



September 2013

Dealer Service Instructions for:

Safety Recall N28 / NHTSA 13V-234

Transmission Oil Cooler Tube

Models

2012 - 2013 (JK) Jeep® Wrangler

*NOTE: This recall applies only to the above vehicles equipped with a 3.6L engine (sales code **ERB**), automatic transmission (sales code **DGJ**), left hand drive (sales code **5I8**) built through February 23, 2013 (MDH 022317).*

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 transmission oil cooler tube on about 176,000 of the above vehicles may come in contact with the power steering fluid return tube. Prolonged contact of the tubes could cause a leak in the transmission oil cooler tube. Operating the vehicle with insufficient transmission fluid may cause damage to the transmission and a loss of transmission function which may increase the risk of a crash.

Repair

The power steering fluid return tube must be replaced on all involved vehicles and the transmission oil cooler tube must be inspected for damage. Transmission oil cooler tubes that are found to be damaged must be replaced. Transmission oil cooler tubes that are not damaged must have a protective sleeve installed.

Parts Information

<u>Part Number</u>	<u>Description</u>
CBRAN281AA	Tube, Power Steering Return
CBRAN282AA	Tube, Transmission Oil Cooler
CBRAN283AA	Sleeve, Transmission Oil Cooler Protective
05166226AA	Fluid, Power Steering +4 (pint)
05013457AA	Fluid, Transmission +4 (quart)

Special Tools

The following special tools are required to perform this repair:

- 9688A Adapter, Power Steering Reservoir Cap
- C-4207-A Pump, Hand Vacuum
- 8875A Disconnect, Transmission Cooler Tube
- NPN wiTECH VCI Pod Kit
- NPN Laptop Computer
- NPN wiTECH Software

Service Procedure

A. Inspect Transmission Oil Cooler Tube

1. Open the hood.
2. Lift the vehicle on an appropriate hoist.
3. Remove and save the left front wheel.

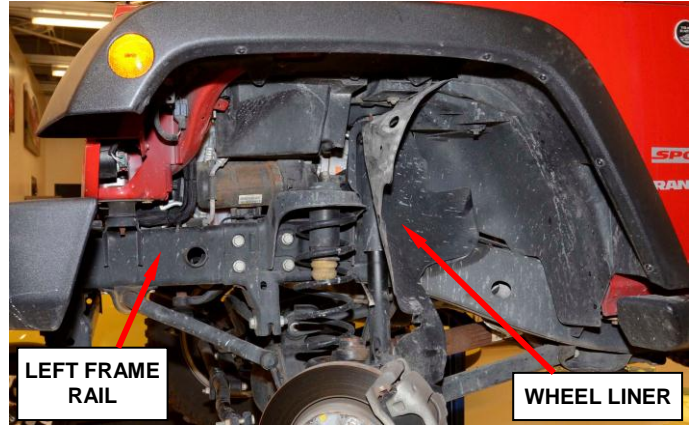


Figure 1 – Left Front Wheel Liner

4. Partially remove the left front wheel liner to gain access to the transmission oil cooler tube and power steering return tube (Figure 1).

5. Disengage the power steering hose retainer from the left frame rail (Figure 2).

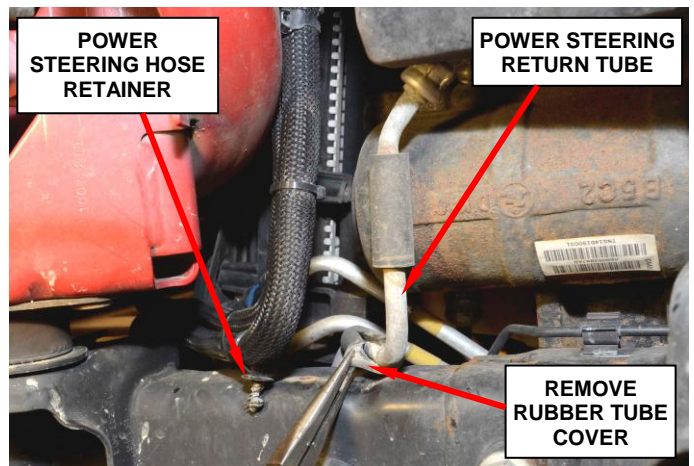


Figure 2 – Remove Rubber Power Steering Return Tube Cover

6. Remove and discard the rubber cover on the power steering return tube (Figure 2).

NOTE: Removing the power steering return tube rubber cover will give better access to view the tubes.

Service Procedure (Continued)

7. Using a small inspection mirror, check for wear marks on the transmission oil cooler tube where it intersects with the power steering return tube:
 - If the transmission oil cooler tube does not have any wear marks, continue with Step 8 of this procedure.
 - If the transmission oil cooler tube has wear marks, continue with **Section C. Replace Transmission Oil Cooler Tube.**

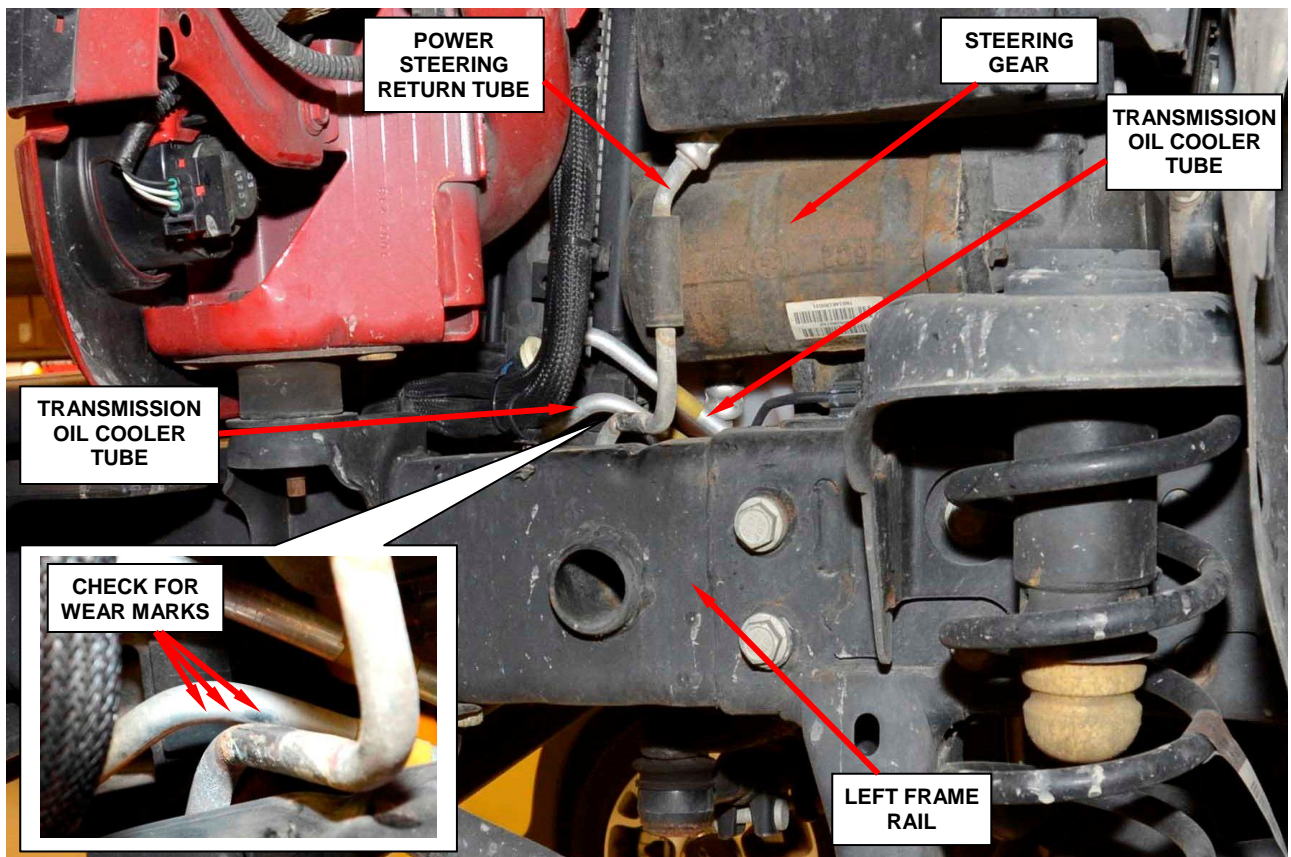


Figure 3 – Inspect the Transmission Oil Cooler Tube at the Power Steering Return Tube for Wear Marks

Service Procedure (Continued)

8. Lift the vehicle on the hoist.
9. Unclip the electrical wire harness from the brake tube (Figure 4).
10. Using diagonal cutters cut off the electrical wire harness clip that supports the wire harness at the brake tube (Figure 4).

NOTE: The electrical wire harness clip referenced in Step 10 will not be reused. The clip is being eliminated and the wire harness should hang freely. Use care not to cut the wire harness or the plastic convolute cover.

11. Inspect the transmission oil cooler tube for wear marks where the electrical body harness crosses the transmission oil cooler tube (Figure 4):
 - If the transmission oil cooler tube does not have any wear marks, continue with **Section B. Install Transmission Oil Cooler Tube Protective Sleeve.**
 - If the transmission oil cooler tube has wear marks, continue with **Section C. Replace Transmission Oil Cooler Tube.**

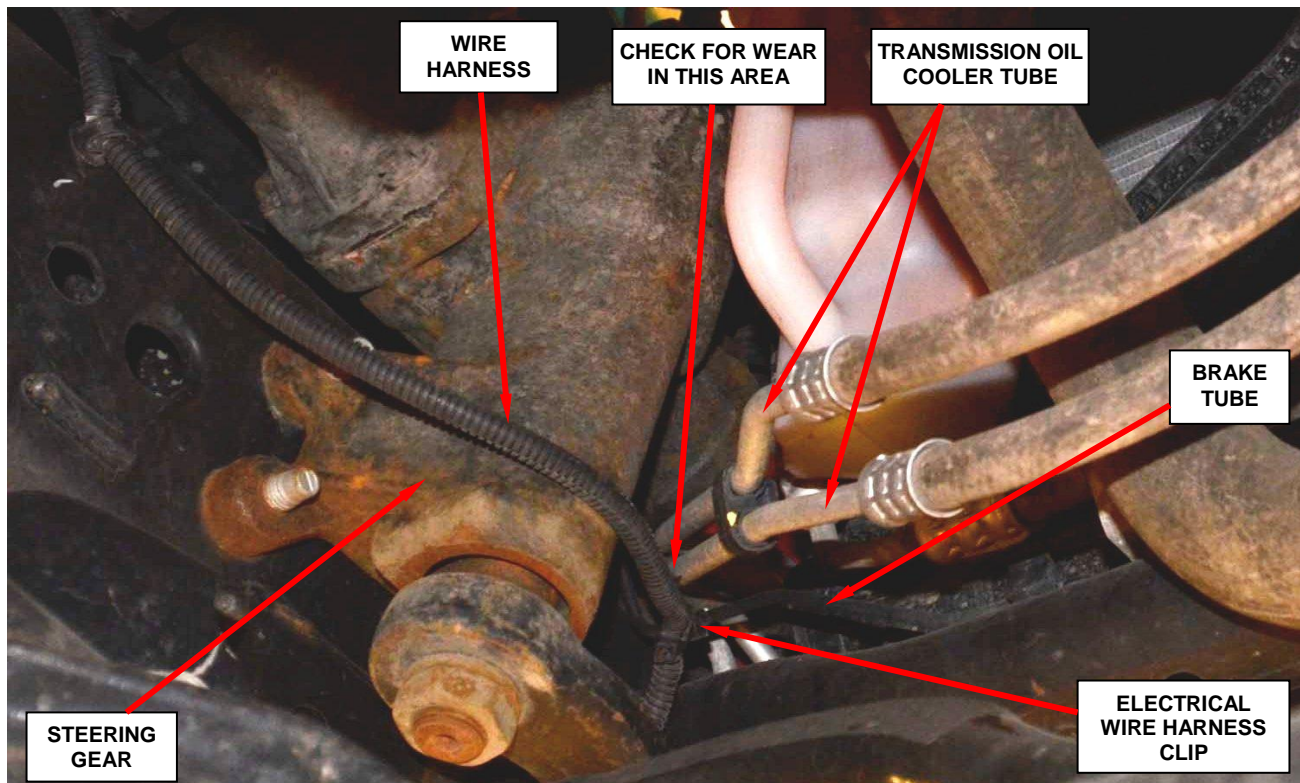


Figure 4 – Inspect Transmission Oil Cooler Tube for Wear Marks at the Wire Harness

Service Procedure (Continued)

B. Install Transmission Oil Cooler Tube Protective Sleeve

1. Carefully slide the protective sleeve over the transmission oil cooler tube (Figure 5).

NOTE: The sleeve must be placed between the transmission cooler fitting and the first black plastic retainer clip.

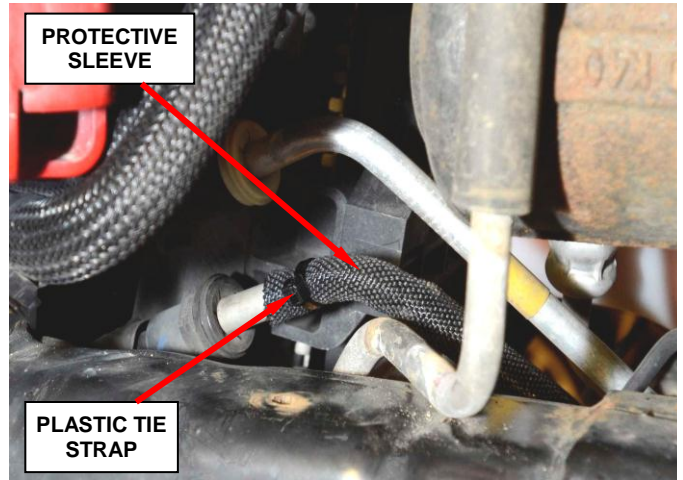


Figure 5 – Tie Strap at Cooler End of Tube

2. Install a plastic tie strap at each end of the protective sleeve (Figure 5 and 6).



Figure 6 – Tie Strap Protective Sleeve

3. Continue with **Section D. Replace Power Steering Return Tube.**

Service Procedure (Continued)**C. Replace Transmission Oil Cooler Tube**

NOTE: The following procedure is required if the transmission oil cooler tube requires replacement per the inspection in Section “A.”

1. Raise the vehicle on the hoist.

2. Remove and save the exhaust pipe hanger at the transmission bellhousing (Figure 7).

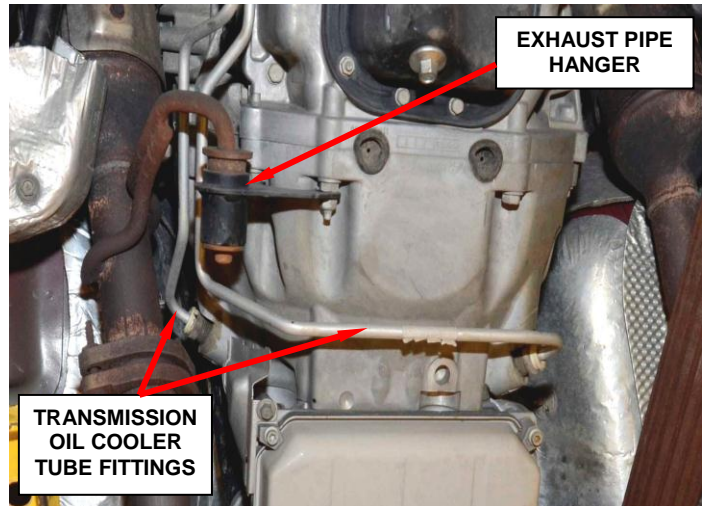
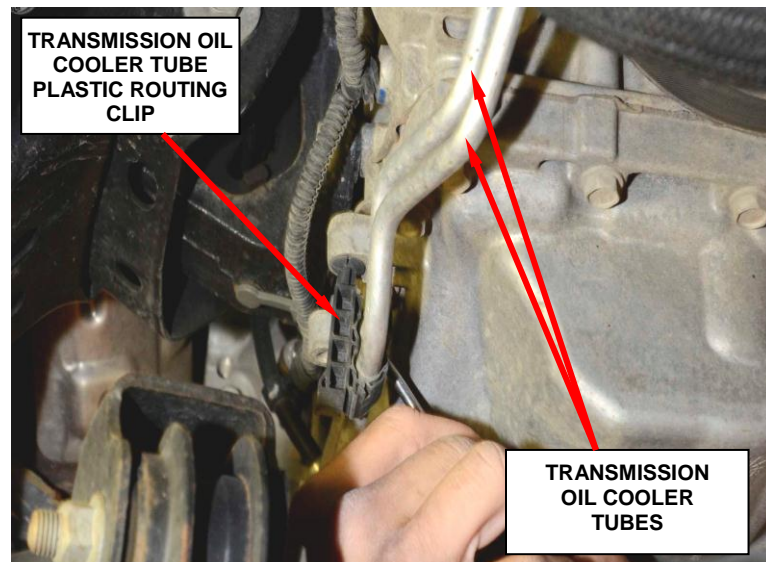


Figure 7 – Exhaust Pipe Hanger

3. Disconnect both transmission oil cooler tubes at the transmission using the following procedure (Figure 7):
 - a. Slide the dust cap up the tube by pulling it straight back off the quick connect fitting.
 - b. Place the proper sized release tool (special tool 8875A or equivalent) onto the transmission cooler tube with the fingers of the tool facing the quick connect fitting.
 - c. Slide the release tool down the transmission tube and engage the fingers of the tool into the retaining clip.
 - d. Rotate the release tool 60 degrees to expand the retaining clip.
 - e. While holding the release tool against the quick connect fitting, pull back on the transmission cooler tube to remove it.

Service Procedure (Continued)

4. Disconnect the plastic routing clip from the engine block (Figure 8).
5. Lower the vehicle.
6. Disconnect both transmission oil cooler tubes at the transmission oil cooler fittings using the following procedure:
 - a. Slide the dust cap up the tube by pulling it straight back off the quick connect fitting.
 - b. Place the proper sized release tool (special tool 8875A or equivalent) onto the transmission cooler tube with the fingers of the tool facing the quick connect fitting.
 - c. Slide the release tool down the transmission tube and engage the fingers of the tool into the retaining clip.
 - d. Rotate the release tool 60 degrees to expand the retaining clip.
 - e. While holding the release tool against the quick connect fitting, pull back on the transmission cooler tube to remove it.
7. Raise the vehicle.
8. Remove and discard the original transmission oil cooler tube and block assembly.
9. Place the new transmission oil cooler tube and block assembly into position.
10. Align the cooler tube with the quick connect fitting while pushing straight into the fitting.
11. Push on the transmission cooler tube until a click is heard or felt.
12. Slide the dust cap down the transmission cooler tube and snap it over the quick connect fitting until it is fully seated and rotates freely.
13. Connect the plastic routing clip to the engine block (Figure 8).

**Figure 8 – Plastic Routing Clip at Engine Block**

Service Procedure (Continued)

14. Install the exhaust pipe hanger (Figure 7). Tighten the nuts securely.
15. Lower the vehicle.
16. Align the cooler tube with the quick connect fitting while pushing straight into the fitting.
17. Push on the transmission cooler tube until a click is heard or felt.
18. Slide the dust cap down the transmission cooler tube and snap it over the quick connect fitting until it is fully seated and rotates freely.

NOTE: The tube fitting white dust cap goes on the top transmission oil cooler port and the tube fitting black dust cap goes on the bottom transmission oil cooler port (Figure 9).

19. Continue with **Section D. Replace Power Steering Return Tube.**

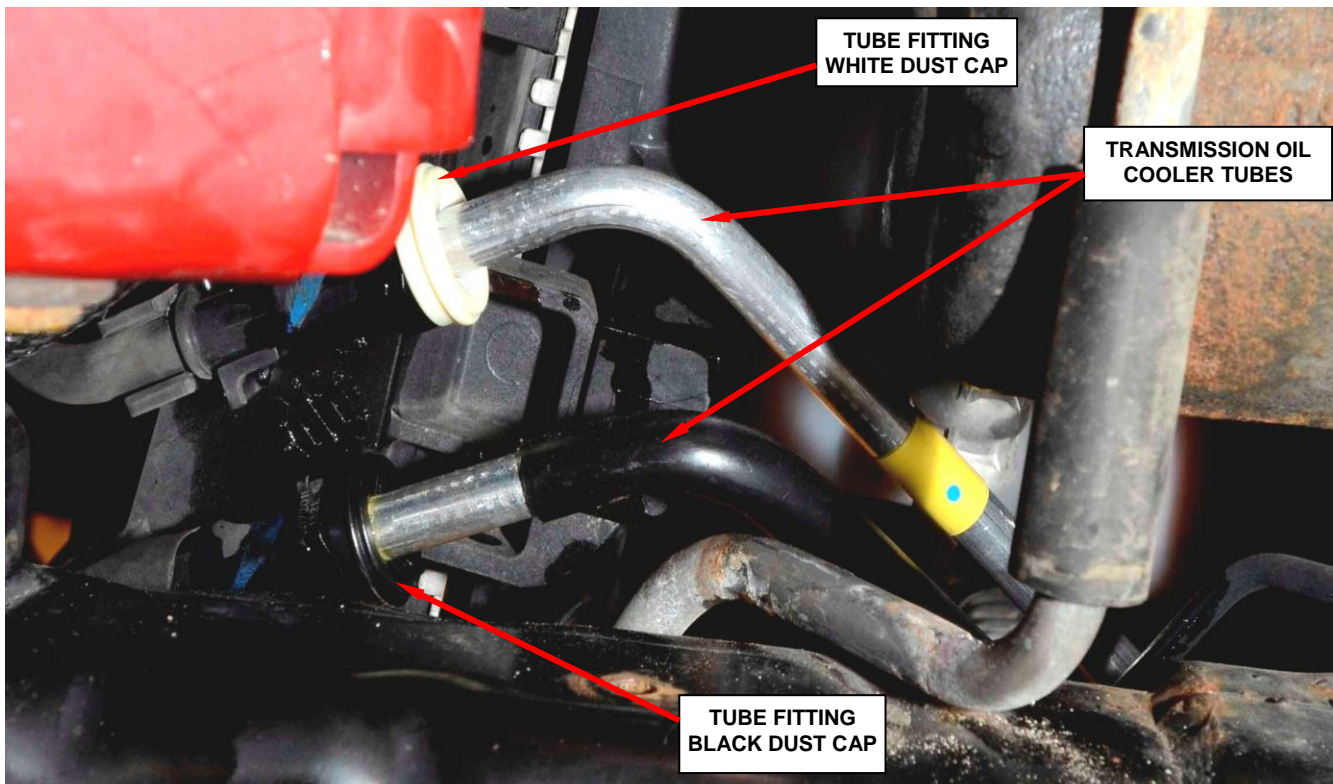


Figure 9 – Transmission Oil Cooler Tube Orientation

Service Procedure (Continued)**D. Replace Power Steering Oil Return Tube**

NOTE: All vehicles involved in this recall must have the power steering oil return tube replaced. The new power steering oil return tube has improved routing to prevent contact with the transmission oil cooler tube.

1. Disconnect the negative battery cable.
2. Disconnect the power steering return tube flare nut on the top of the steering gear (Figure 10).



3. Remove and save the engine cover. **Figure 10 – Power Steering Return Tube Flare Nut**
4. Remove and save the air filter box and air inlet hose (Figure 11).
5. Remove and save the power steering reservoir retaining bolt (Figure 11).

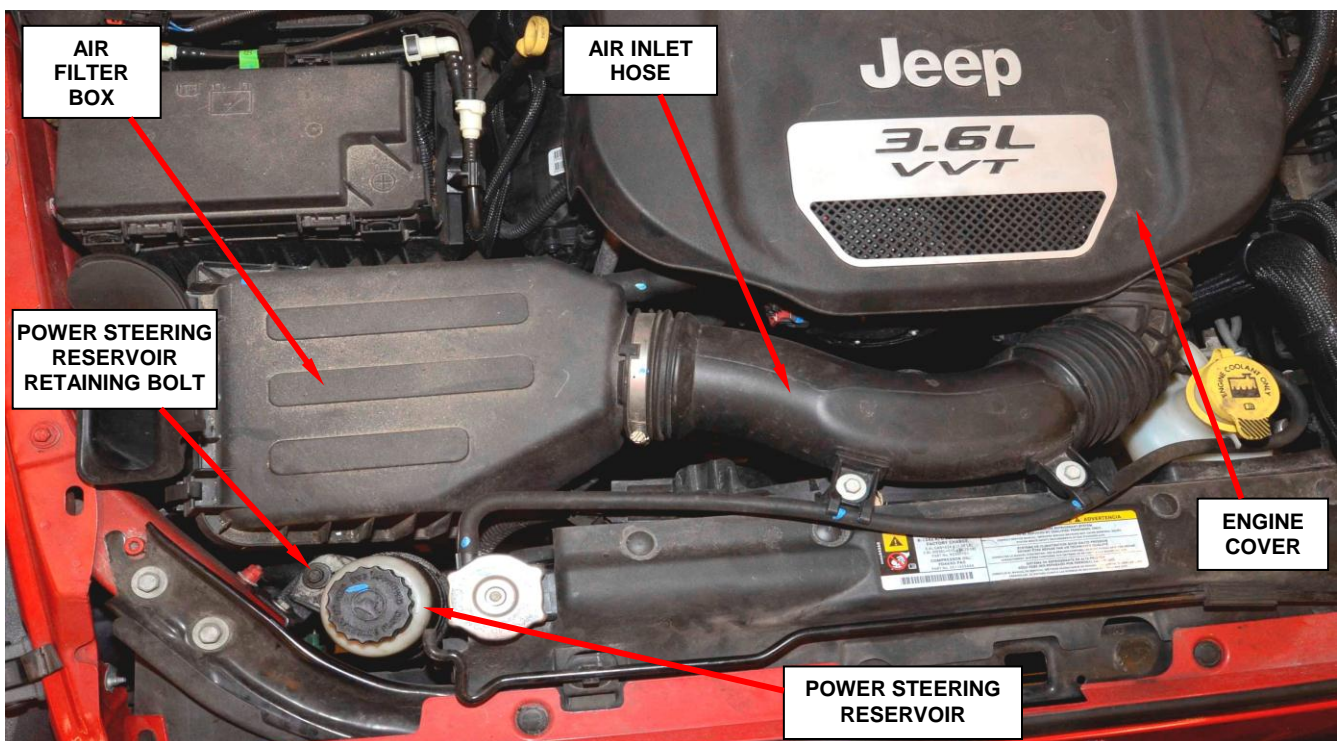


Figure 11 – Air Box and Air Inlet Hose

Service Procedure (Continued)

6. Disengage the power steering return tube routing clip under the reservoir.
7. Lift the vehicle on the hoist.
8. Remove and save the front lower plastic splash shield (located under the front bumper).
9. Remove and save the four stabilizer bar-to-frame rail bolts and lower the stabilizer bar (Figure 12).

NOTE: Partially removing the stabilizer bar will give clearance required to remove the power steering return hose.

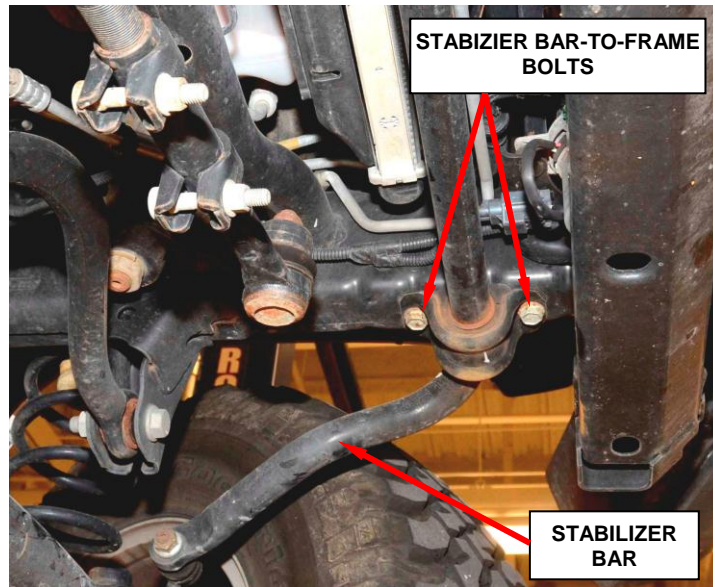


Figure 12 – Stabilizer Bar Bolts (left side shown)

10. Disengage the power steering return tube routing clips on the right and left frame rail.
11. Partially disconnect the right side fog lamp harness.
12. Remove and discard the original power steering return tube.

NOTE: Patient and perseverance is required to remove/install the power steering oil return tube from the vehicle.

13. Place the new power steering return tube into position.
14. Engage the right and left power steering oil return tube routing clips into the bottom of the frame rails.
15. Connect the fog lamp wire harness.
16. Place the stabilizer bar into position and install the retaining bolts. Tighten the bolts to 75 ft. lbs. (102 N·m).
17. Lower the vehicle from the hoist.

Service Procedure (Continued)

18. Connect the power steering return tube flare nut to the steering gear. Tighten the flare nut to 21 ft. lbs. (28 N·m) (Figure 10).
19. Connect the power steering return tube to the power steering reservoir.
20. Install the power steering return tube into the retaining clips.
21. Place the power steering reservoir into position and install the retaining bolt.
22. Clean any spilled transmission fluid from the frame rails and front axle.
23. Install the air filter box and air inlet hose (Figure 11).
24. Raise the vehicle on the hoist
25. Install the left front wheel liner.
26. Install the left front wheel. Tighten the lug nuts to 122 ft. lbs. (165 N·m).
27. Install the front lower splash shield.
28. Lower the vehicle from the hoist.
29. Continue with **Section E. Bleed Power Steering Hydraulic System.**

Service Procedure (Continued)**E. Bleed Power Steering Hydraulic System**

CAUTION: If the air is not purged from the power steering system correctly, power steering pump failure could result.

CAUTION: Mopar Power Steering Fluid +4 must be used in the power steering system (material standard specifications MS-9602). No other power steering or automatic transmission fluid is to be used in the system. Damage may result to the power steering pump and system if another fluid is used. Do not overfill the system.

WARNING: Power steering fluid level should be checked with the engine “OFF” to prevent personal injury from moving parts and to assure an accurate fluid level reading.

1. Remove the cap from the fluid reservoir and fill the power steering fluid reservoir up to the “MAX” marking with Mopar Power Steering Fluid +4.

NOTE: The fluid level can be viewed through the side of the power steering fluid reservoir. Compare the fluid level to the markings on the side of the reservoir. When the fluid is at normal ambient temperature, approximately 70° - 80° F. (21° - 27° C.), the fluid level should read between the “MAX” and “MIN” markings. When the fluid is hot, fluid level is allowed to read up to the “MAX” line.

2. Tightly insert the power steering cap adapter, Special Tool 9688A, into the opening of the power steering fluid reservoir.
3. Attach a hand vacuum pump, Special Tool C-4207-A or equivalent, with reservoir attached, to the power steering cap adapter.
4. Using the hand vacuum pump, apply 20-25 in. Hg. (68-85 kPa.) of vacuum to the power steering hydraulic system for three minutes.

CAUTION: Do not run the vehicle while vacuum is applied to the power steering system. Damage to the power steering pump can occur.

Service Procedure (Continued)

5. Slowly release the vacuum and remove special tool C-4207-A.
6. Adjust the power steering fluid level as necessary.
7. Repeat **Step #1** through **Step #7** until the power steering fluid no longer drops when vacuum is applied.
8. Start the engine and cycle the steering wheel lock-to-lock three times.

CAUTION: Do not hold the steering wheel against the steering stops.

9. Turn off the engine and check for power steering leaks.
10. Check for any signs of air in the power steering reservoir and check the fluid level. If air is present in the fluid, repeat the procedure as necessary.
11. Install power steering reservoir cap.
12. For vehicles that did not have the transmission cooler tubes replaced, install the engine cover and return the vehicle to the customer.
13. For vehicles that had the transmission cooler tubes replaced, continue with **Section F. Check Transmission Fluid Level**.

Service Procedure (Continued)

F. Check Transmission Fluid Level

1. Verify that the vehicle is parked on a level surface.
2. Start the engine and allow it to run at idle speed with the gear shift lever in the Park position.
3. Shift through the transmission modes several times with the vehicle stationary and the engine idling.
4. Warm up the transmission for two minutes.
5. Connect the wiTECH scan tool and monitor the transmission fluid temperature.
6. Remove the dipstick and check the oil level with the engine running.
7. Add fluid as required and recheck fluid level.
8. Install the engine cover and 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 submitted will be used by Chrysler 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
Replace power steering return tube, inspect transmission oil cooler tube, install protective sleeve and bleed power steering hydraulic system	19-N2-81-82	1.4 hours
Replace power steering return tube, inspect and replace transmission oil cooler tube, and bleed power steering hydraulic system	19-N2-81-83	1.7 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 Chrysler 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.

Enclosed with each owner letter is an Owner Notification postcard to allow owners to update our records if applicable.

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
Chrysler Group LLC



**SAFETY RECALL N28 / NHTSA 13V-234
TRANSMISSION OIL COOLER TUBE**

Dear: (Name)

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

Chrysler has decided that a defect, which relates to motor vehicle safety, exists in some **2012 and 2013 model year Jeep® Wrangler vehicles equipped with an automatic transmission.**

The problem is... **The transmission oil cooler tube on your vehicle (VIN: xxxxxxxxxxxxxxxxxxxx) may come in contact with the power steering fluid return tube. Prolonged contact of the tubes could cause a leak in the transmission oil cooler tube. Operating the vehicle with insufficient transmission fluid may cause damage to the transmission and a loss of transmission function which may increase the risk of a crash.**

What your dealer will do... **Chrysler will repair your vehicle free of charge (parts and labor).** To do this, your dealer will replace the power steering return tube and inspect, and replace if necessary, the transmission oil cooler tube. The work will take about two hours to complete. However, additional time may be necessary depending on service schedules.

What you must do to ensure your safety... Simply **contact your Chrysler, Jeep, or Dodge dealer** right away to schedule a service appointment. Ask the dealer to hold the part/parts for your vehicle or to order them before your appointment. **Please bring this letter with you to your dealer.**

If you need help... If you have questions or concerns which your dealer is unable to resolve, please contact the Chrysler Group Recall Assistance Center at 1-800-853-1403.

Please help us update our records by filling out the attached prepaid postcard if any of the conditions listed on the card apply to you or your vehicle. You may also update this information on the web at
CCCCCCCCCCCCCCCCCCCCCCCCCCCC

If you have already experienced this condition and have paid to have it repaired, please send your original receipts and/or other adequate proof of payment to the following address for reimbursement: Chrysler Customer Assistance, P.O. Box 21-8007, Auburn Hills, MI 48321-8007, Attention: Reimbursement. Once we receive and verify the required documents, reimbursement will be sent to you within 60 days.

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 call the toll-free Vehicle Safety Hotline at 1-888-327-4236 (TTY 1-800-424-9153), or go to <http://www.safercar.gov>.

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

Customer Services / Field Operations
Chrysler Group LLC
Notification Code N28

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