QUALITY ACTION

CAMPAIGN BULLETIN

Automatic Transmission Dealer Inventory

Reference: PC564
Date: April 28, 2017

Attention: Dealer Principal, Sales, Service & Parts Managers

Affected Models/Years:	Affected Population:	Dealer Inventory:	SERVICE COMM Activation date:	Stop Sale In Effect
MY2017 Titan XD Gasoline – **4WD**	NA	**1,113**	April 28, 2017	**NO**

*******Dealer Announcement*******

Nissan is conducting a dealer inventory quality action to perform several inspections on **1,113** specific 2017 Titan XD Gasoline 4-wheel drive vehicles identified in Service Comm.

Dealer will perform the following:

- A/T Fluid Leak/Engine Oil Cooler Hose Inspection
- Rear Prop Shaft Bolt Torque Inspection
- Front Prop Shaft Bolt Torque Inspection
- Power Steering Box Leak Inspection

Affected vehicles are **not** subject to stop sale and are either currently in dealer inventory or assigned and in transit to the dealer. Nissan requests dealers to complete this inspection prior to sale to help ensure customer satisfaction.

*******What Dealers Should Do*******

1. Verify if vehicles currently in new dealer inventory are affected by this service action using Service Comm **I.D. PC564**
   - **New vehicles in dealer inventory can also be identified using DBS (Sales-> Vehicle Inventory, and filter by Open Campaign).**
     - Refer to NPSB 15-460 for additional information
   - **Please continue to check newly arriving inventory for campaign applicability.**

2. Use the attached procedure to inspect the vehicle and, if necessary, repair.

3. The service department should submit the applicable warranty claim for the action(s) performed so it can be closed on Service Comm and release the vehicle.

******* Dealer Responsibility *******

It is the dealer's responsibility to check Service Comm using the appropriate campaign I.D for the inspection status on each affected vehicle currently in new vehicle inventory. Nissan requests dealers to perform this repair on new vehicles in inventory prior to being retailed to help ensure customer satisfaction.

NISSAN NORTH AMERICA, INC.
Aftersales DIVISION

PC564 – TITAN XD (A61G, 4WD)
MULTI-POINT INSPECTION

SERVICE PROCEDURE:

Inspection 1: A/T Fluid Leak Inspection

1. Verify the VIN of the affected Vehicle.

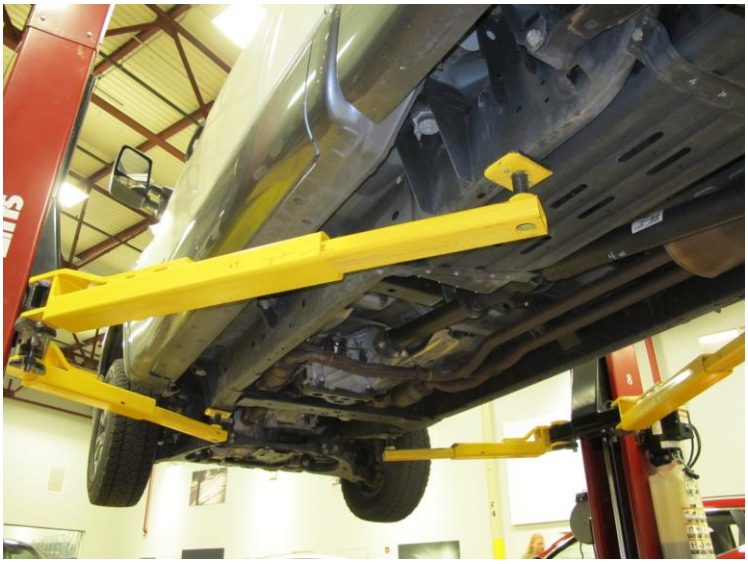


Figure 1

2. Raise the vehicle on a lift (Figure 1).

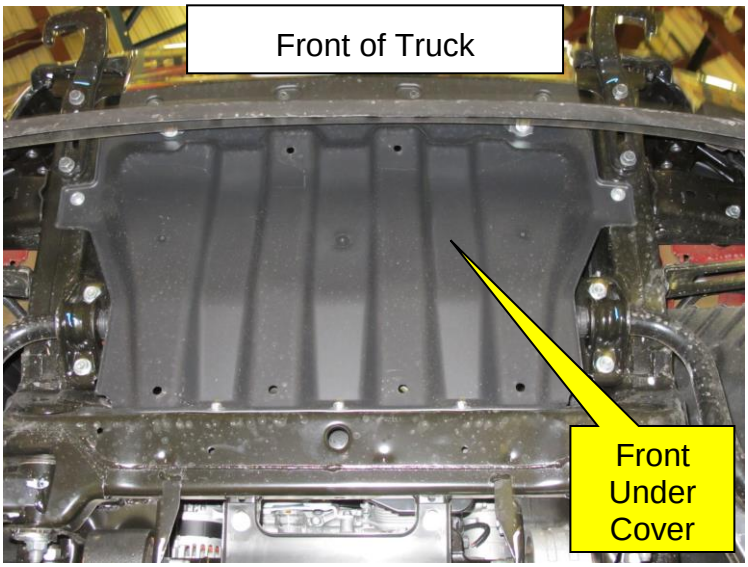
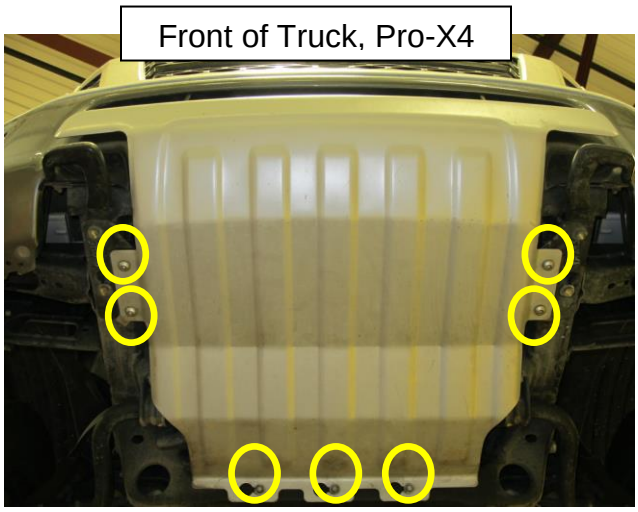


Figure 2

3. Locate the front under cover (Figure 2).

4. Remove the front under cover (Figure 3).

   - Standard: Remove the (7) front under cover bolts.
   - Pro-4X: loosen the (3) bolts and remove the (4) hex head bolts.



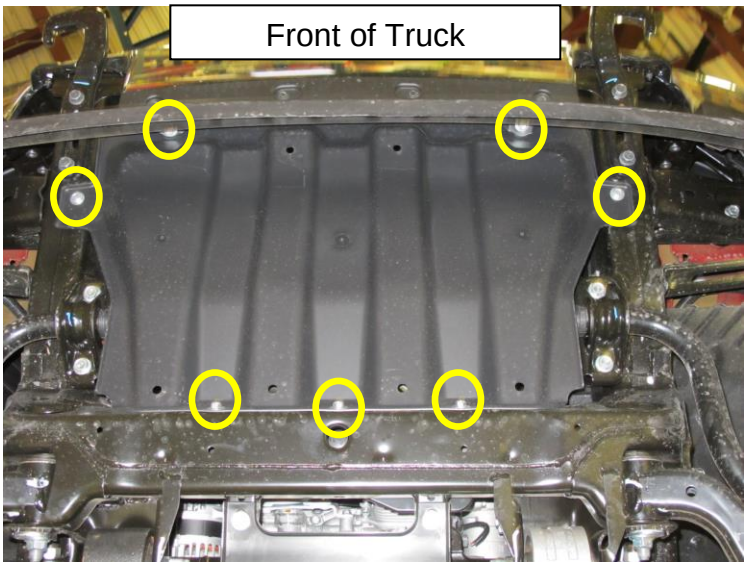


Figure 3

5. Locate the A/T fluid warmer and Engine Oil Cooler at the front of the oil pan (Figure 4, 5).

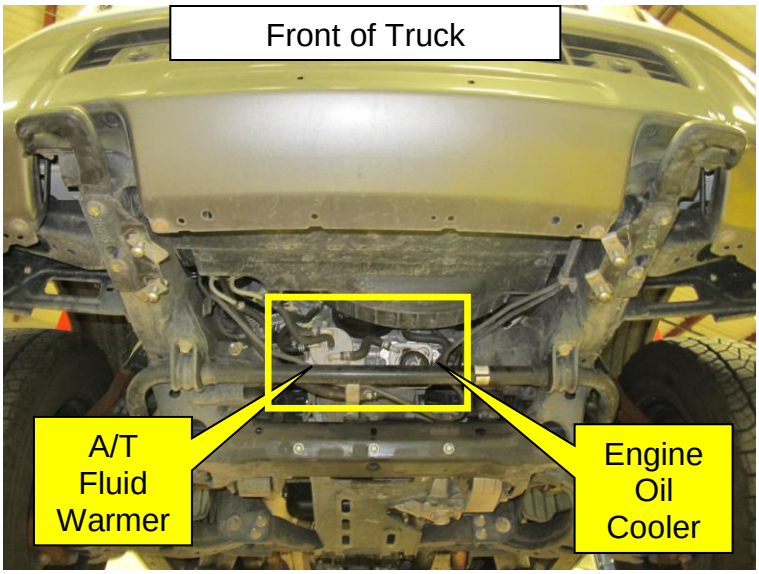


Figure 4

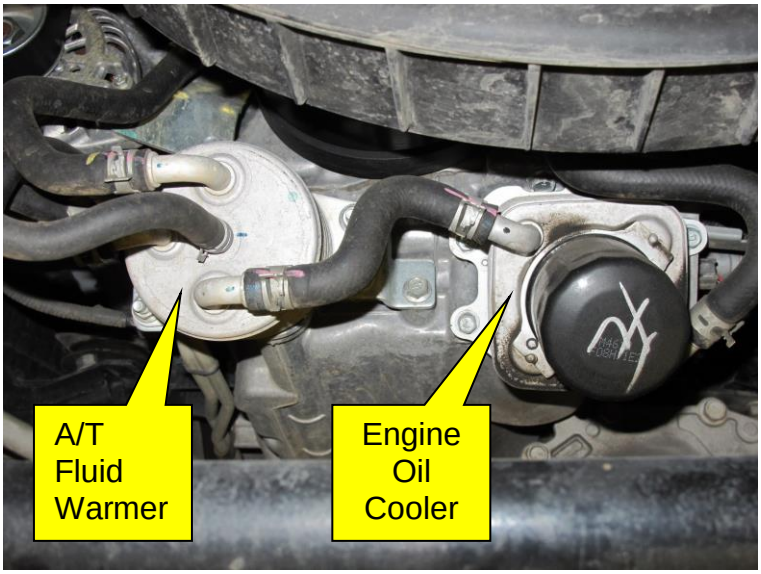


Figure 5

6. Inspect **four** A/T Warmer Hoses for proper configuration (Figure 6).

   A. Straight tube hose placement: hose pushed all the way until flush with warmer housing.

   B. Bent tube hose placement: hose pushed all the way to stop/lip or outward flare.

   C. Clamp placement C; clamp located 5MM +or- 2MM (1/8th to 1/4 inch) from end of hose.

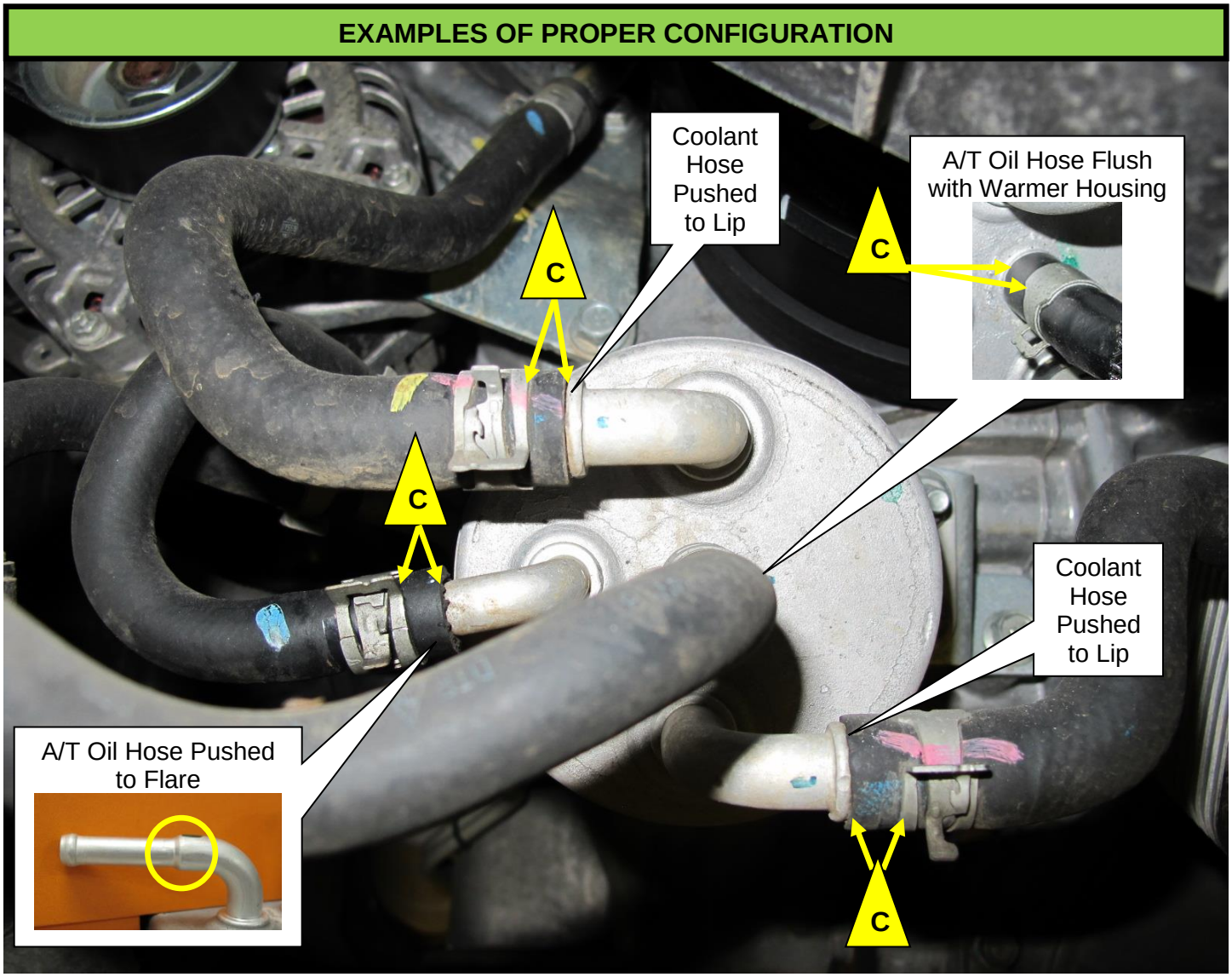


Figure 6

7. EXAMPLES OF A/T WARMER HOSE CONNECTIONS THAT REQUIRE ADJUSTMENT.

- Grenade pin not released (Figure 7).
- Clamp not seated properly on hose (Too close to the end of the hose) (Figure 8).
- Clamp not seated properly on hose (Too close to barb lip) (Figure 9).
- Hose not seated properly on barb (Check hose insertion length) (Figure 10).

EXAMPLES THAT REQUIRE HOSE OR CLAMP ADJUSTMENT

Grenade Pin Not Released

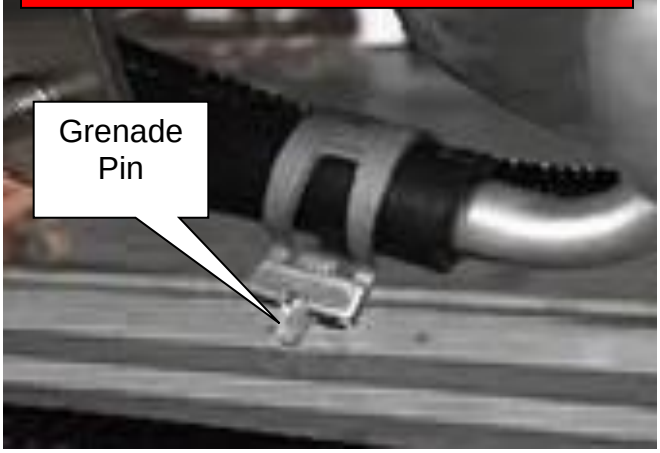


Figure 7

Clamp Not Seated Properly on Hose

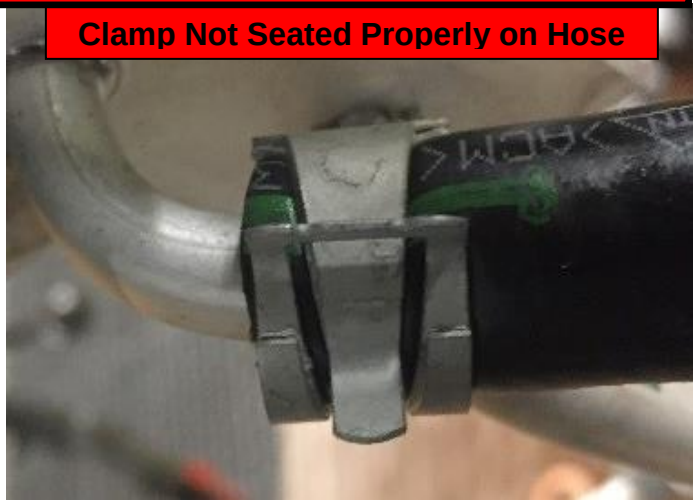


Figure 8

Clamp Not Seated Properly on Hose

Figure 9

Hose Not Seated Properly on Barb

Figure 10

8. **CORRECT ANY HOSES NOT PROPERLY INSTALLED, REFERENCE <u>STEP 6</u> (FIGURE 6).**

9. Inspect **two** engine oil cooler hoses for proper configuration (Figure 11).

   A. Bent tube hose placement: hose pushed to the lip on the oil cooler pipe.

   B. Clamp placement B: clamp located 7MM +or- 2MM or approximately (3/16 to 3/8 inch) from the end of the hose.

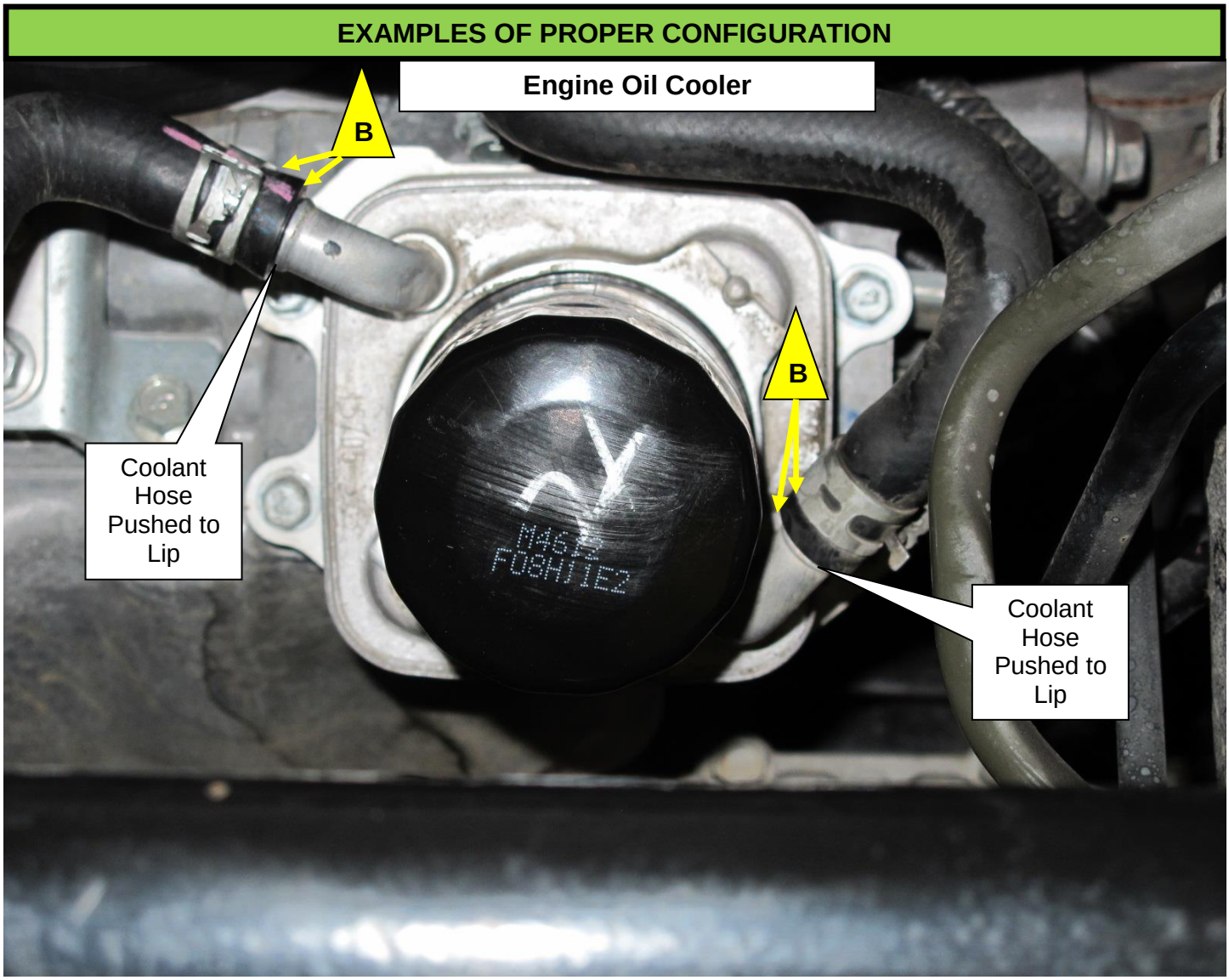


Figure 11

10. EXAMPLES OF ENGINE OIL COOLER HOSE CONNECTIONS THAT REQUIRE ADJUSTMENT.

- Clamp not released/Clamp loose (Figure 12).
- Clamp not seated properly on hose (Too close to the end of the hose) (Figure 13).
- Clamp not seated properly on hose (Too close to barb lip) (Figure 14).
- Hose not seated properly on barb (Check hose insertion length) (Figure 15).

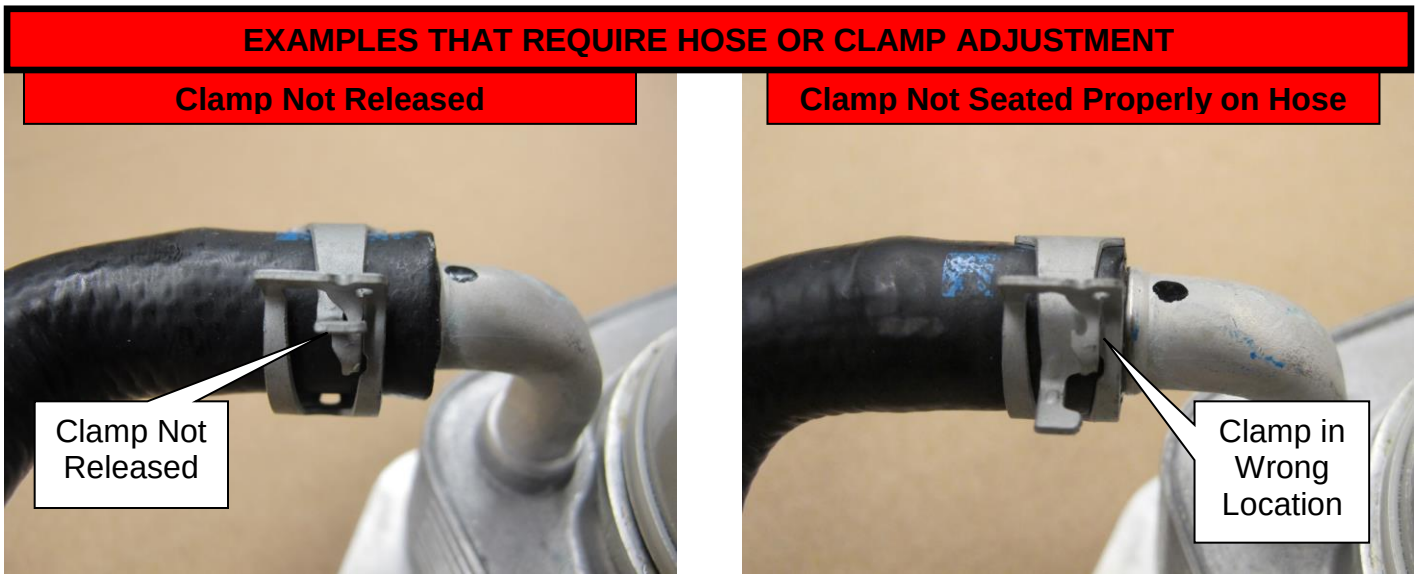


Figure 12

Figure 13

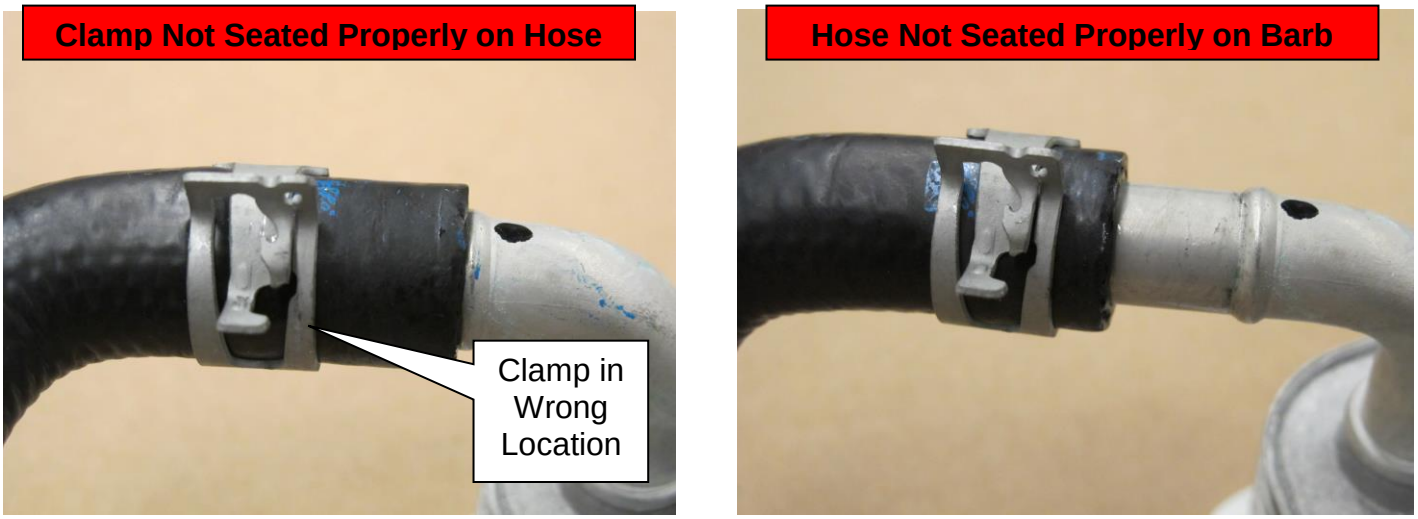


Figure 14

Figure 15

11. CORRECT ANY ENGINE OIL COOLER HOSES NOT PROPERLY INSTALLED, REFERENCE STEP 9 (FIGURE 11).

- Do **NOT** install engine undercover at this time.

12. Once Inspection is complete and all hoses are properly installed, move to Inspection 2.

Inspection 2: Rear Prop Shaft Bolt Torque

1. Locate the (4) rear prop shaft bolts at the transfer case (Figure 1).

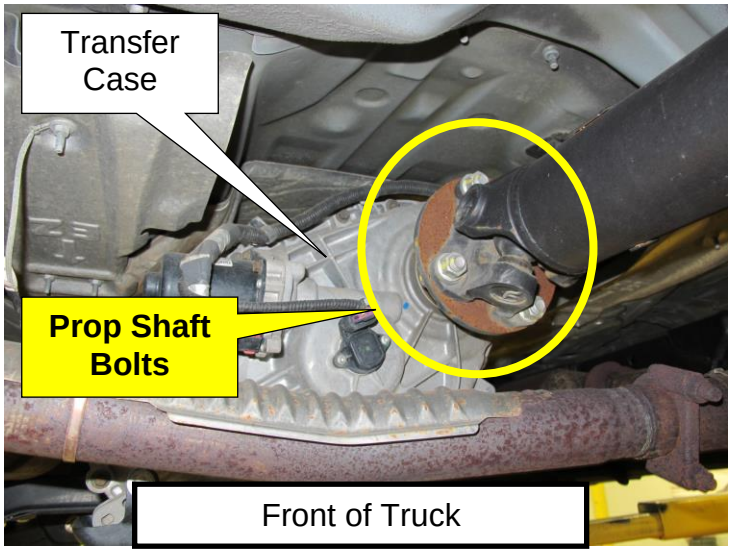


Figure 1

2. Using a suitable tool apply LIGHT to MODERATE force to one of the 19MM bolts, repeat on the other bolts (Figure 2).

   A. If **any** of the bolts move (NOT the prop shaft) **replace all 4** of the rear prop shaft bolts and nuts, (see Parts Information).

   - Torque NEW Rear Prop Shaft bolts and nuts:
     105N·m (77 ft-lb)

   B. If bolts do not move (are tight) go to inspection 3.


Figure 2

3. Once Inspection is complete and all bolts have been checked for torque and/or replaced, move to Inspection 3.

Inspection 3: Front Prop Shaft Bolt Torque

1. Locate the (4) front prop shaft bolts at the front differential (Figure 1).

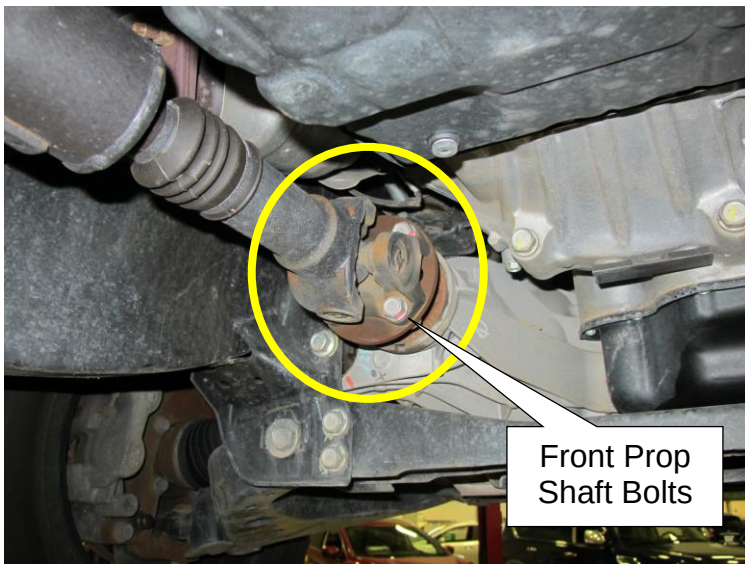


Figure 1

2. Place a 17MM box end wrench on one of the inside nuts, while holding the Prop Shaft in place apply LIGHT to MODERATE force, repeat on the other bolts. (Figure 2):

   A. If **any** of the bolts move (NOT the prop shaft) **replace all 4** of the front prop shaft bolts and nuts, (see Parts Information).

   - Torque NEW Front Prop Shaft bolts and nuts:
     80N·m (59 ft-lb)

   B. If bolts do not move (are tight) go to Inspection 4.

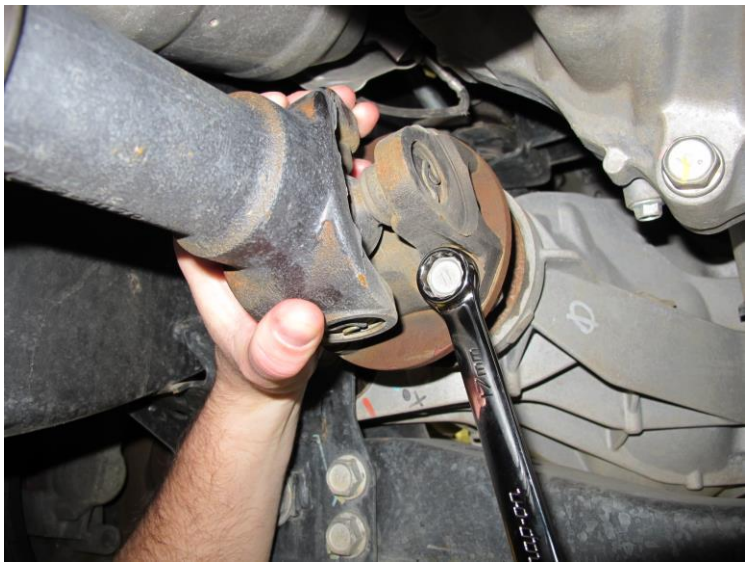


Figure 2

3. Once Inspection is complete and all bolts have been checked for torque and/or replaced, move to Inspection 4.

Inspection 4: POWER STEERING BOX LEAK

1. Locate the power steering box connections for the Power Steering Hose Assembly (Pressure) and Power Steering Hose Assembly (Return). (Figure 1, 2, 3).

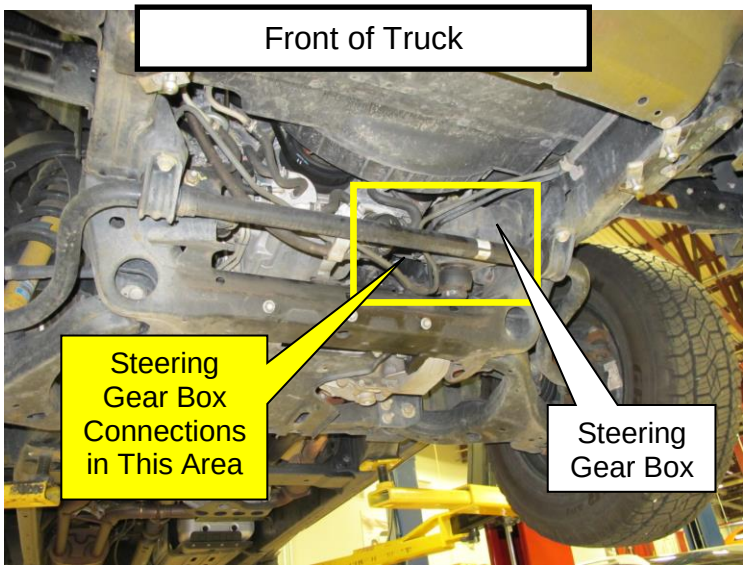


Figure 1

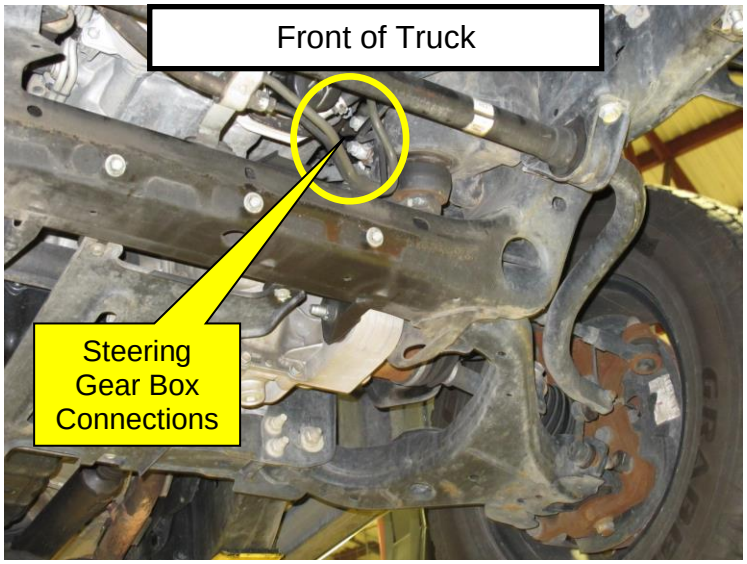


Figure 2

2. Inspect for **LEAKS** between the Steering Gear Box and Power Steering Hose Assembly (Pressure) and Power Steering Hose Assembly (Return) connections. (Figure 3).

   - If **NO LEAK** found, inspection is complete, proceed to step 12 to install front under cover.
   - If **LEAK** found, proceed to step 3.

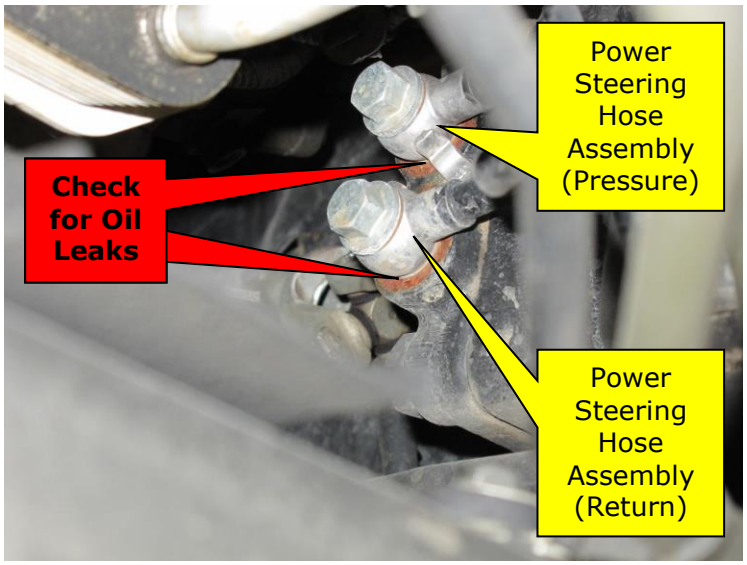


Figure 3

3. Remove engine under (Figure 4).

   - Remove the (4) engine under cover bolts.

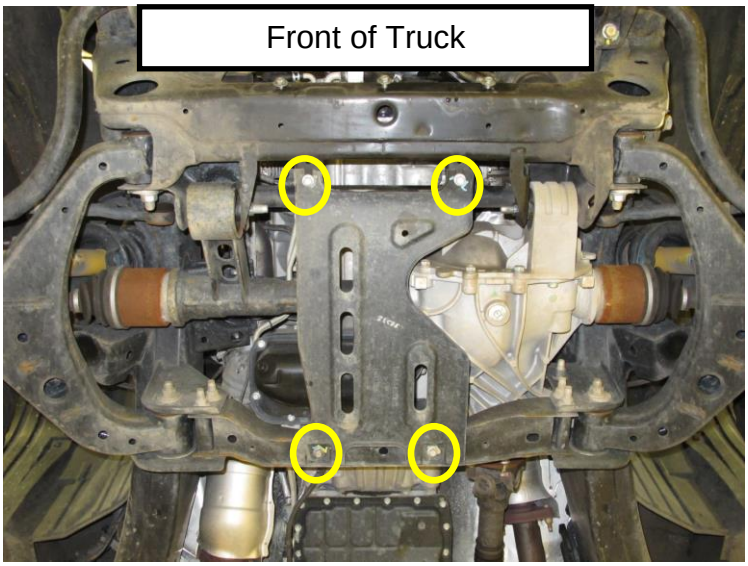


Figure 4

4. Remove the Power Steering Hose Assembly brackets and hose clamps to loosen lines.

   - Remove the power steering hose clamp and the power steering pipe clamp bracket bolts from the front cross member (Figure 5).

   - Remove the two power steering pipe clamp bracket bolts from the driver's side front frame rail (Figure 6).

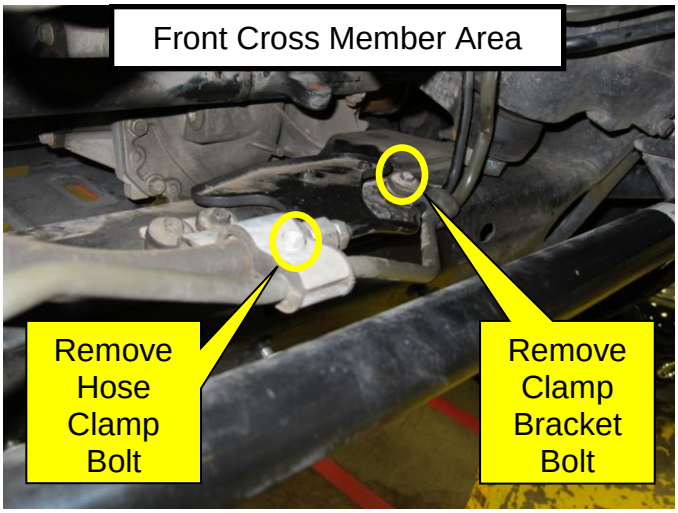


Figure 5

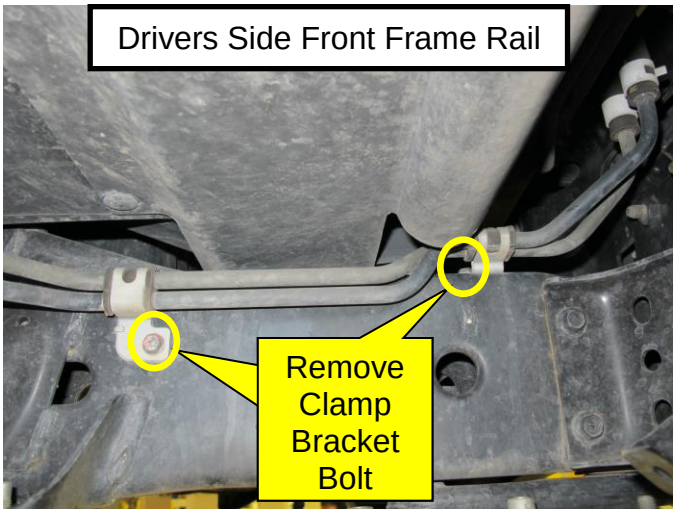


Figure 6

5. Reposition cooling fan harness bracket. Bracket bolted to block across from steering gear box on drivers side of truck (Figure 7)

NOTE: This harness bracket must be moved to the side to remove the power steering hose assembly pressure eye bolt.

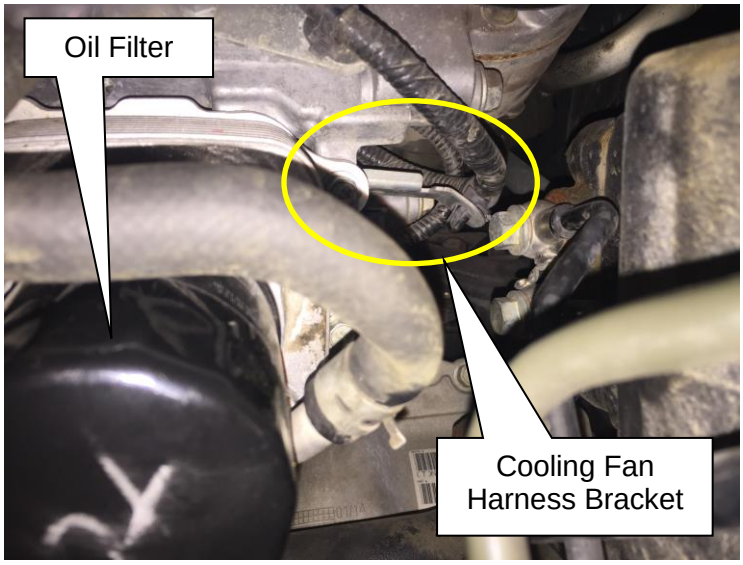


Figure 7

- Compress harness clip freeing harness from bracket in front of high pressure connection eye bolt (Figure 8).

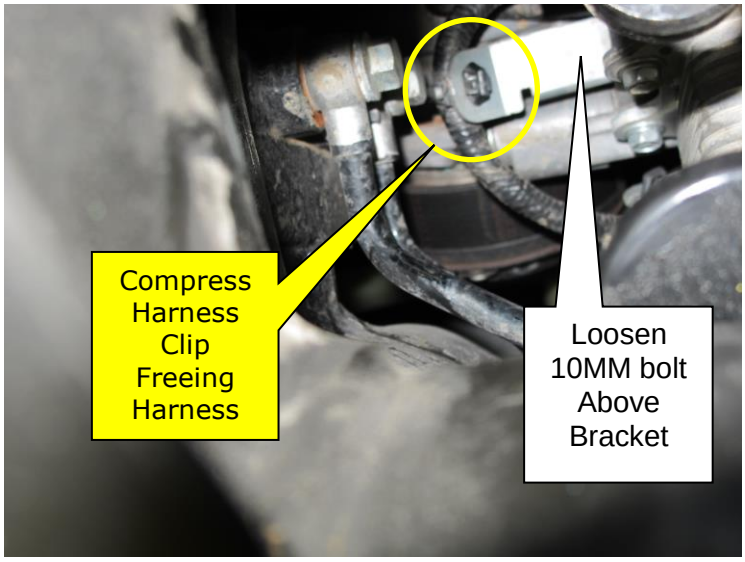


Figure 8

- Using a 10MM socket **<u>loosen</u>** bolt above bracket to loosen bracket and create clearance to remove high pressure connection eye bolt (Figure 9).

NOTE: Do not fully remove bracket bolt.

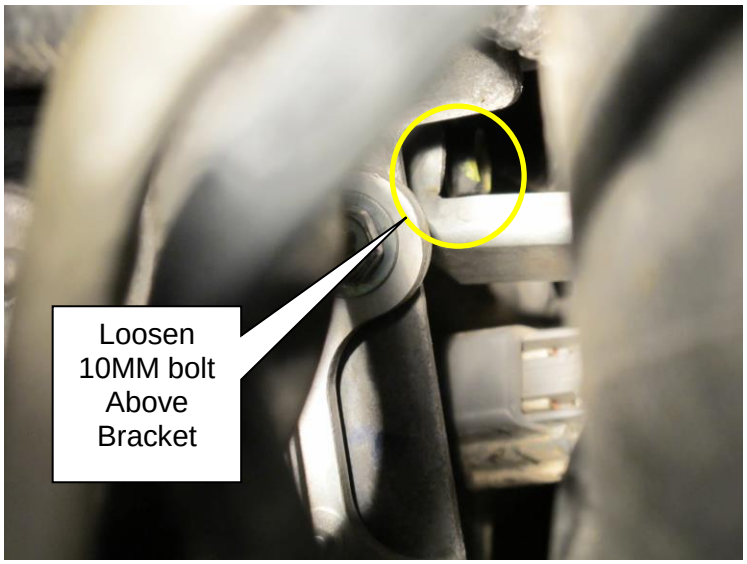


Figure 9

6. Remove Power Steering Hose Assembly **(Pressure & Return**) eye bolts. (Figure 10).

   - Remove old copper sealing washers and discard.
   - Inspect and clean any debris from copper sealing washer mating surfaces.

   Note: Have drain pan available to collect spillage.

   Note: When removing components such as tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

   Caution: Do not reuse drained power steering fluid.

   Caution: Do not reuse copper sealing washers.

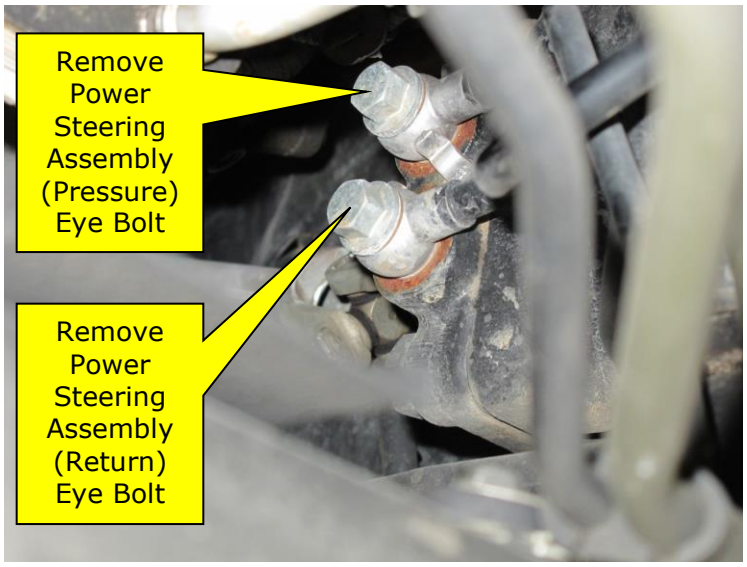


Figure 10

7. Install Power Steering Hose Assembly **(Pressure & Return)** connection eye bolts with four <u>new copper sealing washers</u> (Figure 11).

   - Torque Power Steering Hose Assembly (Pressure) connection eye bolt to: **45N.m (33 ft-lb)**

   Caution: Do not reuse copper sealing washers.

8. Reinstall power steering hose bracket bolts and cooling fan harness bracket: Torque bolts to **9N.m (80 in-lb)**

9. Proceed to step 10 for refilling and air bleeding the hydraulic system.

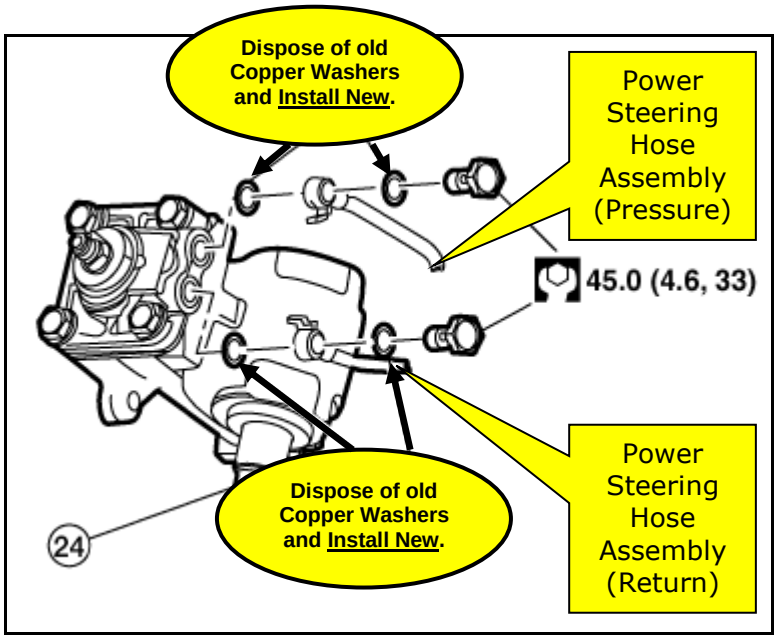


Figure 11

10. **REFILLING AND AIR BLEEDING HYDRAULIC SYSTEM**

CAUTION: Do not deviate from instructions or damage may occur.

NOTE: The following procedure will require an assistant for steps 10 through 13.

1. Allow vehicle to cool to room temperature.
2. Verify that all power steering hydraulic connections are made and tightened to specifications.
3. Turn front wheels fully left, lightly touching wheel stop.
4. Fill power steering fluid reservoir to top just below neck and install the power steering fluid reservoir cap.
5. Start the engine. After two seconds, stop the engine.

CAUTION:
- **Do not crank and run engine for more than two seconds or new air may be drawn into the power steering system and pump damage may occur.**
- **Do not turn steering wheel at this time or new air may be drawn into the power steering system and pump damage may occur.**

6. Remove power steering fluid reservoir cap and fill power steering fluid reservoir to top just below neck. Reinstall power steering fluid reservoir cap.
7. Repeat Steps 5 and 6 until power steering fluid level stabilizes at the top of reservoir just below the neck.

NOTE: Tank will need to be filled approximately 4 – 6 times. If power steering fluid is extremely foamy, allow vehicle to stand for a few minutes, then repeat Steps 4, 5 and 6.
8. Remove power steering reservoir cap.
9. Verify that power steering fluid has stabilized to top of reservoir just below neck. Add power steering fluid if necessary.

NOTE: Complete steps 10 through 13 without stopping between steps.
10. Have an assistant start the engine. The power steering fluid reservoir level will immediately begin to drop.
11. Quickly add power steering fluid to keep the fluid level at the COLD MAX line until the fluid level has stabilized.
12. Keep engine running and have the assistant slowly (approximately 90° [1/4 turn] per second) turn the steering wheel completely from left to right, then back to the left, lightly contacting the steering stops at the end of each turn, while adding power steering fluid to keep fluid level at the COLD MAX line.
13. Reinstall the power steering reservoir cap, then have assistant stop the engine.
14. With the engine stopped, check the power steering reservoir fluid level.
15. Remove power steering reservoir cap and add or remove fluid so that the level is at the COLD MAX line. Reinstall the power steering reservoir cap.
16. Start the engine and moderately (approximately 180° [1/2 turn] per second) turn the steering wheel from left to right, then back to the left, lightly contacting the steering stops at the end of each turn. Stop the engine.
17. With the engine stopped, check the power steering reservoir fluid level.
18. Remove power steering reservoir cap and add or remove fluid so that the level is at the COLD MAX line. Reinstall the power steering reservoir cap.
19. Repeat steps 16, 17 and 18 until the power steering reservoir fluid level has stabilized to the COLD MAX line and no air bubbles or foam exist in the fluid.

NOTE: If power steering fluid is extremely foamy, allow vehicle to stand for a few minutes, then repeat Steps 9 through 19 until air bubbles or cloudiness do not exist.
20. Adjust final fluid level to COLD MAX line at a fluid temperature of 0° - 30°C (32° - 86°F).
21. Reinstall the power steering reservoir cap.
22. Inspect for power steering fluid leaks.

11. Install engine under cover.

- Install the (4) engine under cover bolts: torque to **13.5N.m (10 ft-lb)**

12. Install front under cover by model.

- Standard: Install the (6) front under cover bolts: torque to **13.5N.m (10 ft-lb)**
- Pro-4X: Install the (3) bolts and (4) hex head bolts: torque to **13.5N.m (10 ft-lb)**

13. Submit a warranty claim using the claims information for the Inspection/Repairs completed.

14. Release the vehicle, inspection complete.

Inspection 1: A/T Fluid Leak Inspection

PARTS INFORMATION: (NOT REQUIRED)

Inspection 2: Rear Prop Shaft Bolt Torque

PARTS INFORMATION:

Description	Quantity	Part #
Bolt	4	37120-5X00A
Nut	4	37171-5X00A

Inspection 3: Front Prop Shaft Bolt Torque

PARTS INFORMATION:

Description	Quantity	Part #
Bolt	4	37120-5X05A
Nut	4	37171-AL60A

Inspection 4: Power Steering Box Leak

PARTS INFORMATION:

Description	Quantity	Part #
Washer-Lock	4	49726-50W00
Genuine NISSAN PSF or Equivalent	2 Max	999MP-AG000P

CLAIMS INFORMATION

Submit claim using the following claims coding:

Work Order Line Type: "CM" Campaign

Campaign: PC564

Claim Type:	CM			
PNC:	PC564			
Symptom:	ZZ			
Diagnosis:	99			
Description:	**Op Codes**	**Flat Rate Time**	**Parts Required on claim**	**Expense Code Required**
MULTI-POINT INSPECTION				
Multi-Point Inspection: (ALL) 1. A/T Fluid Leak Inspection (Includes Hose & Clamp Adjustment) 2. Rear Prop Shaft Bolt Torque 3. Front Prop Shaft Bolt Torque 4. Power Steering Box Leak (Includes Re-torque if Required)	PC5640	0.5 Hr	No	No
Inspect Automatic Transmission Fluid Leak, Rear Prop Shaft Bolt Torque, Front Prop Shaft Bolt Torque, and Power Steering Box Leak. Replace 4 Copper Washers: Power Steering Hose Assembly Pressure & Return Connections	PC5641	1.6 Hr	Yes	No
COMBINATION CODES BELOW CAN BE USED IN ADDITION TO PC5640, AND PC5641 IF REPAIR IS REQUIRED				
Replace Rear Prop Shaft (4) bolts and (4) nuts; Torque to spec	PC5642	0.2 Hr	Yes	No
Replace Front Prop Shaft (4) bolts and (4) nuts; Torque to spec	PC5643	0.2 Hr	Yes	No