



# SERVICE BULLETIN

Classification: AT15-015e	Reference: NTB15-086e	Date: November 14, 2016
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## 2013-2014 ALTIMA AND 2014-2016 ROGUE; MIL ON WITH DTC P0776, P1715 MAY HAVE HESITATION AND/OR LACK OF POWER

This bulletin has been amended to remove 2015-2016 Altima from the Applied Vehicles.  
Please discard previous versions of this bulletin.

**APPLIED VEHICLES:** 2013-2014 Altima (L33) with 4-cyl engine only  
2014-2016 Rogue (T32)

### IF YOU CONFIRM

The MIL is ON with DTC P0776 (PC SOLENOID B – Pressure Control Solenoid “B” Performance/Stuck OFF) stored.

**NOTE:** If this issue should occur:

- P1715 (INPUT SPEED SENSOR) may be stored with DTC P0776.
- The vehicle may hesitate and/or have reduced power.

### ACTION

1. Refer to the **Repair Flow Chart** on page 2 for mechanical CVT repair.

**NOTE:** Essential Tool Tech Cam (borescope) J-51951, which is used for CVT inspection, has been sent to dealers. This tool's attachments make CVT inspection possible.

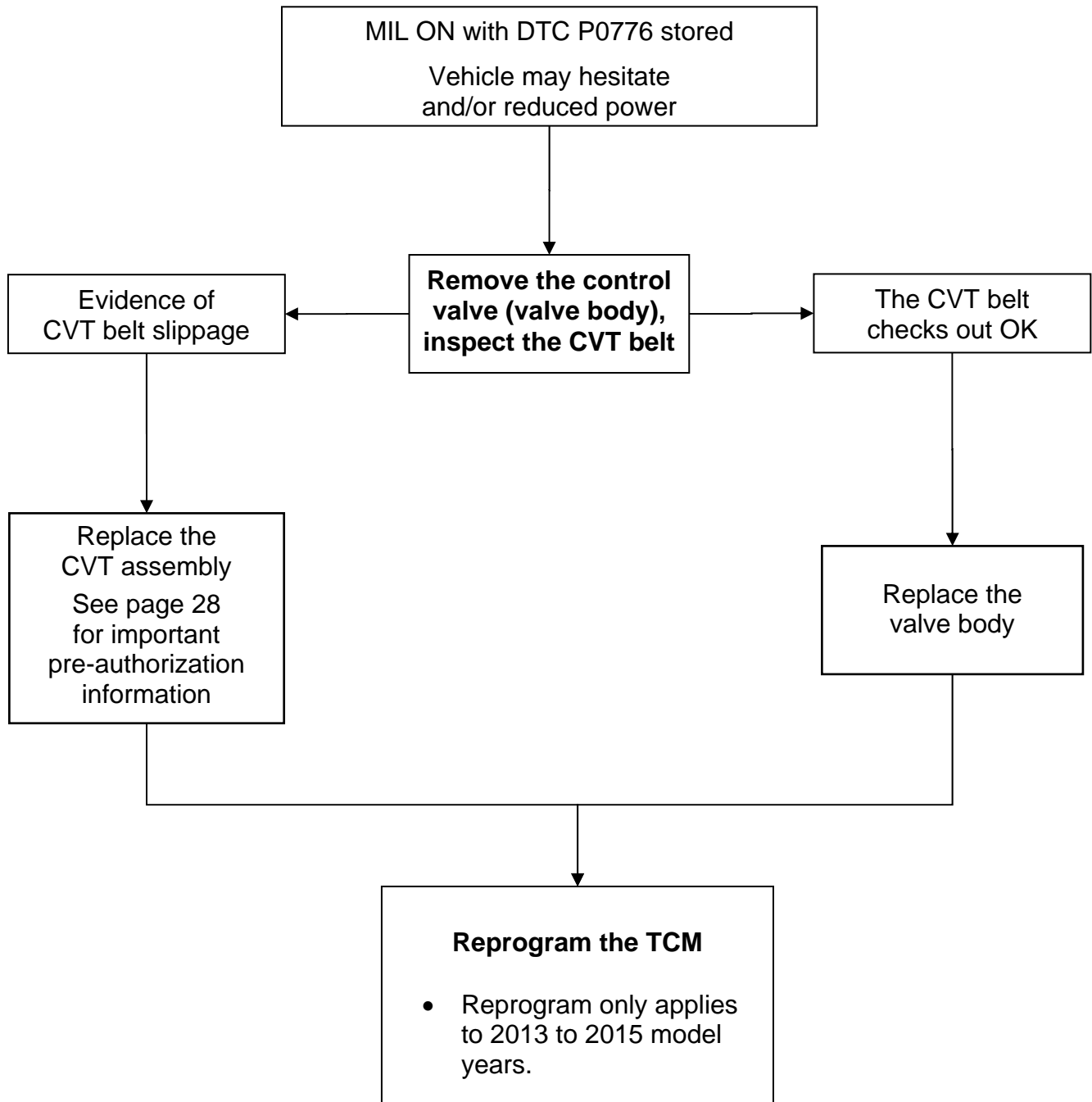
2. If needed, reprogram the TCM.

- Refer to step 6 in the TCM Reprogram section (page 20) of the SERVICE PROCEDURE to confirm if reprogramming is needed.
- **Reprogram only applies to 2013 to 2015 model years.**

**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.

## Repair Flow Chart



# SERVICE PROCEDURE

## Exploded View

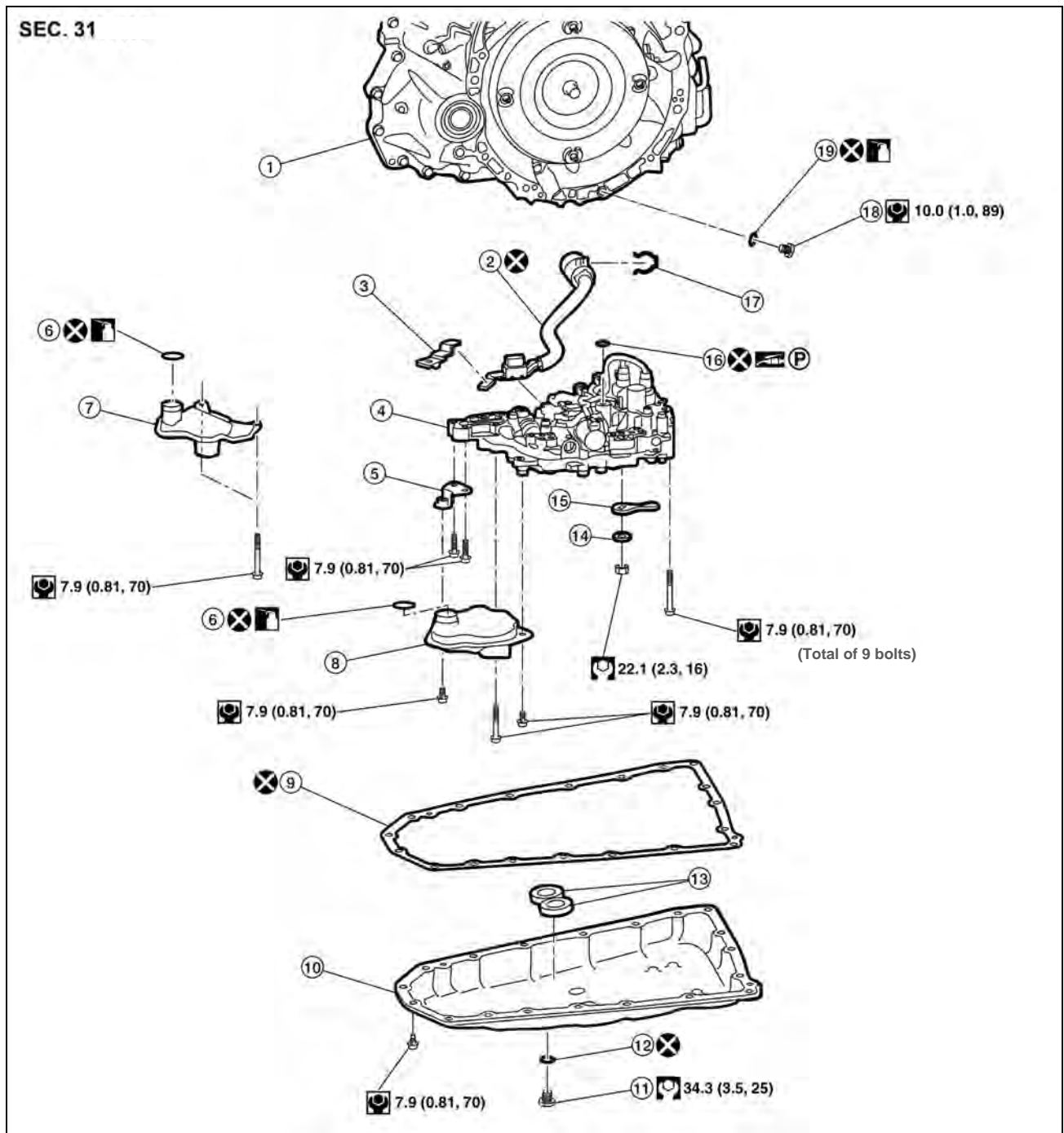


Figure 1

- |                                    |                                    |   |
|------------------------------------|------------------------------------|---|
| 1. Transaxle assembly              | 2. Terminal cord assembly          | 3. CVT fluid temperature sensor bracket |
| 4. Control valve                   | 5. Bracket                         | 6. O-ring                               |
| 7. New-style oil strainer assembly | 8. Old-style oil strainer assembly | 9. Oil pan gasket                       |
| 10. Oil pan                        | 11. Drain plug                     | 12. Drain plug gasket                   |
| 13. Magnet                         | 14. Spring washer                  | 15. Manual plate                        |
| 16. Lip seal                       | 17. Snap ring                      | 18. Overflow plug                       |
| 19. O-ring                         |                                    |   |

## Control Valve (Valve Body) Removal and CVT Belt Inspection

### 1. Remove the valve body.

- Before lifting the vehicle:
  - Place the transmission gear selector in Neutral.
  - Leave the driver door unlatched. A step further in the procedure may require it.
- Refer to the appropriate ESM, section **TM – Transaxle & Transmission**, for valve body removal.

**NOTE:** The number '7' is on the head of all bolts that need to be removed for valve body removal. Do not remove any bolt that does not have the number '7'.

**CAUTION:** Never allow any chemicals or fluids other than NS-3 CVT fluid or equivalent to enter the CVT assembly. Never allow any foreign debris, dust, dirt, etc. to enter the CVT assembly.

- For additional information, see video # 544: "CVT Belt Inspection". This video is located under the TECH TRAINING GARAGE VIDEOS tab in Virtual Academy.

2. Secure the front right tire with a suitable strap.
  - This will assist in making the belt turn.
3. Mark the front left tire with a suitable marking.
  - This will assure all 360° of the belt is inspected.



Figure 2

4. Using borescope J-51951 with mirror attachment, inspect the entirety of the two sides of the belt that come in contact with the pulleys (see page 7, Figure 8). Reference the pictures on pages 7 through 11 for comparison.

**NOTE:**

- Be sure to remove the protective film from the mirror before the first use.
- Clean the camera lens and mirror before each inspection. Use 90% isopropyl alcohol, and a lens swab from Lens Swab packet J-51963 listed in **PARTS INFORMATION**.
- Before inspecting, make sure the camera handle's AA batteries are fresh and the LCD monitor's battery is charged.

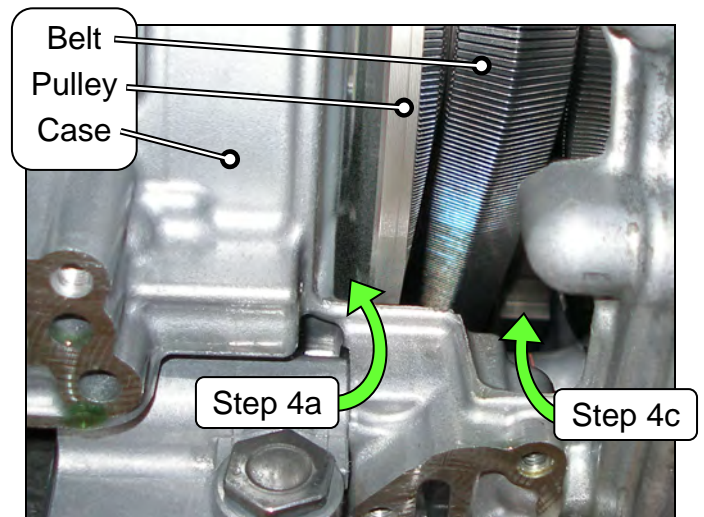


Figure 3

- a. Insert the camera lens between the CVT case and pulley where shown in Figures 3 and 4.
  - Insert the lens approximately seven (7) inches, and then view the side of the belt that contacts the pulley.

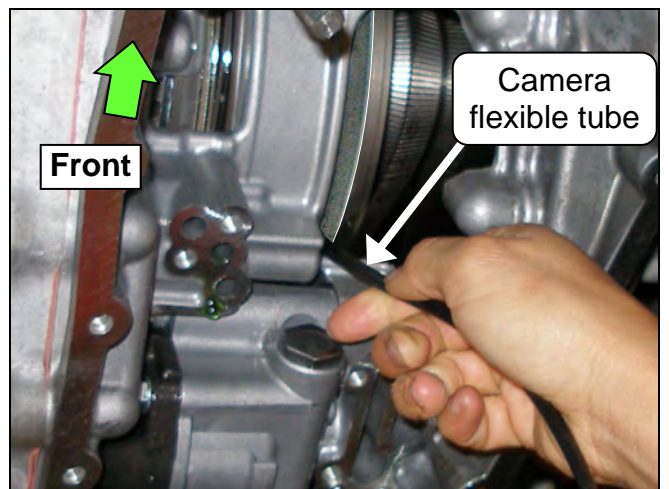


Figure 4

- b. Slowly and carefully turn the front left tire one full turn in the forward rotation to view all of the belt.

- Holding the borescope with one hand allows for turning the tire with the other hand (see Figure 5).

**CAUTION:** If the tire is rotated in the rearward rotation, the camera lens may get caught between the belt and pulley.

- c. If the inspection result is OK, inspect the other side of the belt.
- Insert the the camera lens in the second location where shown in Figure 3 and 6, and then perform step 4b again.
- d. If the inspection result is OK 360° on both sides of the belt, skip to step 5 on the next page.
- If any evidence of belt slippage is found, go to step 4e, and then step 6.
  - For additional information, see video # 544: “CVT Belt Inspection”. This video is located under the TECH TRAINING GARAGE VIDEOS tab in Virtual Academy.



Figure 5

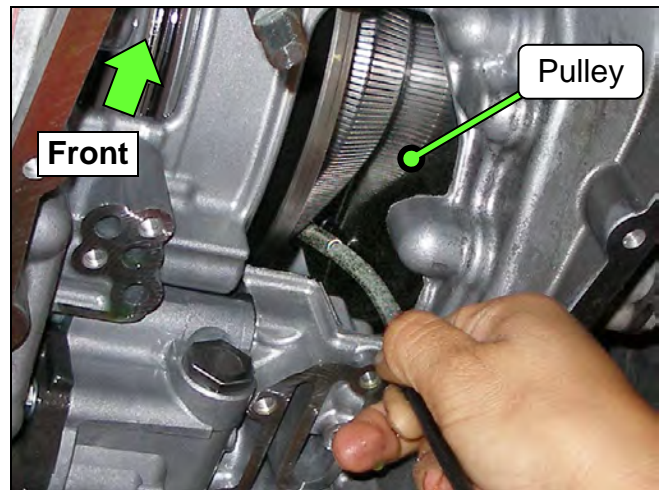


Figure 6

- e. Once CVT replacement is determined as required, use borescope J-51951 to record a 15 second or less continuous video of the most severe evidence of belt slip and the VIN on the F.M.V.S.S. certification label (VIN label). See Figure 7.

**NOTE:** This required video must be attached to the Powertrain Call Center CVT Preauthorization Form (in ASIST) prior to calling for authorization. Failure to submit a continuous video will cause immediate denial of request for replacement.



Figure 7

- Before starting to record, make sure the camera handle's AA batteries are fresh and the LCD monitor's battery is charged.
  - The whole video will show as backward, or reversed mirror image. This is okay.
  - The required video must show clear evidence of belt slippage and be 15 seconds or less.
5. If the belt inspection result is OK, replace the valve body.
- There is no need for pictures or video showing "OK" belt surfaces.
  - For valve body replacement, go to page 12, **Control Valve (Valve Body) Installation**.
6. If the belt inspection result is NG, replace the CVT assembly.
- Get authorization to replace the CVT assembly (see page 28).
  - Make sure to perform step 4e on page 6.
  - For CVT assembly replacement, refer to the appropriate ESM, section **TM – Transaxle & Transmission / RE0F10D**.
- IMPORTANT:** Perform "**ADDITIONAL SERVICE WHEN REPLACING TRANSAXLE ASSEMBLY**".
- Refer to **TM – Transaxle & Transmission / RE0F10D / BASIC INSPECTION**:
    - Check for fluid leakage.
    - Install Write IP Characteristics to the TCM; see NTB12-103.
  - The CVT unit requiring replacement will need to be reassembled for Nissan parts return/collection.
7. Flush the CVT cooler(s).

**IMPORTANT:** A CVT Cooler flush is required after a valve body or CVT assembly replacement. Refer to bulletin NTB15-013 to perform CVT Cooler flush.

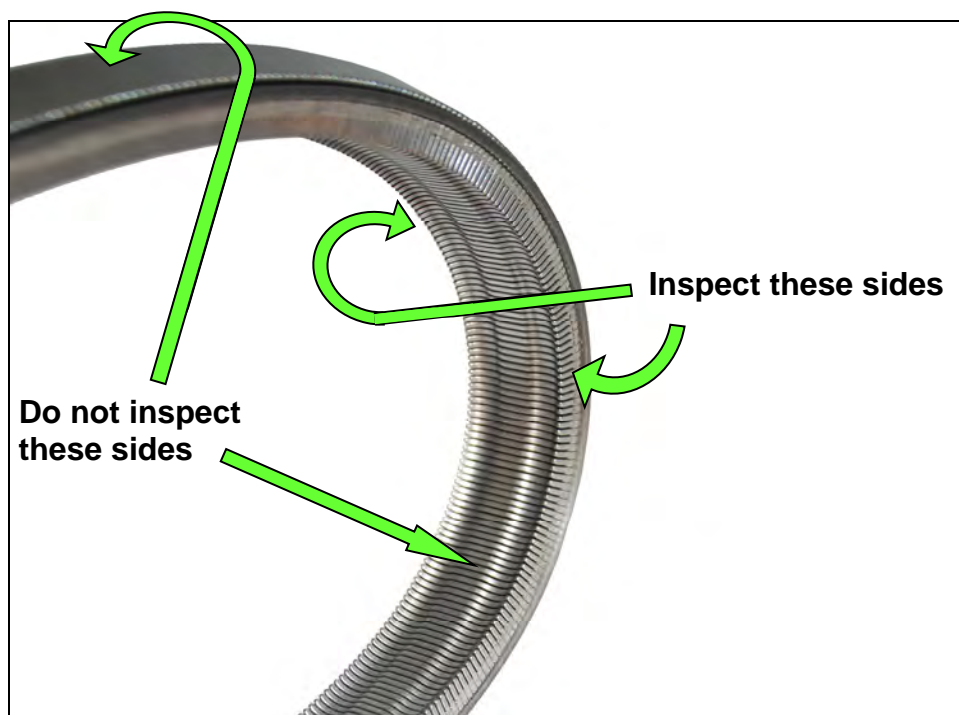


Figure 8

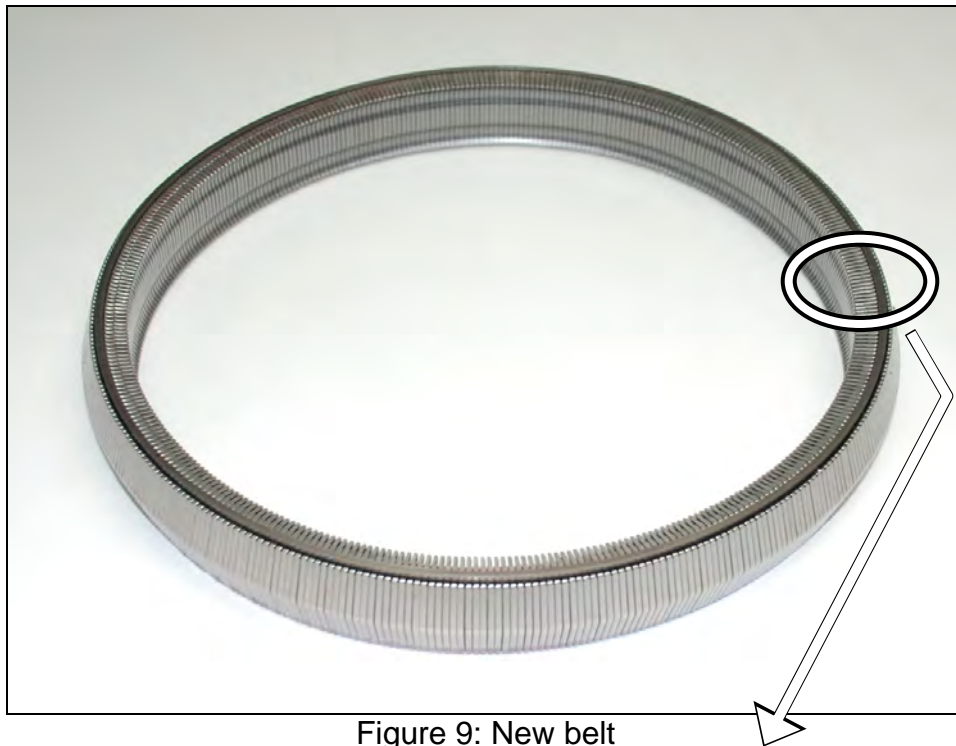


Figure 9: New belt



Figure 10: Close-up of section to be inspected



Pictures in Figures 11 and 12 were taken with borescope J-51951.

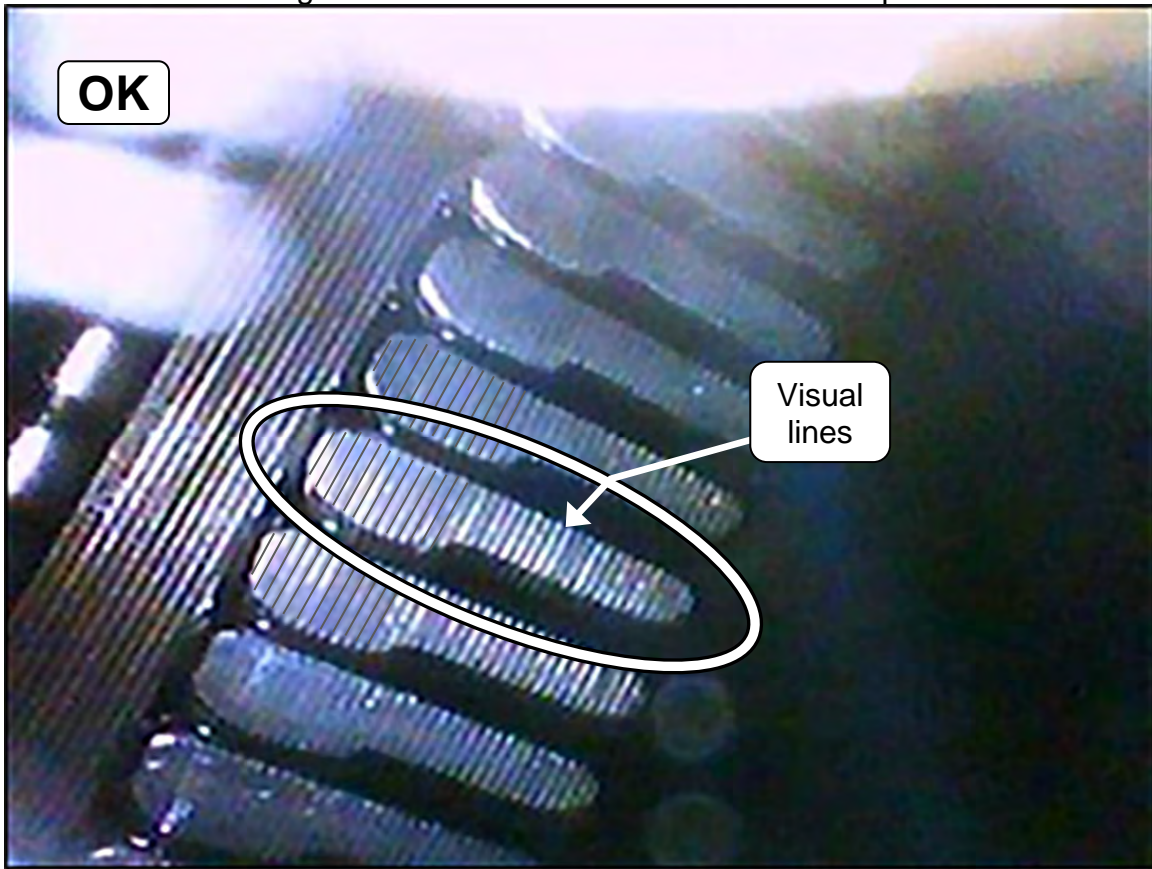


Figure 11: Belt is OK

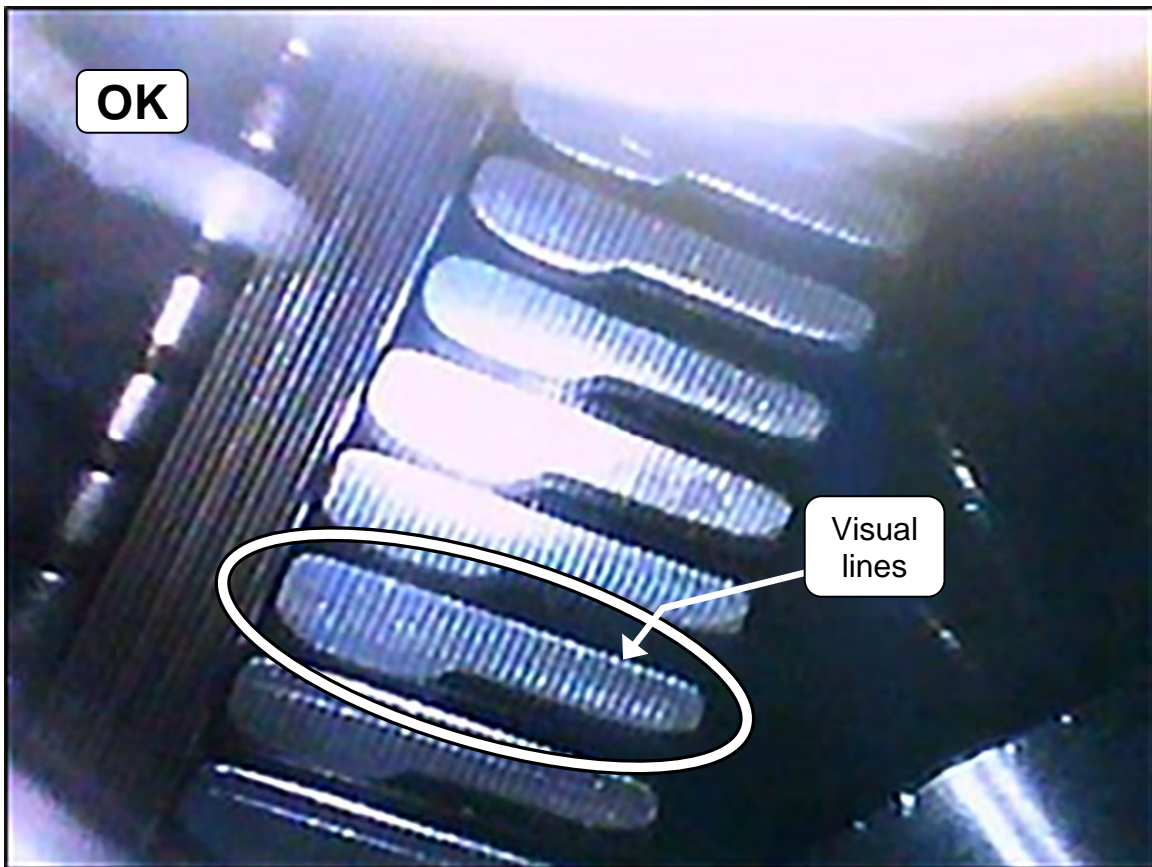


Figure 12: Belt is OK

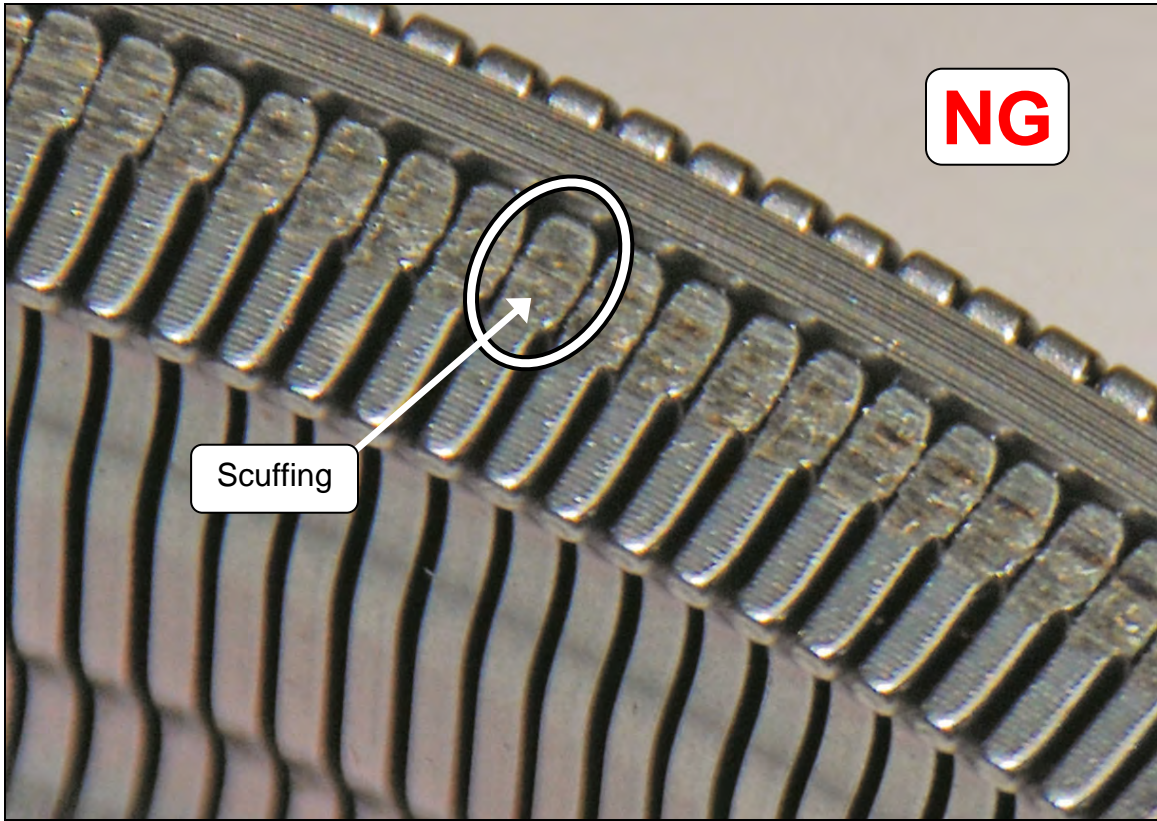


Figure 13: Example of NG belt

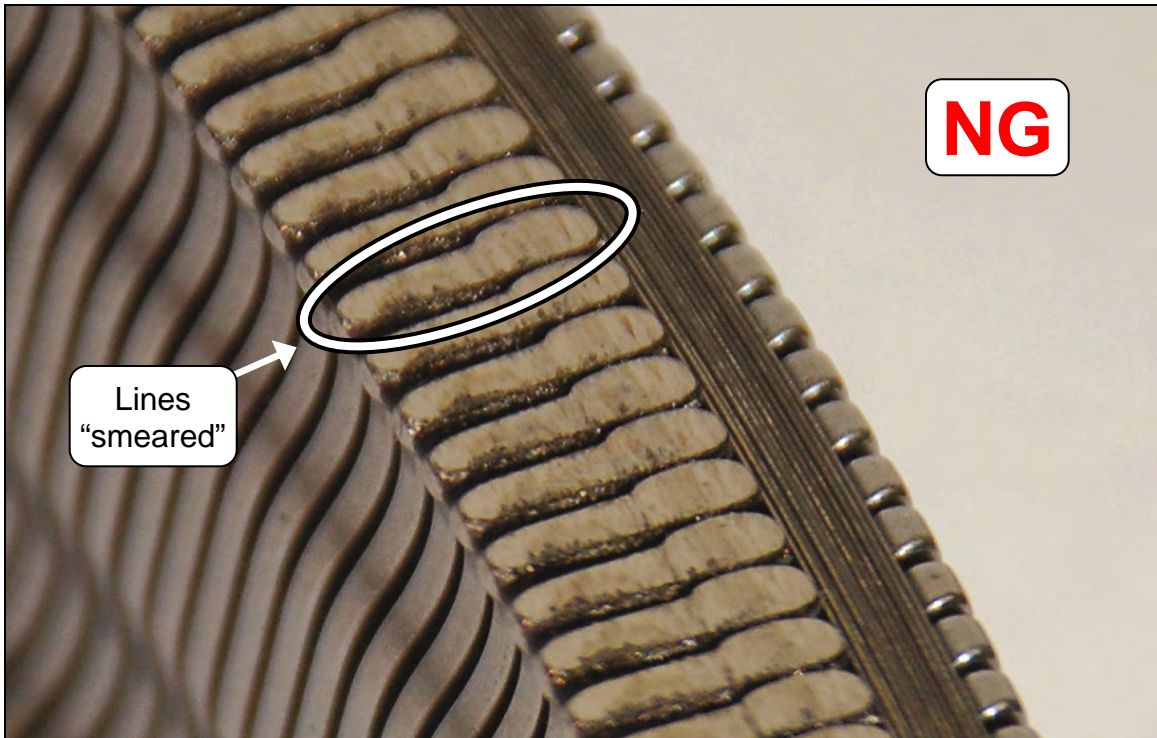


Figure 14: Example of NG belt

Pictures in Figures 15-17 were taken with borescope J-51951.



Figure 15: Example of NG belt

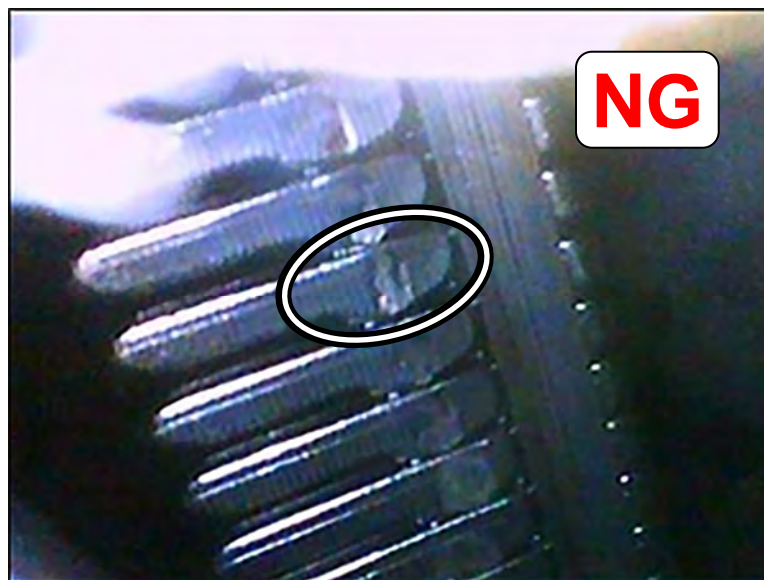


Figure 16: Example of NG belt



Figure 17: Example of NG belt

## Control Valve (Valve Body) Strainer and Pan Installation

### IMPORTANT:

- Installation steps in this bulletin may contain different style parts than what were originally installed in the CVT. Pay careful attention, REASSEMBLY MAY NOT BE IDENTICAL TO DISASSEMBLY.
- **Confirm that the QR label, control valve and CD part numbers all match before installing the control valve (refer to NTB12-103).**
- For additional information, see video # 547: “CVT Belt and Pulley Replacement” and fast forward to minute marker 20:09. This video is located under the TECH TRAINING GARAGE VIDEOS tab in Virtual Academy.

**CAUTION:** Handle the valve body carefully.

**NOTE:** If an oil strainer bracket was removed, discard it. An oil strainer bracket (Figure 1A) will not be used with the new oil strainer.

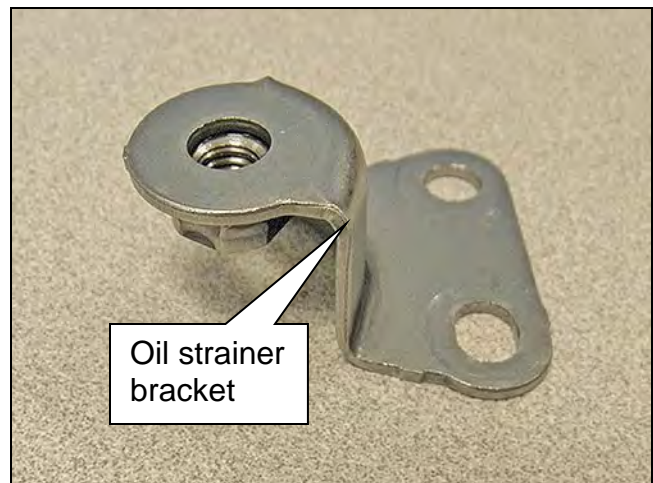


Figure 1A

1. Install a new lip seal (Figure 2A).
  - Do NOT reuse the old lip seal.
  - Apply a small amount of petroleum jelly or equivalent to the lip seal to keep it in place on the CVT.

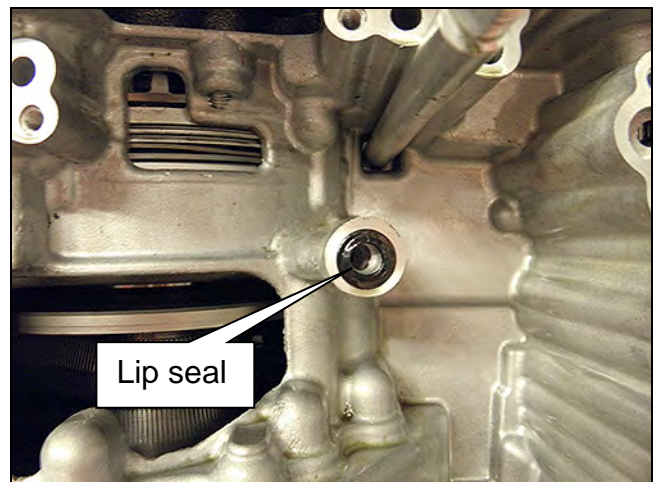






Figure 2A

2. Install the Control Valve with eleven (11) mounting bolts (Figure 3A).

**IMPORTANT:** Leave Four (4)  bolt holes blank at this step.

**CAUTION:** Make sure the wiring harness does not get pinched (see Figures 4A and 5A for correct routing).

- 54 mm (2.125 inches) long bolt ; 7 pieces
- 44 mm (1.73 inches) long bolt ; 2 pieces
- 25 mm long (1 inch) long bolt ; 2 pieces

**CAUTION:** The two 25 mm bolts are installed WITHOUT the strainer bracket.

- Bolt torque: 7.9 N•m (0.81 kg-m, 70 in-lb.)

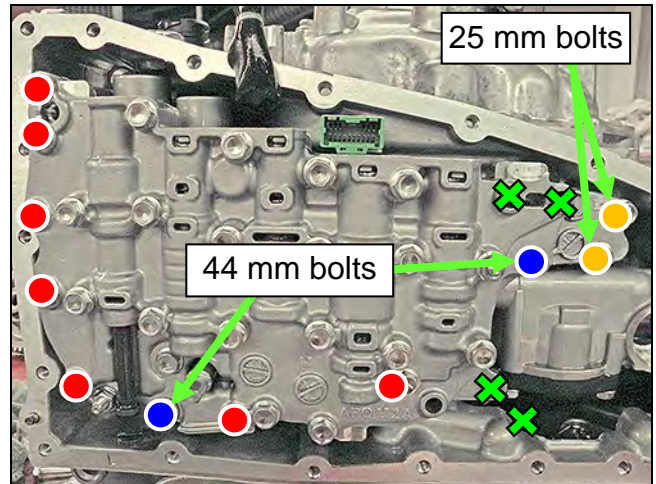


Figure 3A

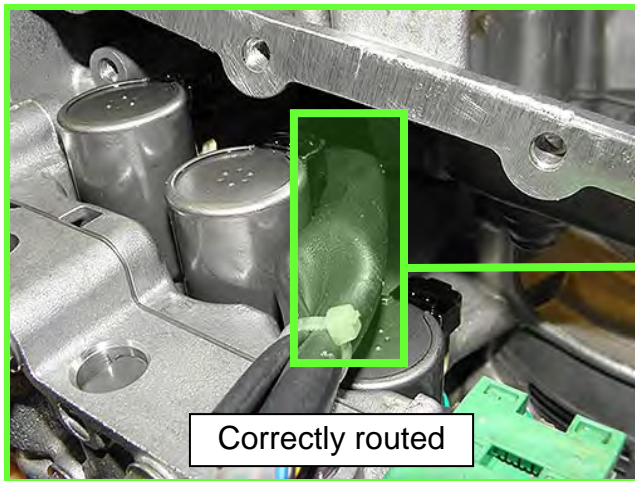


Figure 4A

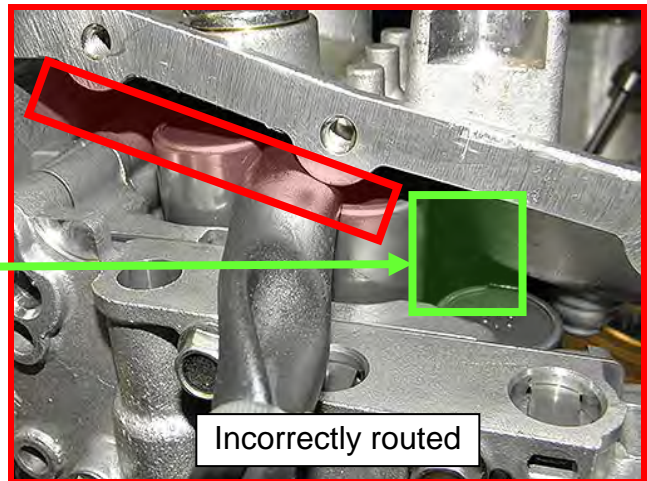


Figure 5A

3. Replace the metal bracket of the fluid temperature sensor as follows:

**NOTE:** The new bracket will be oriented the same way the old bracket was.

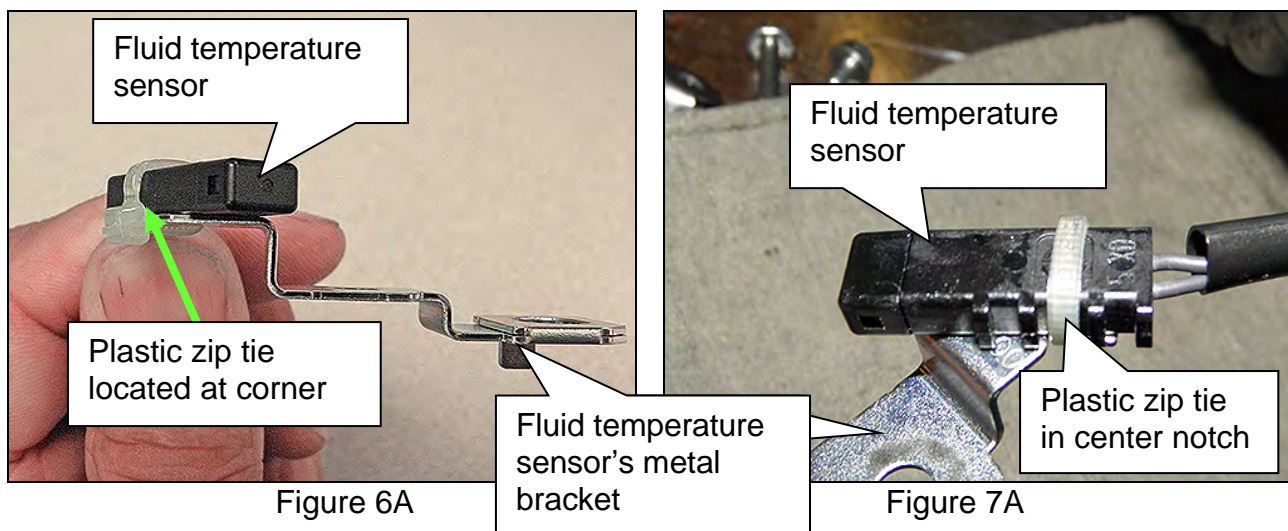
- a. Cut the old plastic zip tie with an appropriate tool to remove the fluid temperature sensor's metal bracket from the terminal harness assembly (Figure 6A and Figure 7A).

**CAUTION:** Cut the plastic zip tie over the metal bracket to avoid damage to the fluid temperature sensor.

- b. Discard the removed metal bracket and plastic zip tie.
- c. Use the new plastic zip tie from the Parts Information to attach the fluid temperature sensor of the terminal connector harness to the fluid temperature sensor's new metal bracket.

**IMPORTANT:**

- Locate the plastic zip tie at the center notch of three notches on the fluid temperature sensor (Figure 7A).
  - Tighten the plastic zip tie so that it is oriented as shown in Figure 6A.
- d. Cut off the plastic zip tie excess.



4. Connect the electrical harness connector (Figure 8A).

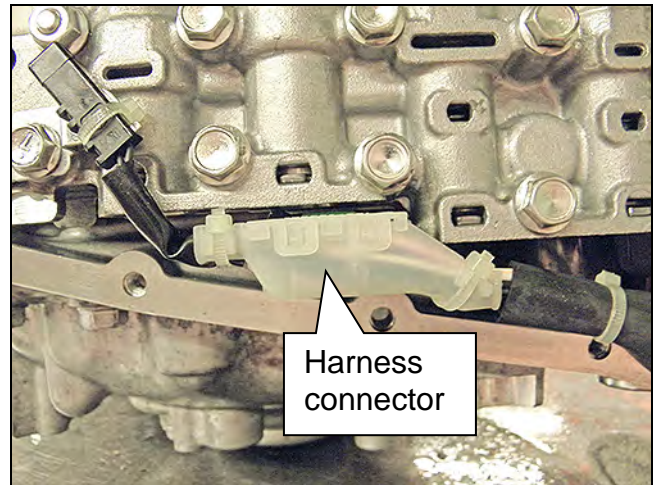


Figure 8A

5. Install the CVT fluid temperature sensor bracket to the valve body with one (1) bolt (Figure 9A).

**NOTE:** Leave one (1) bolt hole blank as it will be used to secure the oil strainer at a later step.

- 54 mm (2.125 inches) long bolt.
- Bolt torque: 7.9 N•m (0.81 kg-m, 70 in-lb.)

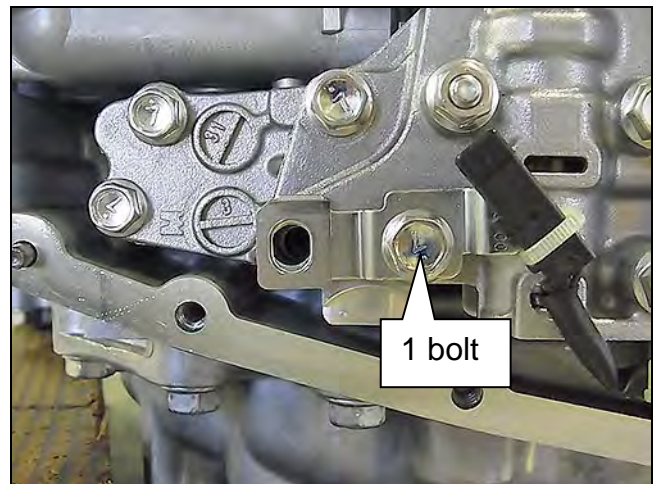



Figure 9A

6. Install the new oil strainer with its new O-ring seal with two (2) bolts (Figure 10A).

**NOTE:** Replacement strainer maybe a different shape than the original.

- 54 mm (2.125 inches) long bolt ; 2 pieces.
- Bolt torque: 7.9 N•m (0.81 kg-m, 70 in-lb.)

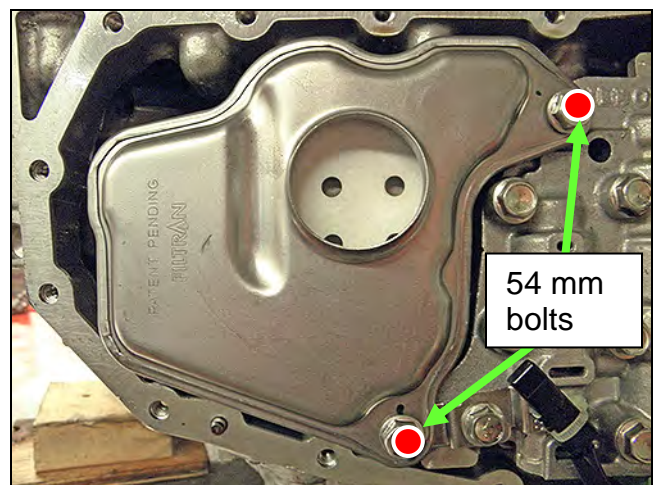


Figure 10A

7. Install the manual plate, lock washer, and nut (Figure 11A).

**NOTE:** Make sure the manual plate fits into the slot of the manual valve before applying torque to the nut.

- Reuse the existing manual plate, lock washer, and nut.
- Nut torque: 22.1 N•m (2.3 kg-m, **16 ft-lb.**)

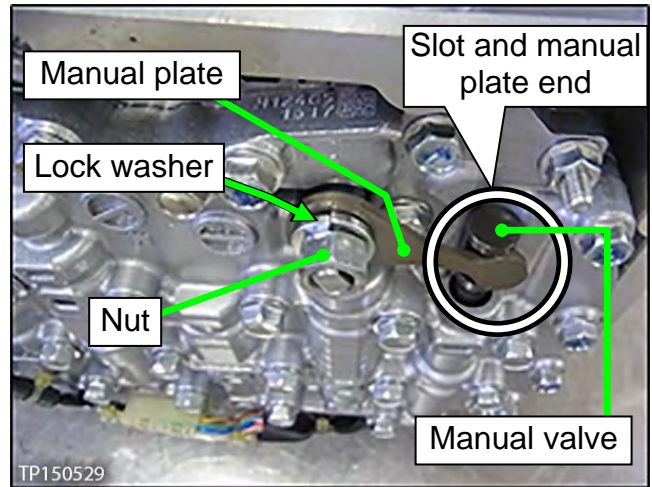


Figure 11A

8. Clean the original oil pan and magnets with a suitable cleaner. Visible debris should not be present at re-assembly.

9. Reassemble the original magnets to the pan.

**NOTE:** Return the magnets to their original locations.

10. Install a new oil pan gasket to the pan.

11. Install the oil pan bolts (see Figure 12A).

- Reuse the existing pan bolts.
- Oil pan bolts torque: 7.9 N•m (0.81 kg-m, **70 in-lb.**)

12. Install a new drain washer to the drain plug on the oil pan.

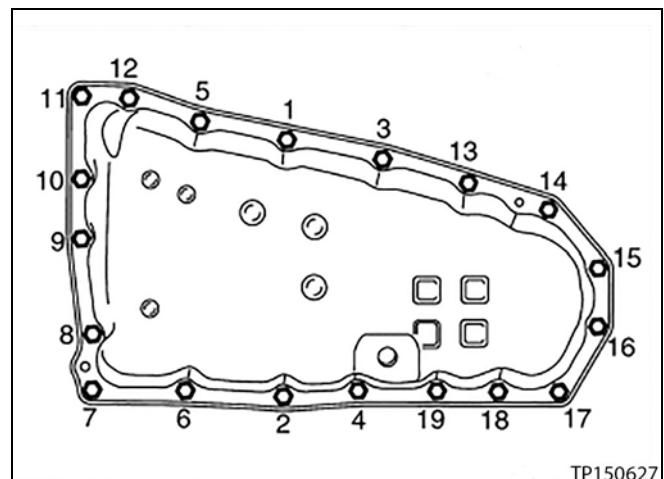


Figure 12A



13. Fill the CVT assembly with NS-3 CVT fluid or equivalent.

- Refer to the ESM, section **TM – Transaxle & Transmission** for CVT fluid filling.

14. **IMPORTANT:** Install Write IP Characteristics to the TCM; Refer to (NTB12-103).

- Refer to **TM – Transaxle & Transmission / BASIC INSPECTION**, and perform **ADDITIONAL SERVICE WHEN REPLACING TRANSAXLE ASSEMBLY**.
  - Check for fluid leaks.
  - Attach the QR label with the new calibration data onto the transmission range switch (inhibitor switch).
    - See Figures 13A and 14A below.
    - A QR Label and CD-R are included with the replacement valve body.

15. Erase DTCs.

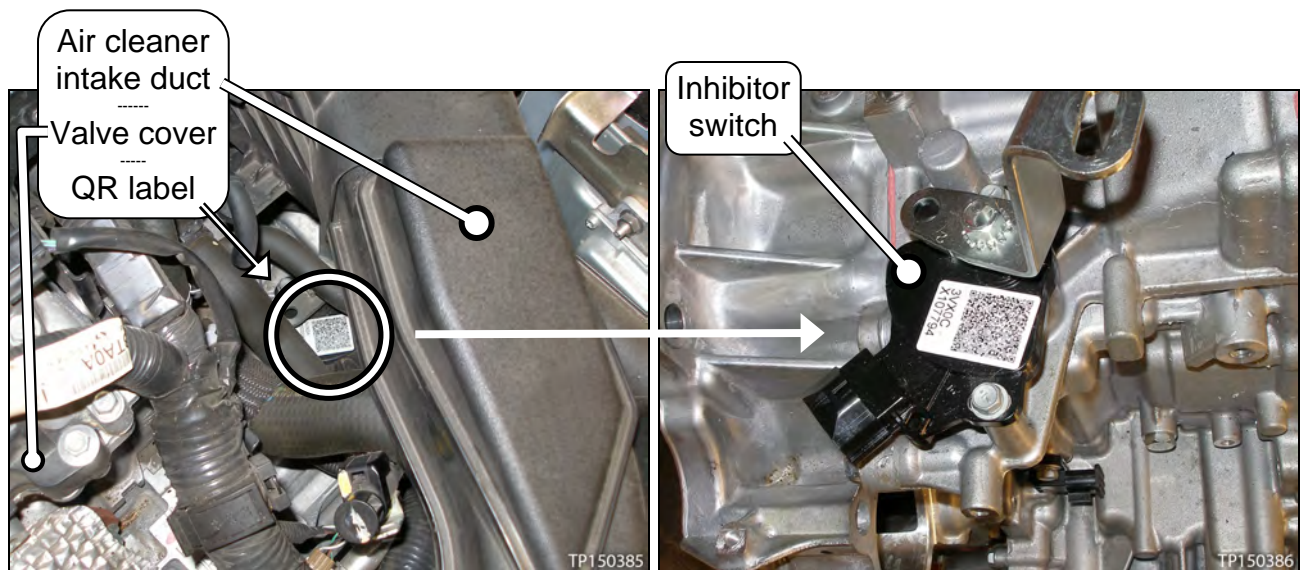


Figure 13A

Figure 14A

## TCM Reprogramming

### NOTE:

- Most instructions for reprogramming with CONSULT-III plus (C-III plus) are displayed on the CONSULT PC screen.
- If you are not familiar with the reprogramming procedure, [click here](#). This will link you to the "CONSULT- III plus Reprogramming" general procedure.

### CAUTION:

- Connect the GR8 to the vehicle battery, set to "power supply" mode. If the vehicle battery voltage drops below 12.0V or rises above 15.5V during reprogramming, the TCM may be damaged.
- Be sure to turn OFF all vehicle electrical loads. If a vehicle electrical load remains ON, the TCM may be damaged.
- Be sure to connect the AC Adapter. If the CONSULT PC battery voltage drops during reprogramming, the process will be interrupted and the TCM may be damaged.
- Turn OFF all external Bluetooth® devices (e.g., cell phones, printers, etc.) within range of the CONSULT PC and the VI. If Bluetooth® signal waves are within range of the CONSULT PC during reprogramming, reprogramming may be interrupted and the TCM may be damaged.

1. Connect the CONSULT PC to the vehicle to begin the reprogramming procedure.
2. Start C-III plus.
3. Wait for the plus VI to be recognized.
  - The serial number will display when the plus VI is recognized.
4. Select **Re/programming, Configuration**.

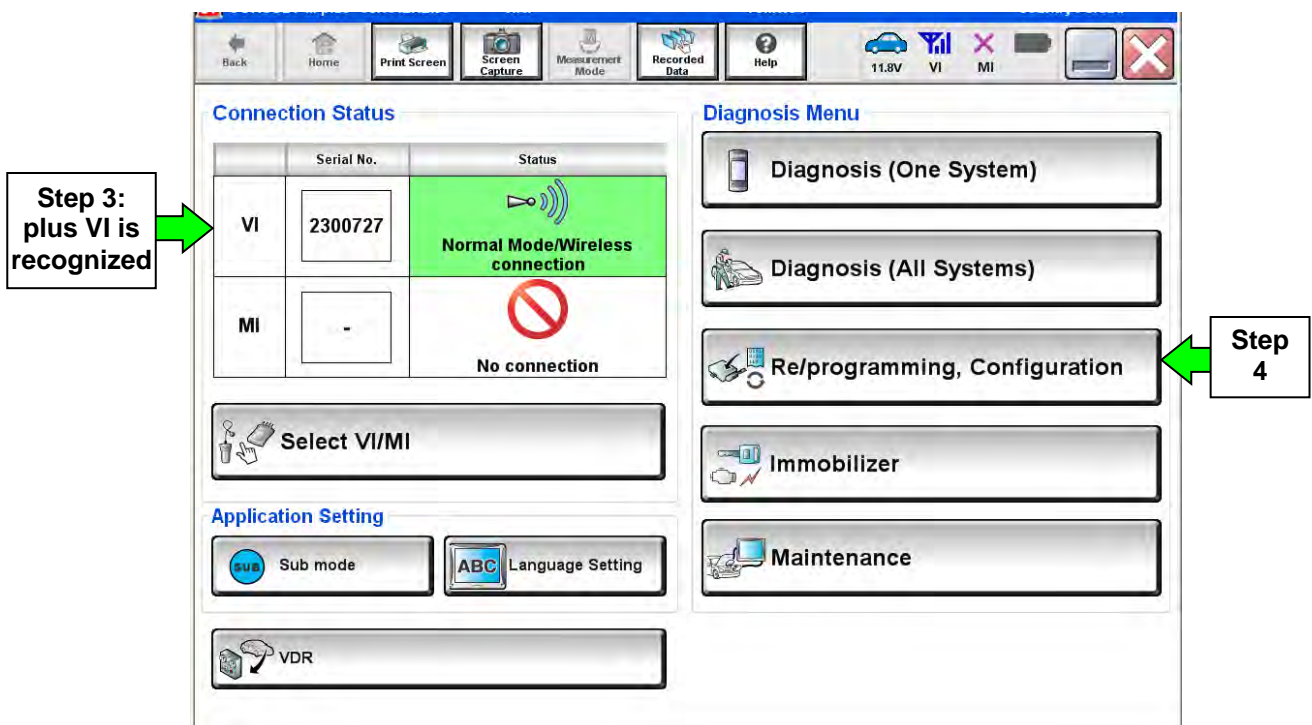


Figure 1B

5. Follow the on-screen instructions and navigate the C-III plus to the screen shown in Figure 2B on the next page.

6. When you get to the screen shown in Figure 2B, confirm this bulletin applies as follows.

A. Find the TCM **Part Number** and write it on the repair order.

**NOTE:** This is the current TCM Part Number (P/N).

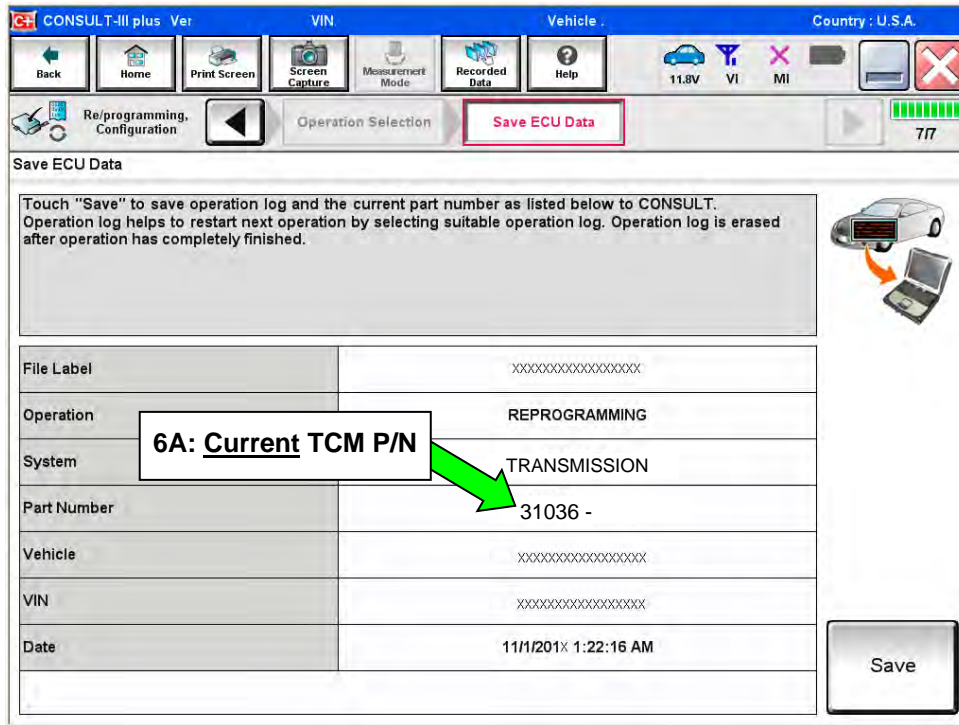


Figure 2B

B. Compare the P/N you wrote down to the numbers in the **Current TCM Part Number** column in **Table A** below.

- If there is a match, this bulletin applies. Continue with the reprogramming procedure.
- If there is not a match, reprogramming is not needed.

Table A

MODEL	MODEL YEAR	CURRENT TCM PART NUMBER BEFORE REPROGRAMMING: 31036 -
Altima (4-cyl engine only)	2013	3TA0A, 3TA4A 3TA4B 3TA4C, 3TA9C 3TY0A, 3TY1A 3TY0B, 3TY1B
Altima (4-cyl engine only)	2014	9HM0A, 9HM0C, 9HM0D, 9HM0E
Rogue	2014	4BA5A, 4BA5B 4BA8A 4BA0A, 4BA0B 4BA9A, 4BA9B, 4BA9C
	2015	9TA0A, 9TA0B, 9TA0C, 9TA0D, 9TA5A 5HA0A, 5HA0B, 5HA0C, 5HA5A

7. Follow the on-screen instructions to navigate C-III plus and reprogram the TCM.

**NOTE:**

- In some cases, more than one new P/N for reprogramming is available.
  - If more than one new P/N is available, the screen in Figure 3B displays.
  - Select and use the reprogramming option that **does not** have the message “Caution! Use ONLY with NTBXX-XXX”.
- If you get this screen and it is blank (no reprogramming listed), it means there is no reprogramming available for this vehicle.

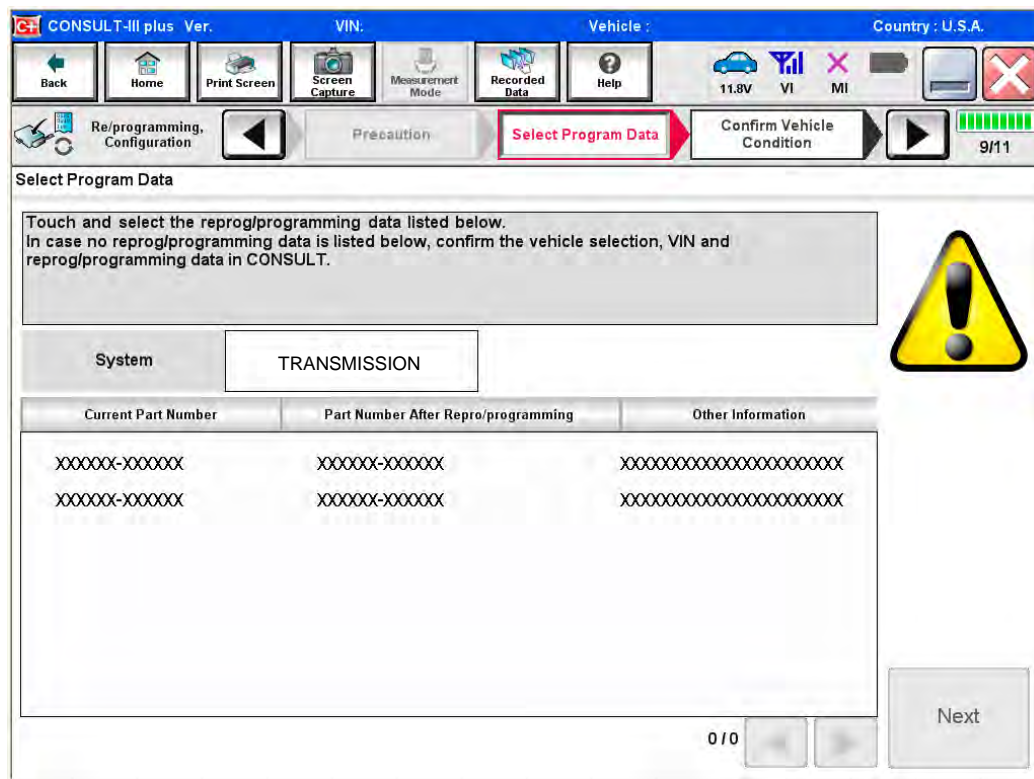


Figure 3B

8. When the screen in Figure 4B displays, reprogramming is complete.

**NOTE:** If the screen in Figure 4B does not display (indicating that reprogramming did not complete), refer to the information on the next page.

9. Disconnect the battery charger from the vehicle.

10. Select **Next**.

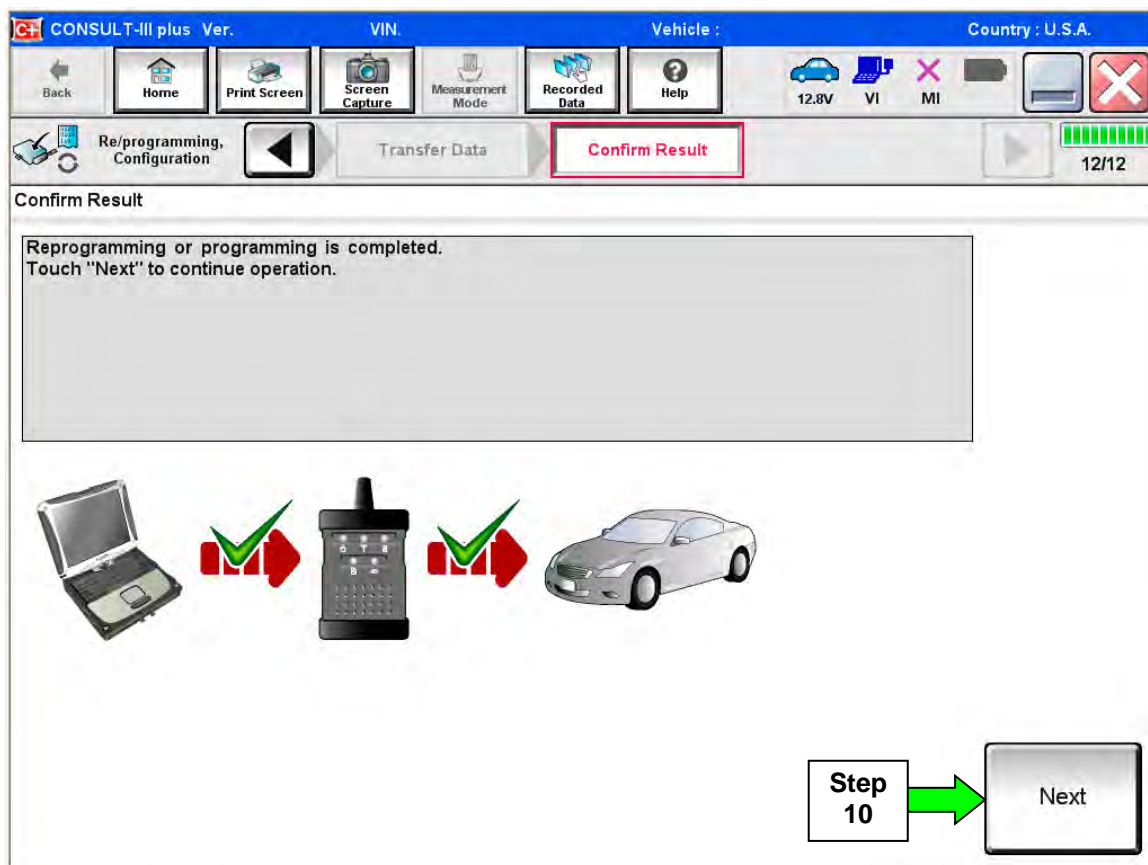


Figure 4B

**NOTE:**

- In the next step (page 24) you will perform **Erase All DTCs**.
- DTC erase is required before C-III plus will provide the final reprogramming confirmation report.

## TCM Recovery:

**Do not disconnect plus VI or shut down C-III plus if reprogramming does not complete.**

If reprogramming does not complete and the “!?” icon displays as shown in Figure 5B:

- Check battery voltage (12.0–15.5 V).
- Ignition is ON, engine OFF.
- External Bluetooth® devices are OFF.
- All electrical loads are OFF.
- **Select retry and follow the on screen instructions.**
- “Retry” may not go through on first attempt and can be selected more than once.

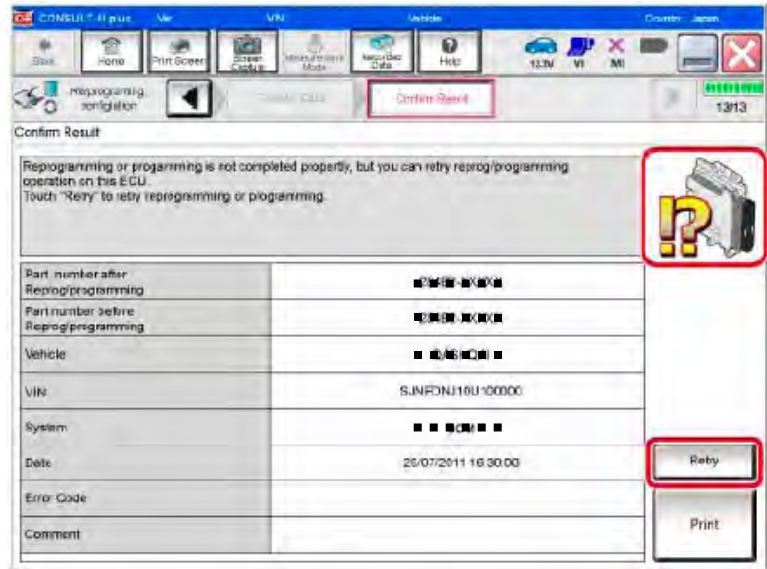


Figure 5B

If reprogramming does not complete and the “X” icon displays as shown in Figure 6B:

- Check battery voltage (12.0 – 15.5 V).
- CONSULT A/C adapter is plugged in.
- Ignition is ON, engine OFF.
- Transmission is in Park.
- All C-III plus / VI cables are securely connected.
- All C-III plus updates are installed.
- **Select Home, and restart the reprogram procedure from the beginning.**

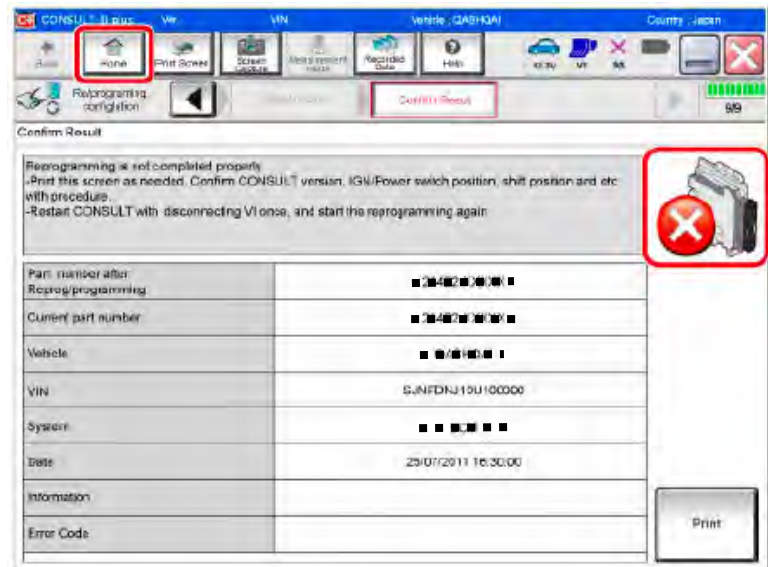


Figure 6B

11. Follow the on-screen instructions to **Erase All DTCs**.
12. When the entire reprogramming process is complete, the screen in Figure 7B will display.
13. Verify the before and after part numbers are different.
14. Print a copy of this screen (Figure 7B) and attach it to the repair order for warranty documentation.
15. Select **Confirm**.

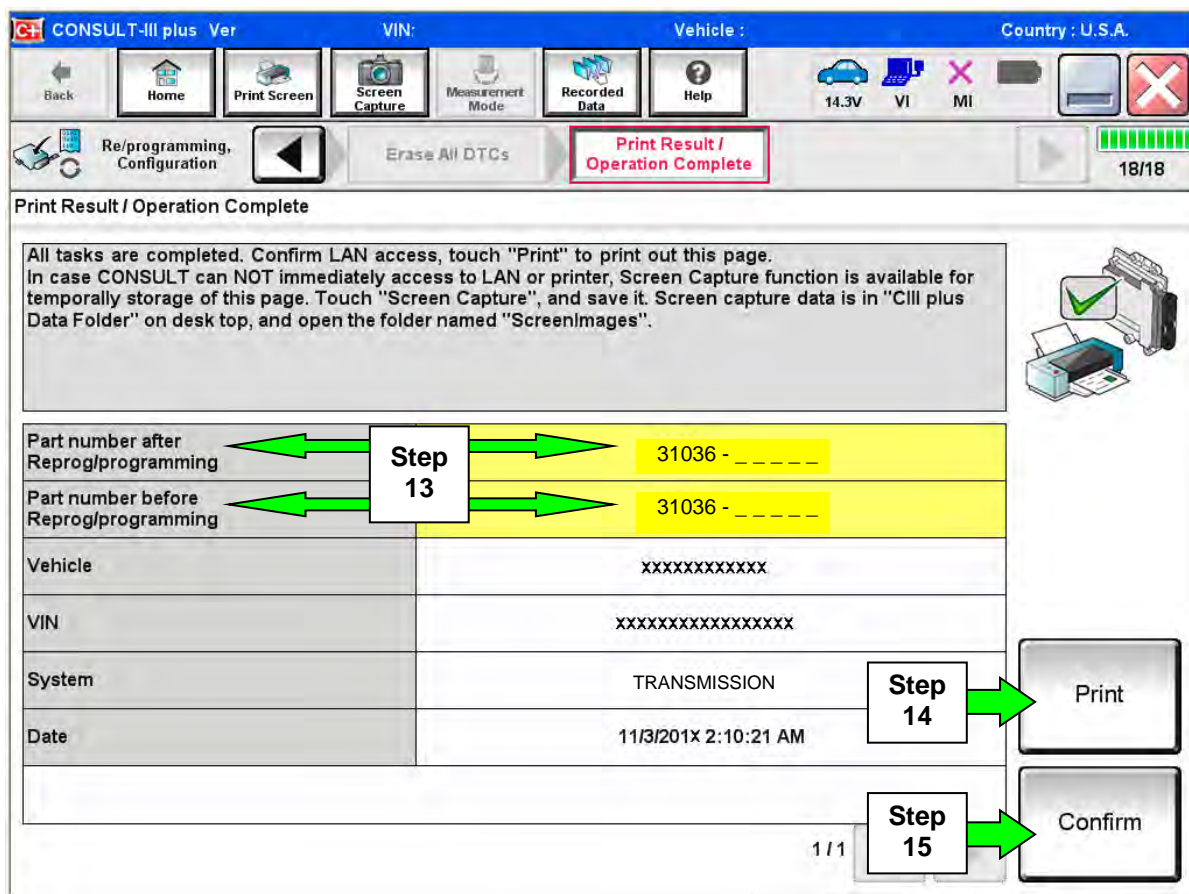


Figure 7B

16. Return C-III plus to the Home screen.
17. Turn OFF C-III plus and the vehicle ignition.
18. Disconnect C-III plus from the vehicle.

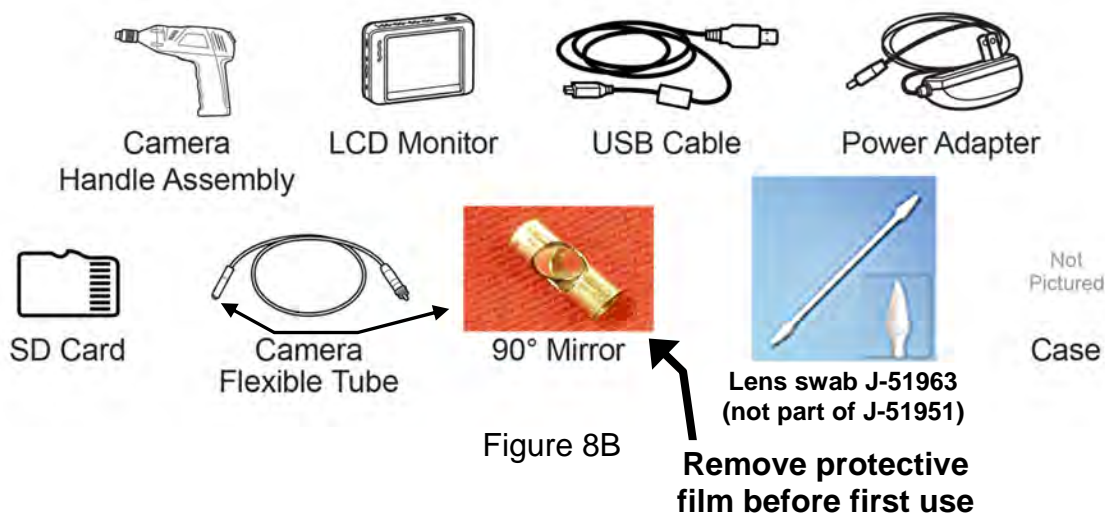


## PARTS INFORMATION

DESCRIPTION	PART NUMBER	QUANTITY
CVT ASSEMBLY (1)	(2)	1
VALVE ASSEMBLY-CONTROL (valve body) (3)	31705-28X0B	1
STRAINER ASSY-OIL, AUTO TRANS	31728-28X0A	1
BRACKET (for temperature sensor)	31069-3VX0D	1
BAND (zip tie for sensor bracket)	24224-3VX0A	1
GASKET-OIL PAN	31397-1XF0D	1
SEAL-LIP	31528-1XZ0A	1
WASHER-DRAIN	11026-JA00A	1
SEAL, O-RING (fluid filler plug gasket)	31526-3VX0B	1
NS-3 CVT Fluid (4) (5)	999MP-NS300P	As needed
Lens Swab (6) (7)	J-51963	As needed

- (1) If the CVT assembly is being replaced, no other parts in the table above, except NS-3 CVT fluid or equivalent, are needed.
- (2) Refer to the electronic parts catalog (FAST or equivalent) for the correct part number.
- (3) Includes QR Label, CD-R, and Control Valve Assembly.
- (4) For warranty repairs, Nissan NS-3 CVT Fluid **must** be used. For customer pay repairs, Nissan NS-3 CVT Fluid or an equivalent is recommended.
- (5) NS-3 CVT Fluid can be ordered through the Nissan Maintenance Advantage program: Phone: 877-NIS-NMA1 (877-647-6621) or Website: Order via link on dealer portal [www.NNAnet.com](http://www.NNAnet.com) and click on the "Maintenance Advantage" link.
- (6) Lens swabs are available from Tech•Mate online: [www.nissantechmate.com](http://www.nissantechmate.com), or by phone: 1-800-662-2001.
- (7) Shop supply.

## Tech Cam J-51951



Additional kits and components of Tech Cam J-51951 are available from Tech•Mate online: [www.nissantechmate.com](http://www.nissantechmate.com), or by phone: 1-800-662-2001.

## CLAIMS INFORMATION

**NOTE:** Refer to CVT Assembly Replacement Approval Procedures (on page 28) before submitting a claim.

### If belt condition shows no signs of belt slip, OK

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
RPL CVT CONTROL VALVE ASSY	(1)	JD48AA	ZE	32	(2)

(1) Reference the Parts Information Table and use the applicable Control Valve Assembly Part Number (31705-\*\*\*\*\*) as the Primary Failed Part.

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

**NOTE:** FRT allows adequate time to access DTC codes. No other diagnostic procedures subsequently required. Do NOT claim any diagnostic OP Codes with this claim.

And

DESCRIPTION	OP CODE	FRT
Inspect CVT Belt, Belt = OK	JX37AA	0.3

### And; if TCM requires reprogramming

OPERATION	PFP	OP CODE	SYM	DIAG	FRT
TCM Reprogramming	(3)	JE99AA	ZE	32	(4)

(3) Refer to the electronic parts catalog (FAST or equivalent) and use the TCM part number (31036 - \*\*\*\*\*) as the PFP.

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

**NOTE:** FRT allows adequate time to access DTC codes. No other diagnostic procedures subsequently required. Do NOT claim any diagnostic OP Codes with this claim.

Claims Information continued on the next page.

## CLAIMS INFORMATION (continued)

### If belt inspection shows signs of belt slip, NG

MODEL	DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Altima	CVT R&R	(1)	JD01AA	ZE	32	(2)
Rogue			JD023A			
Altima/ Rogue	CVT TROUBLE DIAGNOSIS		JX22AA			0.5

(1) Reference the electronic Parts Catalog (FAST or equivalent) and use the CVT assembly part number for the vehicle being repaired as the Primary Failed Part.

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

**NOTE:** FRT allows adequate time to access DTC codes. No other diagnostic procedures subsequently required. Do NOT claim any diagnostic OP Codes with this claim.

And

DESCRIPTION	OP CODE	FRT
Inspect CVT Belt, Belt = NG (Includes control valve R&I)	JX36AA	2.2

### And; if TCM requires reprogramming

OPERATION	PFP	OP CODE	SYM	DIAG	FRT
TCM Reprogramming	(3)	JE99AA	ZE	32	(4)

(3) Refer to the electronic parts catalog (FAST or equivalent) and use the TCM part number (31036 - \*\*\*\*\*) as the PFP.

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

**NOTE:** FRT allows adequate time to access DTC codes. No other diagnostic procedures subsequently required. Do NOT claim any diagnostic OP Codes with this claim.

## CVT Assembly Replacement Approval Procedures

- If CVT belt inspection **indicates CVT assembly replacement** is required:
  - a. Complete the PCC CVT Preauthorization Form in ASIST.
  - b. Attach the required video (15 seconds or less) to the CVT Preauthorization Form.
    - Failure to submit a continuous video showing evidence of belt slip and the VIN will cause immediate denial of request for CVT unit replacement.
  - c. Call the PCC for authorization at **800-973-9992 (opt 2)**.

**IMPORTANT:** Make sure the video has a clear image of the VIN on the F.M.V.S.S. certification label (VIN label).

