SERVICE BULLETIN

Classification:	Reference:	Date:
AT15-015c	NTB15-086c	April 6, 2016

2013-2016 ALTIMA AND 2014-2016 ROGUE; MIL ON WITH DTC P0776

This bulletin has been amended to correct a typographical error in the title.
Please discard all previous versions of this bulletin.

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

NOTE: Does not apply to Rogue Select (S35)

IF YOU CONFIRM:

The MIL is ON and ONLY DTC P0776 (PC SOLENOID B – Pressure Control Solenoid "B" Performance/Stuck OFF) is stored in the TCM.

NOTE: If this issue should occur, the vehicle may hesitate and/or have a lack of power.

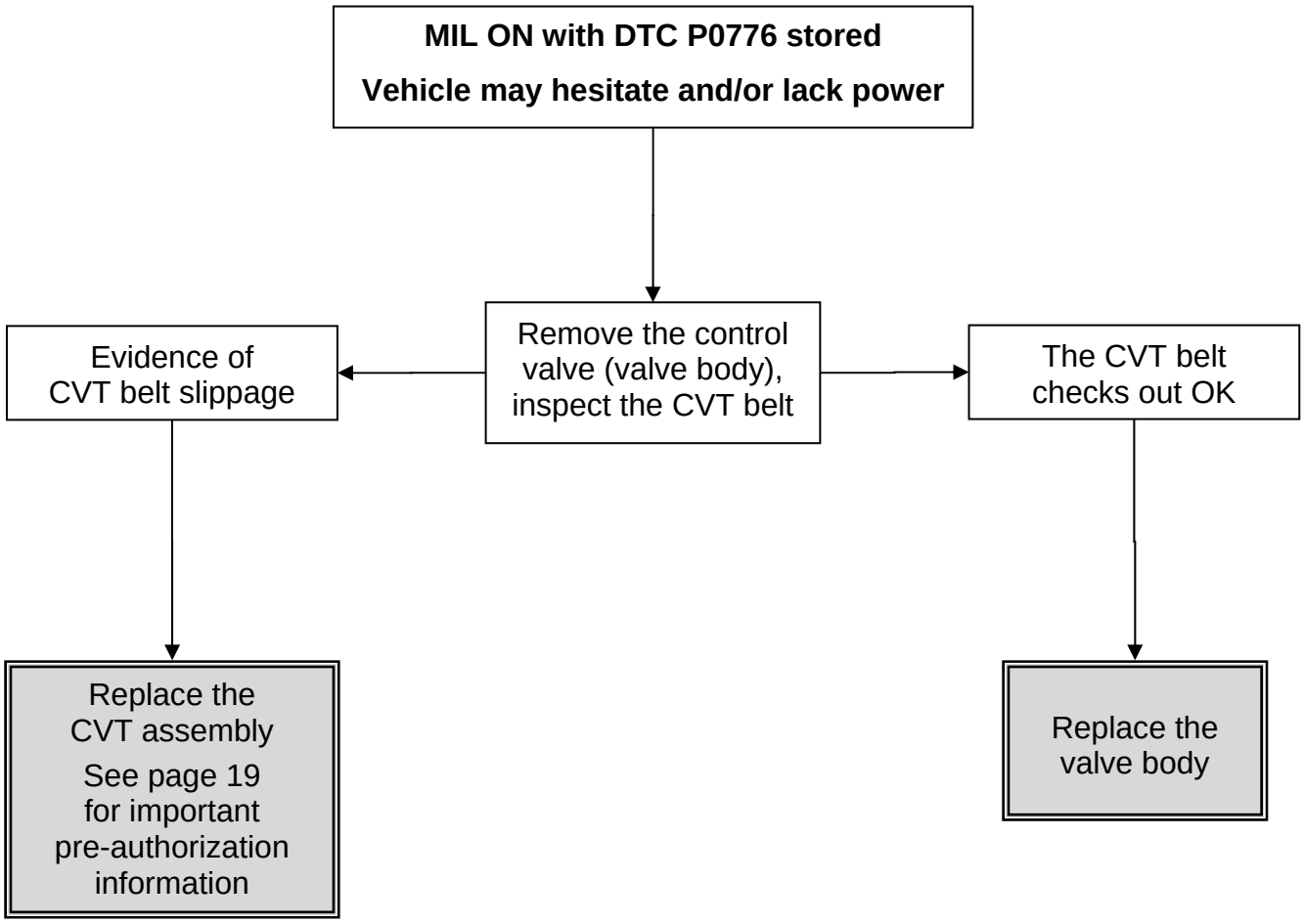
ACTION:

Refer to the **Repair Flow Chart** on page 2.

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

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.

Repair Flow Chart



SERVICE PROCEDURE

Exploded View

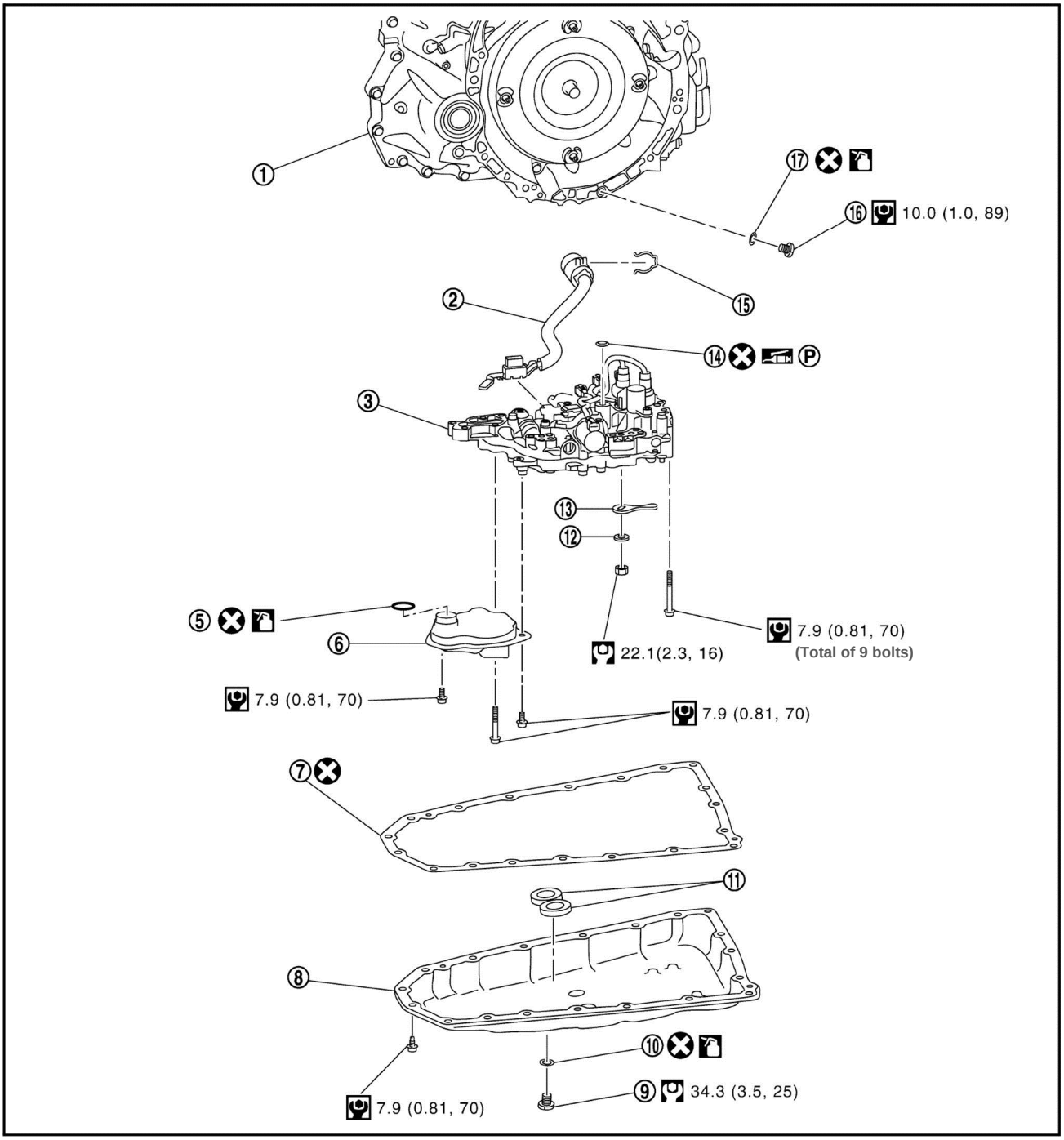


Figure 1

① Transaxle (CVT) assembly	② Terminal cord assembly	③ Control valve (valve body)
	⑤ O-ring	⑥ Oil strainer assembly
⑦ Oil pan gasket	⑧ Oil pan	⑨ Drain plug
⑩ Drain plug gasket	⑪ Two original magnets	⑫ Spring washer
⑬ Manual plate	⑭ Lip seal	⑮ Snap ring
⑯ Overflow plug	⑰ 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.

- For Altima: Refer to the appropriate ESM, section **TM – Transaxle & Transmission,** for valve body removal.

- For Rogue: Refer to the 2013 Altima ESM, section **TM – Transaxle & Transmission / RE0F10D**, 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.

   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.

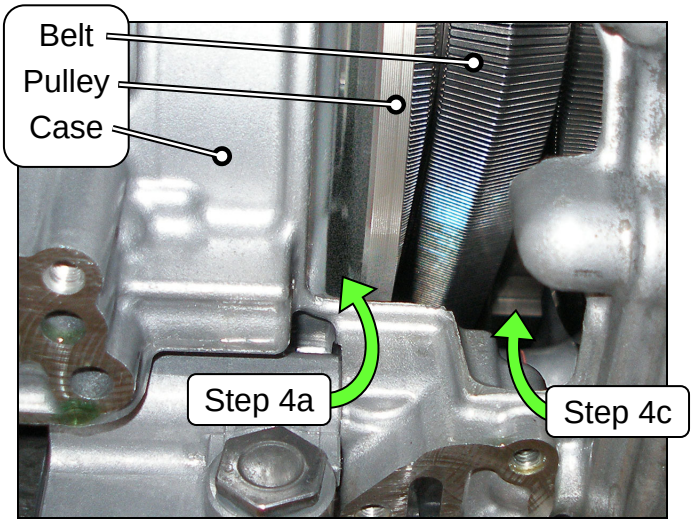


Figure 3

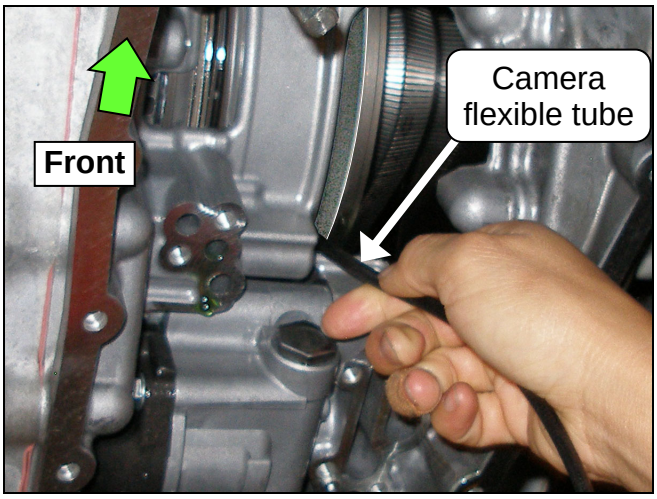


Figure 4

b. Slowly and carefully turn the front left tire one full turn <u>in the forward rotation</u> 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 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

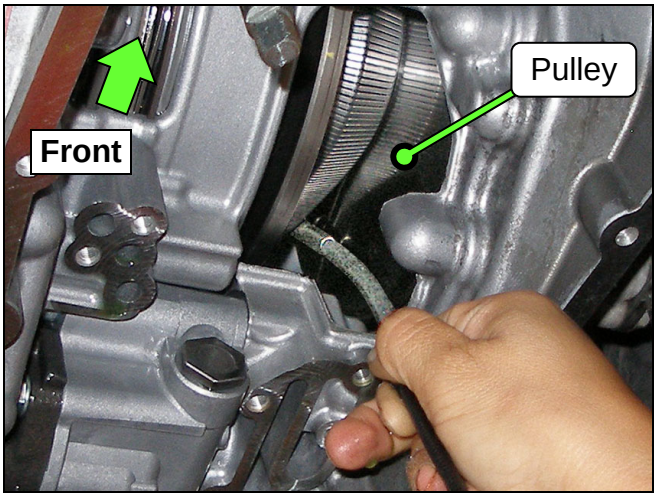


Figure 6

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.

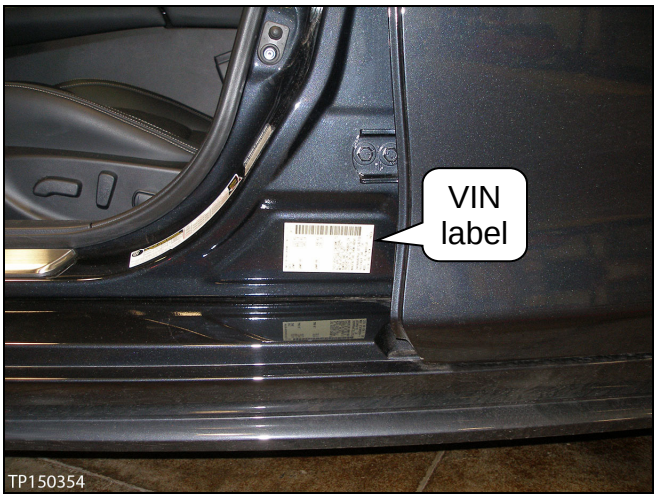


Figure 7

- 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 19).
   - 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.

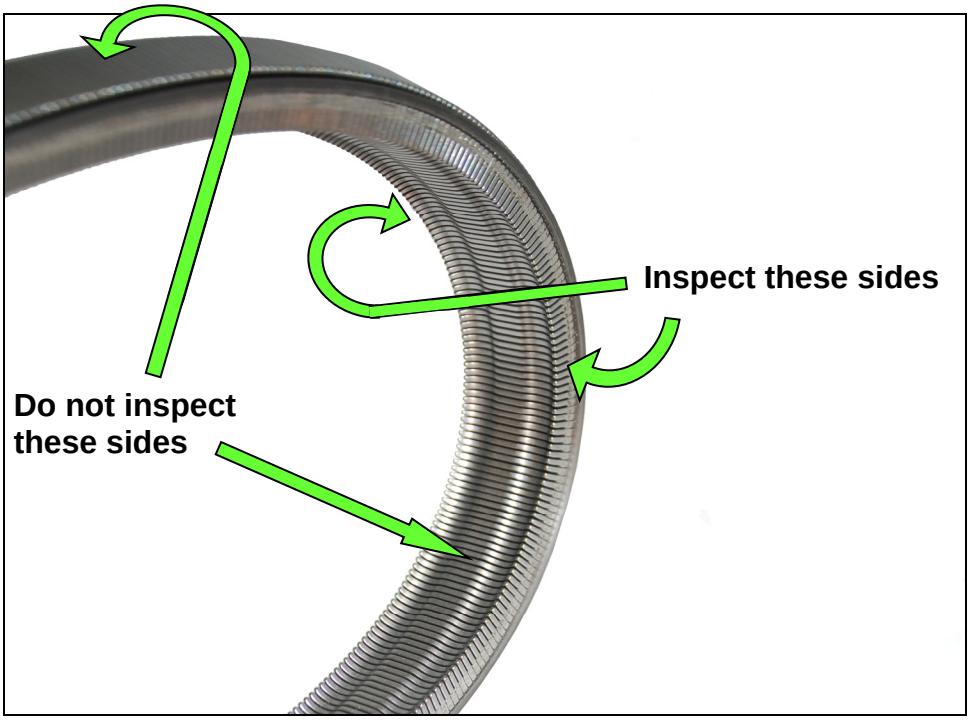


Figure 8

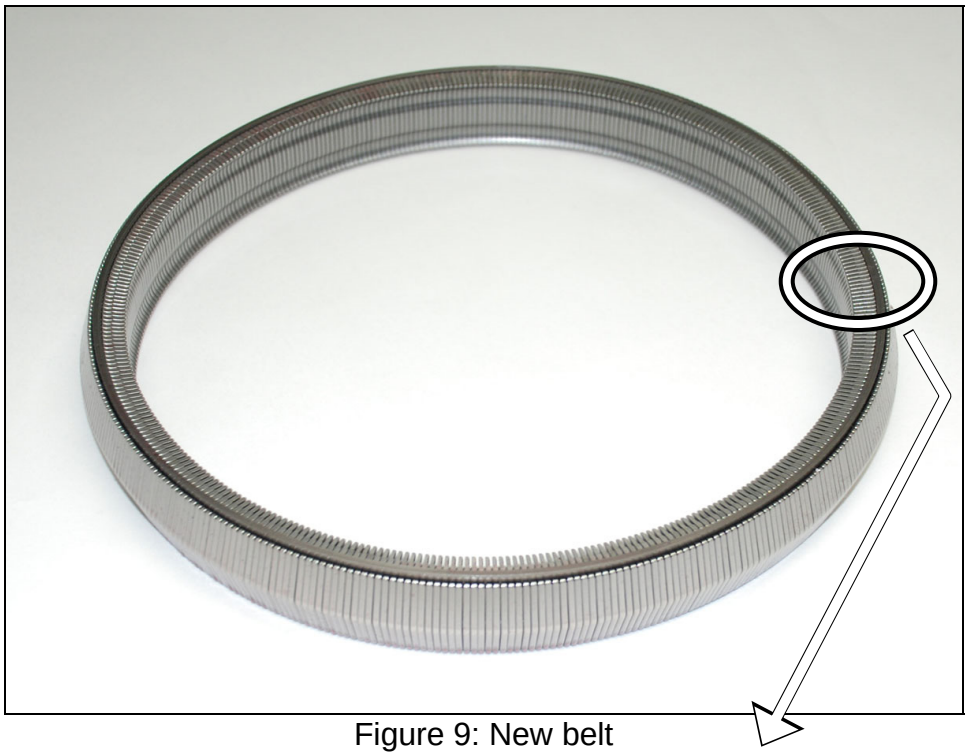


Figure 9: New belt

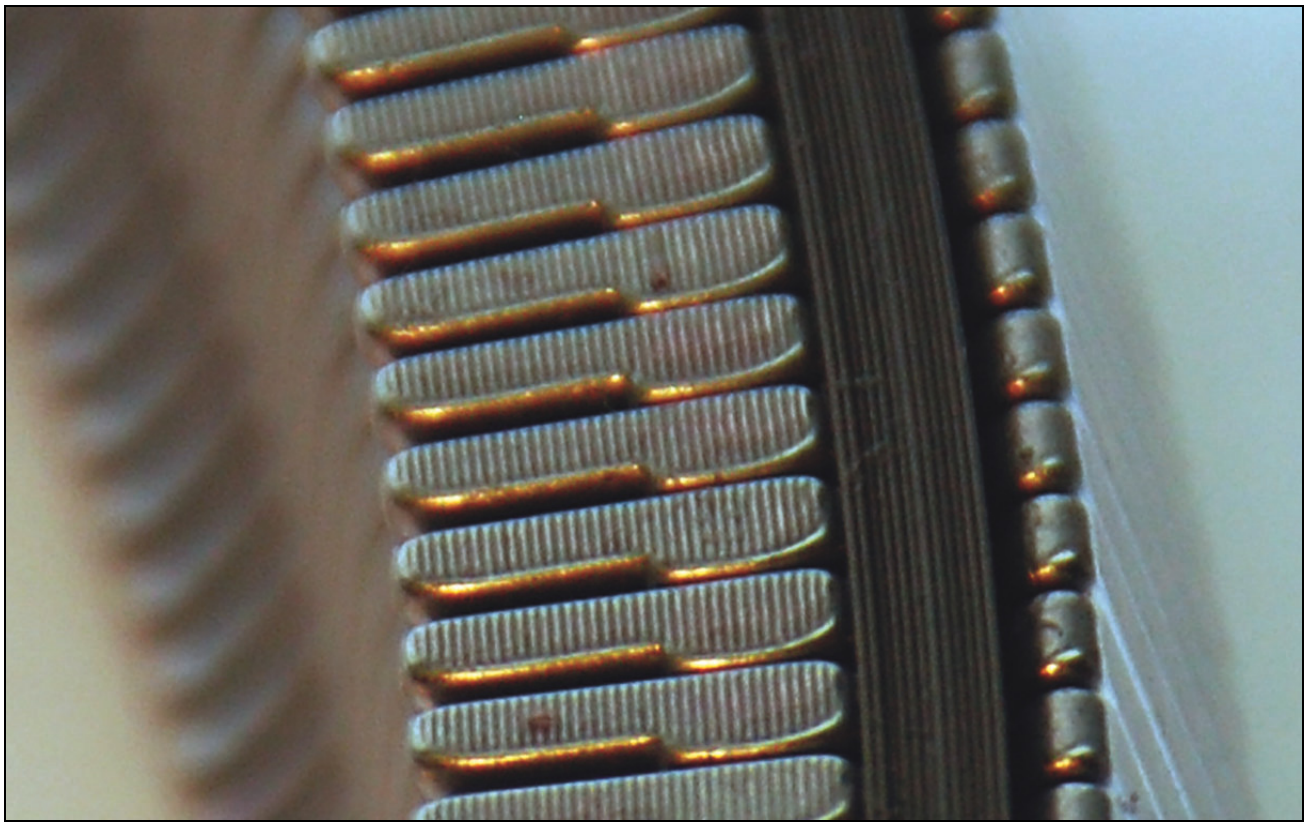


Figure 10: Close-up of section to be inspected

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

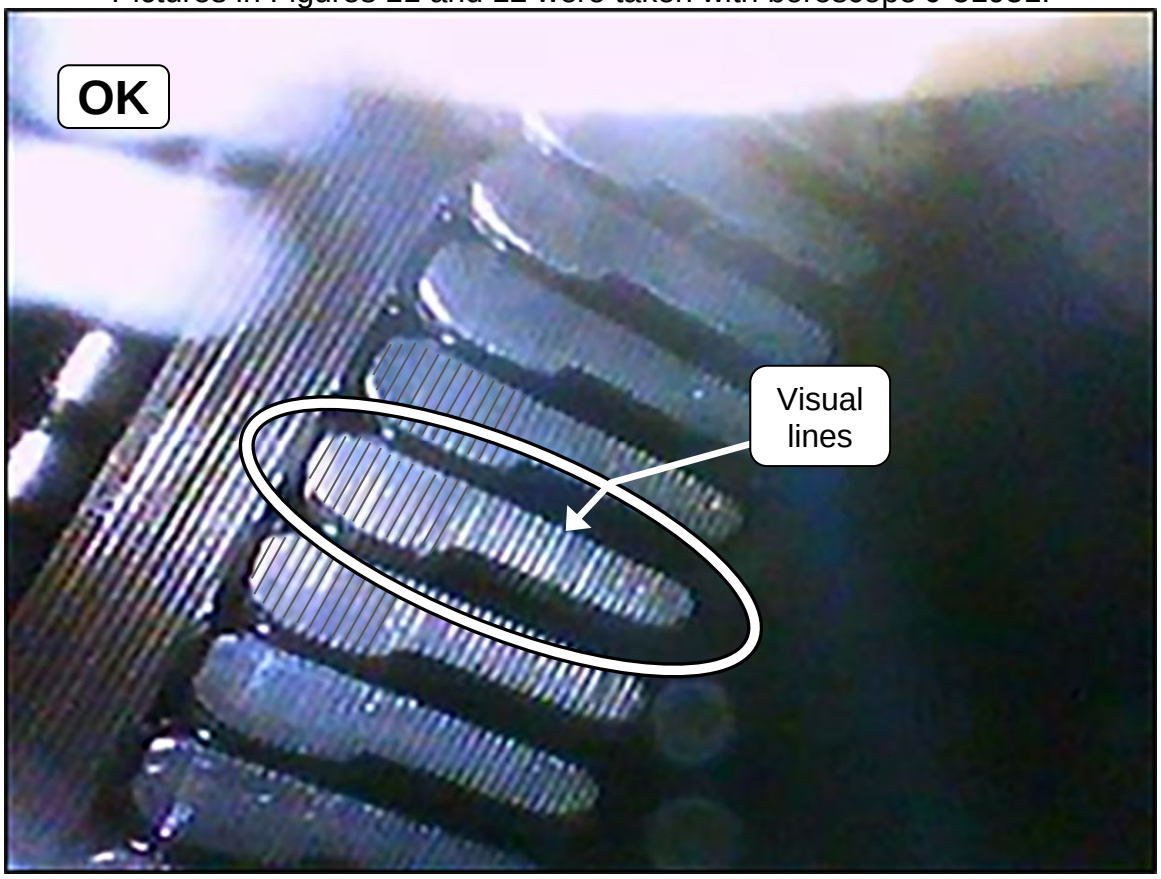


Figure 11: Belt is OK

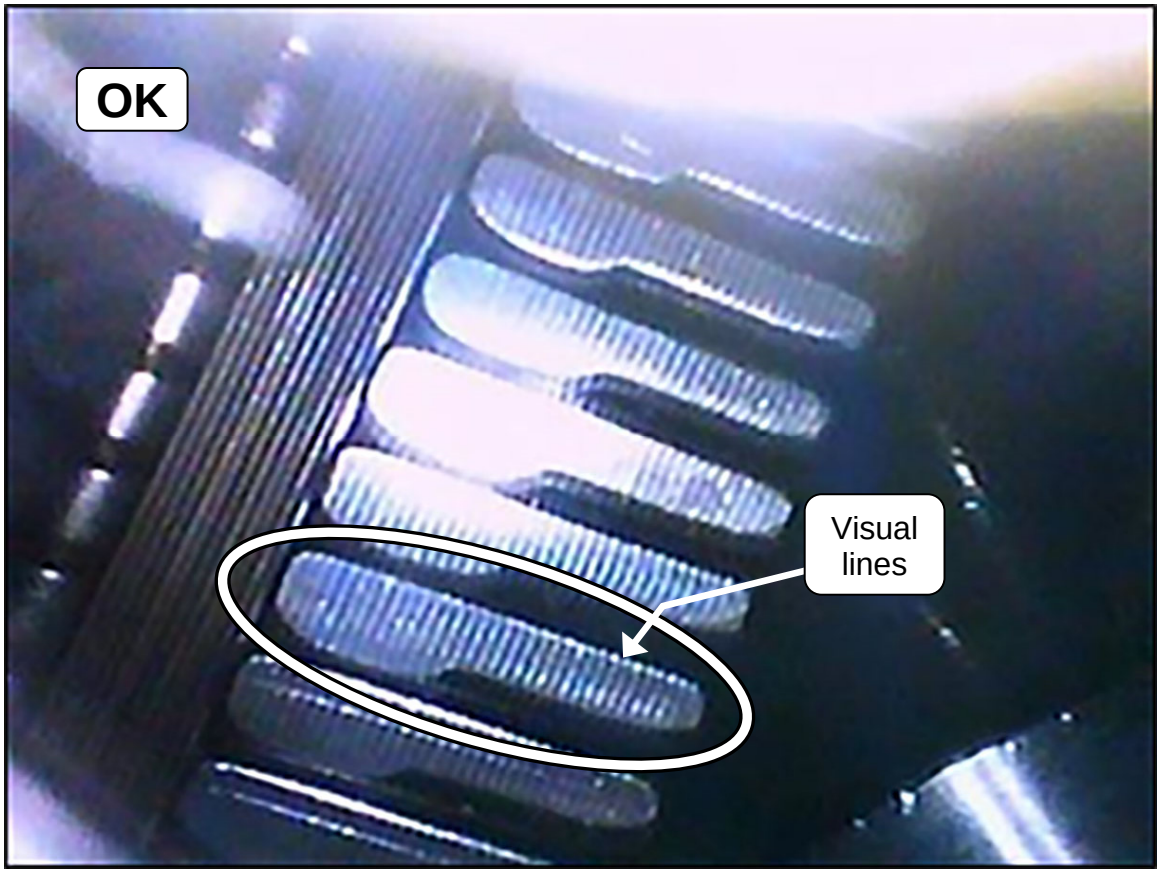


Figure 12: Belt is OK

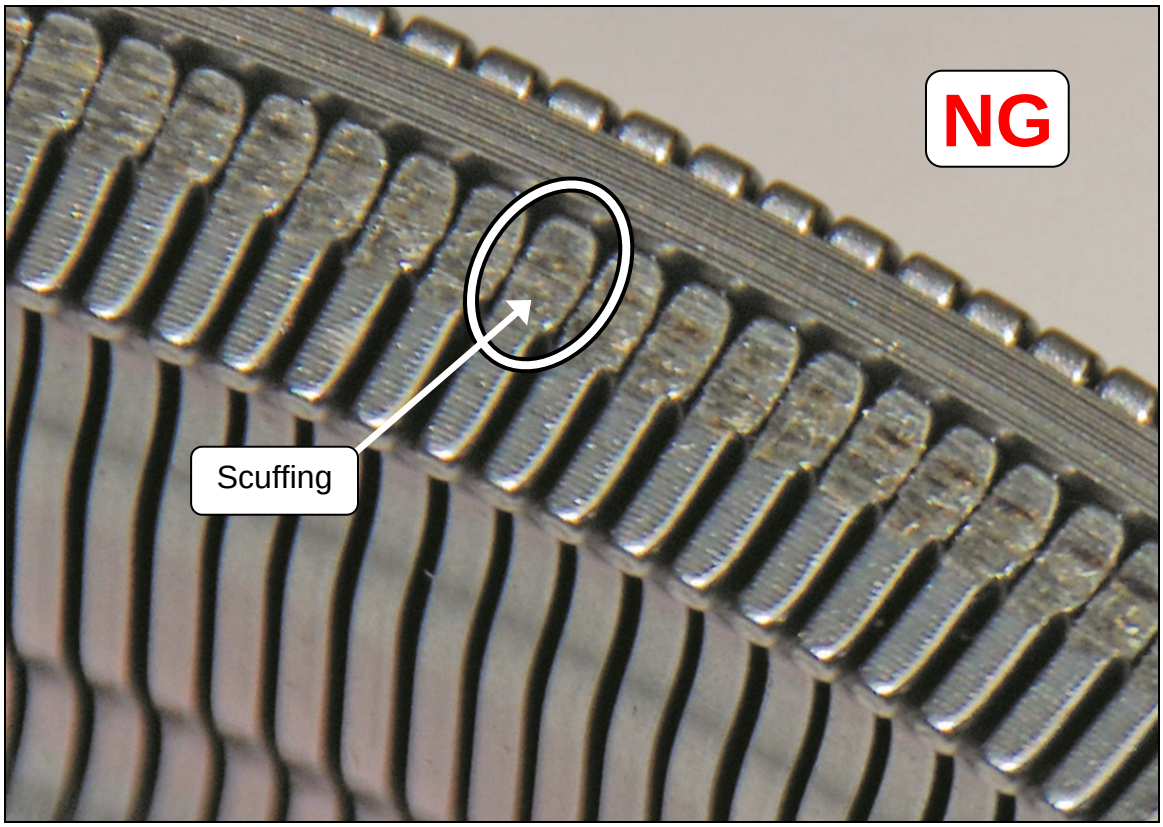


Figure 13: Example of NG belt

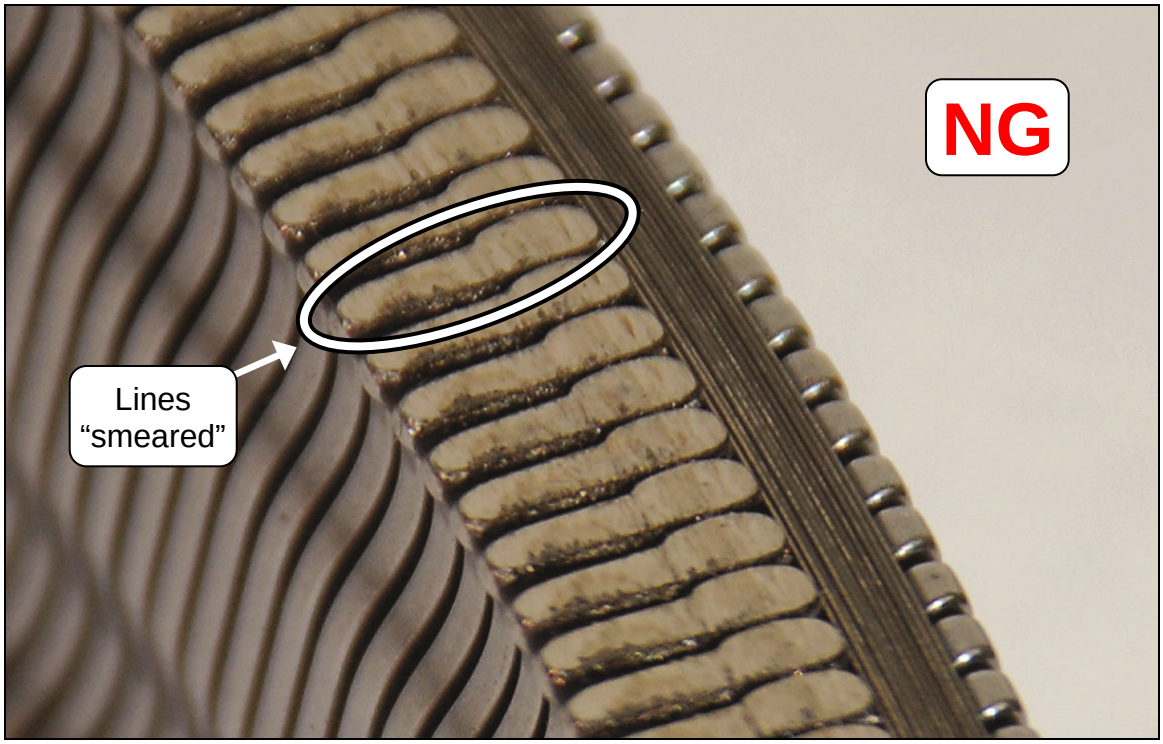


Figure 14: Example of NG belt

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

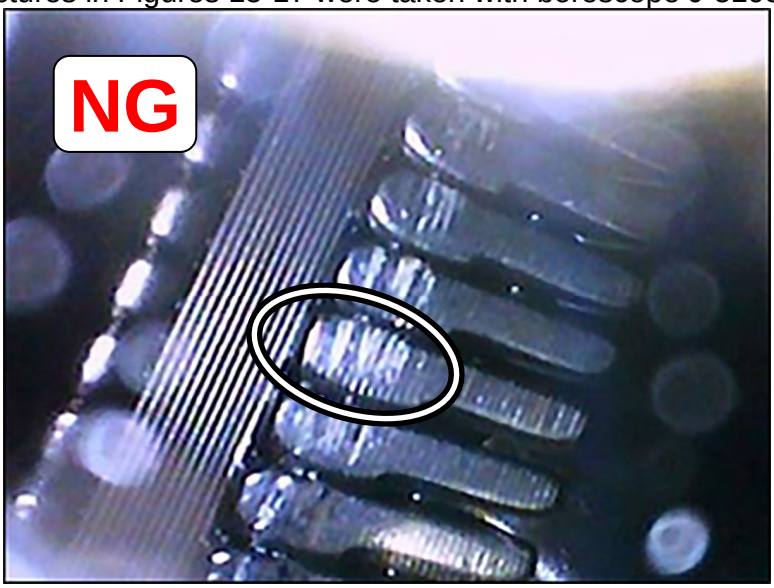


Figure 15: Example of NG belt

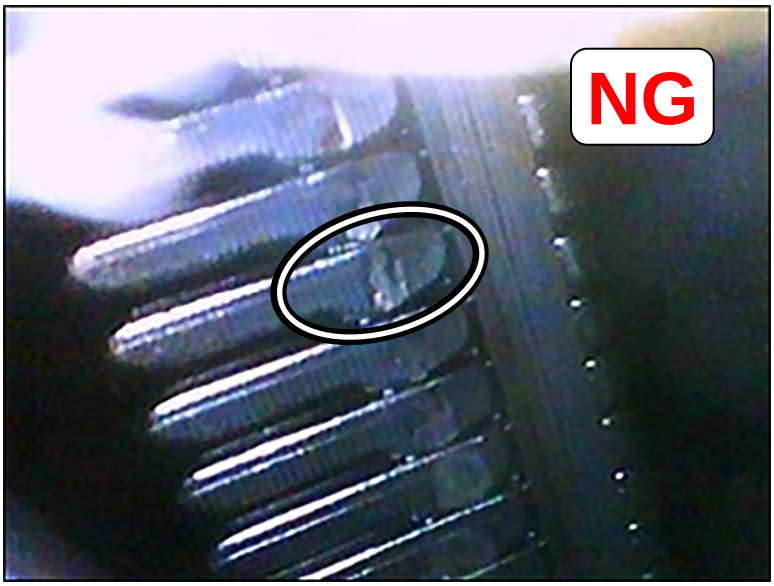


Figure 16: Example of NG belt

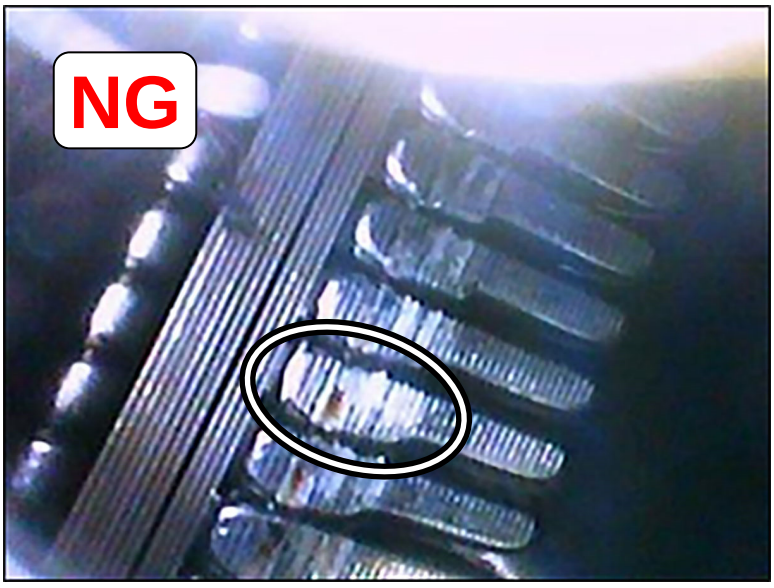


Figure 17: Example of NG belt

Control Valve (Valve Body) Strainer and Pan Installation

IMPORTANT: This section may contain different style parts than what was originally installed in the CVT. Pay careful attention, REASSEMBLY MAY NOT BE IDENTICAL TO DISASSEMBLY.

CAUTION: Handle the valve body carefully.

1. Discard the oil strainer bracket (Figure 18).

2. Install a new lip seal. Do NOT reuse the old lip seal (Figure 19).

   NOTE: Apply a small amount of petroleum jelly to the lip seal to keep it in place on the CVT.

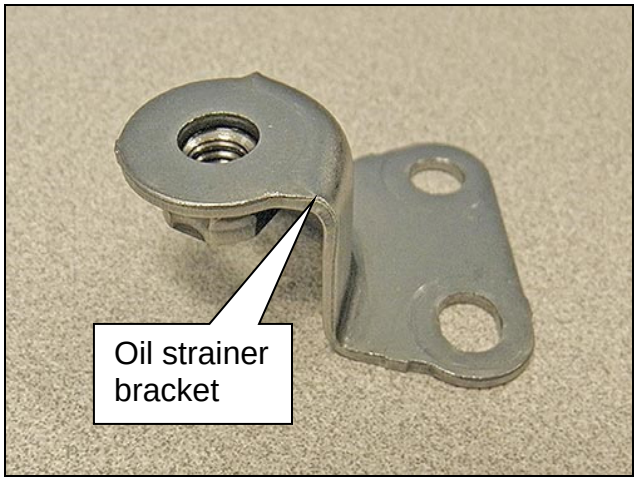


Figure 18

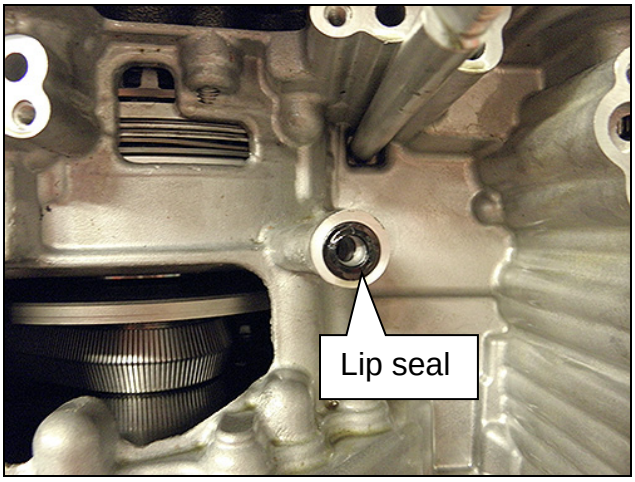


Figure 19

3. Install the Control Valve with nine (9) mounting bolts (Figure 20).

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

   CAUTION: Make sure the wiring harness is not in the way / does not get pinched.

   - 54 mm long bolt 🔴 – 7 pieces
   - 44 mm long bolt 🔵 – 2 piece
   - 25 mm long bolt 🟡 – 2 piece

     CAUTION: These two bolts are installed WITHOUT the strainer bracket.

     ➢ Bolt torque: 8.0 N•m (0.81 kg-m, **70.8 in-lb.**)

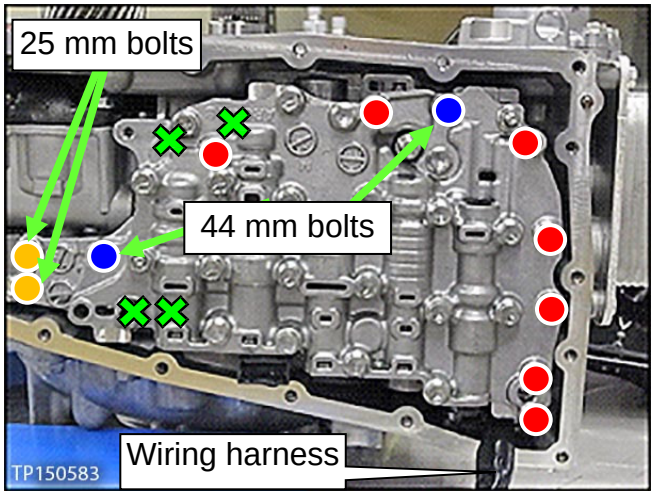


Figure 20

4. Replace the metal bracket of the temperature sensor as follows:

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

   a. Cut the plastic zip tie with an appropriate tool to remove the temperature sensor bracket from the terminal harness assembly. (Figure 21).

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

   b. Discard the removed bracket and plastic zip tie.

   c. Use the plastic zip tie from Parts Information to attach the new temperature sensor bracket to the temperature sensor of the terminal connector harness.

      IMPORTANT: Locate the plastic zip tie at the **center notch** of three notches on the temperature sensor.

   d. Cut off plastic zip tie excess.

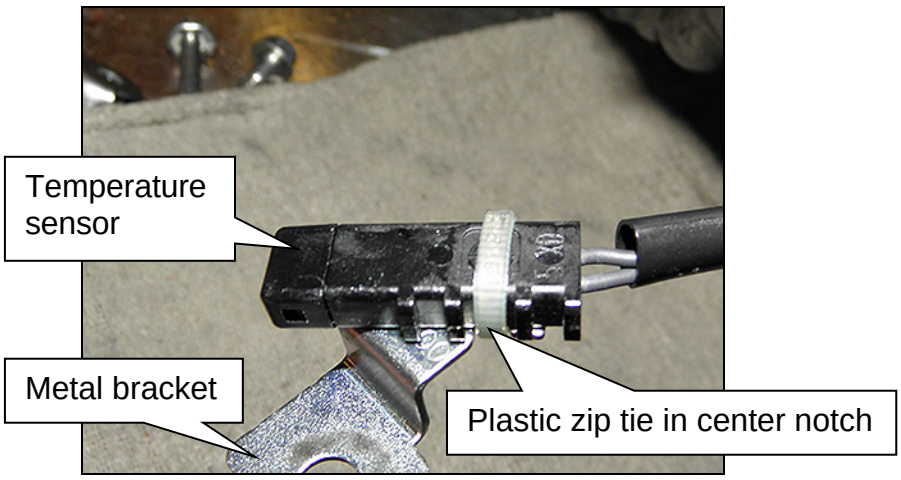


Figure 21

5. Connect the electrical harness connector (Figure 22).

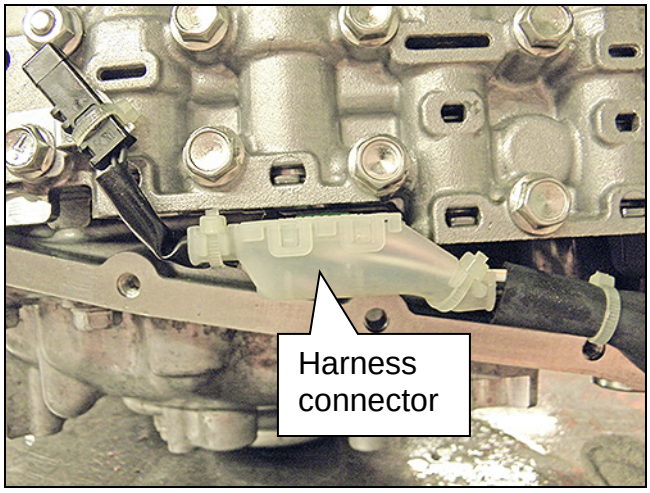


Figure 22

6. Install the CVT fluid temperature sensor bracket to the valve body with one (1) bolt (Figure 23).

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

   - Bolt torque: 8.0 N•m (0.81 kg-m, **70.8 in-lb.**)
   - Bolt length: 54 mm

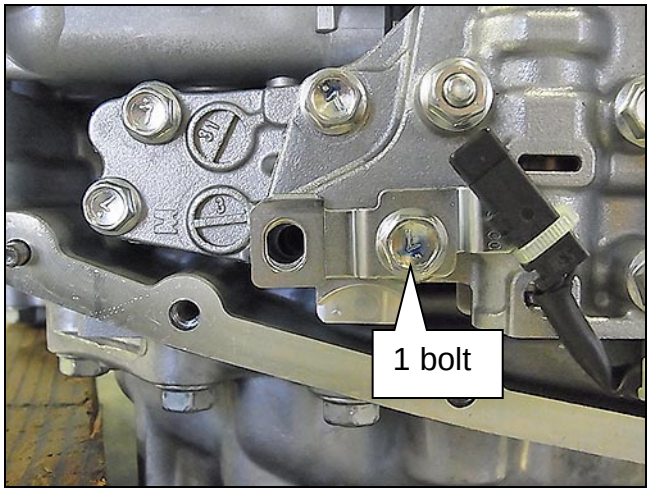


Figure 23

7. Install the new oil strainer with its new O-ring seal with two (2) bolts (Figure 24).

   NOTE: replacement strainer maybe a different shape.

   - Bolt torque: 8.0 N•m (0.81 kg-m, **70.8 in-lb.**).
   - 54 mm long bolt ● - 2 pieces.

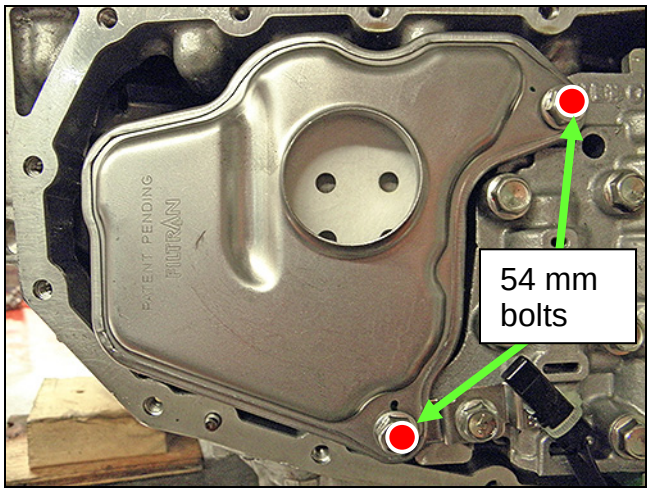


Figure 24

8. Install the manual plate, lock washer, and nut (Figure 25).

   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: 22.5 N•m (2.29 Kg-m, **16.6 ft-lb**.)

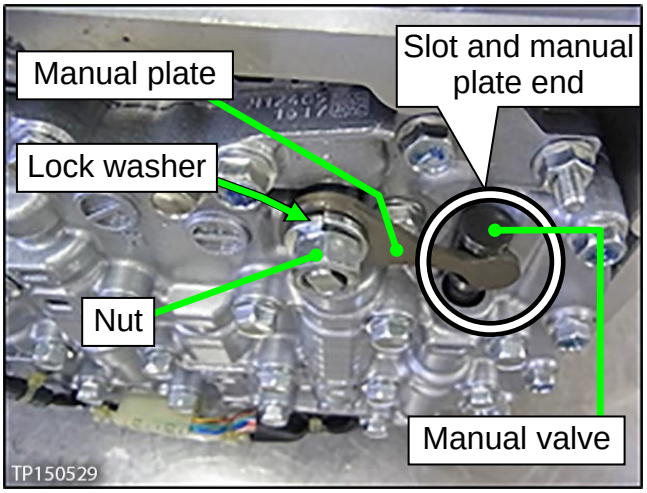


Figure 25

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

10. Reassemble the original magnets to the pan.

    NOTE: Return the magnets to their original locations.

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

12. Install the oil pan bolts (see Figure 26).

    - Reuse the existing pan bolts.
    - Oil pan bolts torque: 8.0 N•m, (0.81 Kg-m, **70.8 in-lb.**)

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

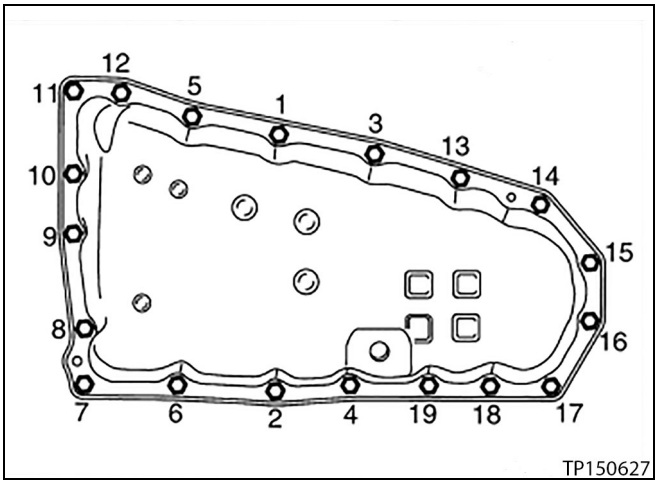


Figure 26

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

- Refer to the ESM, section **TM – Transaxle & Transmission / RE0F10D**, for CVT fluid filling.

15. **IMPORTANT:** Install Write IP Characteristics to the TCM; see NTB12-103.

- Refer to **TM – Transaxle & Transmission / RE0F10D / BASIC INSPECTION,** and perform **ADDITIONAL SERVICE WHEN REPLACING TRANSAXLE ASSEMBLY**.
  - ➢ Check for fluid leakage.
  - ➢ Attach the QR label with the new calibration data onto the transmission range switch (inhibitor switch).
    - o See Figure 27 and 28 below.
    - o A QR Label and CD-R are included with the replacement valve body.

16. Erase the DTC.

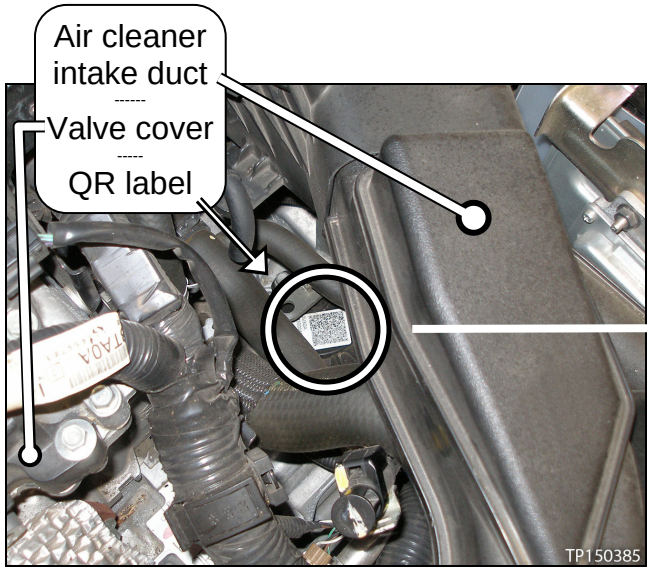


Figure 27

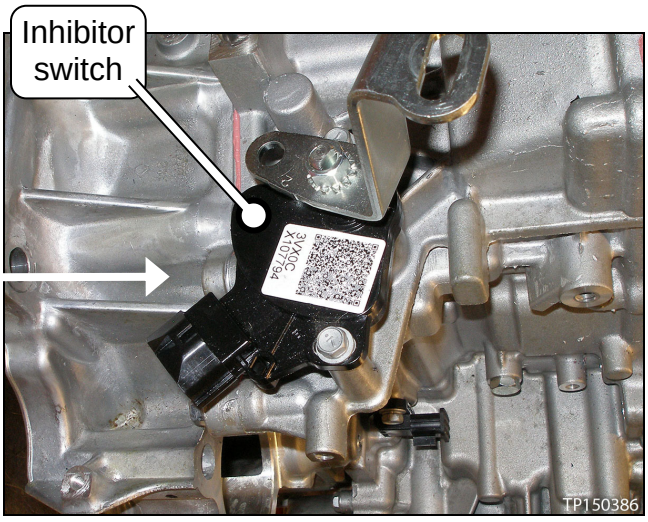


Figure 28

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 and click on the “Maintenance Advantage” link.
(6) Lens swabs are available from Tech•Mate online: www.nissantechmate.com, or by phone: 1-800-662-2001.
(7) Shop supply.

Tech Cam J-51951

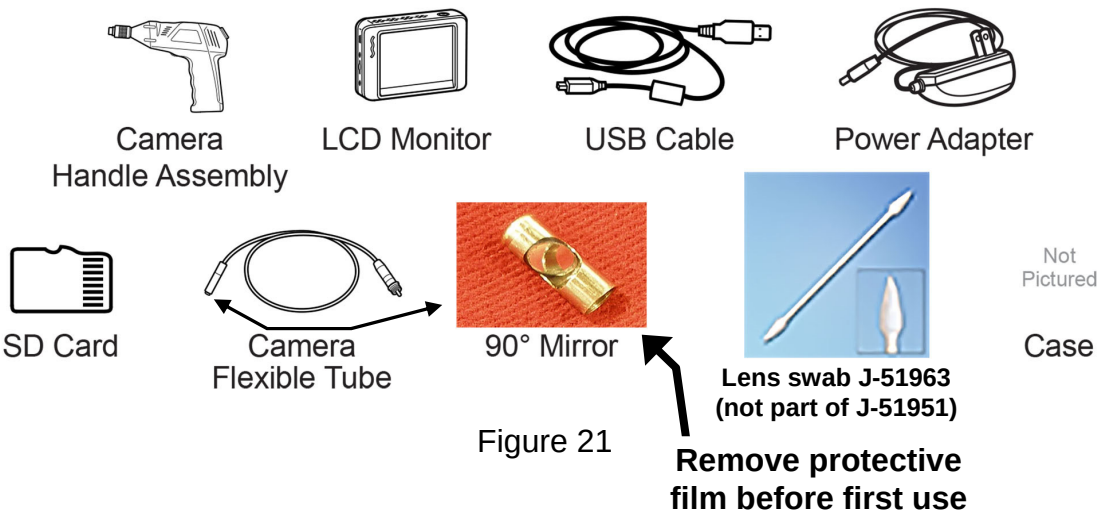


Figure 21

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

CLAIMS INFORMATION

NOTE: Refer to **CVT Assembly Replacement Approval Procedures** (on the next page) 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

OR

If belt inspection shows signs of belt slip, NG

MODEL	DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Altima	CVT R&R	(3)	JD01AA JD023A	ZE	32	(4)
Rogue						
Altima/ Rogue	CVT TROUBLE DIAGNOSIS		JX22AA			0.5

(3) 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.
(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.

And

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

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).