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SERVICE BULLETIN

Classification:	Reference:	Date:
AT13-011c	NTB13-095c	November 25, 2015

2007-2012 SENTRA; REDUCED PERFORMANCE DUE TO CVT FLUID TEMPERATURE PROTECTION LOGIC

This bulletin has been amended to revise the flow chart on page 2 with additional repair information. Please discard all previous versions.

APPLIED VEHICLE: 2007-2012 Sentra (B16)
APPLIED ENGINE: MR20

IF YOU CONFIRM:

The vehicle speed is, or was, reduced by the CVT fail-safe (reduced vehicle speed) after continuous operation under the following conditions:

- High RPM and/or high speed driving
  (4000 RPM or more, and/or 65 MPH or more for 1.0 – 1.5 hrs or more)
- Driving in ambient temperature of 96 degrees or higher
- Climbing steep or extended hills for 6 miles or more
- Whine or rattle type noise occurring during reduced engine performance (vehicle speed decrease)

NOTE: Before applying this bulletin if the vehicle has any DTCs, they should be checked and repaired first.

ACTION

1. Perform a self-diagnosis with CONSULT-III plus (C-III plus).
   - ➢ If DTCs are present, refer to the appropriate section of the Electronic Service Manual (ESM) and diagnose the DTCs first before proceeding to step 2 of **ACTION**.
2. Check the number of counts of "CVT-A" and "CVT-B" with C-III plus.
   - ➢ Refer to the Flow Chart on page 2 and the Service Procedure starting on page 3 to confirm if this bulletin applies.

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 the 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.

Flow Chart

Important

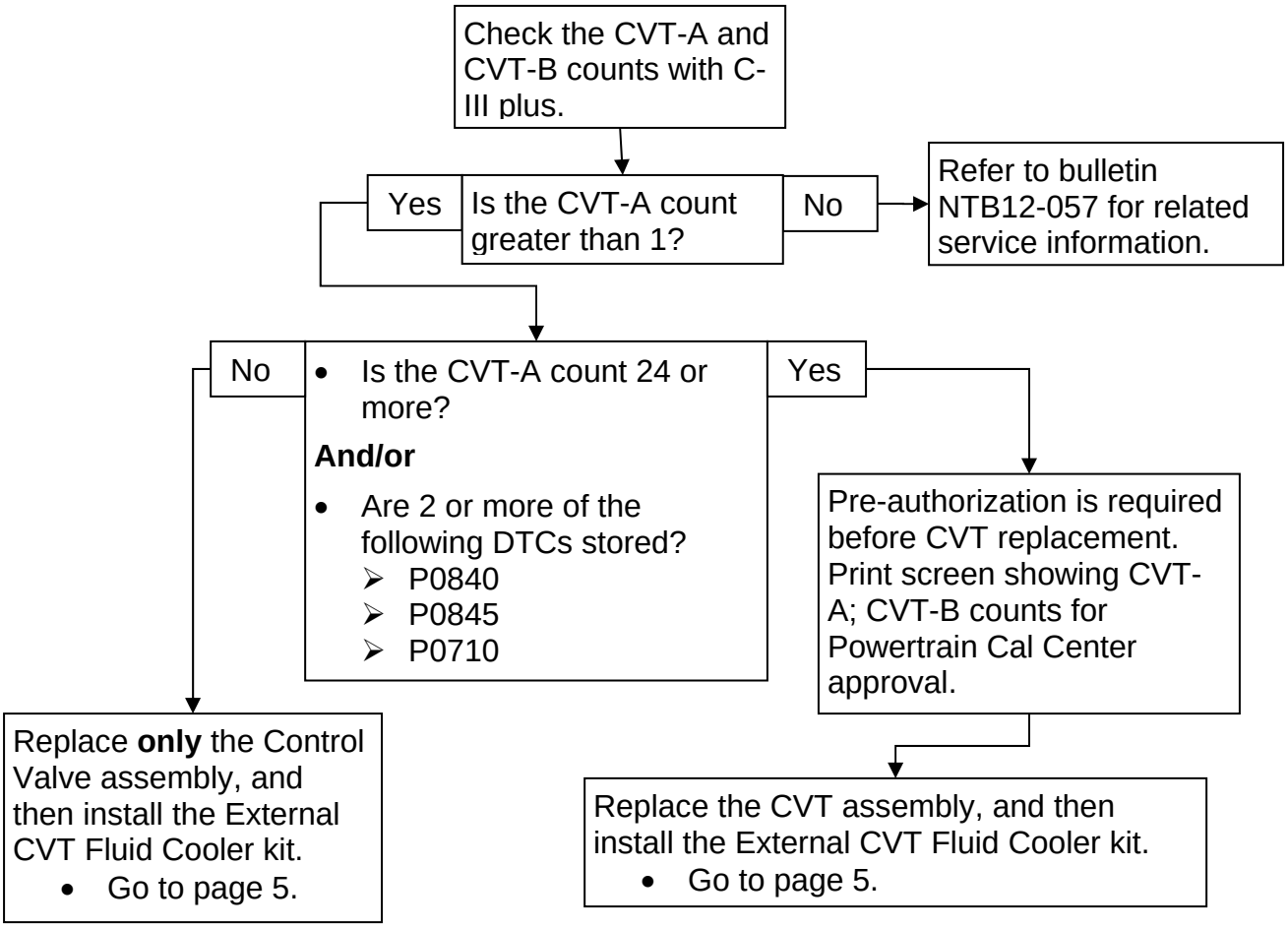
Before applying this bulletin:

- Confirm that the CVT fluid has not been overfilled, and that it contains the proper CVT fluid.
- Confirm that the coolant concentration is not greater than 50%.

Use of incorrect fluid, overfilling the CVT fluid, or coolant concentrations greater than 50% can cause the symptoms in the IF YOU CONFIRM section on page 1.

Refer to NTB12-057 to resolve these conditions first if they should occur.

NOTE: Refer to the ESM for the correct CVT fluid and coolant type for the model and year vehicle that is being worked on.



NOTE:

- If the CVT-A count is not greater than 1 and similar symptoms to those in IF YOU CONFIRM and/or a single DTC is present, refer to the ESM and NTB12-057 for further diagnosis.
- Refer to the ESM section TM – Transaxle & Transmission for removal and installation information for the Control Valve or CVT assemblies.

SERVICE PROCEDURE

Check CVT-A and CVT-B count with C-III plus

1. Open C-III plus and select **Diagnosis (All Systems)**.

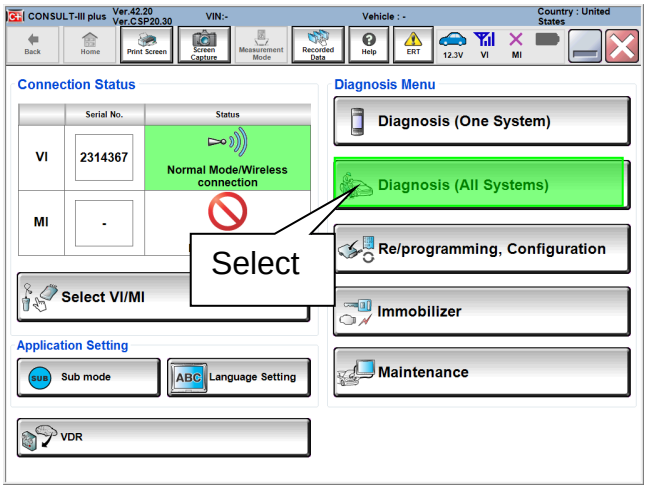


Figure 1

2. Select **TRANSMISSION**.

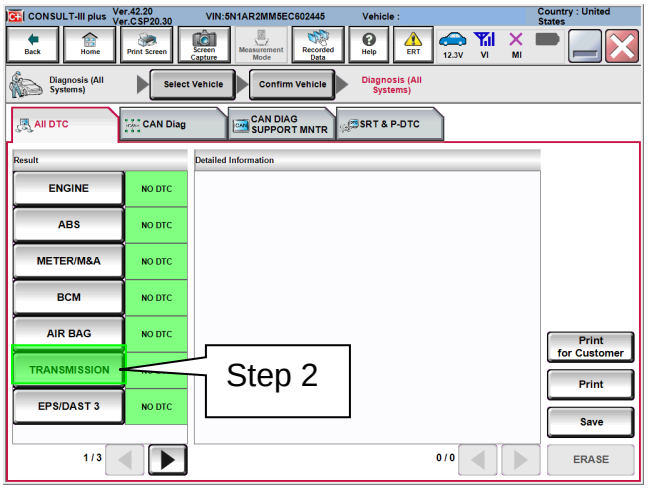


Figure 2

3. In **Data Monitor** select **TRANSMISSION** and then select **CVT-A** and **CVT-B.**

4. Select **START**.

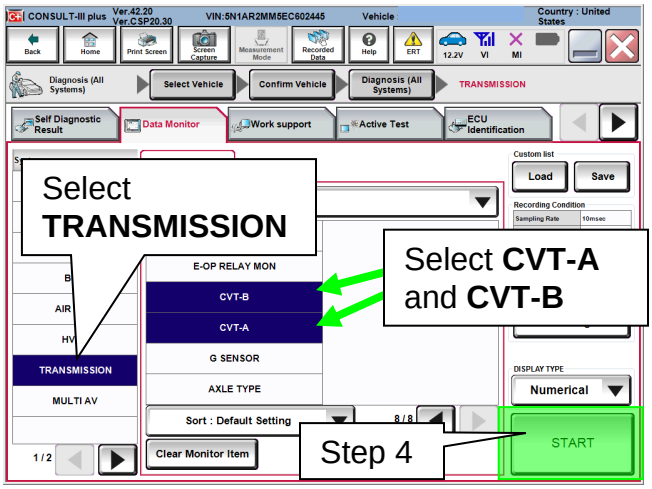


Figure 3

5. Check both **CVT-A** and **CVT-B** counts and refer to the Flow Chart on page 2 to confirm if this bulletin applies.

   NOTE: If the CVT-A count <u>is not</u> greater than 1 and similar symptoms to those in IF YOU CONFIRM and/or a DTC are present, refer to the ESM and NTB12-057 for further diagnosis.

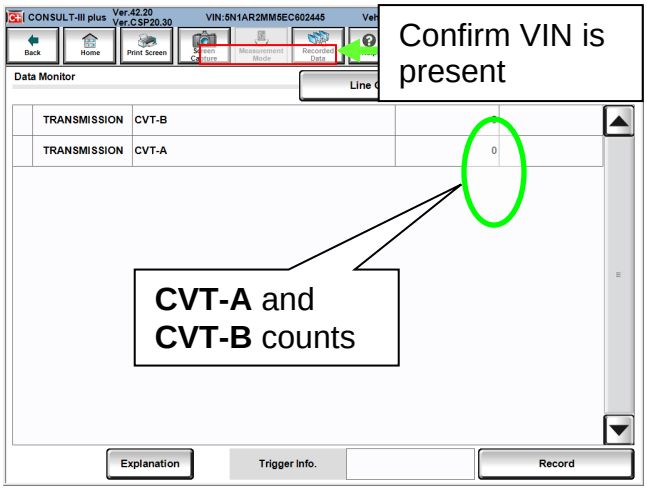


Figure 4

6. If it is confirmed that this bulletin applies, install the SERVICE KIT-COOLER-ASSY listed in the Parts Information.

   And

   - If the CVT count is 24 or greater, replace the CVT assembly.

   Or

   - If the CVT count is less than 24, replace the Control Valve Assembly.

   IMPORTANT: Pre-authorization is required before CVT replacement. Print screen showing CVT-A; CVT-B counts for Powertrain Call Center approval.

   - ➢ Refer to the **Installation Instructions** beginning on the next page to install the SERVICE KIT-COOLER-ASSY.
   - ➢ Refer to the ESM section TM – Transaxle & Transmission for removal and installation information for the Control Valve or CVT assemblies.

INSTALLATION INSTRUCTIONS

1. Place the vehicle on a lift and raise it as needed to perform the following procedure.

2. Install the “COOLER ASSY – AUTO TRANS. OIL” to the pre-existing weld nuts on the front of the radiator support with bolts from kit.
   - Torque bolts to 7N•m (0.71 kg-m, 62 in-lb).

   NOTE: Figure 5 is shown looking from the bottom of the vehicle upward, at the lower front radiator/condenser support.

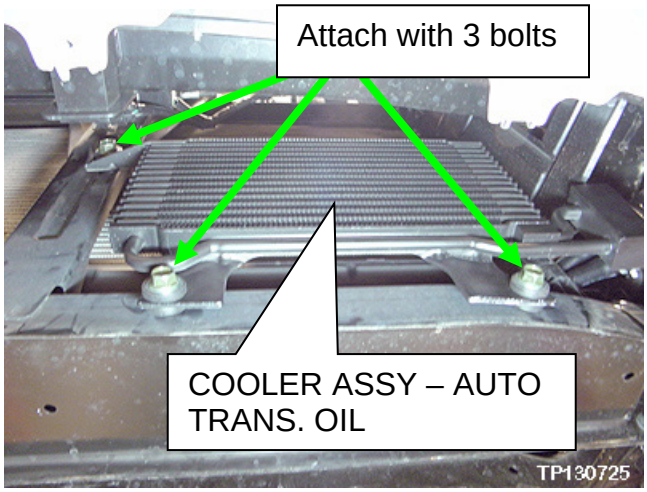


Figure 5

   NOTE: Figure 14 on page 8 shows an overview of the external CVT cooler and hose routing.

3. Route both hoses through the radiator support and into engine compartment.

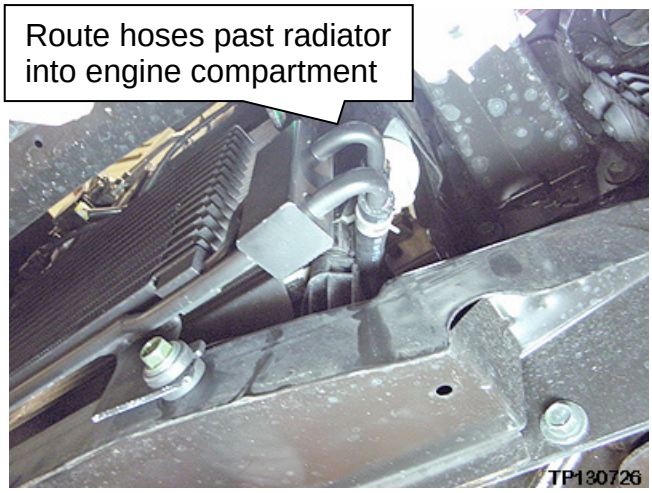


Figure 6

4. Remove the Air Inlet to gain access to the CVT Fluid Cooler.

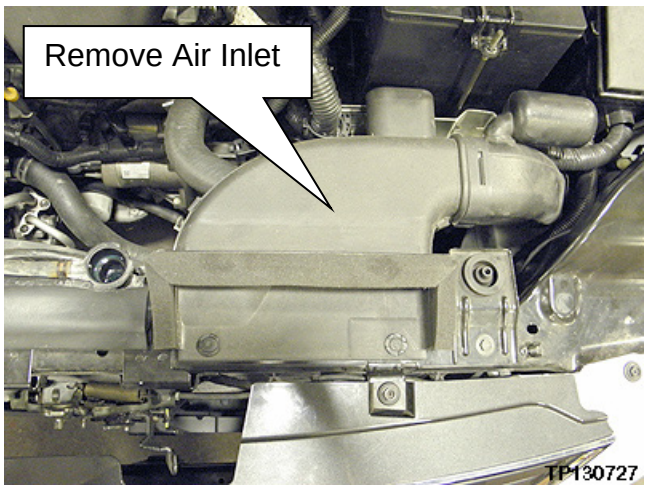


Figure 7

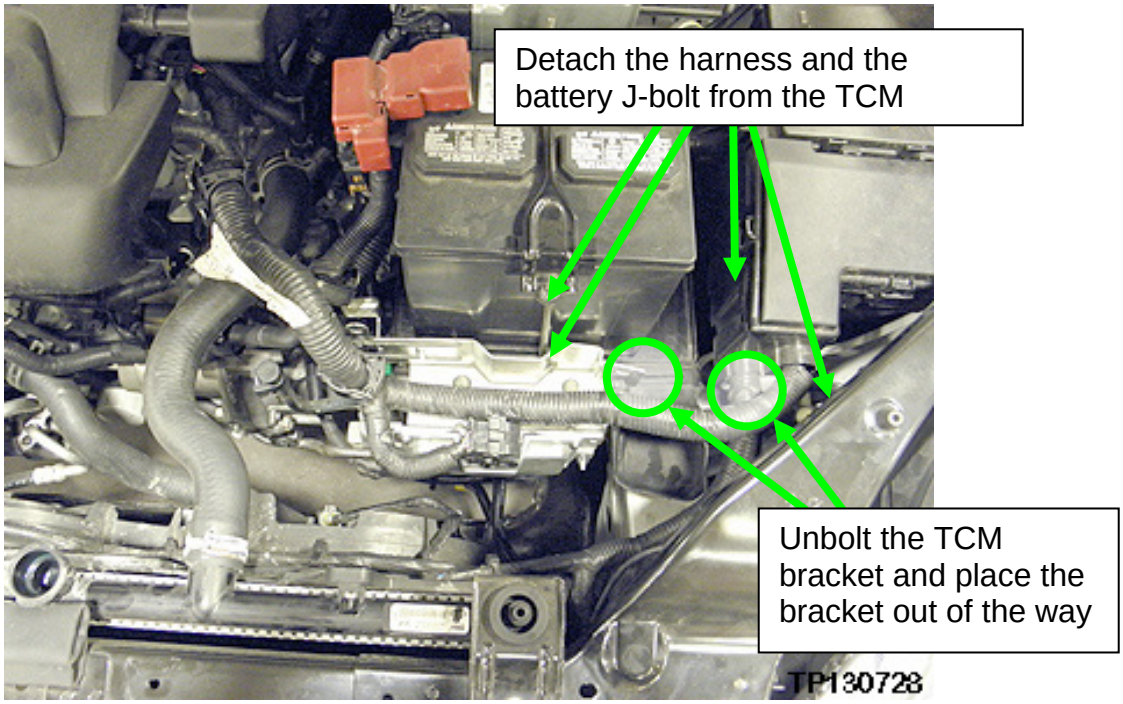


Figure 8

5. Detach the Engine Room harness and the battery J-bolt from the TCM bracket.

6. Unbolt the TCM bracket and place it out of the way.

WARNING:

- Never remove the radiator cap when the engine is hot. Serious burns may occur from high-pressure engine coolant escaping from the radiator.

7. Relieve any residual cooling system pressure.

   a. Wrap a thick cloth around the radiator cap. Slowly turn it a quarter of a turn to release the pressure.

   b. Then turn it all the way.

8. Clamp both of the coolant hoses attached to the CVT Fluid Cooler to prevent coolant loss.

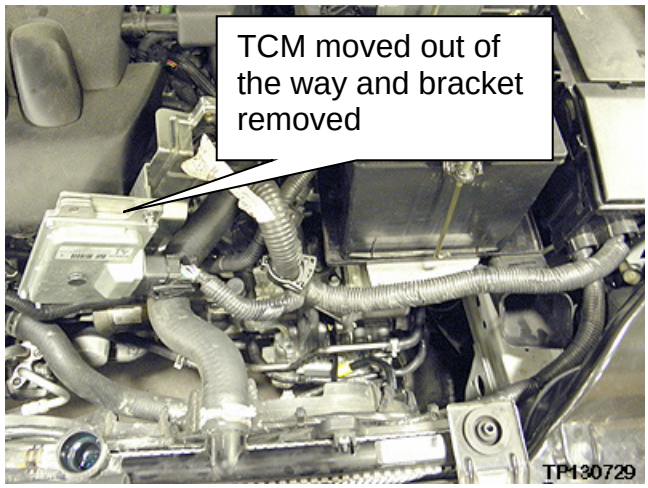


Figure 9

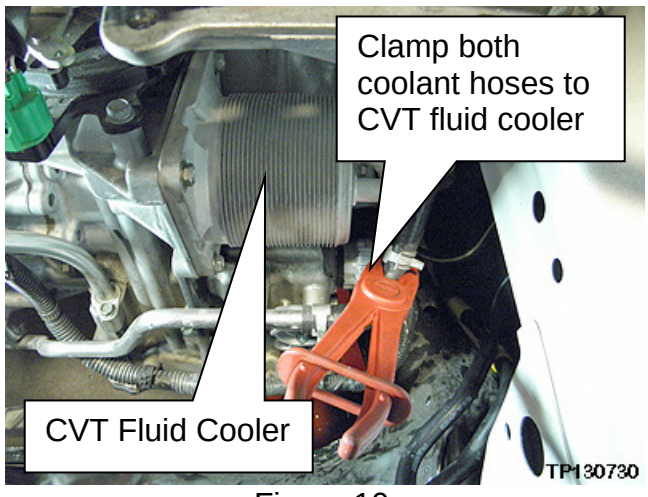


Figure 10

9. Remove both of the CVT Fluid Cooler coolant hose (Water Hose B and Water Hose C) spring clamps and then remove both of the hoses from the CVT Fluid Cooler.

   NOTE: These spring clamps will be saved for reassembly.

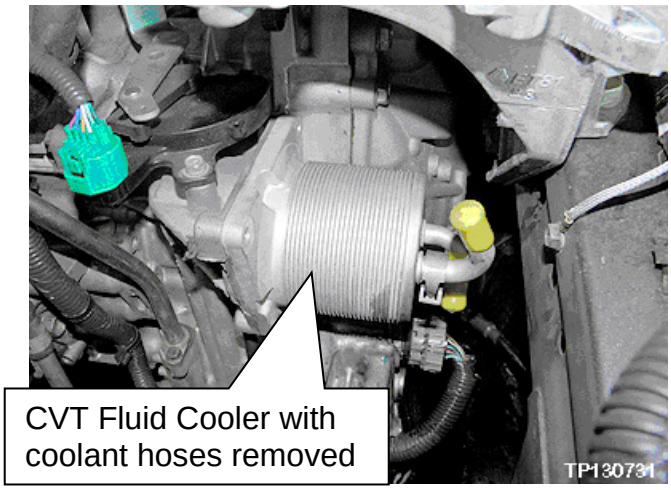


Figure 11

10. Loosen the CVT Fluid Cooler mounting bolts (4 bolts) and remove the CVT Fluid Cooler.

11. Clean any debris from the CVT Fluid Cooler mounting surface with brake cleaner and a lint free cloth.

    NOTE: Use genuine Nissan Brake Cleaner or equivalent.

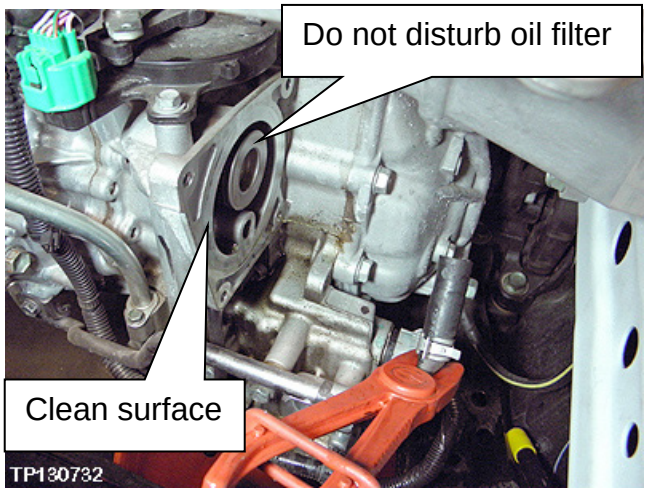


Figure 12

12. Coat the O-ring on the new CVT Fluid Cooler using NS-2 CVT fluid before installing it onto the CVT Cooler mounting area.

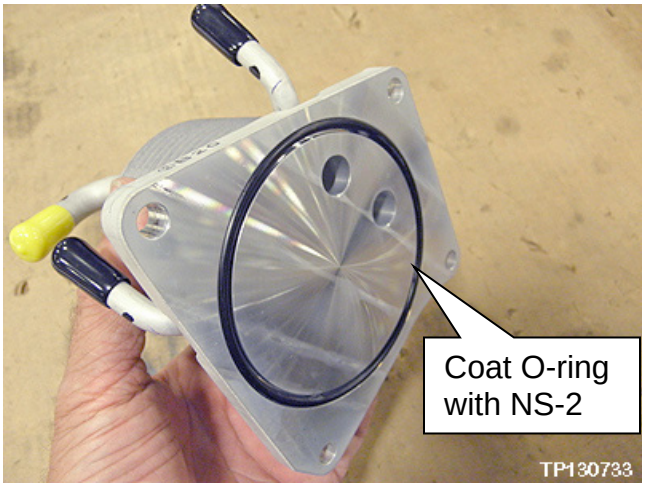


Figure 13

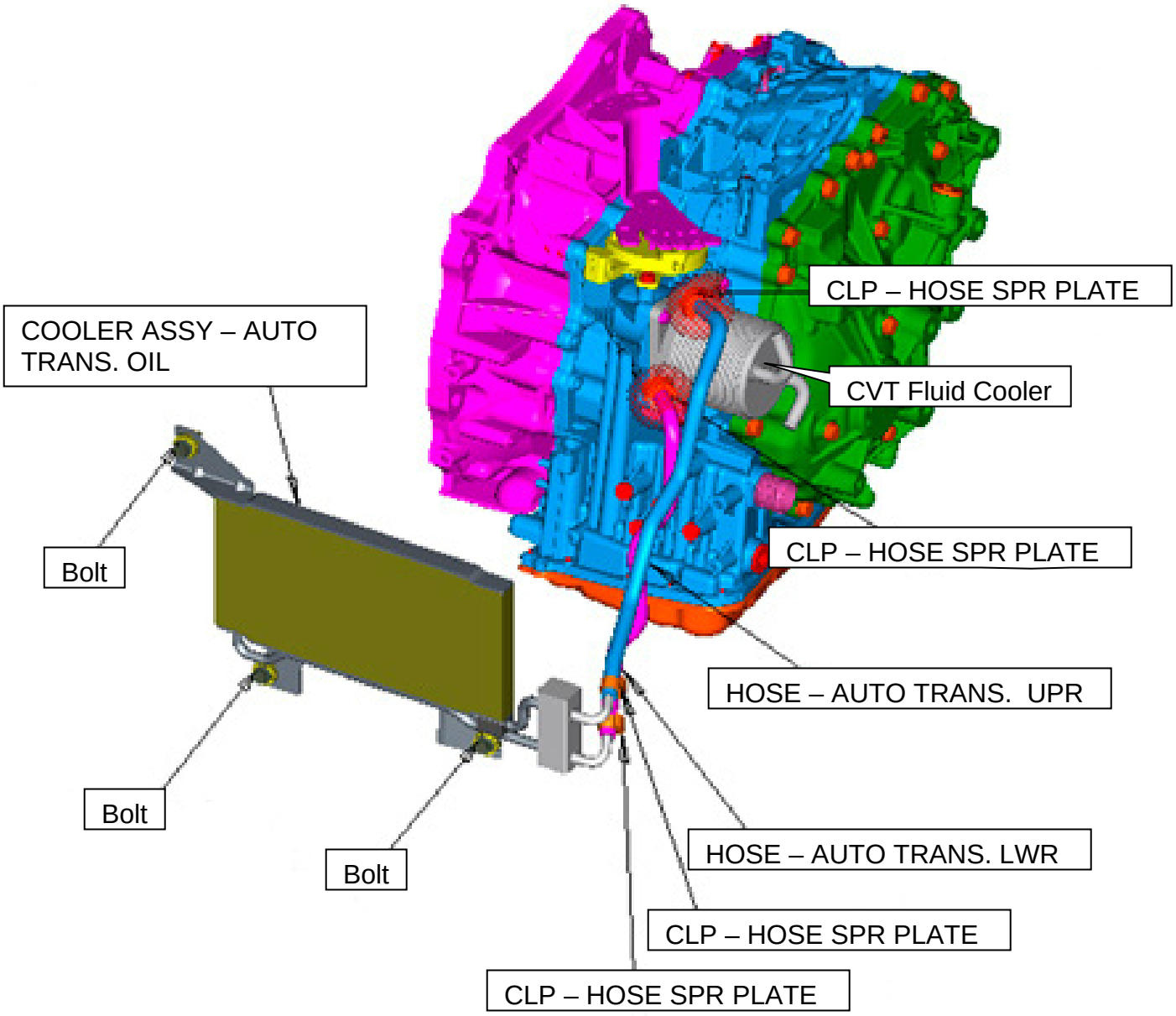


Figure 14

Figure 14 shows overview of external CVT cooler and hose routing.

13. Install the new CVT Fluid Cooler from the kit onto the CVT and tighten the mounting bolts to 3.63 N•m (0.37 kg-m, 32 in-lb).

14. Use a lint-free cloth and genuine Nissan Brake Cleaner or equivalent to remove any residual coolant from the inside of both of the coolant hoses before re-assembly of the hoses to the CVT fluid cooler.

15. Re-install CVT Water Hose B and CVT Water Hose C onto the new CVT Fluid Cooler and reposition spring clamps.

    - Position the spring clamps as close to each fitting bulge as possible and then release them.

    NOTE: Confirm that the clamps are not on top of each fitting bulge or on an angle.

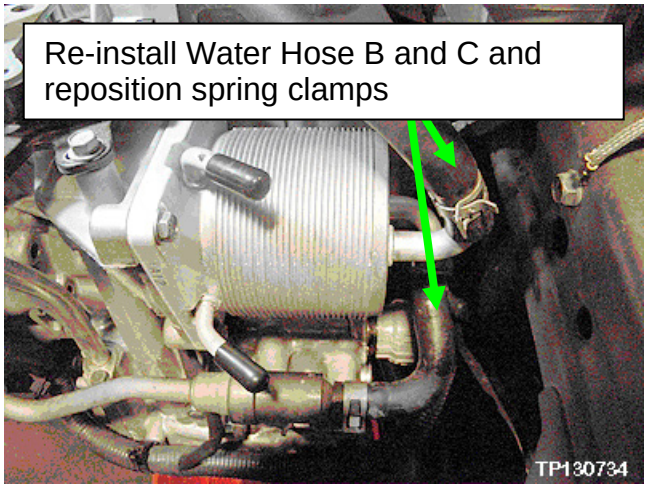


Figure 15

16. Place 2 new “CLP – HOSE SPR PLATE” (spring clamps) onto the COOLER ASSY – AUTO TRANS. OIL hoses and install the cooler hoses on to the CVT Fluid Cooler.
    - See Figure 14 for hose routing.
    - Position the hoses so that they do not come in contact with the radiator support.
    - Position the spring clamps as close to the fitting bulge as possible and then release them.

    NOTE: Confirm that the spring clamps are not on top of the fitting bulge or on an angle.

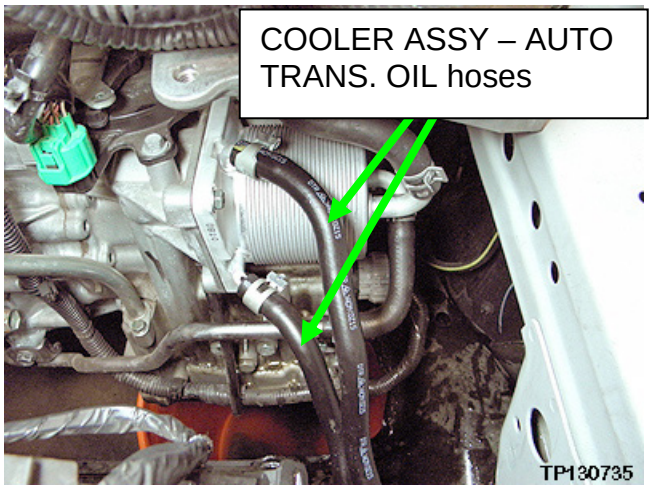


Figure 16

17. Reassemble the components removed in steps 4 – 6 in reverse order.
18. Check the level of the coolant and add as needed.
    - Refer to ESM for correct coolant for the model year vehicle that is being worked on.
19. Check the level of the CVT Fluid and add as needed.
    - Refer to ESM for correct method to check fluid level for the model year vehicle that is being worked on.

      NOTE: For warranty repairs, Nissan NS-2 CVT Fluid **must** be used. For customer pay repairs, Nissan NS-2 CVT Fluid or an equivalent is recommended.

PARTS INFORMATION

DESCRIPTION	PART #	QUANTITY
SERVICE KIT-COOLER ASSY	21606-ET89B	1
NS-2 CVT Fluid (2)	999MP-NS200P (1)	As needed
Control Valve Assembly	(3)	1
CVT Assembly	(3)	1

(1) For warranty repairs, Nissan NS-2 CVT Fluid **must** be used. For customer pay repairs, Nissan NS-2 CVT Fluid or an equivalent is recommended.

(2) Order this item through the Nissan Maintenance Advantage program: Phone: 877-NIS-NMA1 (877-647-6621). Website order via link on dealer portal www.NNAnet.com and click on the "Maintenance Advantage" link.

(3) Use the VIN and the electronic parts catalog (FAST or equivalent) to obtain the applicable part number for the vehicle you are working on.

Table A – Listing of parts included in the SERVICE KIT-COOLER ASSY

PART NAME	QTY PER KIT
COOLER ASSY-AUTO TRANS OIL (air-to-ATF cooler)	1
HOSE-AUTO TRANS, UPR	1
HOSE-AUTO TRANS, LWR	1
CLP – HOSE SPR PLATE(s)	4
BOLT-HEX	3
BOLT-HEX	4
CVT Fluid Cooler (CVT mounted heat exchanger with 4 ports)	1
OIL COOLER O-Ring	1

CLAIMS INFORMATION

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Replace Control Valve Assembly	21606-ZX59A	JD48AA	AE	32	(1)
Oil cooler kit installation		JX15AA			1.0

(1) Reference the current Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time.

OR

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
R&I Automatic CVT Transaxle Assembly	(2)	JD01AA	ZE	32	(1)
Replace Automatic CVT Transaxle Assembly		JD023A			
CVT TROUBLE DIAGNOSIS		JX22AA			
Oil cooler kit installation		JX15AA			1.0

(1) Reference the current Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time.

(2) Refer to the electronic parts catalog (FAST) and use the CVT assembly part number as the Primary Failed Part (PFP).