## **Technical Bulletin**



# SERVICE BULLETIN

 Classification:
 Reference:
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 EL17-037
 NTB17-122
 December 1, 2017

# 2016 – 2017 TITAN XD DIESEL; BLOCK HEATER INOPERATIVE

**APPLIED VEHICLES:** 2016 – 2017 Titan XD (A61) APPLIED ENGINE: Cummins (5.0L V8) Diesel

#### IF YOU CONFIRM

The coolant heater (block heater) needs to be replaced based on the Electronic Service Manual (ESM) inspection,

#### and

The vehicle is currently equipped with a coolant heater (with attached cord) located in the front engine cover.

#### NOTE:

- This bulletin does not apply if the vehicle is equipped with a coolant heater located in the water inlet at the lower radiator hose.
- Refer to the ESM, section CO Engine Cooling System, for coolant heater operation and inspection information.

#### **ACTION**

- 1. Use the Service Procedure in this bulletin to install a new coolant heater, locating it in the water inlet at the lower radiator hose.
- 2. Cut the cord to the original coolant heater.

**IMPORTANT:** The purpose of ACTION (above) is to give you a quick idea of the work you will be performing. You MUST closely follow the entire SERVICE PROCEDURE as it contains information that is essential to successfully completing this repair.

Nissan Bulletins are intended for use by qualified technicians, not 'do-it-yourselfers'. Qualified technicians are properly trained individuals who have the equipment, tools, safety instruction, and know-how to do a job properly and safely. NOTE: If you believe that a described condition may apply to a particular vehicle, DO NOT assume that it does. See your Nissan dealer to determine if this applies to your vehicle.

#### SERVICE PROCEDURE

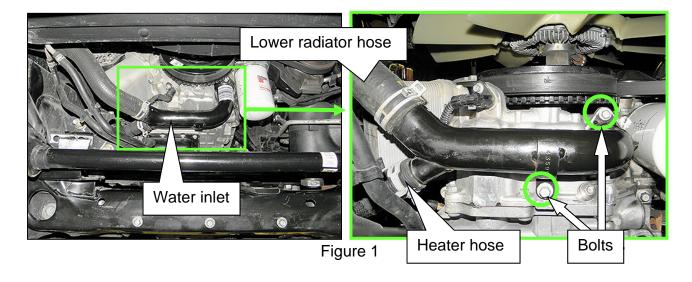
#### **Coolant Heater Installation**

- 1. Record (write down) any customer settings that will be lost when the battery is disconnected.
  - Refer to the ESM section PG Power Supply, Ground, & Circuit Elements, for a listing of systems that may lose settings or memory when disconnecting the 12V battery.
    - Look in the PG section index for ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL.
    - > This list often includes items such as audio, HVAC, power windows, clock, etc.
- 2. Disconnect the negative battery cable from both batteries.
- 3. Drain the engine coolant.
  - Refer to the ESM, section CO Engine Cooling System, for information on draining coolant.
  - Drain the coolant into a clean drain pan. The drained coolant will be reused/reinstalled back into the cooling system.

**CAUTION:** Do not spill coolant on the drive belt.

**IMPORTANT:** Leave the coolant heater in its present location as a non-functional plug.

- 4. Remove the existing water inlet (Figure 1) as follows:
  - a. Remove the lower radiator hose from the water inlet.
  - b. Remove the heater hose from the water inlet.
  - c. Remove the two bolts that attach the water inlet to the engine front cover.



- 5. Install new water inlet in the reverse order that the original was removed (Figure 2).
  - Torque the two bolts to 18 N•m (1.8 kg-m, 13 ft-lb).

#### **IMPORTANT:**

- Use the new bolts from the Parts Information when installing the new water inlet.
   They are longer.
- The bolt with the thread-locker (SCREW,HEX FLANGE HEAD CAP) must be used in the location shown in Figure 2.
- 6. Install a new coolant heater into the bottom of the water inlet (see Figure 2).
  - Torque the coolant heater to 55 Nom (5.6 kg-m, 40 ft-lb).

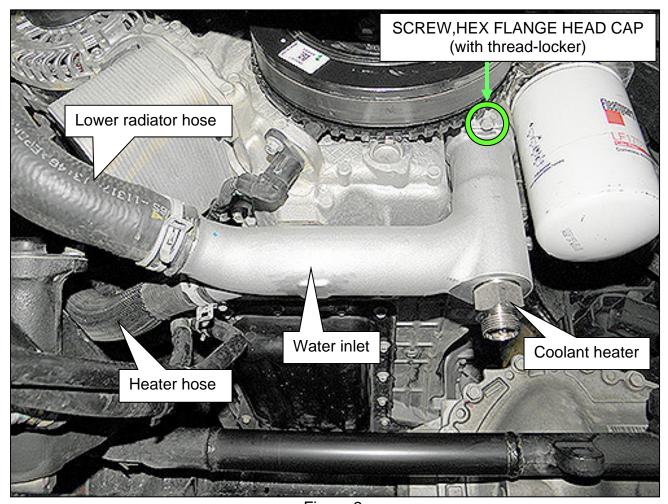


Figure 2

- 7. Re-fill the engine coolant.
  - Refer to the ESM, section **CO Cooling System**, for coolant refill information.
  - Reuse the coolant that was removed from the engine, and then verify that the coolant is at a 50/50 mix in the system using a refractometer.

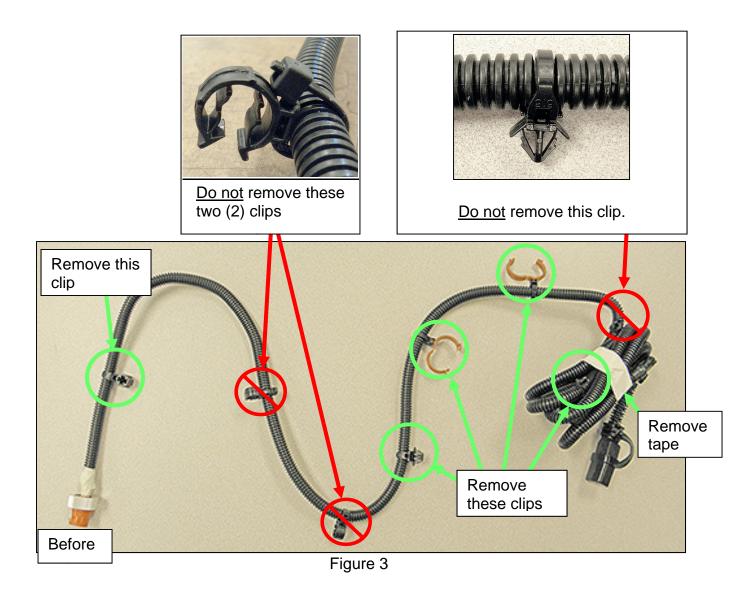
#### IMPORTANT:

- Use Nissan long life coolant and distilled water, or equivalent.
- Coolant should be changed every 45,000 miles.

#### **Coolant Heater Cord Installation**

- 1. Prepare the "coolant heater cord" (cord) as follows:
  - a. Remove the cord from the package.
  - b. Remove the white tape that retains the coiled cord.
  - c. Remove the five (5) clips circled in green that are shown in Figure 3 from the cord.
    - Do not remove the three (3) clips that are circled in red in Figure 3.

**IMPORTANT:** The three original clips circled in red will be retained for cord installation.



d. Slide the three (3) remaining harness clips to the locations shown in Figures 4, 5, and 6.

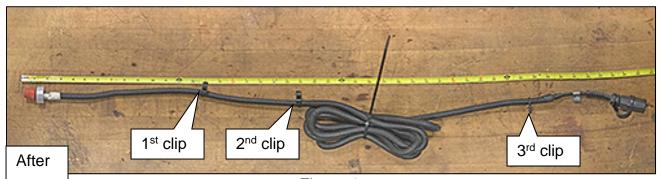


Figure 4

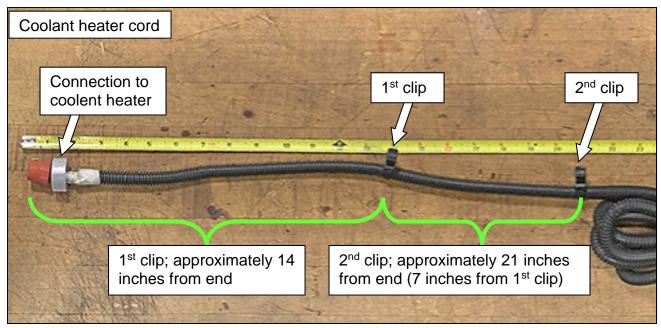


Figure 5

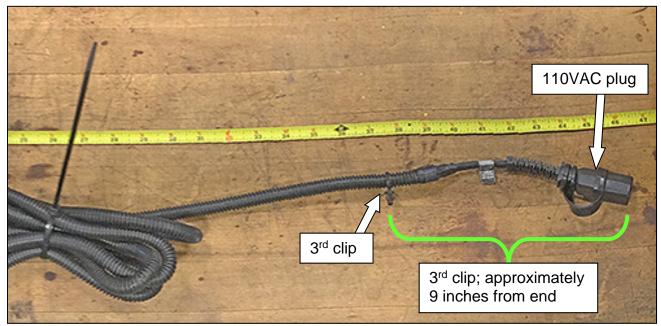
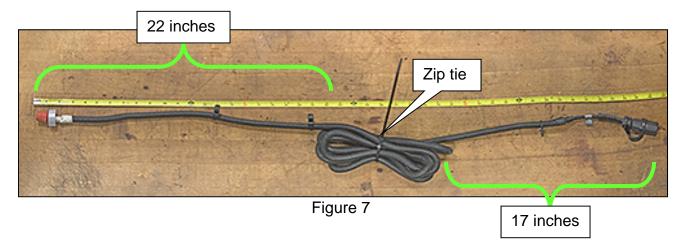


Figure 6

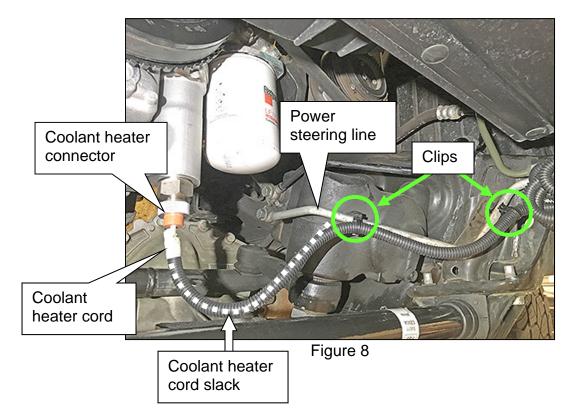
- e. Recoil the cord so that:
  - The block heater connector to coiled cord is 22 inches.
  - The 110VAC plug end to coiled cord is 17 inches.

#### and then

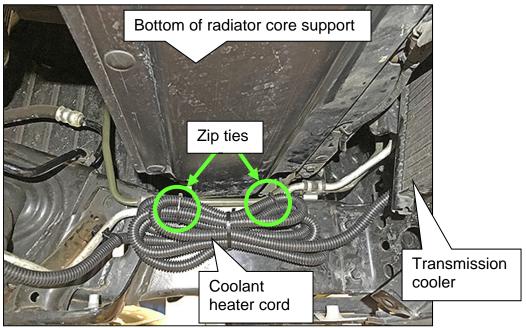
• Retain recoiled cord with a zip tie as shown in Figure 7.



- 2. Connect the cord to the coolant heater as shown in Figure 8.
- 3. Clip the cord to the power steering line as shown in Figure 8.
  - Leave slack in the cord between the coolant heater connector and the first clip, to the power steering line, as shown in Figure 8.



- 4. Attach the coiled section of cord to the power steering lines with two zip ties; one at each end.
  - Insert the zip ties through at least three coils to provide support.



- Figure 9
- 5. Route the 110VAC plug end of the cord over the top of the frame in front of the transmission cooler (see Figure 10).
- 6. Clip the cord to the frame.
  - Insert from the top into the pre-existing hole as show in Figure 10.

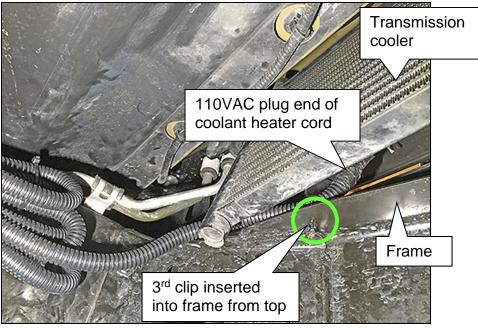


Figure 10

7. Route the coolant heater cord 110VAC plug through the front bumper as shown in Figure 11.

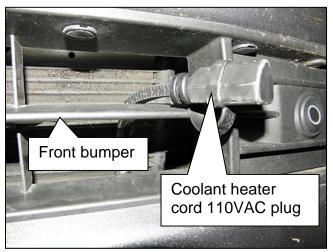


Figure 11

- 8. Cut through the old/original coolant heater cord (plug end) near its first harness clip, where shown in Figure 12, and discard the removed coolant heater cord/plug.
  - Cut the end of the coolant heater cord that plugs into the wall.

**NOTE:** Battery does not need to be removed for this step.

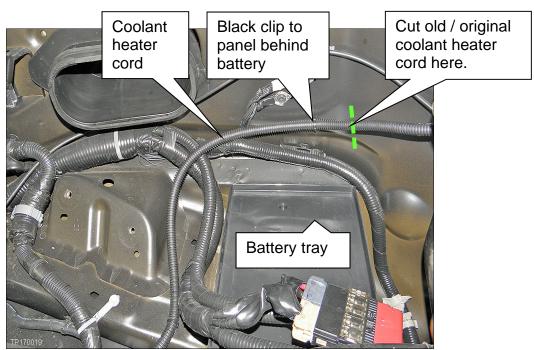


Figure 12

- 9. Re-install any remaining parts that were removed in reverse order.
  - Refer to the ESM as needed for re-assembly.
- 10. Re-set any customer settings that were lost when the battery was disconnected.
  - Refer to the ESM section PG-Power Supply, Ground, & Circuit Elements, for a listing of systems that may lose settings or memory when disconnecting the 12V battery.
    - ➤ Look in the PG section index for **ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL**.
    - > This list often includes items such as audio, HVAC, power windows, clock, etc.

### **PARTS INFORMATION**

DESCRIPTION	PART#	QUANTITY
HEATER – CYLINDER BLOCK (Coolant Heater)	11001-EZ40A	1
COOLANT HEATER CORD	24076-EZ01A	1
CONNECTION, WATER INLET (Water Inlet)	13048-EZ40B	1
SCREW, HEX FLANGE HEAD CAP (Water inlet mounting bolt with thread-locker)	11035-EZ44D	1
SCREW,STUDDED FLANGE CAP (Water inlet mounting bolt)	29799-EZ40A	1
CLIP (TIE STRAP)	24224-3VX0B	1

### **CLAIMS INFORMATION**

# Submit a Primary Part (PP) type line claim using the following claims coding:

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Replace coolant heater	(1)	AX45AA	ZE	32	1.1

<sup>(1)</sup> Reference the electronic parts catalog (FAST), and use the Cylinder Block Heater (11001-\*\*\*\*) as the Primary Failed Part (PFP).