



June 2022

Dealer Service Instructions for:

Emissions Recall U90 Catalyst Efficiency

Remedy Available

2016 (KL) Jeep® Cherokee

NOTE: This recall applies only to the above vehicles equipped with a 2.4L Engine (Sales Codes ED6, ED8 or EDD).

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 vehicle inventory. Dealers should complete this recall service on these vehicles before retail delivery. Involved vehicles can be determined by using the VIP inquiry process.

Subject

About 82,588 of the above vehicles may exceed tailpipe emission standards due to a loss of catalyst CO/NO_x conversion efficiency resulting from the catalyst operating at high temperatures.

Repair

Install a new catalyst and reprogram the Powertrain Control Module (PCM) and Transmission Control Module (TCM) with the latest software.

Parts Information

<u>Part Number</u>	<u>Description</u>
CEZGU901AA	Campaign Kit

Each package contains the following components:

<u>Quantity</u>	<u>Description</u>
6	Bolt, Manifold to Engine Cylinder Head M10x1.25x30.00
2	Nut, Manifold to Engine Cylinder Head M10x1.25
2	Nut, Maniverter to Exhaust Pipe Flange M8x1.25
1	O2 Sensor – Mid-bed / Downstream
1	Gasket, Maniverter Outlet
3	Nut, Maniverter Upper Heat Shield
2	Bolt, Maniverter Upper Heat Shield
1	Bolt, Maniverter Bracket to Engine M8x1.25x25.00

Parts Information [Continued]

<u>Part Number</u>	<u>Description</u>
CEZGU906AA	Upstream O2 Sensor

<u>Part Number</u>	<u>Description</u>
CEZGU905AA	Campaign Kit (Gasket and Heat Shield)

Each package contains the following components:

<u>Quantity</u>	<u>Description</u>
1	Upper Heat Shield
1	Gasket, Exhaust Manifold

<u>Part Number</u>	<u>Description</u>
CEZGU902AB	Campaign Kit (Maniverter)

Each package contains the following components:

<u>Quantity</u>	<u>Description</u>
1	Maniverter
2	Bolts, Maniverter to Outlet Bracket M8X1.25X25.00
1	Bracket, Maniverter to Outlet

Service Procedure

A. Replace Maniverter (Manifold / Catalytic Converter)

1. Position the vehicle on a lift.
2. Raise and support the vehicle.
3. If equipped, remove and **SAVE** the fasteners securing the engine belly pan (Figure 1).
4. If equipped, remove and **SAVE** the engine belly pan (Figure 1).

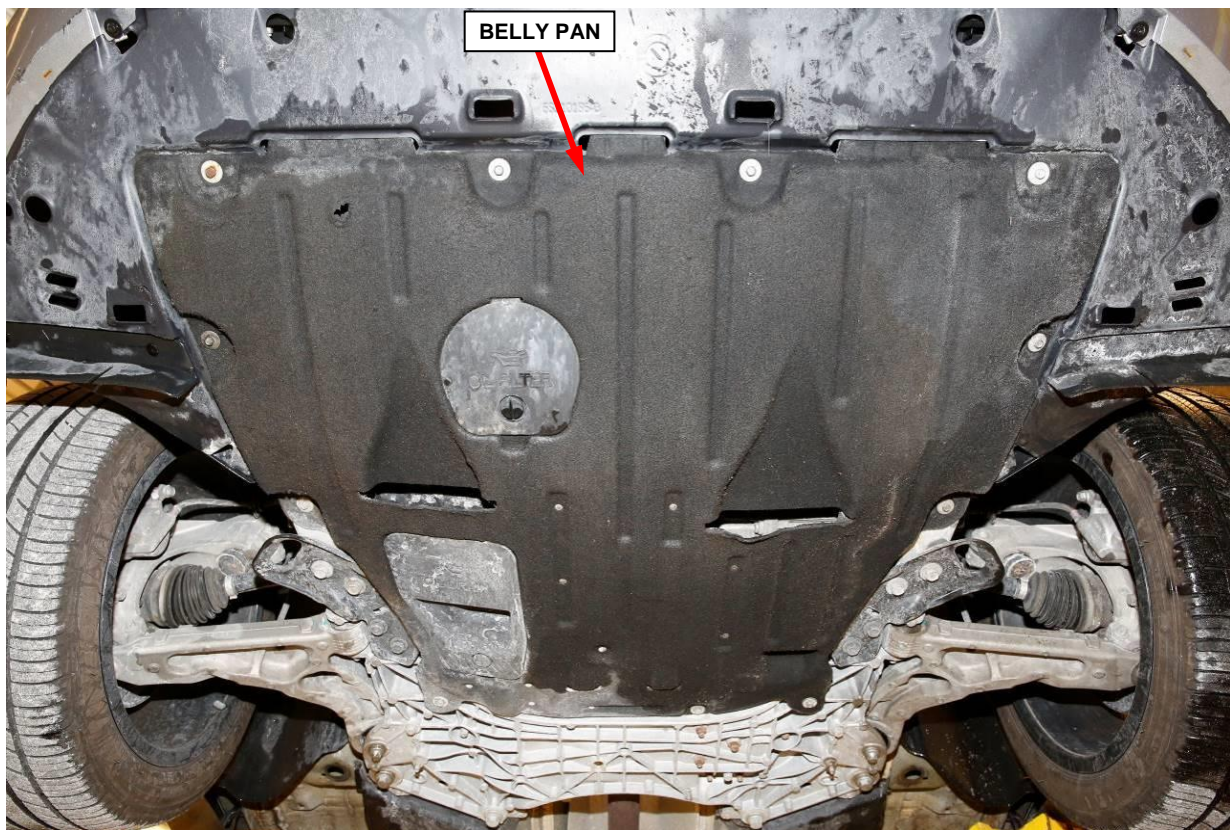


Figure 1 – Engine Belly Pan

Service Procedure [Continued]

WARNING: The maniverter and exhaust pipes become very hot during engine operation. Allow engine to cool before removing exhaust system components. Failure to allow engine to cool before removal may result in personal injury caused by burns.

- Remove and **SAVE** the bolt securing the exhaust crossunder pipe support bracket to the transmission (Figure 2).

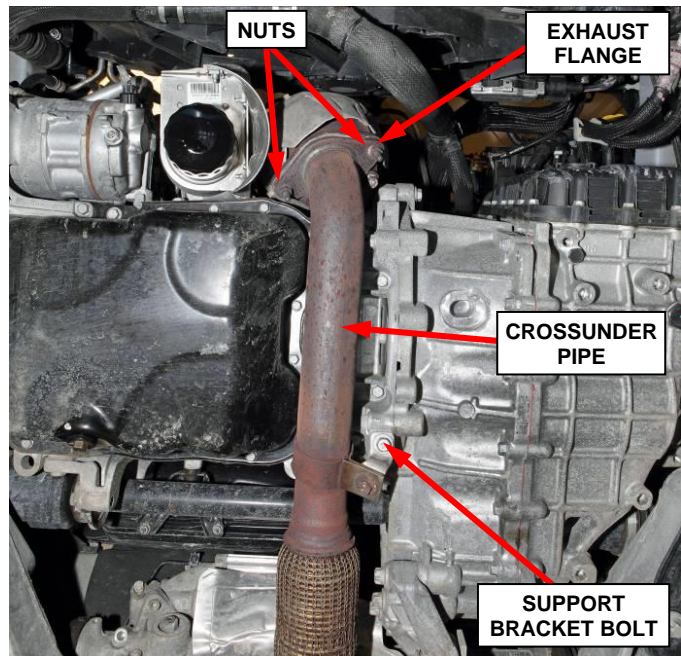


Figure 2 – Crossunder Pipe

- Remove the and **DISCARD** the two nuts securing the exhaust flange crossunder pipe to the maniverter (Figure 2).

- Disconnect the exhaust crossunder pipe from the maniverter and support the exhaust crossunder pipe to prevent damage to the flex joint (Figure 3).

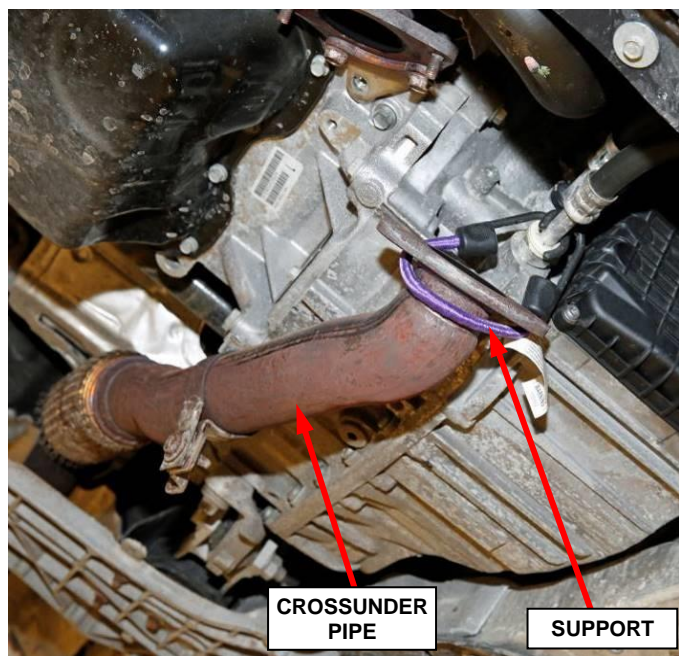


Figure 3 – Support Crossunder Pipe

Service Procedure [Continued]

8. Remove the and **SAVE** the bolt securing the maniverter lower support bracket to the engine oil pan (Figure 4).
9. Remove the and **DISCARD** the two bolts securing the maniverter lower support bracket to the maniverter and **DISCARD** the support bracket (Figure 4).

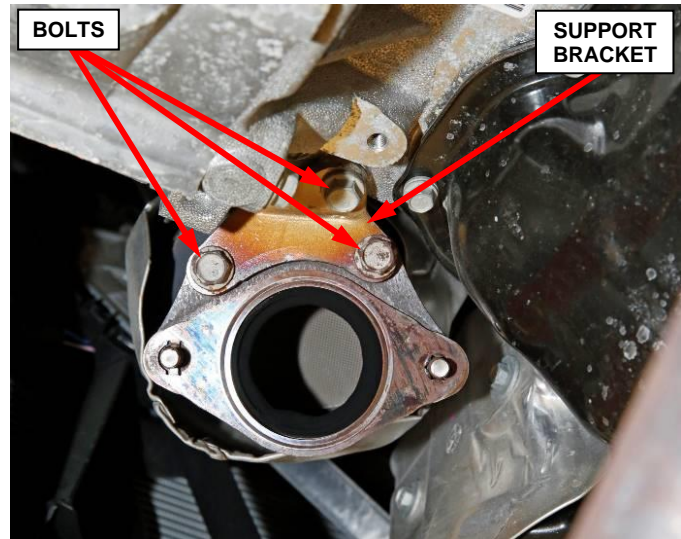


Figure 4 – Maniverter Support Bracket

10. Lower the vehicle.

11. Remove push pin fasteners then remove closeout panel (Figure 5).

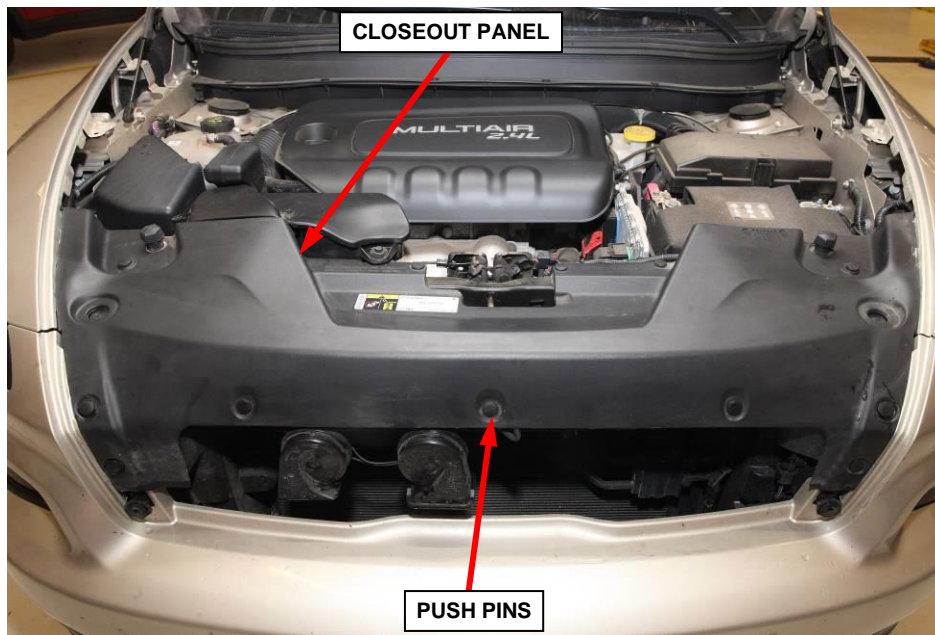


Figure 5 – Closeout Panel

Service Procedure [Continued]

12. Remove one bolt and release air duct resonator assembly from the two push pin grommets, then remove the air duct resonator assembly from the vehicle (Figure 6).

NOTE: Air duct resonator assembly is slotted to slide onto the push pin grommets. It is not necessary to remove the push pin grommets.

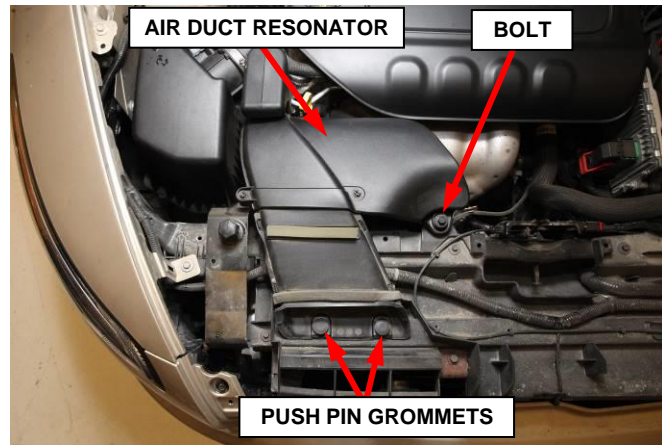


Figure 6 – Air Duct Resonator

13. Release the engine cover from the ball studs if applicable or remove and **SAVE** the four fasteners if applicable, then remove and **SAVE** the engine cover (Figure 7).

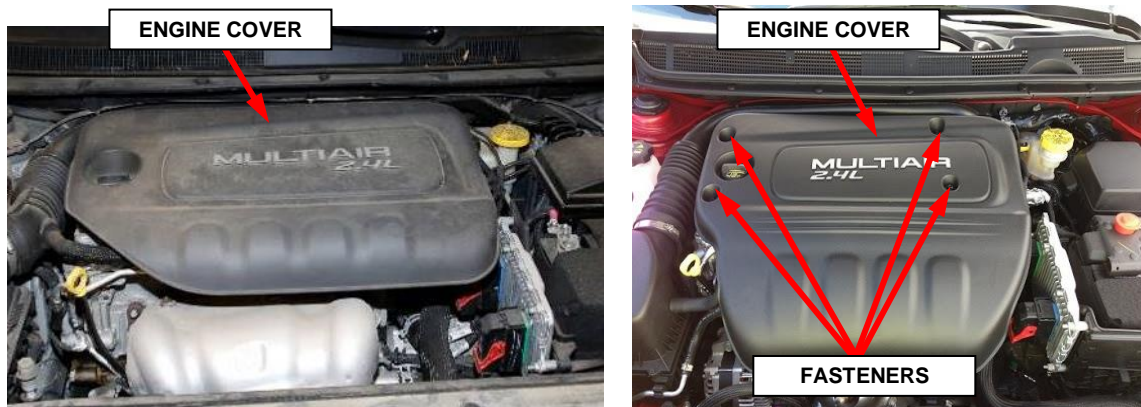


Figure 7 – Engine Cover

14. Disconnect and isolate the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), disconnect the IBS connector first before disconnecting the negative battery cable.

Service Procedure [Continued]

15. Disconnect the upstream oxygen sensor and downstream oxygen sensor wire harness connectors (Figure 8).

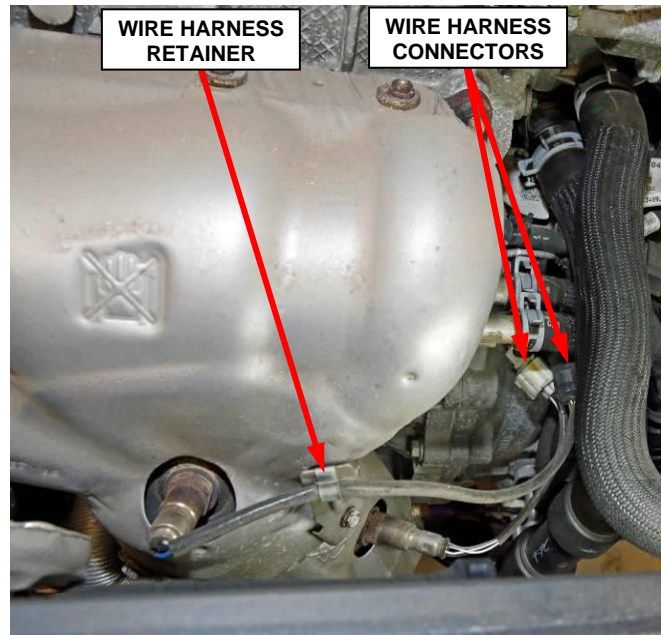


Figure 8 – Oxygen Sensors Electrical

16. Remove and **DISCARD** the two upper heat shield bolts and if applicable, **SAVE** the oxygen sensor wire harness retainer bracket (Figure 9).

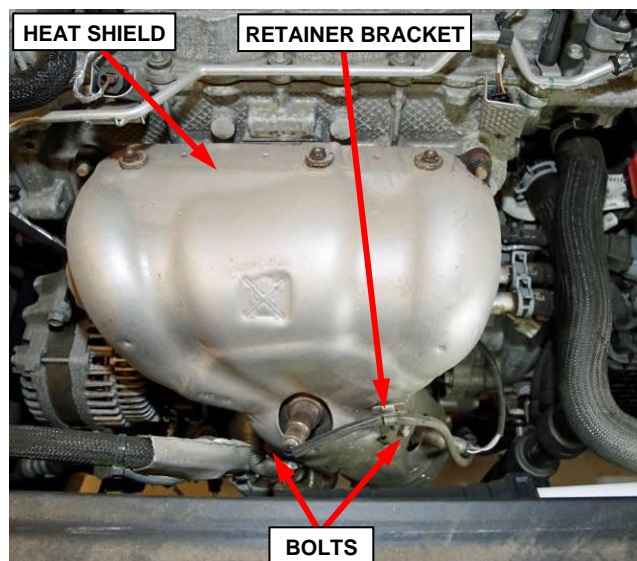


Figure 9 – Maniverter Heat Shield

Service Procedure [Continued]

CAUTION: Use care when removing the bolts that secure the maniverter to the engine cylinder head. Aluminum cylinder head fastener threads are susceptible to damage if the bolts are not removed with care. Use hand tools **ONLY**.

NOTE: Use compressed air or other method to clean loose debris away from exhaust manifold before removal.

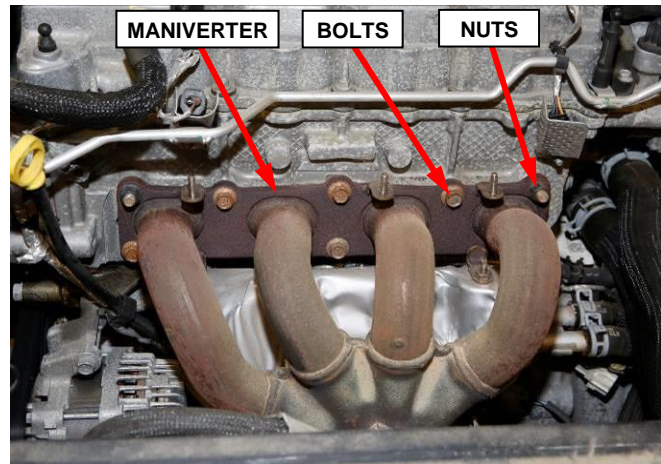


Figure 10 – Maniverter to Engine

17. Remove the fasteners, six bolts and two nuts, securing the maniverter to the engine cylinder head (Figure 10).

NOTE: Pay attention to the bolts for signs of thread loss or bolt breakage as they are removed and note which hole they came from (Figure 11).

18. Inspect the bolts and bolt holes for any signs of thread loss then **DISCARD** the bolts (Figure 11).

- If bolt holes do not show signs of thread loss, proceed to **Step 21**.
- If bolt holes show signs of thread loss, continue with **Step 19**.
- If a bolt is broken off in the hole, proceed to **Step 20**.

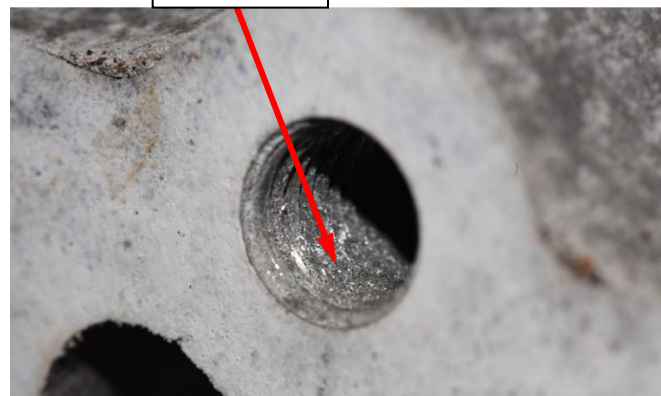


Figure 11 – Inspect for Thread Loss

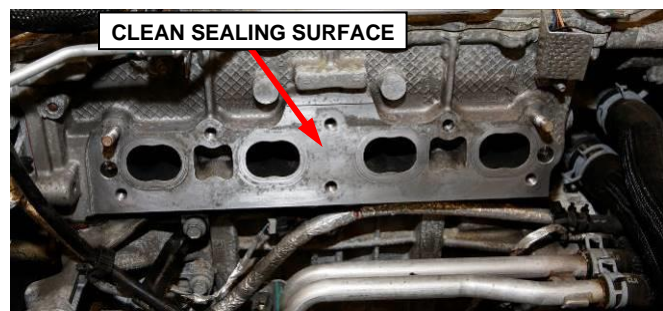
Service Procedure [Continued]

19. If thread loss is suspected, use compressed air to remove any debris from the suspect bolt hole. With the old maniverter and gasket still in place on the engine head, install a **NEW** exhaust manifold bolt in the suspect hole and tighten the bolt to 34 N·m (25 ft. lbs.) to determine if proper torque can be achieved.
 - If the bolt is able to be tightened to 34 N·m (25 ft. lbs.), no further action is required. Remove the bolt and proceed to **Step 21**.
 - If the bolt hole threads are stripped allowing the bolt to rotate, unable to achieve proper torque, remove the bolt and continue with **Step 20**.
20. For stripped hole(s) or broken bolt(s), submit a collateral damage claim to obtain authorization for installing a helicoil in the damaged hole(s). Remove the maniverter and gasket following **Steps 21 - 23**. Then use the special tool **2073500090 - Kit, Cylinder Head Thread Repair - 2.4L MAIR** to perform the helicoil thread repair operation by following the service instructions published in **DealerCONNECT / Service Library / Engine, 2.4L Multiair / Standard Procedure / Exhaust Manifold Fastener Hole Repair**. After the damaged bolt hole(s) have been repaired with helicoil(s), proceed with **Step 24**.

21. Remove the maniverter out the top of the engine compartment and retain the maniverter for core return.

**Figure 12 – Maniverter Gasket**

22. Remove and **DISCARD** the exhaust manifold gasket (Figure 12).

**Figure 13 – Clean Sealing Surface**

23. Clean the exhaust manifold gasket sealing area of the engine cylinder head (Figure 13).

Service Procedure [Continued]

24. **DO NOT APPLY SEALER.** Install a **NEW** exhaust manifold gasket onto the cylinder head, taking care that the arrow shown in the figure is pointing downwards (Figure 14).

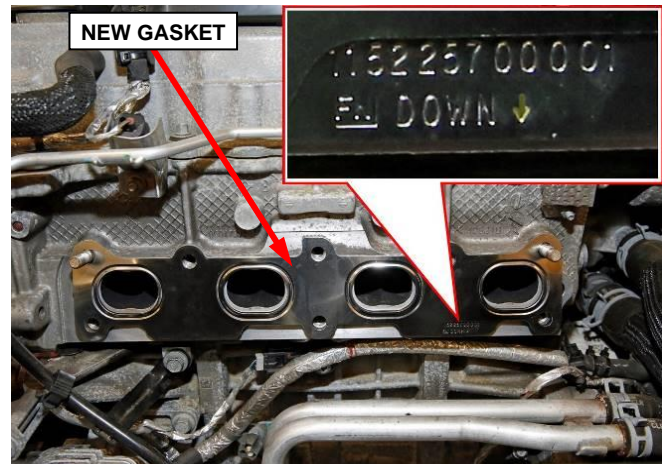


Figure 14 – Install New Gasket

25. Install the **NEW** maniverter through the top of the engine compartment. Set the maniverter into position (Figure 15).

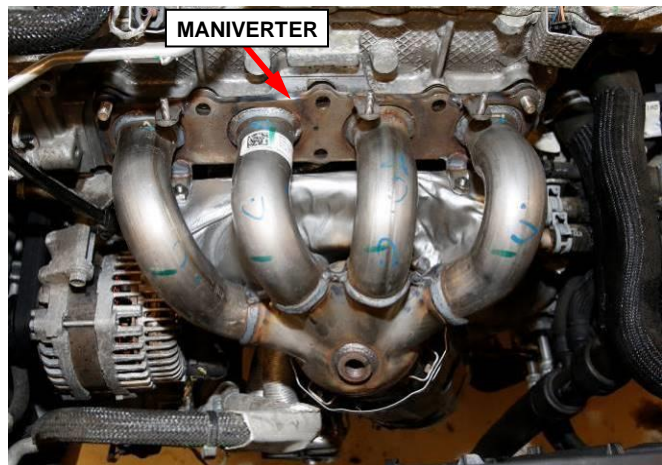


Figure 15 – Install New Gasket

26. Install the **NEW** maniverter bolts and nuts. Following the torque sequence, tighten the maniverter fasteners to 34 N·m (25 ft. lbs.) (Figure 16).

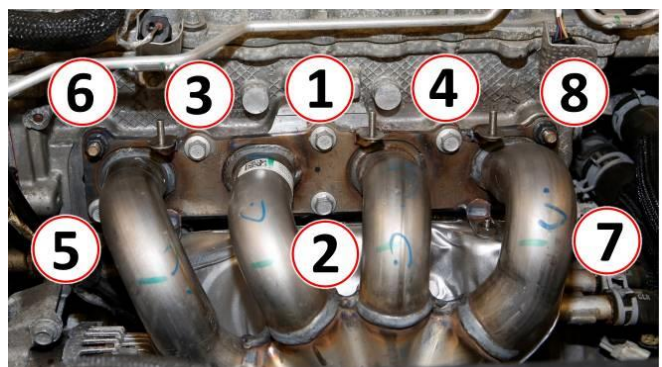
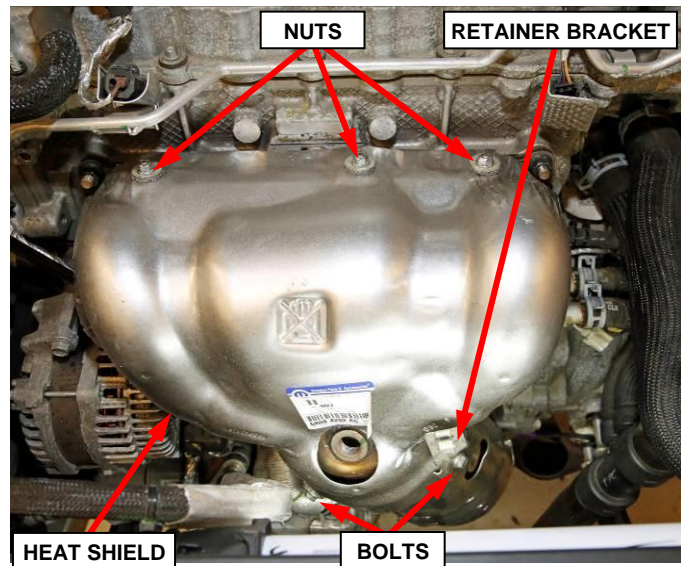


Figure 16 – Torque Sequence

Service Procedure [Continued]

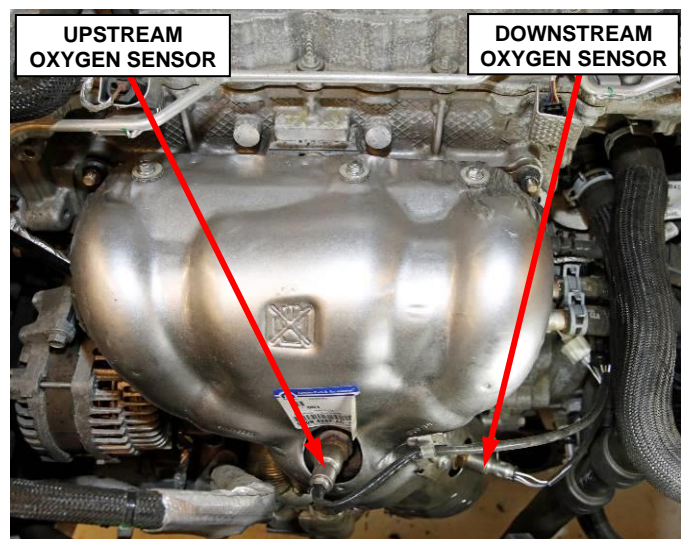
27. Install the **NEW** upper heat shield to the maniverter (Figure 17).
28. If applicable, position the wire harness retainer to the heat shield (Figure 17).
29. Install the two **NEW** heat shield bolts. Tighten the heat shield bolts to 12 N·m (8 ft. lbs.) (105 in. lbs.) (Figure 17).

**Figure 17 – Maniverter Heat Shield**

30. Install the three **NEW** heat shield nuts. Tighten the heat shield nuts to 12 N·m (8 ft. lbs.) (105 in. lbs.) (Figure 17).

NOTE: Threads of new oxygen sensors are factory coated with anti-seize compound to aid in removal. DO NOT add any additional anti-seize compound to threads of a new oxygen sensor.

31. Install the **NEW** upstream oxygen sensors with black connector and **NEW** downstream oxygen sensors with white connector to the mainverter. Tighten the oxygen sensors to 29 N·m (36 ft. lbs.) (Figure 18).

**Figure 18 – Oxygen Sensors**

Service Procedure [Continued]

32. sensor and downstream oxygen sensor wire harness connectors (Figure 19).

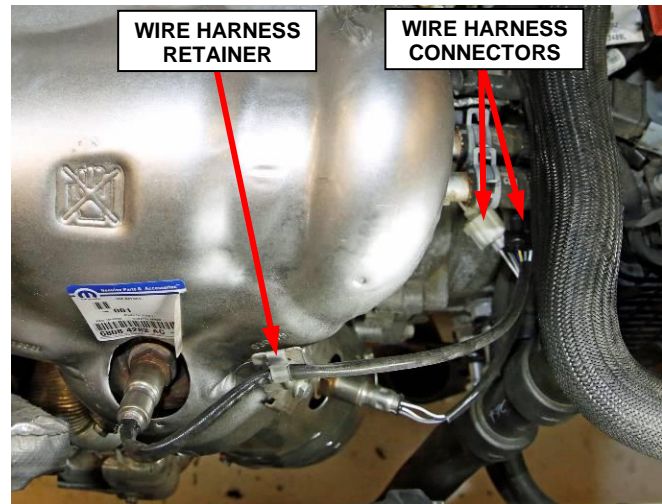


Figure 19 – Oxygen Sensors Electrical

33. Connect the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), Connect the IBS connector after connecting the negative battery cable.

34. Position the engine cover onto the ball studs. Using hands only, press down on the top of the engine cover to engage the ball studs (Figure 7).

35. Install the air duct resonator assembly to the two push pin grommets on the vehicle (Figure 6).

36. Install the closeout panel and push pin fasteners (Figure 5).

37. Close the hood.

38. Raise and support the vehicle.

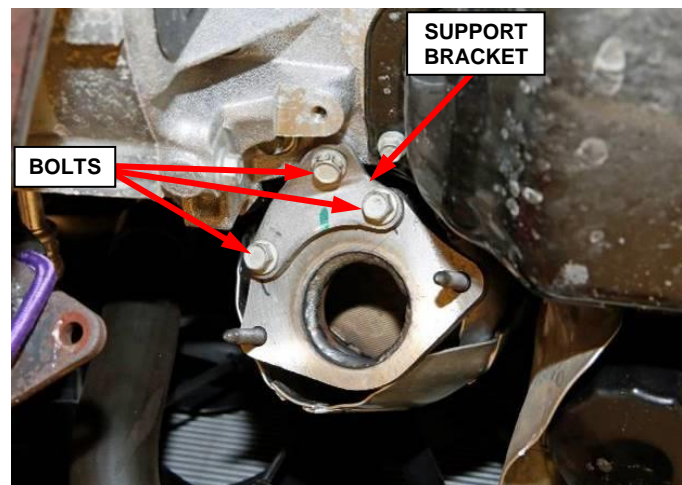


Figure 20 – Maniverter Outlet Bracket

39. Install the **NEW** catalytic converter lower support bracket to the engine oil plan using the bolt saved from the removal step. Do not tighten the bolt at this time (Figure 20).

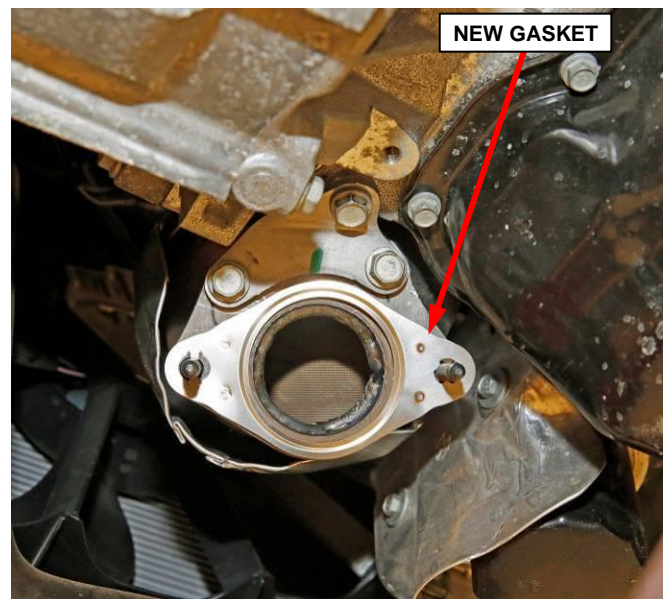
Service Procedure [Continued]

40. Install two **NEW** bolts securing the lower support bracket to the catalytic converter. Tighten all three catalytic converter lower support bracket bolts to 20 N·m (15 ft. lbs.) (Figure 20).

41. Clean the exhaust crossunder pipe flange sealing surface (Figure 21).

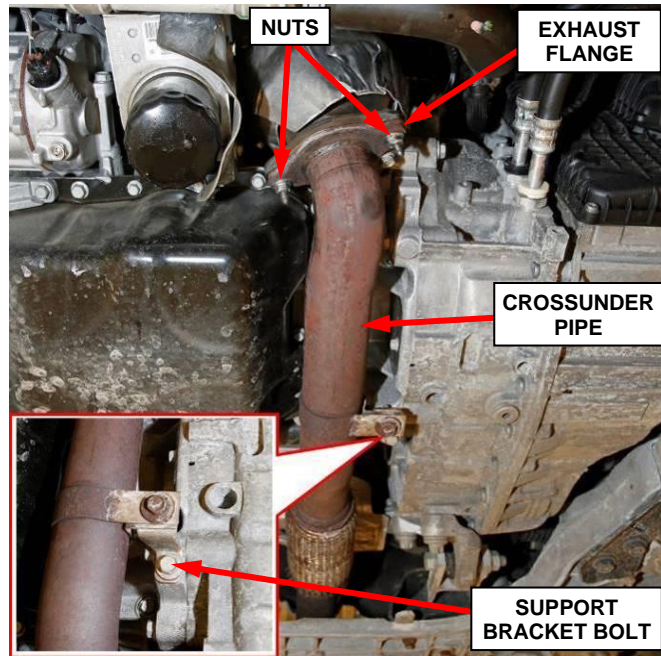
**Figure 21 – Crossunder Pipe Flange**

42. Install the **NEW** exhaust flange gasket to the manifold (Figure 22).

**Figure 22 – Exhaust Flange Gasket**

Service Procedure [Continued]

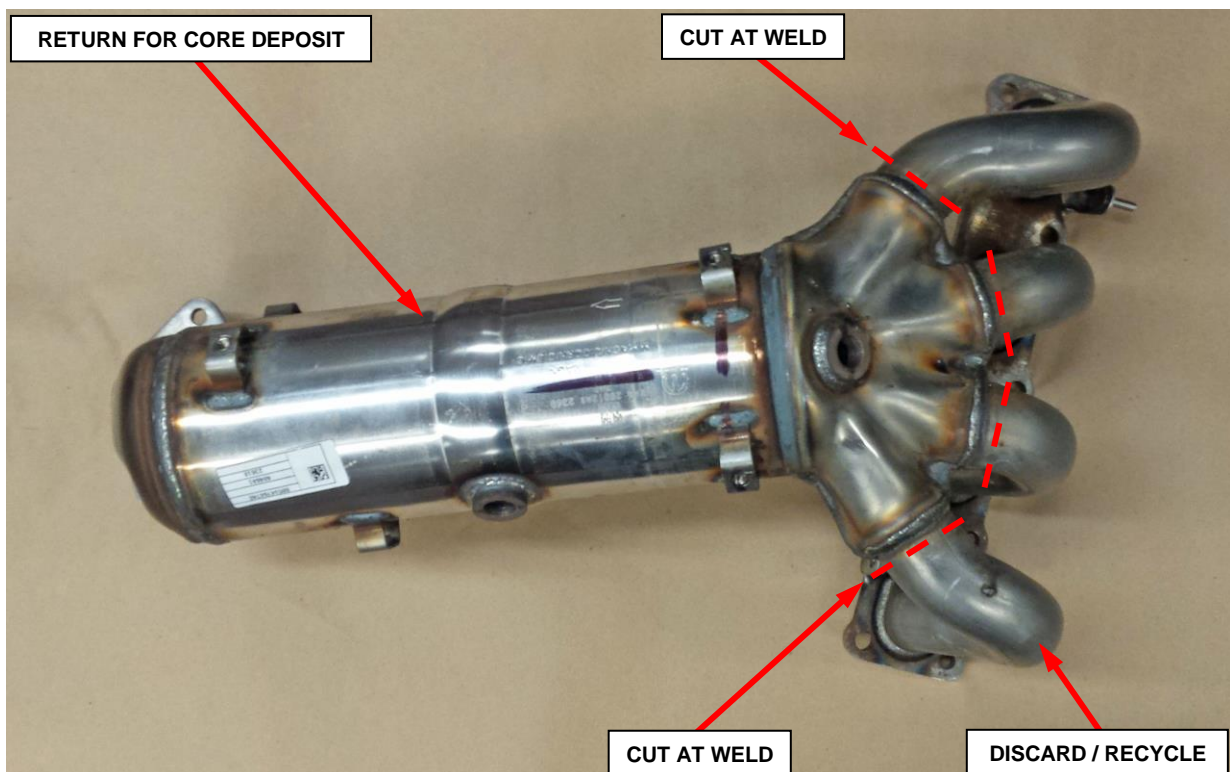
43. Position the exhaust crossunder pipe to the catalyst flange (Figure 23).
44. Install the two **NEW** nuts securing the exhaust flange crossunder pipe to the maniverter. Tighten the nuts to 19 N·m (14 ft. lbs.) (Figure 23).
45. Install the bolt securing the exhaust crossunder pipe support bracket to the transmission. Tighten the bolt to 20 N·m (15 ft. lbs.) (Figure 23).

**Figure 23 – Crossunder Pipe**

46. If equipped, position the engine belly pan to the underside of the vehicle (Figure 1).
47. If equipped, install the fasteners securing the engine belly pan. Tighten the fasteners securely (Figure 1).
48. Lower the vehicle.
49. Initialize the steering. Start the engine, then turn the steering wheel from one lock to the other and then turn it back into the center position. Turn the engine off.
50. Proceed to **Section B. Prepare Maniverter for Core Return.**

Service Procedure [Continued]**B. Prepare Maniverter For Core Return**

1. Removal of upper rear heat shield may improve access for cutting of runner pipes. Removal of heat shields and oxygen sensors are not required for catalyst recycling core return credit.
2. Cut the four runner pipes from the maniverter as close to the weld seam as possible (Figure 24).
3. Separate the manifold portion from the catalyst. Discard/recycle the manifold portion and return the catalyst portion for core return credit (Figure 24).
4. Proceed to **Section C. Reprogram the ECM and TCM with the Latest Software**

**Figure 24 – Maniverter Cut/Remove Pipes**

Service Procedure

C. Reprogram the ECM and TCM with the Latest Software

NOTE: The wiTECH scan tool must be used to perform this recall. If the reprogramming flash for the PCM or TCM is aborted or interrupted, repeat the procedure.

CAUTION: Both the PCM and TCM software must be at the latest software calibration level after completing this recall. Failure to do so may result in undesirable transmission shift quality. First the PCM must be reprogrammed; second the TCM must be programmed.

1. Open the hood and install a battery charger. 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 MicroPod 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.

Service Procedure [Continued]

7. From the “**Action Items**” screen, select the “**Topology**” tab.
8. From the “**Topology**” tab, select the “**PCM**” module icon.
9. From the “**Flash**” tab, compare the “**Current Electronic Control Unit (ECU) Part Number**” with the “**New ECU Part Number**” listed.
 - If the “**Current ECU part Number**” is the same as the “**New Part Number**”, proceed to **Step 15**.
 - If the “**Current ECU part Number**” is NOT the same as the “**New Part Number**”, continue with **Step 10**.
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. Confirm the software is at the latest available calibration level.
14. Click “**View DTCs**”, select “**Clear All DTCs**”, click “**Continue**” and then click “**Close**”.
15. From the “**Action Items**” screen, select the “**Topology**” tab.
16. From the “**Topology**” tab, select the “**TCM**” module icon.

Service Procedure [Continued]

17. From the “Flash” tab, compare the “**Current Electronic Control Unit (ECU) Part Number**” with the “**New ECU Part Number**” listed.
 - If the “**Current ECU part Number**” is the same as the “**New Part Number**”, proceed to **Step 22**.
 - If the “**Current ECU part Number**” is NOT the same as the “**New Part Number**”, continue with **Step 18**.

18. From the TCM tab, select the TCM flash part number. Read the flash special instructions page. Select “**OK**” to continue.

19. From the flash ECU agreement page, agree to terms by checking the box.

20. Select “**Flash ECU**” and then follow the wiTECH screen instructions to complete the flash.

21. Confirm the software is at the latest available calibration level.

22. Click “**View DTCs**”, select “**Clear All DTCs**”, click “**Continue**” and then click “**Close**”.

23. Using wiTECH, navigate to the TCM data and locate the transmission fill and fast fill counters.
 - **If all counters have a value greater than zero**, proceed to **Step 25**.
 - **If all counters have a value equal to zero**, continue with “**Quick Learn**” **Step a**.

Service Procedure [Continued]

- a. Select the **“Quick Learn”** procedure then follow the on-screen instructions to reset and learn the clutch adaptive values.

NOTE: If the “Quick Learn” option does not appear on wiTECH and both the TCM and PCM were just updated, restart the wiTECH application which should now be populated with the “Quick Learn” option.

NOTE: If the vehicle is equipped with the start/stop feature (sales code XBU) it must be disabled prior to performing the quick learn procedure. To disable, press the on/off switch located on the center switch bank near the HVAC controls.

- b. Click **“View DTCs”**, select **“Clear All DTCs”**, click **“Continue”** and then click **“Close”**.
-
25. Place the ignition in the **“OFF”** position and then remove the wiTECH MicroPod II device from the vehicle.
 26. Remove the battery charger from the vehicle.
 27. Proceed to **Section D. Complete Proof of Correction Form for California Residents.**

Service Procedure (Continued)**D. Complete Proof of Correction Form for California Residents:**

This recall 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 recall 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 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>
Replace the Catalyst, Inspect that the PCM and TCM Software is currently at the Latest Released Level.	09-U9-01-82	1.3 hours
Replace the Catalyst, Inspect the PCM and TCM Software, Reprogram PCM Only.	09-U9-01-83	1.5 hours
Replace the Catalyst, Inspect the PCM and TCM Software, Reprogram TCM Only.	09-U9-01-84	1.4 hours
Replace the Catalyst, Inspect and Reprogram PCM and TCM with Latest Released Level Software	09-U9-01-85	1.6 hours

Related Operations

Perform Transaxle Quick Learn	09-U9-01-50	0.4 hours
Remove pipe from catalyst for core return up to \$3 reimbursement per vehicle for cutting supplies, bill as NPN	09-U9-01-52	0.2 hours

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

This notice applies to your vehicle,

[Model Year and Model]

VIN XXXXXXXXXXXXXXXXXXXX

U90

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 Emissions Recall

U90

IMPORTANT EMISSIONS RECALL

Catalyst Efficiency

Dear [Name],

FCA US LLC, has determined that certain [2016 Model Year (KL) Jeep® Cherokee] vehicles equipped with a 2.4L engine may release air pollutants which exceed tailpipe emission standards.

WHY DOES MY VEHICLE NEED REPAIRS?

Your vehicle ^[1] may exceed tailpipe emission standards due to a loss of catalyst CO/NOx conversion efficiency resulting from the catalyst operating at high temperatures.

HOW DO I RESOLVE THIS IMPORTANT EMISSIONS ISSUE?

FCA will repair your vehicle ^[2] free of charge (parts and labor). To do this, your dealer will reprogram the Powertrain Control Module (PCM) and Transmission Control Module (TCM) with the latest software. In addition, your dealer will install a new catalyst. The estimated repair time is 2 hours. 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 repairs prior to vehicle registration renewal. Your dealer will provide you with a Vehicle Emission Recall Proof of Correction Form after the Emission Recall 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 Emission Recall 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 recall 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.