February 2018

Dealer Service Instructions for:

Safety Recall T51 / NHTSA 17V-562
Diesel Water Pump

Models

2013-2017	**(DJ) RAM 2500 Pickup**
2013-2017	**(D2) RAM 3500 Pickup**
2013-2017	**(DD) RAM 3500 Cab Chassis**
2016-2017	**(DF) RAM 3500 10K lb. Cab Chassis**
2013-2017	**(DP) RAM 4500/5500 Cab Chassis**

NOTE: This recall applies only to the above vehicles equipped with a 6.7L I6 Cummins Turbo Diesel Engine ***(sales code ETK)*** *built from October 24, 2012 through February 27, 2017* ***(MDH 102404 through 022723)***.

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 water pump on about 444,000 of the above vehicles may experience a failure resulting in an engine compartment fire. An engine compartment fire may result in an increased risk of injury to motor vehicle occupants or persons outside the vehicle.

Repair

The water pump must be inspected and replaced if required.

Parts Information

Part Number	Description
CS2HT511AA	**Package, Water Pump (OMP)**

Each package contains the following components:

Quantity	Description
1	Water Pump
1	O-Ring Seal

or

Part Number	Description
CS2HT512AA	**Package, Water Pump (Concentric)**

Each package contains the following components:

Quantity	Description
1	Water Pump
1	O-Ring Seal

68163849AB	**Coolant, if required (MS12106) (MSQ of 4)**

NOTE: The CS2HT511AA water pump is produced by a different manufacturer than the CS2HT512AA water pump.

NOTE: The CS2HT511AA water pump will fit and function equal to the CS2HT512AA water pump, although their appearance is different.

NOTE: Mopar may substitute a CS2HT511AA or CS2HT512AA water pump order depending on parts availability.

Parts Return

No parts return required for this campaign.

Special Tools

The following special tool is required to perform this repair:

- 399-550000 UView Airlift™ Cooling System Refill
- 8286 Refractometer

Service Procedure

A. Inspect Water Pump

1. Open the hood.

NOTE: Water pump housing configurations may vary depending on manufacturer. Water pumps produced by OMP will have unique characteristics as shown in Figure 2.

2. Inspect the water pump for manufacturer. **Is the water pump produced by OMP?** (Figure 1 and 2)

   - Yes, close the hood and return the vehicle to the customer.

   - No, the vehicle is equipped with a Concentric water pump, continue with **Step 3.**

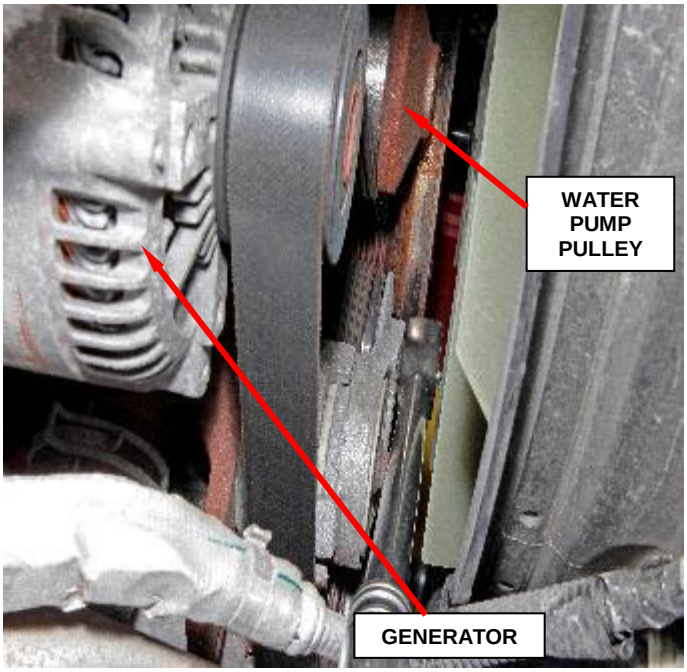

Figure 1 - Water Pump Location

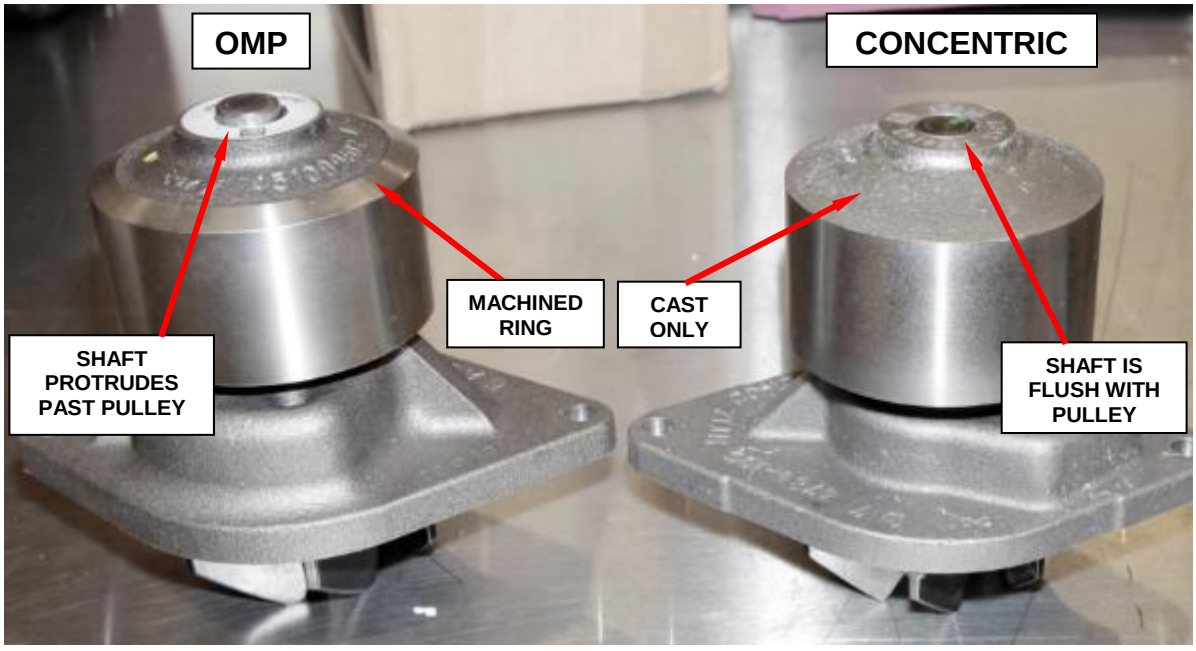

Figure 2 – OMP vs Concentric Water Pump

Service Procedure (Continued)

3. Inspect the Concentric water pump for a vent hole (Figure 3).

   NOTE: The vent hole, if equipped, is located on the front surface of the water pump housing at approximately the 10 O'clock position behind the water pump pulley (Figure 3).

4. Does the Concentric water pump have a vent hole?

   - Yes, close the hood and return the vehicle to the customer.
   - No, continue with section **B. Replace Water Pump**.

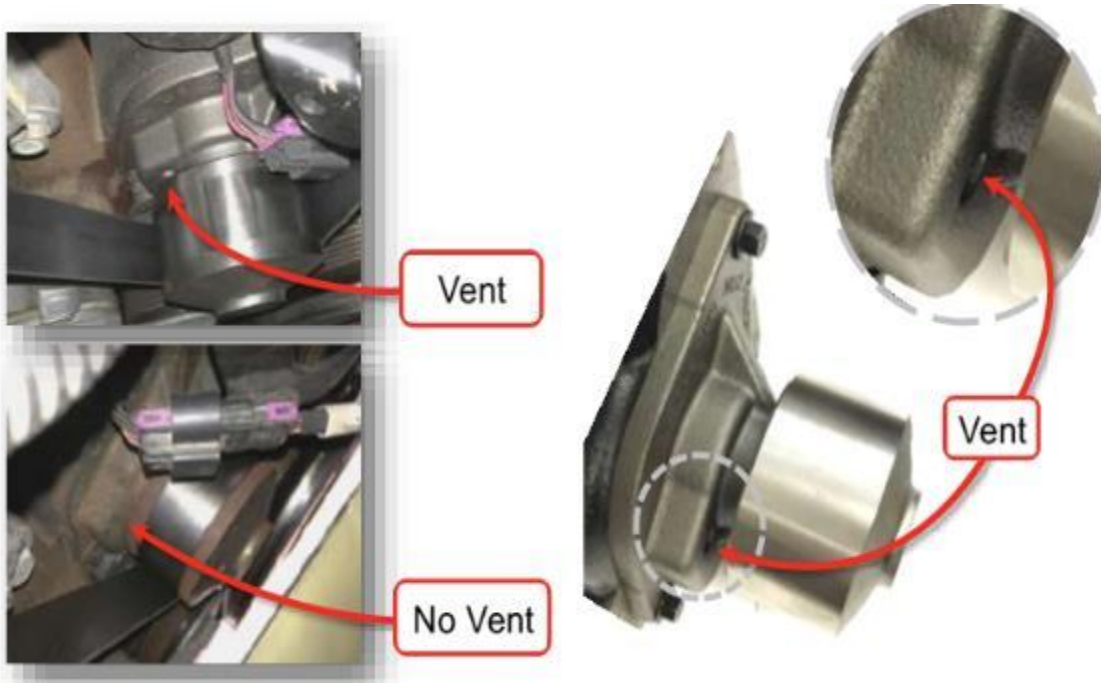

Figure 3 – Inspect for a Vent Hole (Concentric Only)

Service Procedure (Continued)

B. Replace Water Pump

1. Disconnect and isolate both negative battery cables.

2. Use the following steps to drain the cooling system.

   WARNING: Do not remove the cylinder block drain plugs or loosen the radiator drain plug with system hot and under pressure. Serious burns from coolant can occur.

   NOTE: For 2013 MY, the Cab Chassis models are equipped with dual radiators.

   a. Do not remove the pressure cap when draining coolant from pressurized coolant bottle.

   b. Remove and save the power steering reservoir mounting bolt and position the reservoir to the side (Figure 4).

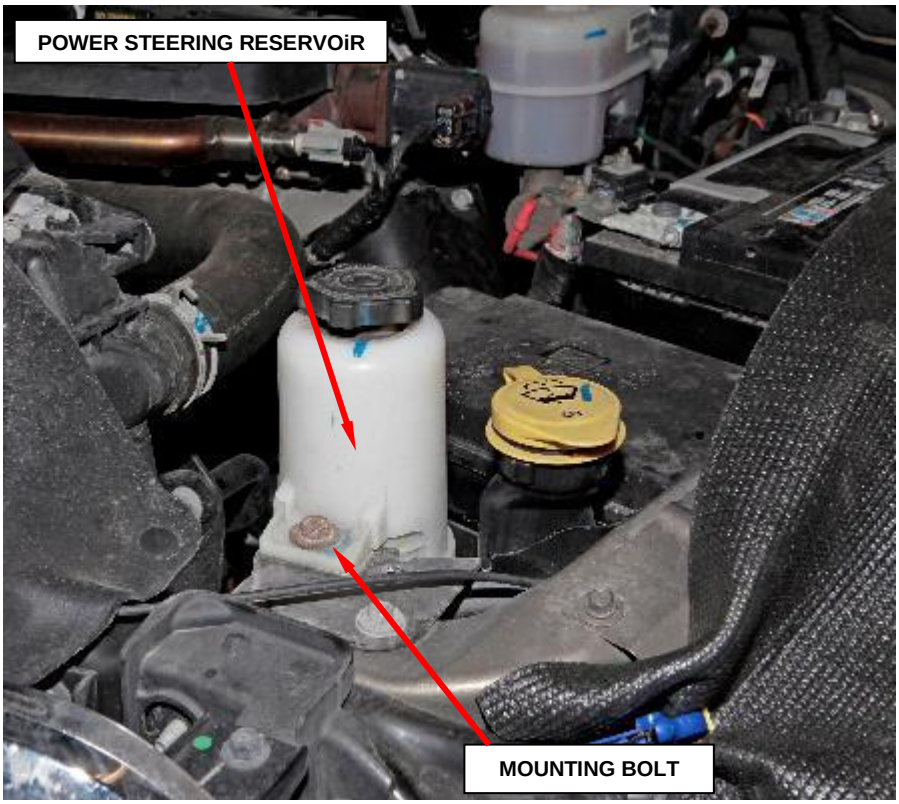

Figure 4 – Power Steering Reservoir

Service Procedure (Continued)

c. Thoroughly clean a drain pan to avoid coolant contamination.

d. Position a drain pan under the primary radiator draincock.

e. Attach a clean drain hose and open the radiator primary draincock located on left side of radiator and drain the radiator. **Save the coolant for inspection** (Figure 5).

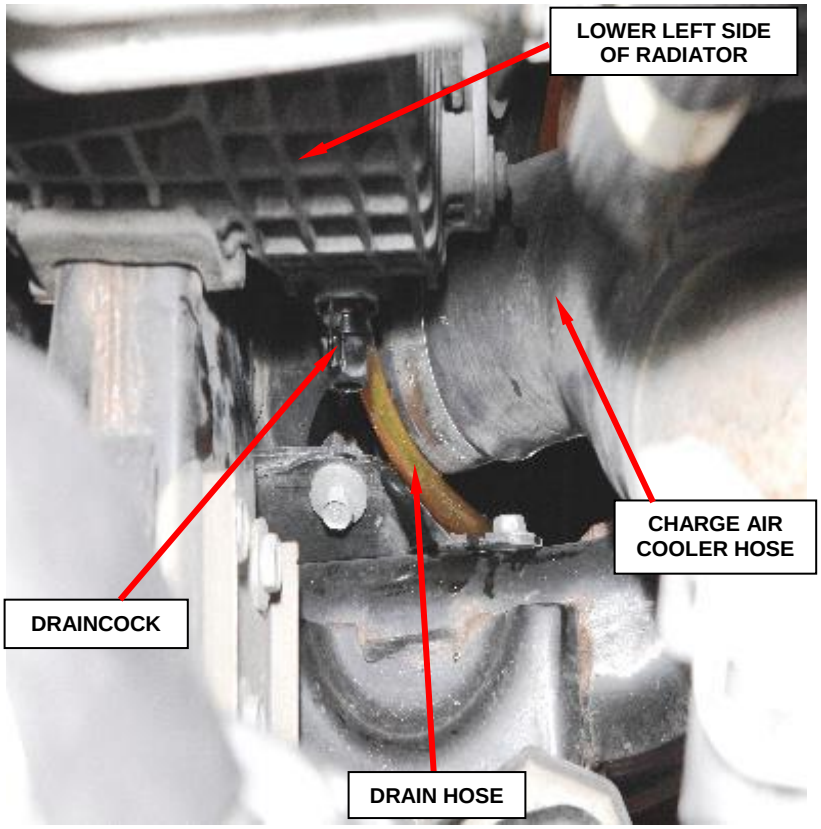

Figure 5 – Primary Radiator Draincock

f. If necessary, open the secondary radiator drain located on right side of secondary radiator access through front bumper.

g. When the pressurized coolant bottle is empty, remove pressure cap.

h. Remove the drain hose(s) and close the radiator draincock(s).

Service Procedure (Continued)

3. Remove the air cleaner body and the turbocharger inlet tube.

   a. Remove the intake air housing bolt (Figure 6).

   b. Disconnect the Mass Air Flow (MAF) sensor wire harness connector (Figure 7).

   c. Disconnect the Temperature/Barometric Pressure Sensor (TBAP) sensor wire harness connector (Figure 7).

   d. Release the upper wire harness retaining clip from the air cleaner body (Figure 7).

   e. Loosen the clamp and disconnect the turbocharger inlet tube from the air cleaner body (Figure 7).

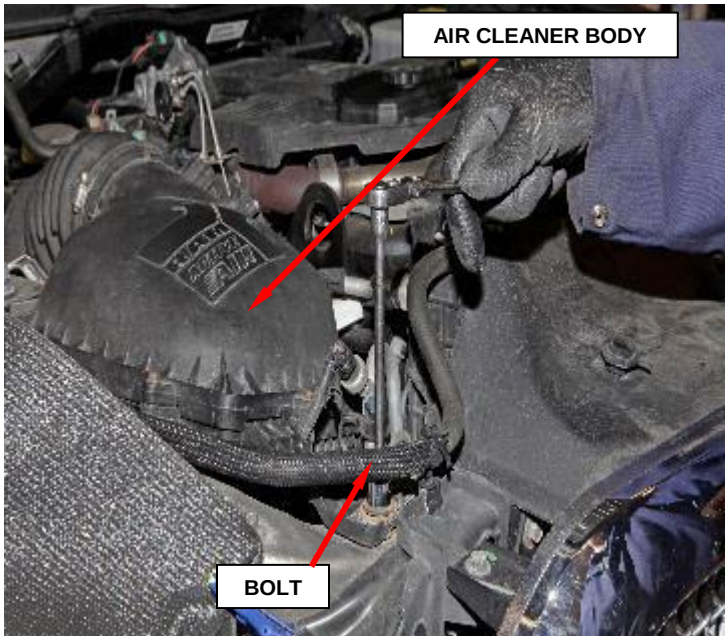

Figure 6 - Air Cleaner Body Bolt

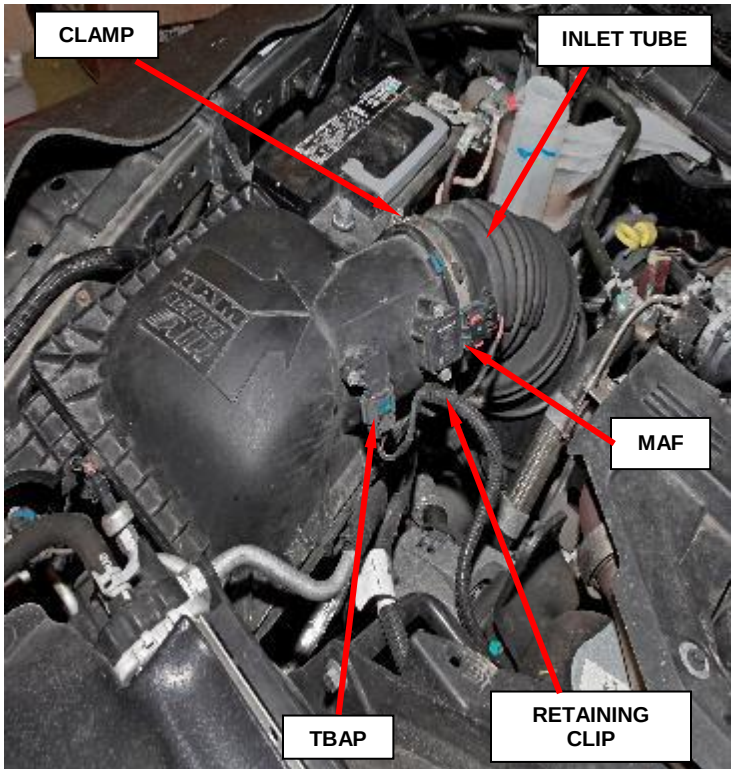

Figure 7 – Air Cleaner Body

Service Procedure (Continued)

f. Lift the air cleaner body to access the ram air actuator wire harness connector.

g. Disconnect the ram air actuator wire harness connector (Figure 8).

h. Release the lower wire harness retaining clip from the air cleaner body and remove the air cleaner body (Figure 8).

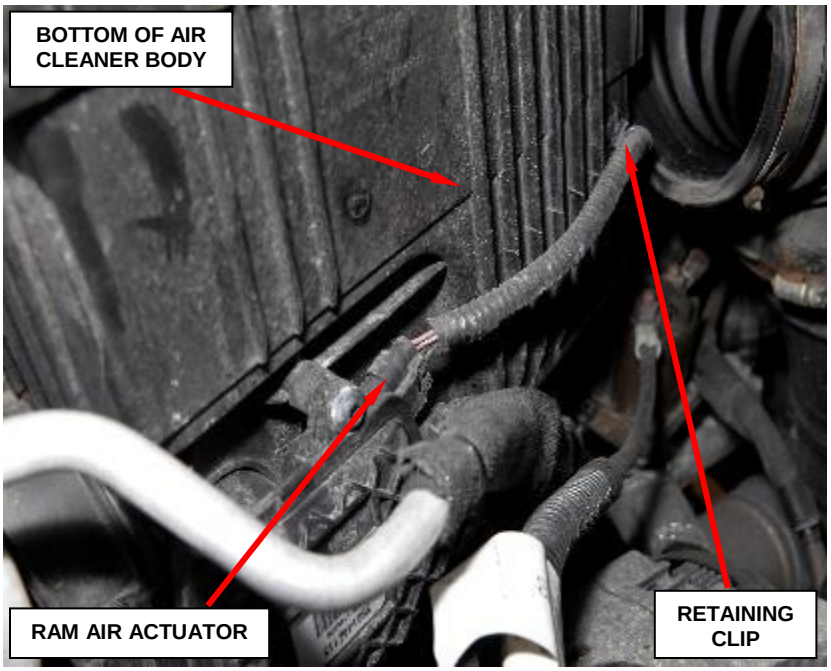

Figure 8 - Ram Air Actuator

4. A 1/2-inch square hole is provided in the automatic belt tensioner. Attach a suitable tool into this hole and rotate the tensioner assembly clockwise (as viewed from front of the vehicle) until tension has been relieved from belt then remove the serpentine drive belt (Figure 9).

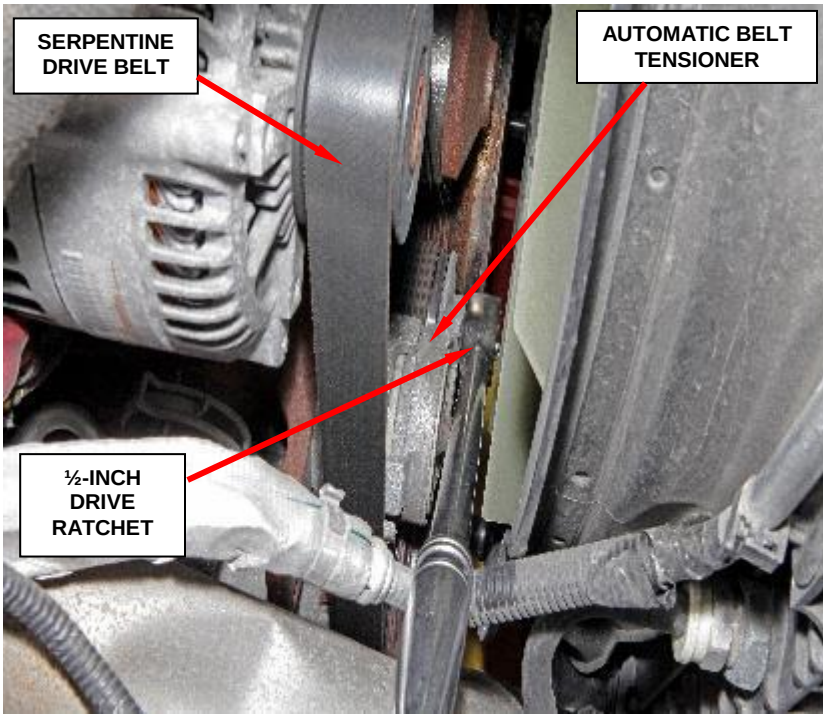

Figure 9 - Automatic Belt Tensioner

Service Procedure (Continued)

5. Remove and save the two bolts then remove and **discard** the water pump (Figure 10).

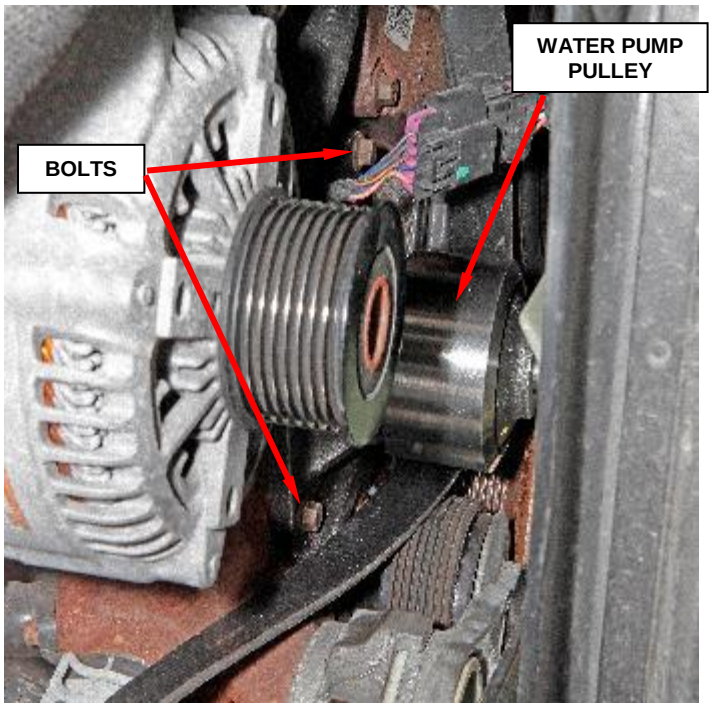

Figure 6 – Water Pump

6. Remove and **discard** the O-ring seal from the cylinder block.

7. Clean the water pump sealing surface on the cylinder block.

CAUTION:

<u>Never use the following to clean gasket surfaces:</u>

- **Metal scraper.**
- **Abrasive pad or paper to clean cylinder block and head.**
- **High speed power tool with an abrasive pad or a wire brush.**
- **High speed power tool with 3M Roloc™ Bristle Disc (white or yellow).**

<u>Only use the following for cleaning gasket surfaces:</u>

- **Solvent or a commercially available gasket remover**
- **Plastic or wood scraper.**

Service Procedure (Continued)

8. Install a **new** O-ring seal in the groove on **new** water pump.

9. Install the **new** water pump. Tighten the two mounting bolts to 24 N·m (18 ft. lbs.) (Figure 10).

CAUTION: Never force a belt over a pulley rim using a screwdriver. The synthetic fiber of the belt can be damaged.

CAUTION: When installing a serpentine accessory drive belt, the belt must be routed correctly. The water pump may be rotating in the wrong direction if the belt is installed incorrectly, causing the engine to overheat. Refer to belt routing label in engine compartment.

10. Install the serpentine drive belt.

    a. Attach a suitable tool to the accessory drive belt tensioner.

    b. Rotate the accessory drive belt tensioner clockwise (as viewed from front of the vehicle).

    c. Be sure the belt is properly seated on all pulleys.

    d. Let the tensioner rotate back into place. Remove the tool.

Service Procedure (Continued)

11. Install the air cleaner body and the turbocharger inlet tube assembly.

    a. Connect the ram air actuator wire harness connector.

    b. Connect the lower wire harness retaining clip to the air cleaner body and position the air cleaner body to the vehicle.

    c. Position the air cleaner body onto the rear pegs to battery tray and push down to lock in place.

    d. Install the intake air tube onto the air cleaner body. Tighten the clamp to 4 N·m (35 in. lbs.).

    e. Connect the Mass Air Flow (MAF) sensor wire harness connector.

    f. Connect the TBAP sensor wire harness connector.

    g. Connect the upper wire harness retaining clip to the air cleaner body.

    h. Install the housing bolt and tighten to 8 N·m (71 in. lbs.).

12. Position the power steering reservoir and install the mounting bolt. Tighten the bolt to 13 N·m (10 ft. lbs.).

13. Connect both negative battery cables.

Service Procedure (Continued)

14. Use the following steps to evacuate air and refill the cooling system.

a. Using Refractometer 8286 or equivalent, following the manufacturer's instructions, test the coolant freeze point (Figure 11).

- If the coolant tested **is between** -25°F and - 50°F (-31°C and -45°C) and is free of contamination, reuse the **original** the coolant.

- If the coolant tested is contaminated, refill the cooling system with **new** coolant.

- If the coolant tested is **not between** -25°F and - 50°F (-31°C and -45°C) and is free of contamination, **use the chart below to add the appropriate amount of new coolant** prior to completely refilling the cooling system with the remaining original coolant (Figure 12).

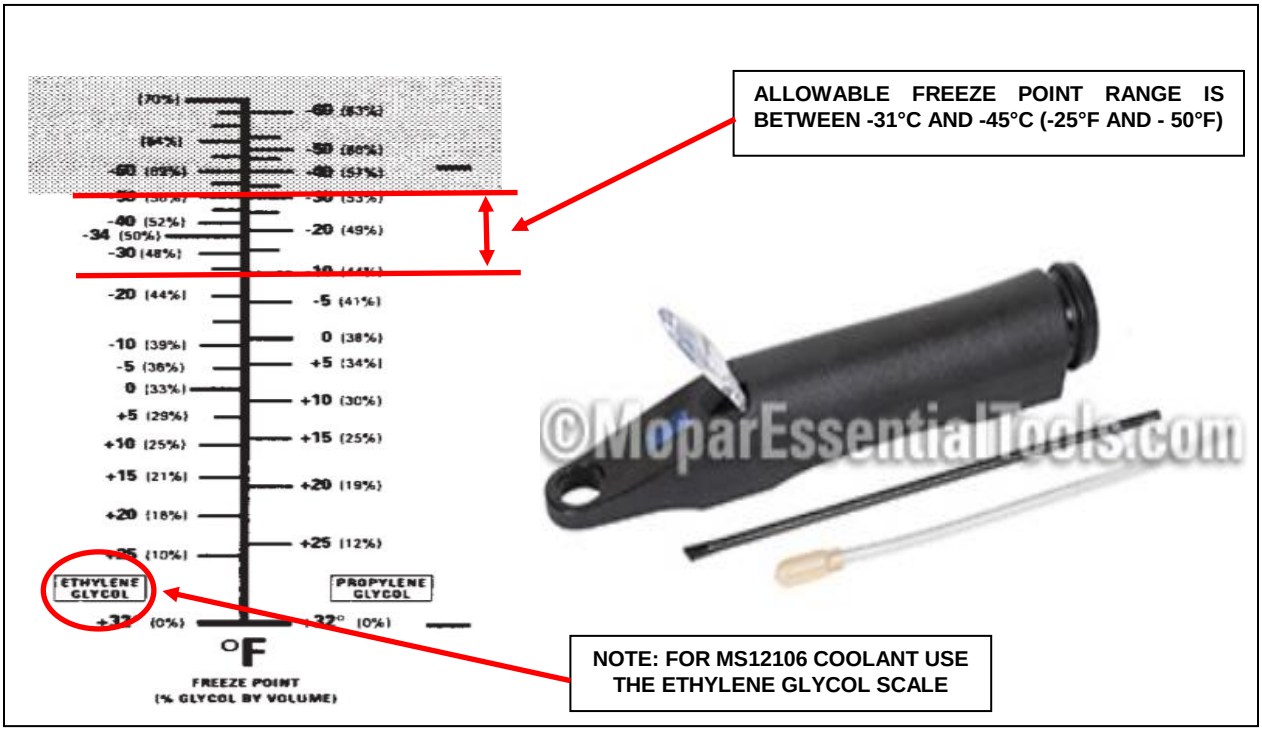

Figure 11 - Refractometer 8286 or Equivalent

Service Procedure (Continued)

COOLANT ADJUSTMENT CHART TO MAINTAIN RECOMMENDED FREEZE POINT PROTECTION

Freeze Point (°F) vs. Percent Premix Coolant

EXAMPLE: FOR A VEHICLE WITH A SINGLE RADIATOR AND A -20°F FREEZE POINT, 4 QUARTS OF NEW PREMIXED COOLANT MUST REPLACE 4 QUARTS OF ORIGNAL COOLANT PRIOR TO COMPLETING THE REFILL PROCEDURE.

												Acceptable Concentrations						
Freeze Point, °F[1]	+32	+25	+20	+15	+10	+5	0	-5	-10	-15	-20	-25	-30	-35	-50	-65	-75	-84
EG Content, vol%	0%	10%	16%	21%	25%	29%	33%	36%	39%	42%	44%	46%	48%	50%	55%	60%	65%	70%
Drain Coolant and Add New Premixed Coolant (Quarts)																		
Single Radiator	20	18	16	14	14	12	10	8	8	6	4					6	10	12
Dual Radiators	24	22	20	18	16	14	12	10	8	6	6					8	12	14

1) The specified refractometer shows freeze point (FP) values down to ~-84°F. For FPs below -84F (off the scale), replace all of the coolant with New Premixed Coolant.

2) 1 Gallon = 4 Quarts or 3.8 Liters

Figure 7 – Coolant Adjustment Chart

NOTE: Evacuating or purging air from the cooling system involves the use of a pressurized air operated vacuum generator. The vacuum created allows for a quick and complete coolant refilling while removing any airlocks present in the system components.

WARNING: Antifreeze is an ethylene glycol base coolant and is harmful if swallowed or inhaled. If swallowed, drink two glasses of water and induce vomiting. If inhaled, move to fresh air area. Seek medical attention immediately. Do not store in open or unmarked containers. Wash skin and clothing thoroughly after coming in contact with ethylene glycol. Keep out of reach of children. Dispose of glycol based coolant properly. Contact your dealer or government agency for location of collection center in your area. Do not open a cooling system when the engine is at operating temperature or hot under pressure; personal injury can result. Avoid radiator cooling fan when engine compartment related service is performed; personal injury can result.

Service Procedure (Continued)

WARNING: WEAR APPROPRIATE EYE AND HAND PROTECTION WHEN PERFORMING THIS PROCEDURE.

NOTE: The service area where this procedure is performed should have a minimum shop air requirement of 80 PSI (5.5 bar) and should be equipped with an air dryer system.

NOTE: For best results, the radiator should be empty. The vehicle's heater control should be set to the heat position (ignition may need to be turned to the on position but do not start the motor).

b. Refer to the Mopar Essential Tools and Service Equipment Tool, UView Airlift™ Cooling System Refill 399-550000 or equivalent and follow tool's operating manual for specific assembly steps.

c. Choose an appropriate adapter cone that will fit the vehicle's radiator filler neck or reservoir tank.

d. Attach the adapter cone to the vacuum gauge.

e. Make sure the vacuum generator/venturi ball valve is closed and attach an airline hose (minimum shop air requirement of 80 PSI (5.5 bar) to the vacuum generator/venturi.

f. Position the adaptor cone/vacuum gauge assembly into the radiator filler neck or reservoir tank. Ensure that the adapter cone is sealed properly.

g. Connect the vacuum generator/venturi to the positioned adaptor cone/vacuum gauge assembly.

h. Open the vacuum generator/venturi ball valve.

NOTE: Do not bump or move the assembly as it may result in loss of vacuum. Some radiator overflow hoses may need to be clamped off to obtain vacuum.

Service Procedure (Continued)

i. Let the system run until the vacuum gauge shows a good vacuum through the cooling system. Refer to the tool's operating manual for appropriate pressure readings.

   NOTE: If a strong vacuum is being created in the system, it is normal to see the radiator hoses collapse.

j. Close the vacuum generator/venturi ball valve.

k. Disconnect the vacuum generator/venturi and airline from the adaptor cone/vacuum gauge assembly.

l. Wait approximately 20 seconds, if the pressure readings do not move, the system has no leaks. If the pressure readings move, a leak could be present in the system and the cooling system should be checked for leaks and the procedure should be repeated.

m. Place the tool's suction hose into the coolant's container.

   NOTE: Ensure there is a sufficient amount of coolant, mixed to the required strength/protection level available for use. For best results and to assist the refilling procedure, place the coolant container at the same height as the radiator filler neck. Always draw more coolant than required. If the coolant level is too low, it will pull air into the cooling system which could result in airlocks in the system.

n. Connect the tool's suction hose to the adaptor cone/vacuum gauge assembly.

o. Open the suction hose's ball valve to begin refilling the cooling system.

p. When the vacuum gauge reads zero, the system is filled.

   NOTE: On some remote pressurized tanks, it is recommended to stop filling when the proper level is reached.

Service Procedure (Continued)

q. Close the suction hose's ball valve and remove the suction hose from the adaptor cone/vacuum gauge assembly.

r. Remove the adaptor cone/vacuum gauge assembly from the radiator filler neck or reservoir tank.

s. With heater control unit in the HEAT position, operate the engine with container cap in place.

t. After engine has reached normal operating temperature, shut the engine off and allow it to cool. When engine is cooling down, coolant will be drawn into the radiator from the pressure container.

u. Add coolant to the recovery bottle/container as necessary. **Only add coolant to the container when the engine is cold. Coolant level in a warm engine will be higher due to thermal expansion.** Add necessary coolant to raise container level to the COLD MINIMUM mark after each cool down period.

v. Once the appropriate coolant level is achieved, attach the radiator cap or reservoir tank cap.

15. Start and warm the engine and check for leaks.

16. 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 one of the following labor operation numbers and time allowances:

	Labor Operation Number	**Time Allowance**
Inspect for Vent Hole	07-T5-11-81	0.2 hours
Inspect for Vent Hole and Replace Water Pump	07-T5-11-82	1.0 hours

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 XXXXXXXXXXXXXXXXX

T51/NHTSA 17V-562

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. The last eight characters of your VIN are provided above.

DEALERSHIP INSTRUCTIONS
Please reference Safety Recall T51.

IMPORTANT SAFETY RECALL

Diesel Water Pump

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 [2013 through 2017 model year (DJ) RAM 2500 Pickup, (D2) RAM 3500 Pickup, (DD) RAM 3500 Cab Chassis, (DP) RAM 4500/5500 Cab Chassis and 2016-2017 (DF) RAM 3500 10K lb. Cab Chassis] vehicles equipped with a 6.7L I6 Cummins Turbo Diesel Engine.

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?

The water pump on your truck [1] may experience a failure resulting in an engine compartment fire. **An engine compartment fire may result in an increased risk of injury to motor vehicle occupants or persons outside the vehicle.**

HOW DO I RESOLVE THIS IMPORTANT SAFETY ISSUE?

FCA will repair your vehicle [2] free of charge (parts and labor). To do this, your dealer will inspect and replace the water pump if required. In addition, your dealer will require your vehicle for proper check-in, preparation, and check-out during your visit. Your time is important to us; please be aware that these steps may require more time. The estimated repair time is two hours. 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 1-800-853-1403
OR 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
Fiat Chrysler Automobiles US LLC

FCA
FIAT CHRYSLER AUTOMOBILES

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.