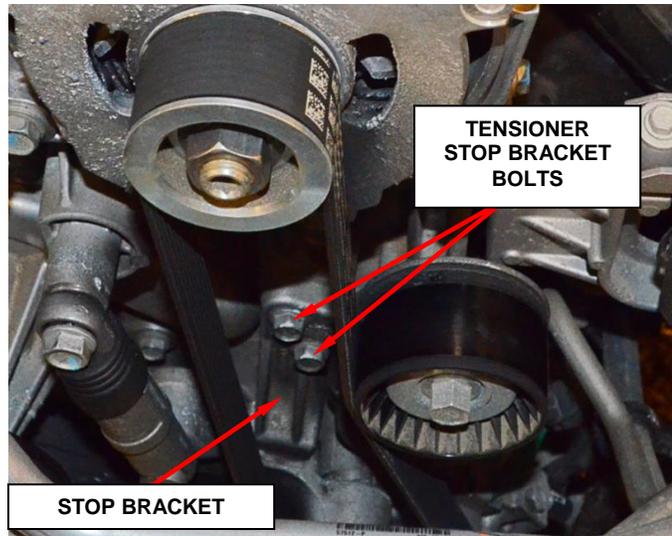


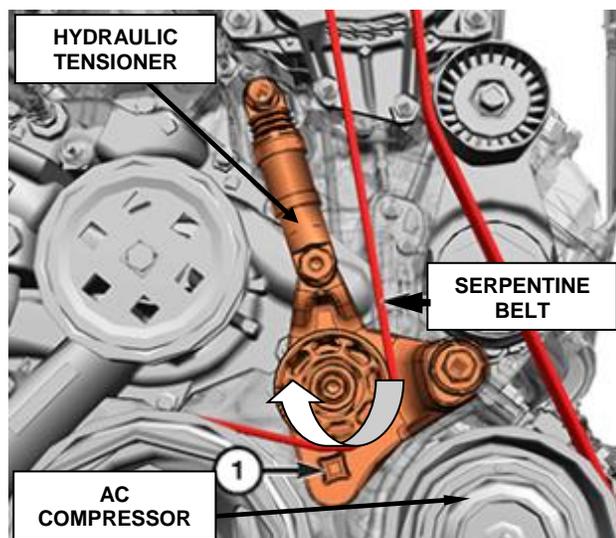
Figure 2 – Lock Pin Location

Service Procedure [Continued]

4. Remove the bolts and the belt tensioner stop bracket (Figure 3).

**Figure 3 – Tensioner Stop Bracket**

5. Using a ½ drive ratchet/breaker bar tool on the hydraulic tensioner (1), rotate the tensioner **clockwise** and remove the serpentine belt from the AC compressor pulley (Figure 4).

**Figure 4 – Hydraulic Tensioner**

CAUTION: Do not let tensioner arm snap back to the free-arm position, severe damage may occur to the tensioner.

CAUTION: Do not use anything other than a ½ inch drive ratchet/breaker bar to rotate the belt tensioner. Nonstandard tools must never be used as damage to the part will result.

Service Procedure [Continued]

6. Disconnect the Motor-Generator Unit (MGU) wire harness connector by disengaging the locking tab, then pushing down to disengage the connector before pulling on the connector body (Figure 5).



Figure 5 – Wire Harness Connector

7. Using a small flat blade tool, open the 48-volt positive cable connector cover to allow access to the M8 nut, then remove the nut (Figure 6).

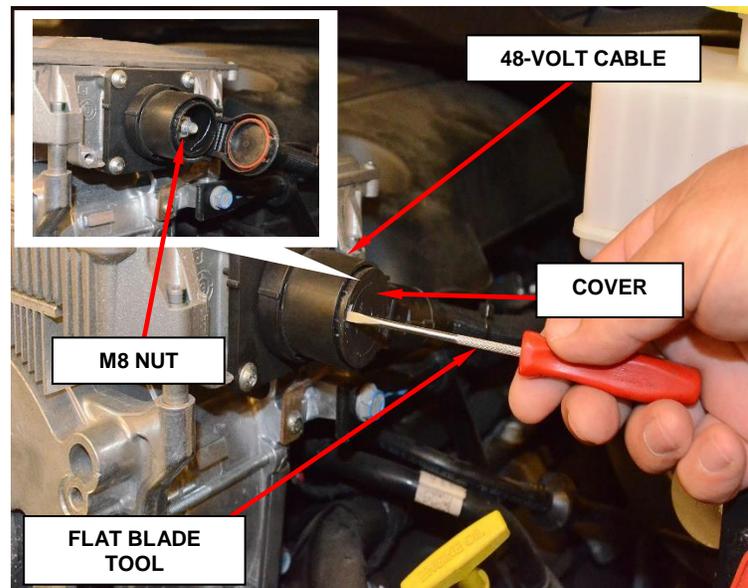
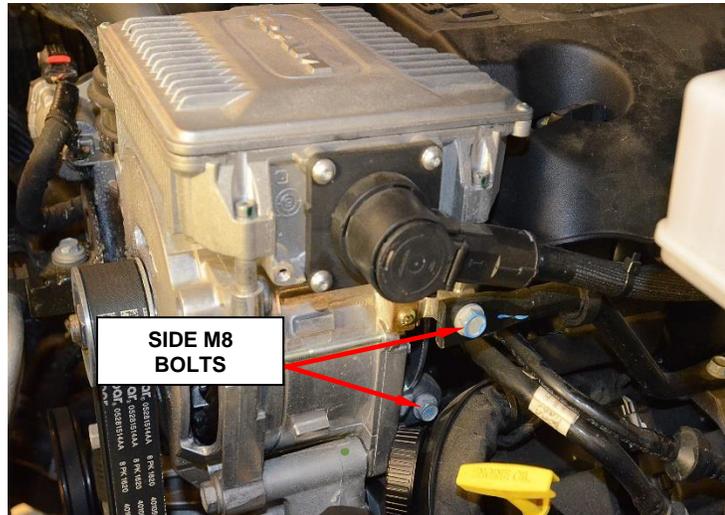


Figure 6 – Connector Cover

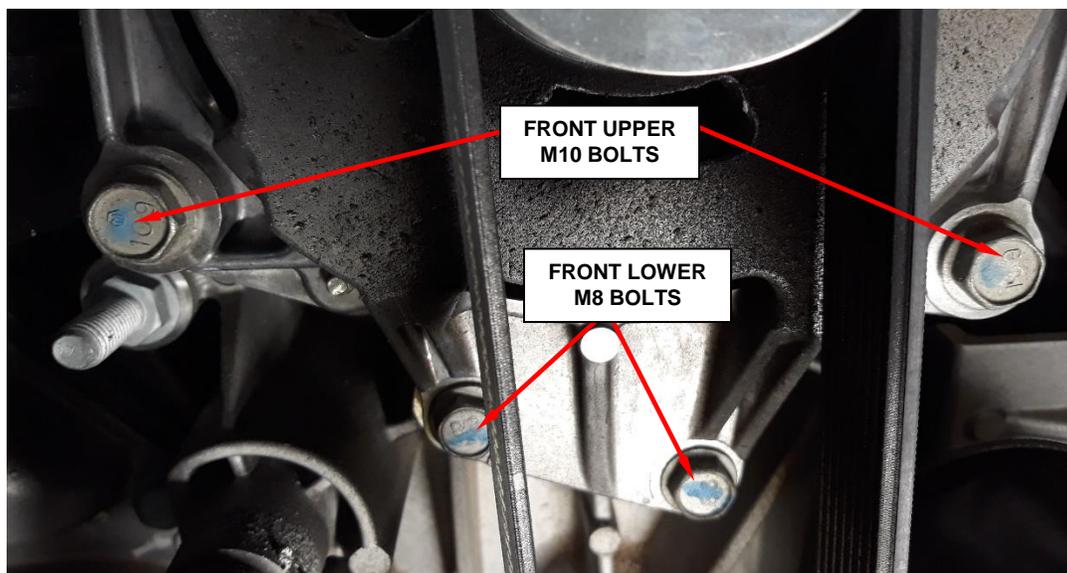
8. Remove the 48-volt cable from the MGU by grabbing the connector sleeve behind the connector cap and pull straight out in the same direction as the threaded stud and position the cable aside (Figure 6).

Service Procedure [Continued]

9. Remove the M8 bolts on the side of the MGU (Figure 7).

**Figure 7 – Side MGU Bolts**

10. Remove the front lower M8 bolts from the MGU (Figure 8).
11. Loosen both of the front upper M10 bolts three full turns and tap the bolts toward the housing face so that the rear threaded bushings unseat from the cover creating clearance (Figure 8).

**Figure 8 – Front MGU Bolts**

Service Procedure [Continued]

12. Remove the front upper M10 bolts from the MGU.

NOTE: It is recommended to have a helper assist in the removal and installation of the MGU due to the weight of the component.

13. Remove the MGU from the vehicle and discard.

Service Procedure [Continued]**MGU Installation Procedure**

1. Align the **NEW** MGU to the installed position to prepare for bolt installation.
2. Hand start the two front upper M10 bolts and the two front lower front M8 bolts (Figure 8).
3. Hand start the two side M8 bolts (Figure 7).

NOTE: All of the bolts for the MGU are to be tightened in the order of the steps below.

4. Once all four of the front bolts are hand tightened, tighten the M10 bolts to 55 N·m (41 Ft. Lbs.). This establishes the alignment of the pulley to the accessory drive serpentine belt.
5. Tighten the lower front M8 bolts to 25 N·m (18 Ft. Lbs.) (Figure 8).
6. Tighten the side M8 MGU bolts to 25 N·m (18 Ft. Lbs.) (Figure 7).
7. Position the 48-volt positive cable to the cable stud, then install and tighten the M8 nut to 18 N·m (13 Ft. Lbs.) (Figure 6).

NOTE: Do NOT overtighten the 48-volt cable M8 nut.

8. Close the 48-volt positive cable cover (Figure 6).
9. Connect the MGU wire harness connector to the MGU and secure the connector locking tab (Figure 5).
10. Install the serpentine belt over all pulleys except for the AC compressor pulley.

NOTE: When installing the accessory drive belt onto pulleys, make sure that belt is properly routed and all V-grooves make proper contact with pulleys.

Service Procedure [Continued]

11. Using a ½ inch drive ratchet/breaker bar tool, to rotate the hydraulic belt tensioner **clockwise** and slip the belt over the AC compressor pulley (Figure 4).

CAUTION: Do not use anything other than a ½ inch drive ratchet/breaker bar to rotate the belt tensioner. Nonstandard tools must never be used as damage to the part will result.

CAUTION: Do not let the tensioner arm snapback to the fully extended position, severe damage may occur to the tensioner.

12. Gently release the hydraulic belt tensioner.
13. Install the belt tensioner stop bracket and tighten the bolts to 25 N·m (18 Ft. Lbs.) (Figure 3).
14. Using a suitable tool, rotate the belt tensioner **clockwise** to remove the locking device (Figure 2).
15. Gently release the belt tensioner.
16. Connect the negative battery cable and tighten to 7 N·m (62 In. Lbs.).
17. Obtain the **vehicle axle ratio** in dealer connect under **single VIN inquiry** then **vehicle options**, this information will be required to program the **NEW MGU**.

NOTE: The Hybrid Control Processor (HCP), a component integral to the MGU, is flash programmable and is sensitive to cold temperature during module flashing. The HCP will need to be flashed when the vehicle is at room temperature. Failure to flash the module at room temperature can cause the flash procedure to not complete which could suggest an unnecessary MGU component replacement.

NOTE: The wiTECH scan tool must be used to perform this recall. This procedure must be performed with the wiTECH MicroPod II at latest software release level. If the reprogramming flash for the HCP is aborted or interrupted, repeat the procedure.

Service Procedure [Continued]

18. 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.

19. Connect the wiTECH MicroPod II to the vehicle data link connector.
20. Place the ignition in the “**RUN**” position.
21. Open the wiTECH 2.0 website.
22. Enter your “**User id**” and “**Password**” and your “**Dealer Code**”, then select “**Sign In**” at the bottom of the screen. Click “**Accept**”.
23. From the “**Vehicle Selection**” screen, select the vehicle to be updated.
24. From the “**Action Items**” screen, select the “**Topology**” tab.
25. From the “**Topology**” tab, select the “**HCP**” module icon.
26. Select the proper axle ratio and vehicle application, 2-Wheel Drive (2WD) or 4-Wheel Drive (4WD) for flash part number selection.

CAUTION: Selecting the incorrect flash part number for your specific vehicle application will result in a non-functioning MGU, verify selection before beginning the programming procedure.

27. Follow all the screen prompts until the HCP programming is completed.
28. Disconnect the MicroPod from the vehicle diagnostics port.
29. Disconnect the battery charger, and close the hood.

Service Procedure [Continued]

- 30. Complete proof of correction form for California residents.
- 31. Return the vehicle to the customer.

Complete Proof of Correction Form for California Residents

This campaign is subject to the State of California Registration Renewal/Emissions Recall Enforcement Program. Complete a Vehicle Emission Recall Proof of Correction Form (Form No. 81-016-1053) and **supply it to vehicle owners residing in the state of California** for proof that this campaign has been performed when they renew the vehicle registration.

Process Steps to obtain the California Proof of Correction form:

- a. Access the “**DealerCONNECT**” website.
- b. Select the “**Service**” tab.
- c. Under the “**Publications**” heading, select the “**ePublishing**” link.
- d. Sign in using your **Dealer Code** and **Password**.
- e. Select the “**Proof of Correction form**”.

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 Customer Satisfaction Notification service completions and provide dealer payments.

Use the following labor operation number and time allowance:

	Labor Operation Number	Time Allowance
Replace MGU	08-V8-71-82	0.9 hours

NOTE: See the Warranty Administration Manual, Recall Claim Processing Section, for complete 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 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 campaign launch, those with a phone number, city, zip code, or VIN sequence.

Dealers should 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.

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 notification 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.

Customer Service / Field Operations
FCA US LLC

This notice applies to your vehicle,

[Model Year and Model]

VIN XXXXXXXXXXXXXXXXXXXX

V87

LOGO

VEHICLE PICTURE

YOUR SCHEDULING OPTIONS

- 1. RECOMMENDED OPTION**
Call your authorized Chrysler / Dodge / Jeep® / RAM 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.

DEALERSHIP INSTRUCTIONS

Please reference CSN V87.

CUSTOMER SATISFACTION NOTIFICATION

Motor-Generator Unit

Dear [Name],

At FCA US LLC, we recognize that the success of our business depends on the satisfaction of our customers. We are constantly monitoring the quality of our products and looking for opportunities to improve our vehicles even after they are sold. Because your long-term satisfaction is important to us, we are contacting you on important improvements we would like to make to your vehicle ^[1]. This will be done at no charge to you.

We are recommending the following improvements be performed on certain [2019 (DT) RAM 1500 Pickup] vehicles equipped with a 5.7 L eTorque engine.

WHY DOES MY VEHICLE NEED REPAIRS?

The flex cable within the Motor-Generator Unit (MGU) on your vehicle is not latched to the electrical Printed Circuit Board (PCB). This condition will illuminate the check engine light and the low battery light. The vehicle will also lose charging of the battery due to the inoperative generator. Depending on the state of battery charge, the vehicle may have 15 – 40 minutes of driving time before a vehicle stall. The vehicle will be unable to re-start.

HOW DO I RESOLVE THIS CUSTOMER SATISFACTION NOTIFICATION

FCA will repair your vehicle free of charge (parts and labor). To do this, your dealer will replace the Motor-Generator Unit (MGU). The estimated repair time is about an hour. 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**

CALIFORNIA RESIDENTS

The State of California requires the completion of emission recall repair prior to vehicle registration renewal. Your dealer will provide you with a Vehicle Emission Recall Proof of Correction Form after the CSN service is performed. Be sure to save this form since the California Department of Motor Vehicles may require that you supply it as proof that the CSN has been performed.

In order to ensure your full protection under the emissions warranty provisions, it is recommended that you have your vehicle serviced as soon as possible. Failure to do so could be determined as lack of proper maintenance of your vehicle.

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. ^[2] 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 repair performed.

We apologize for any inconvenience, but are sincerely concerned about your satisfaction. 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] 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.