



December 2019

Dealer Service Instructions for:

Equipment Safety Recall VB9 / NHTSA 19E-077 Electric Power Steering Gear

Subject

FCA US has decided that a defect, which relates to motor vehicle safety, exists in certain Electric Power Steering (EPS) gears intended for use on 2013 - 2019 Model Year (DS) Ram 1500 pickup trucks. Some EPS gear assemblies may have been built with a contaminated circuit card assembly that may short circuit. A short in the control circuit components may result in an intermittent loss of power steering assist which may cause an inconsistent steering effort, especially during lower speed maneuvers. Inconsistent steering effort can cause a vehicle crash without prior warning

Repair

The EPS gear serial number must be inspected and all involved EPS gears must be either exchanged or replaced with an EPS gear that is not contaminated.

Inspection Procedure

EPS Gear Serial Number Inspection

1. If customer brings only the EPS gear for inspection, proceed to **Step 4**.
2. Position the vehicle on a suitable lift then raise and support the vehicle.
3. **If Equipped**, remove the front skid plate.
4. Locate and read the serial number on the EPS gear (Figures 1 and 2).
5. Compare EPS gear serial number to recalled EPS gear serial number list:

- TIC2349A4153
- TIC2349A4154
- TIC2349A4170
- TIC2349A4173
- TIC2349A4192
- TIC2349A5152
- TIC2349A5155
- TIC2349A5163
- TIC2349A5167
- TIC2349A5168
- TIC2349A5171
- TIC2349A5182
- TIC2349C4109
- TIC2349C5112
- TIC2609A4211

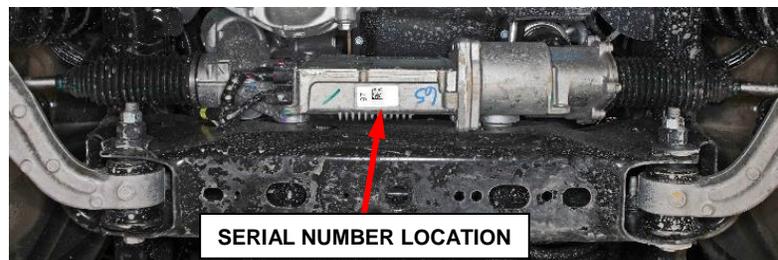


Figure 1 – Serial Number Location

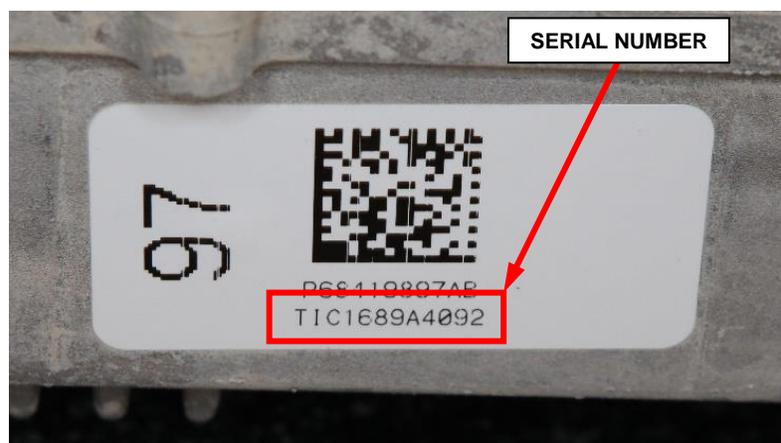


Figure 2 – Serial Number

Inspection Procedure [Continued]

6. Is the serial number on EPS gear listed in recalled EPS gear serial number list?

- **YES**, The EPS gear serial number matches one of the serial numbers listed:
 - EPS gear not installed in the vehicle, exchange the EPS gear and return the recalled EPS gear to the Mopar Core Return Center for core credit. Claim the inspection LOP.
 - EPS gear is installed in the vehicle, replace the EPS gear following the Service Procedure on **Page 5**.

- **NO**, The EPS gear serial number is **NOT** listed so is not recalled.
 - EPS gear not installed in the vehicle, return the EPS gear to the customer. Claim the inspection LOP.
 - EPS gear is installed in the vehicle, reinstall the skid plate if removed then return the vehicle to the customer. Claim the inspection LOP.

Service Procedure

EPS Gear Removal

1. Position the vehicle on a suitable lift.
2. Place the ignition in the OFF position.

3. Using a steering wheel holder, lock the steering wheel at the 12 o'clock center position to keep it from rotating. This keeps the clockspring in the proper orientation (Figure 3).



Figure 3 – Steering Wheel Holder

4. Open the hood.
5. Disconnect the Intelligent Battery Sensor (IBS) wire harness connector (Figure 2).
6. Remove the M8 negative battery cable eyelet nut (Figure 2).
7. Remove the negative battery cable eyelet and isolate the negative battery cable away from the IBS negative cable terminal (Figure 2).

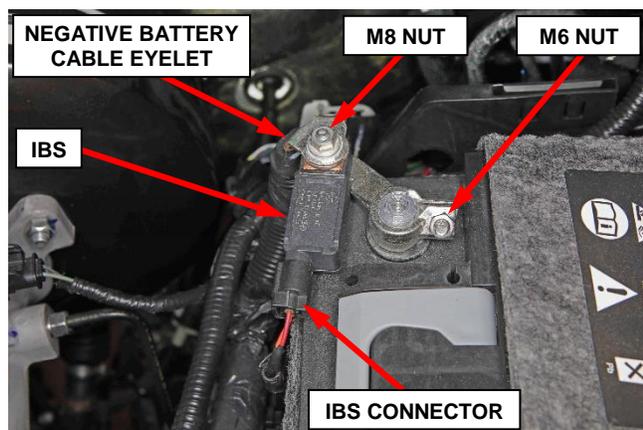


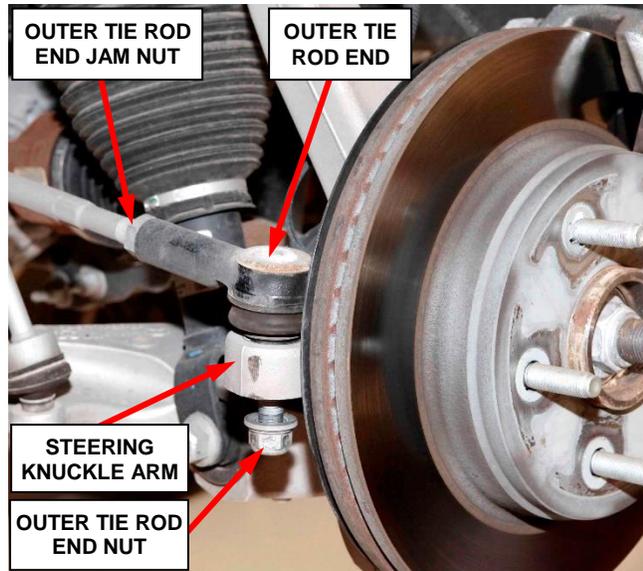
Figure 2 – Vehicle Battery

8. Loosen the M6 battery cable clamp with IBS captive nut (Figure 2).

NOTE: Do not remove the M6 captive nut, doing so may cause the M6 stud on the battery cable clamp with IBS to break (Figure 2).

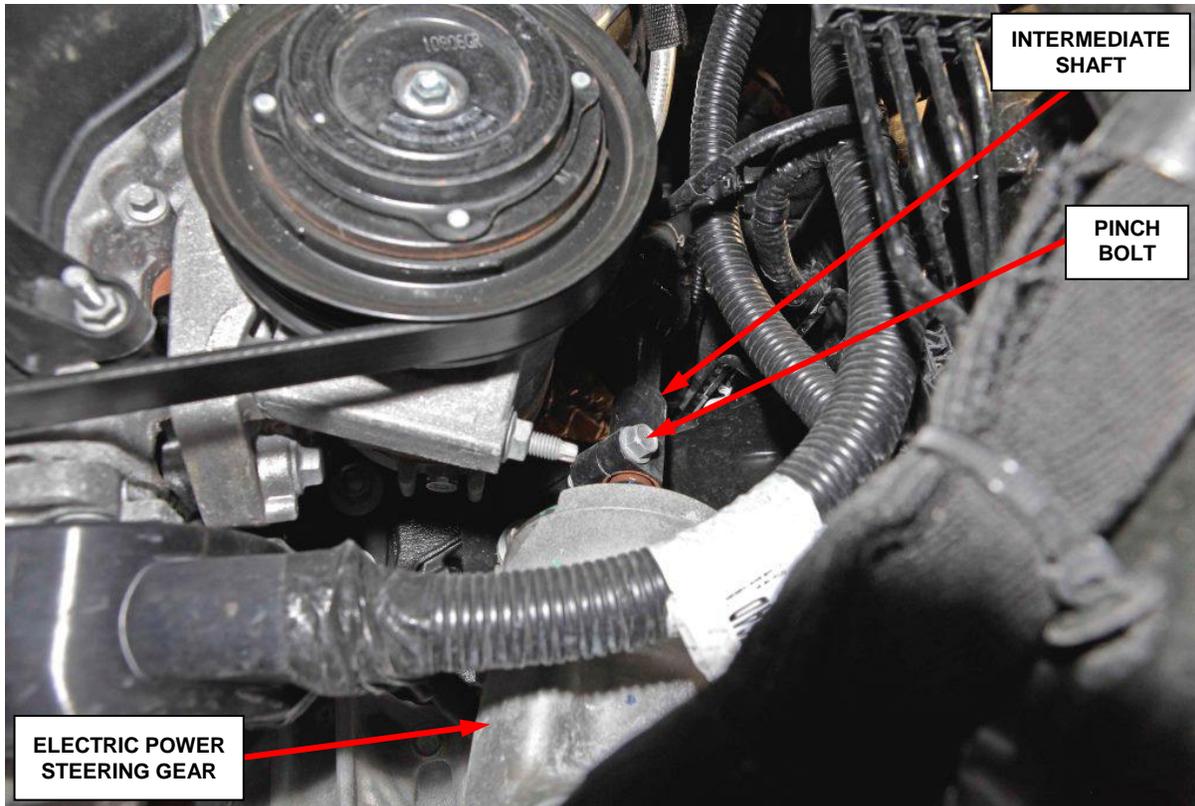
Service Procedure [Continued]

9. Partially raise the vehicle on an appropriate hoist.
10. Remove and save the front tires and wheels.
11. **For 4x2 vehicles**, loosen the left outer tie rod end jam nut (Figure 5).
12. Remove and **DISCARD** the right and left side outer tie rod nuts (Figure 5).

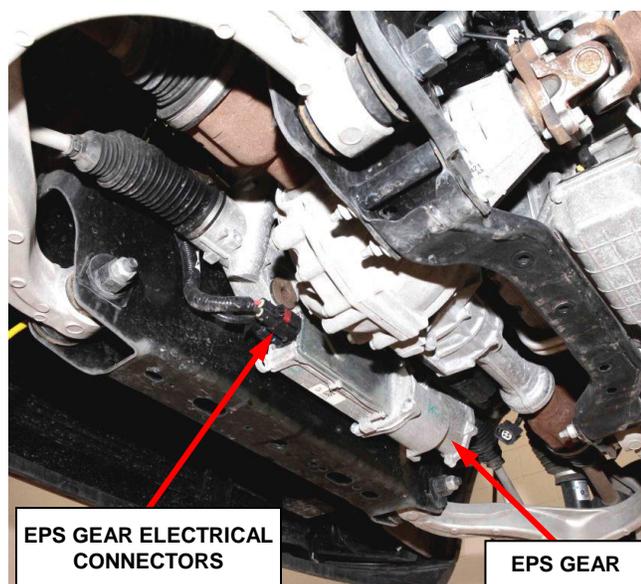


**Figure 5 – Outer Tie Rod End Nut
(Left Side Shown)**

13. Using **Special Tool 9360** or equivalent, separate both outer tie rod ends from the steering knuckle arms.
 14. **For 4x2 vehicles**, remove and discard the left outer tie rod end.
- NOTE: Removing the left tie rod end will give clearance required to remove the EPS gear from the vehicle.**
15. Raise the vehicle completely on the hoist.

Service Procedure [Continued]**Figure 6 – EPS Gear Steering Column Intermediate Shaft Pinch Bolt**

16. Remove and **DISCARD** the steering column intermediate shaft lower pinch bolt (Figure 6).
17. Separate the steering column intermediate shaft from the EPS gear shaft.
18. Disconnect the two electrical connectors located at Electric Power Steering (EPS) gear (Figure 7).

**Figure 7 – EPS Gear Electrical Connectors**

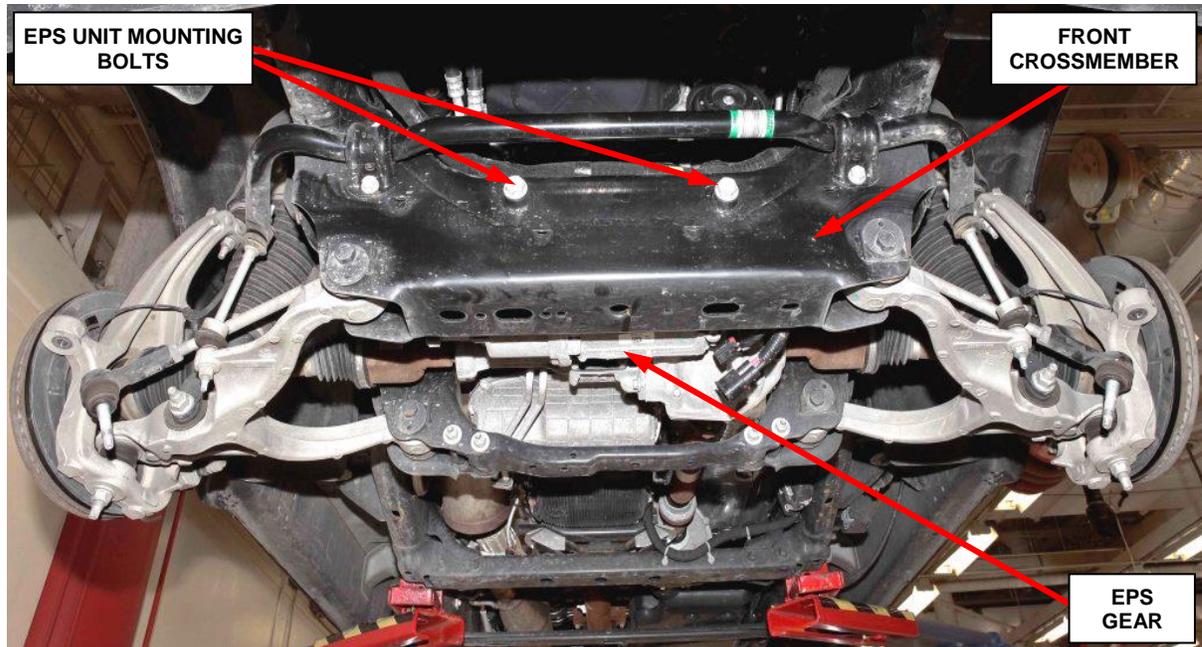
Service Procedure [Continued]

Figure 8 – Electric Power Steering Gear Mounting Bolts (4x4 Shown)

19. Remove and save the two EPS gear mounting bolts (Figure 8).
20. **For 4x2 vehicles**, turn the EPS gear steering shaft to the full right turn position.

NOTE: Turning the EPS gear to the full right turn position will give clearance required to remove the EPS gear from the vehicle.

21. Remove the EPS gear then render it unusable and discard.

NOTE: No other vehicle components need to be removed to gain clearance for EPS gear removal.

Service Procedure [Continued]

EPS Gear Installation

1. **For 4x2 vehicles**, if the tie rod ends are installed on new EPS gear, remove and save the left tie rod end from the new EPS gear.
2. **For 4x2 vehicles**, turn the new EPS gear steering shaft to the full right turn position.
3. Position the new EPS gear to the front crossmember.
4. Install the two EPS gear mounting bolts and tighten them to 180 N·m + 90° turn (133 ft. lbs. + 90° turn) (Figure 6).
5. Connect the two electrical connectors at EPS gear (Figure 7).
6. **For 4x2 vehicles**, center the steering gear by turning the EPS gear steering shaft from lock-to-lock, counting the turns. Then turn the steering shaft half the turns that are required to go lock-to-lock.
7. Slide the intermediate shaft onto the EPS gear shaft and install a **NEW** intermediate shaft pinch bolt. Tighten the pinch bolt to 55 N·m (41 ft. lbs.) (Figure 6).
8. Install the new tie rod ends to the new EPS gear if not already installed.
9. Clean and dry the tie rod end studs and the tapers in the steering knuckle arms. Then install the tie rod ends into the steering knuckles.
10. Install **NEW** tie rod end to knuckle nuts. Tighten the nuts to 30 N·m + 90° turn (22 ft. lbs. + 90° turn) (Figure 5).

Service Procedure [Continued]

11. **If Equipped**, Install the front skid plate. Tighten the bolts to 18 N·m (13 ft. lbs.).
12. Partially lower the vehicle from the hoist.
13. Install the front tires and wheels. Tighten the lug nuts to:
 - Coned Nut 176 N·m (130 ft. lbs.).
 - Flanged Nut 190 N·m (140 ft. lbs.).
14. Lower the vehicle from the hoist.
15. Loosen the M6 battery cable clamp with IBS captive nut (Figure 4).

NOTE: Do not remove the M6 captive nut, doing so may cause the M6 stud on the battery cable clamp with IBS to break (Figure 2).

16. Install the negative battery cable eyelet on the IBS M8 stud (Figure 4).
17. Connect the IBS wire harness connector. Make sure there is no stress on the wires (Figure 4).
18. Install and tightening the M8 negative battery cable eyelet nut to 16 N·m (12 ft. lbs.) (Figure 4).

NOTE: The M8 negative battery cable eyelet nut has a higher torque than the M6 battery cable clamp with IBS nut and can break the IBS free if the M6 nut is tightened first.

NOTE: Avoid rotating the IBS during tightening of the M8 nut in order to avoid contact between the wire harness connector receptacle and the battery.

19. Tighten the M6 battery cable clamp with IBS nut to 6 N·m (53 in. lbs.) (Figure 4).

Service Procedure [Continued]

20. Install a battery charger. Verify that the charging rate provides 13.0 to 13.5 volts. 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.

21. Connect the wiTECH micro pod II to the vehicle data link connector.
22. Place the ignition in the “**RUN**” position.
23. Open the wiTECH 2.0 website.
24. Enter your “**User id**” and “**Password**” and your “**Dealer Code**”, then select “**Sign In**” at the bottom of the screen. Click “**Accept**”.
25. From the “**Vehicle Selection**” screen, select the vehicle to be updated.
26. From the “Action Items” screen, select the “**Topology**” tab.
27. From the “**Topology**” tab, select the “**EPS**” module icon.
28. Select the “**Misc. Functions**” tab.
29. Select “**Clear Steering Pull Compensation**”.
30. Follow the screen prompts to complete the task.

Service Procedure [Continued]

31. Click “**View DTCs**”, select “**Clear All DTCs**”, click “**Continue**” and then click “**Close**”.
32. Place the ignition in the “OFF” position and then remove the wiTECH micro pod II device from the vehicle.
33. Remove the battery charger from the vehicle and close the hood.
34. Place the truck on an alignment rack and set the toe alignment per specifications published in DealerConnect Service Library. Tighten the tie rod end jam nuts to 90 N·m (66 ft. lbs.).

NOTE: Follow the alignment rack manufacturer’s instructions to complete the alignment.
35. Road test the vehicle to verify steering wheel is centered.
36. Return the vehicle to the customer or vehicle inventory.

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 numbers and time allowances:

	<u>Labor Operation Number</u>	<u>Time Allowance</u>
Inspect the ESP gear serial number (EPS gear not involved in recall)	19-VB-91-81	0.2 hours
Inspect and Replace the ESP gear (4x4) (includes toe set)	19-VB-91-82	1.3 hours
Inspect and Replace the ESP gear (4x2) (includes toe set)	19-VB-91-83	1.4 hours

Optional Equipment

Front Skid Plate	19-VB-91-60	0.1 hours
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Add the cost of the recall parts package plus applicable dealer allowance to your claim.

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.

Customer Services / Field Operations
FCA US LLC

IMPORTANT SAFETY RECALL

Electric Power Steering Gear

VB9/NHTSA 19E-077

Dear [Name],

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

FCA has decided that a defect, which relates to motor vehicle safety, exists in certain Electric Power Steering (EPS) gears intended for use on Ram 1500 Pickup vehicles.

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

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

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 Safety Recall VB9.

WHY DOES MY ITEM OF EQUIPMENT NEED REPAIRS?

FCA records indicate that you may have had an EPS gear replaced or purchased for your vehicle ^[1]. Some EPS gear assemblies may have been built with a contaminated circuit card assembly that may short circuit. A short in the control circuit components may result in an intermittent loss of power steering assist which may cause an inconsistent steering effort, especially during lower speed maneuvers. **Inconsistent steering effort can cause a vehicle crash without prior warning.**

HOW DO I RESOLVE THIS IMPORTANT SAFETY ISSUE?

FCA will exchange/replace your EPS gear ^[2] free of charge (parts and labor). To do this, your dealer will inspect the EPS gear serial number for involvement in this recall and all involved EPS gears will be either exchanged or replaced with an EPS gear that is not contaminated. We recommend that you schedule a service appointment to minimize your inconvenience. Please bring your EPS gear or vehicle with EPS gear installed and 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.