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# SERVICE BULLETIN

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Classification:

AT19-004

Reference:

NTB19-068

Date:

September 6, 2019

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## MIL ON WITH DTC P0868 AND MAY HAVE HESITATION AND/OR LACK OF POWER

**APPLIED VEHICLES:** 2019 Sentra (B17)  
2019 Versa Note (E12)  
2019 Versa Sedan (N17)

**APPLIED ENGINE:** MRA8DE

**APPLIED TRANSMISSION:** CVT (RE0F11A)

### IF YOU CONFIRM

The MIL is ON with DTC P0868 (FLUID PRESS LOW) stored.

**NOTE:** The vehicle may also hesitate and/or have reduced power.

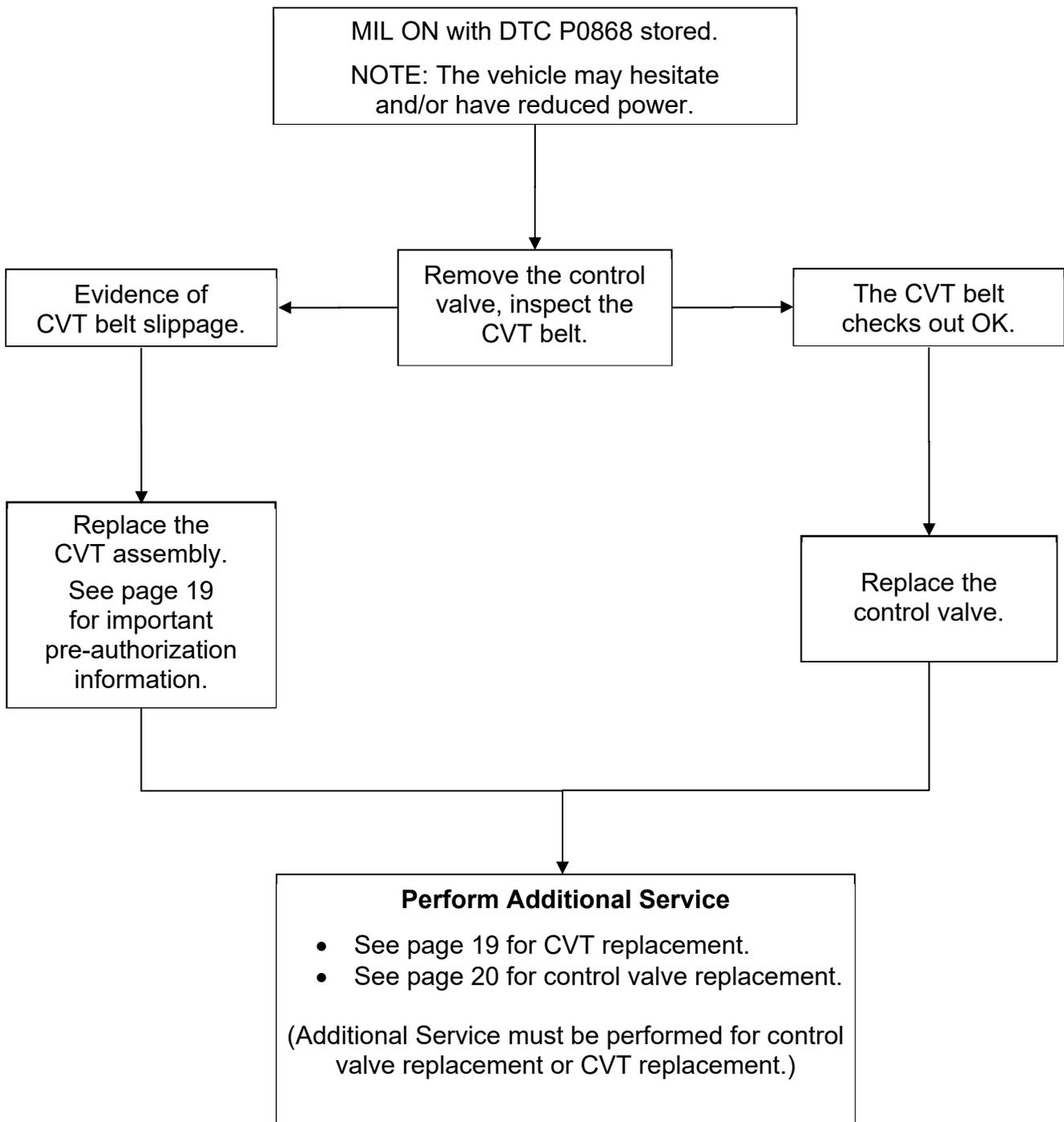
### ACTION

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

**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



## Essential Special Service Tools

Additional Essential Tools are available from Tech•Mate online:  
[www.nissantechmate.com](http://www.nissantechmate.com), or by phone: 1-800-662-2001.

### Tech Cam J-51951

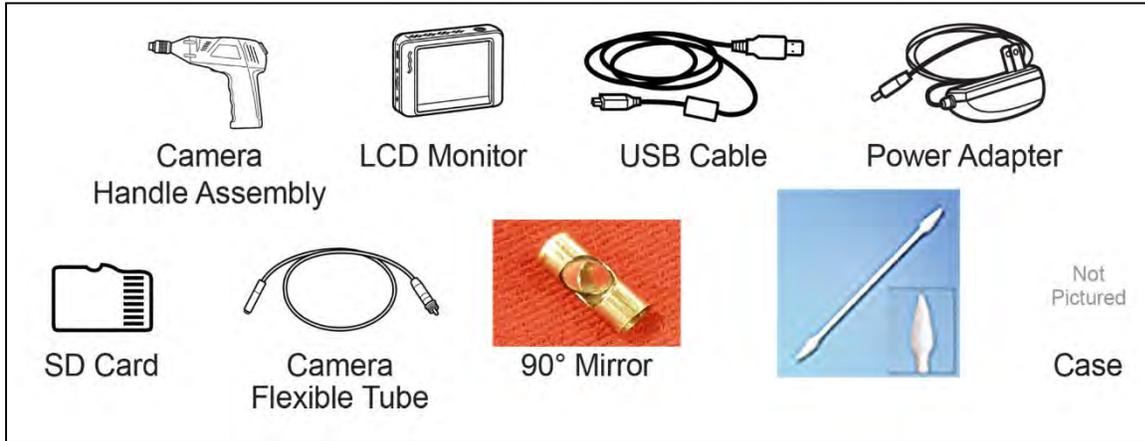


Figure 1



Figure 2

## Essential Special Service Tools (continued)

Evap Pressure Test  
Kit J-42909



Figure 3

## SERVICE PROCEDURE

**IMPORTANT:** Repairs performed for this bulletin require CONSULT-III plus (C-III plus) Diagnostic result reporting function-Setting be turned ON and Diagnosis (All Systems) be performed. If not done, it may result in a repair being non-warrantable.

## Control Valve Removal

### NOTICE

- Only allow NS-3 CVT fluid or suitable cleaners to enter the CVT assembly or damage to the CVT may occur.
- Use care and cover all CVT openings to avoid any foreign debris, dust, dirt, etc. from entering or damage to the CVT may occur.

1. Write down all audio presets.

Presets	1	2	3	4	5	6
AM						
FM 1						
FM 2						
SAT 1						
SAT 2/3						
Bass	Treble	Balance	Fade	Speed Sen. Vol.		

2. Place the vehicle on a lift.
3. Before lifting the vehicle, place the transmission gear selector in Neutral.
4. Disconnect both battery cables, negative cable first.
5. Raise the vehicle, and then drain the CVT fluid by removing the drain plug.
  - Remove the engine under cover if needed.

**⚠CAUTION** To avoid the risk of minor personal injury, use caution when looking into the drain hole as there is the risk of fluid entering the eye.

6. Disconnect the engine room harness from the CVT.
7. Remove the oil pan mounting bolts, and then remove the oil pan and oil pan gasket.
  - Do not discard the bolts. These will be reused during assembly.



Figure 4

# Exploded View

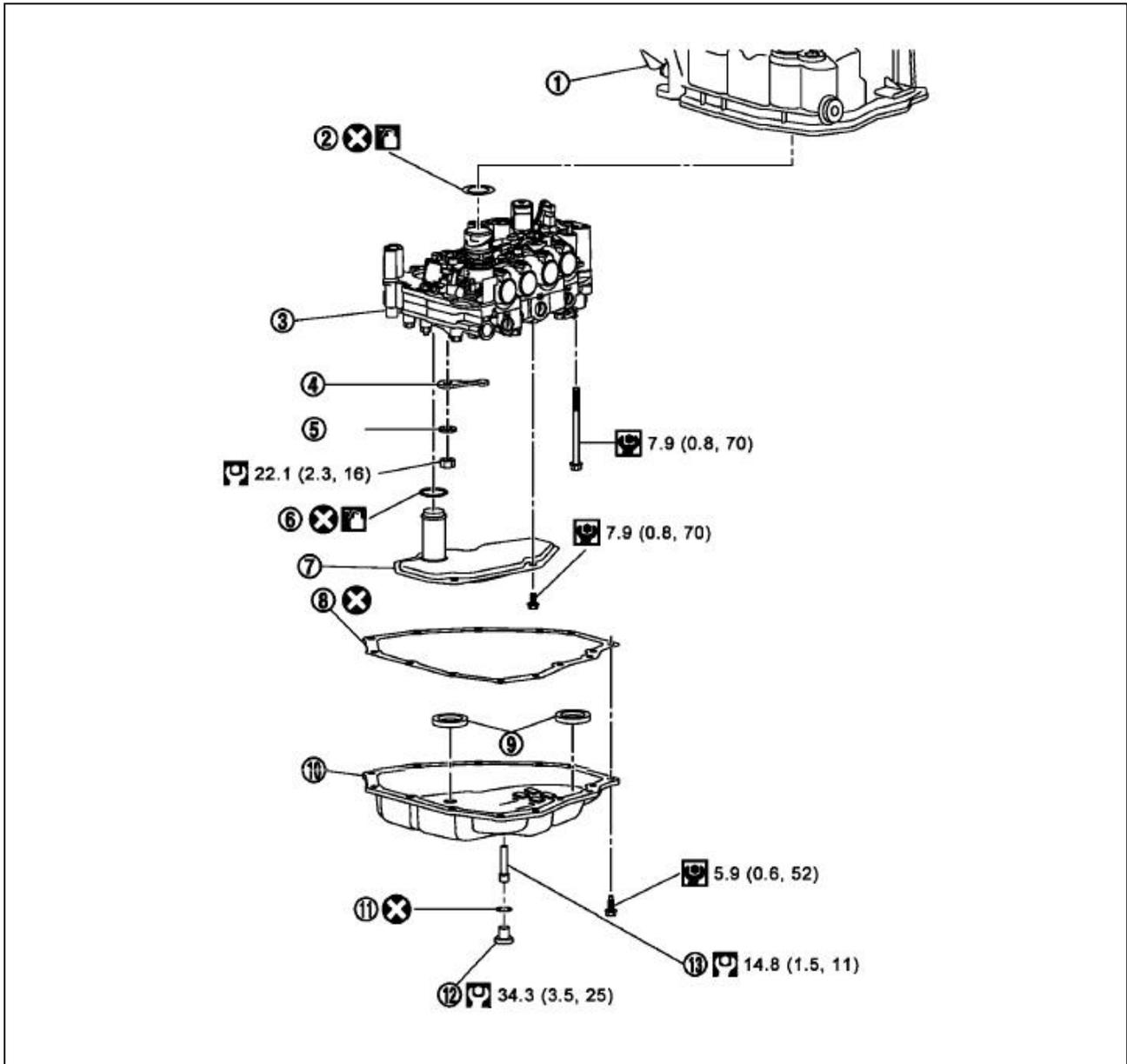


Figure 5

- 1. Transaxle assembly
- 4. Manual plate
- 7. Strainer
- 10. Oil pan

- 2. O-ring
- 5. Washer
- 8. Oil pan gasket
- 11. Drain plug gasket

- 3. Control valve
- 6. O-ring
- 9. Magnet
- 12. Drain plug

-  : Always replace after every disassembly.
-  : N•m (kg-m, ft-lb)
-  : N•m (kg-m, in-lb)

8. Remove the magnets from the oil pan.
  - Clean the magnets.
  - Clean the CVT oil pan.
  - Reinstall the magnets to the oil pan in their original positions.

9. Remove the three (3) strainer bolts, and then remove the strainer from the control valve (Figure 6).

- These bolts will be reused.

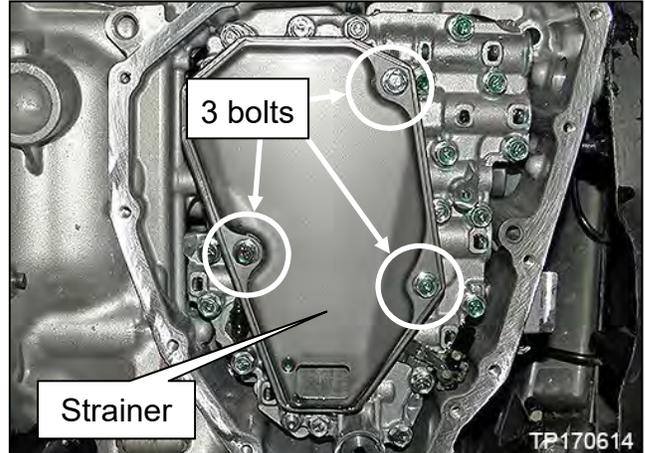


Figure 6

10. Remove the nut and washer, and then remove the manual plate shown in Figure 7.

- Use a screwdriver to hold the manual plate (Figure 8) to keep the shaft from rotating while removing the nut.
- Do not discard the nut and washer. These will be reused during assembly.

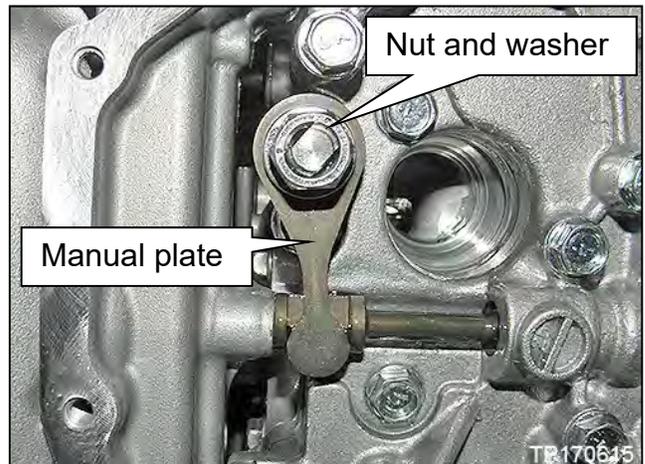


Figure 7



Figure 8

11. Clean around the CVT unit harness connector to prevent foreign materials from entering into the CVT case.
12. Remove ONLY the eleven (11) control valve bolts circled in yellow with markings as shown in Figure 9.
  - On this model transaxle, DO NOT remove the bolts with a single dot over the "7" (not shown).
  - The bolts removed will be reused.
13. Press the CVT unit harness connector down into the transaxle case, and then remove the control valve from the transaxle case.

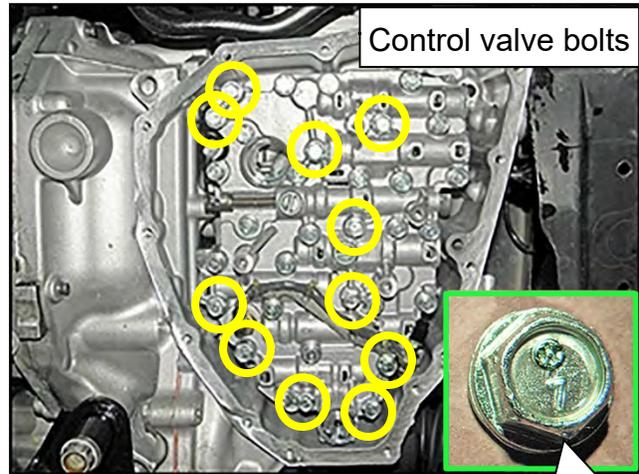


Figure 9

**NOTICE** Non-warrantable damage may occur if care is not taken when handling the CVT unit harness connector.

### CVT Belt Visual Inspection

14. Secure the front right tire with a suitable strap (Figure 10).
  - This will assist in making the belt turn during the borescope belt inspection.
15. Mark the front left tire with a suitable marking.
  - This will assure all 360° of the belt is inspected.

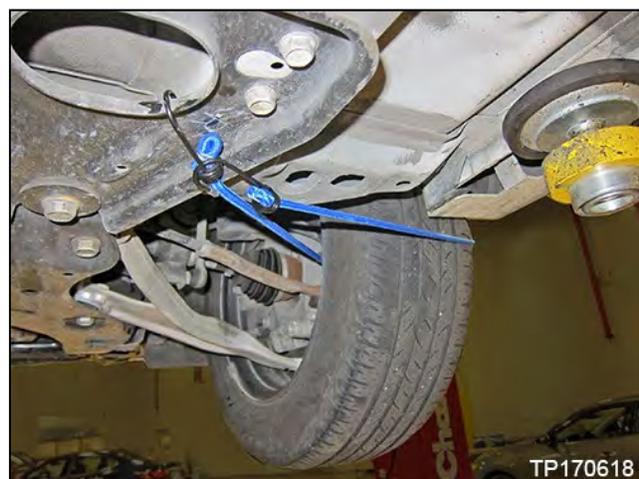


Figure 10

16. Inspect the entirety of the two sides of the belt that come in contact with the pulleys (Figure 11).

**IMPORTANT:**

- Reference Figure 23 through Figure 28 on pages 16-18 for comparison.
- Use borescope J-51951 with mirror attachment.
- 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** on page 21 of this bulletin.

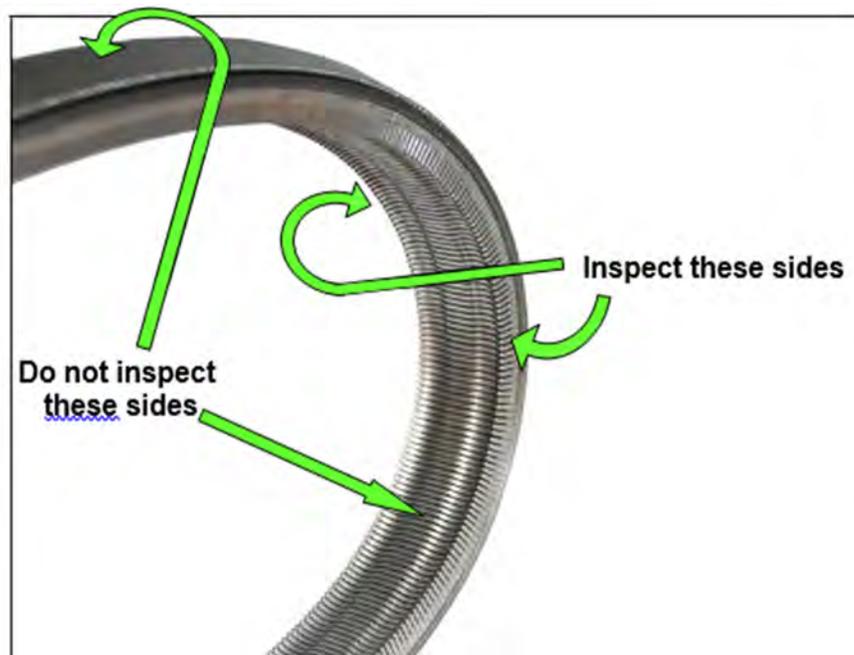


Figure 11

- a. Install the Clutch Engagement Tool (J-52273) to the CVT case with two bolts finger tight where shown in Figure 12 and Figure 13.
- Bolt torque not to exceed: 2.26 N•m (0.23 kg-m, **20 in-lb.**)

**NOTICE**

- Use care when tightening the bolts as damage to the bolts/CVT could occur.
- Make sure an O-ring is installed to the Clutch Engagement Tool (J-52273) before installation as this could lead to improper/incomplete testing.

**HINT:** The O-ring for the Clutch Engagement Tool comes with the attachment. To obtain only the O-ring, refer to **PARTS INFORMATION** on page 21 of this bulletin for the part number.

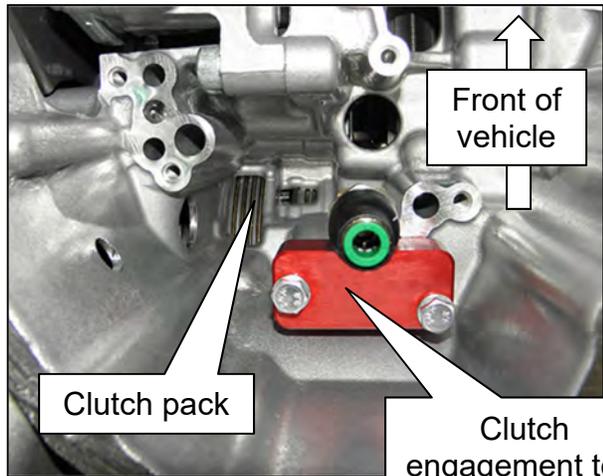


Figure 12

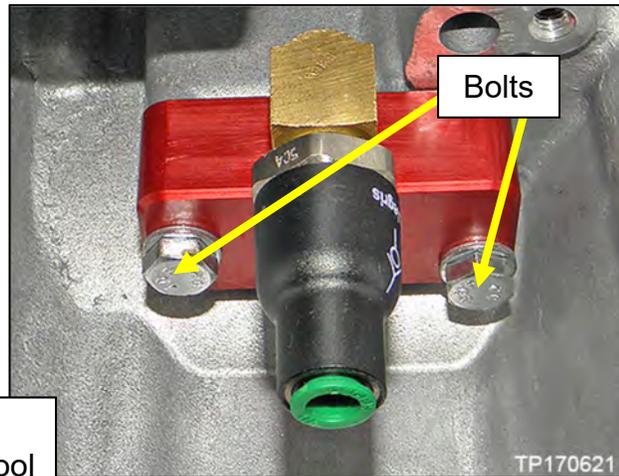


Figure 13

- b. Connect the Hand pump from Evap Pressure Test Kit (J-42909) to the Clutch Engagement Tool (J-52273) and pump to 20 PSI (Figure 14).

**IMPORTANT:**

- Proper pressure has been achieved when the CVT belt moves while the left front wheel is rotated and the CVT is in NEUTRAL with the right front wheel secured.

**NOTICE**

- Do NOT over-pressurize the system as internal damage to the CVT could result.
- The hand pump should be removed from the Clutch Engagement Tool (J-52273) quick connect once the clutch has been engaged and the belt is observed moving with tire rotation.
- Pressure will be retained.

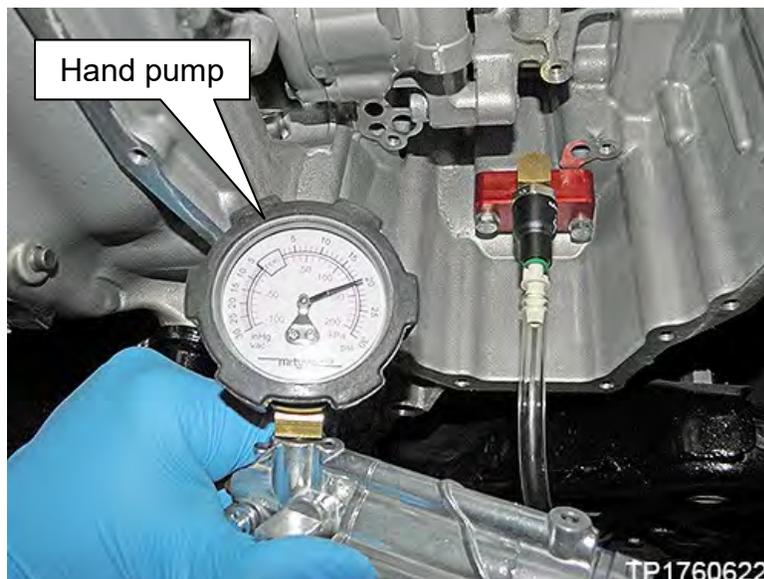


Figure 14

c. Insert the borescope where shown in Figure 15 as follows:

- I. Face the mirror of the borescope toward the driver's side of the vehicle (CVT side cover).
- II. Insert the lens approximately 7.5 inches from the CVT oil pan gasket surface as shown in Figure 17 on page 12.
- III. View the side of the belt that contacts the pulley.

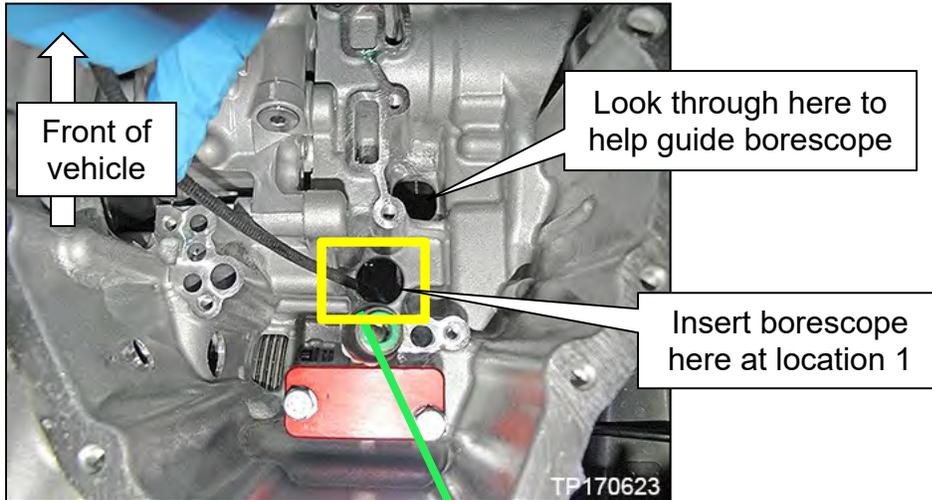


Figure 15

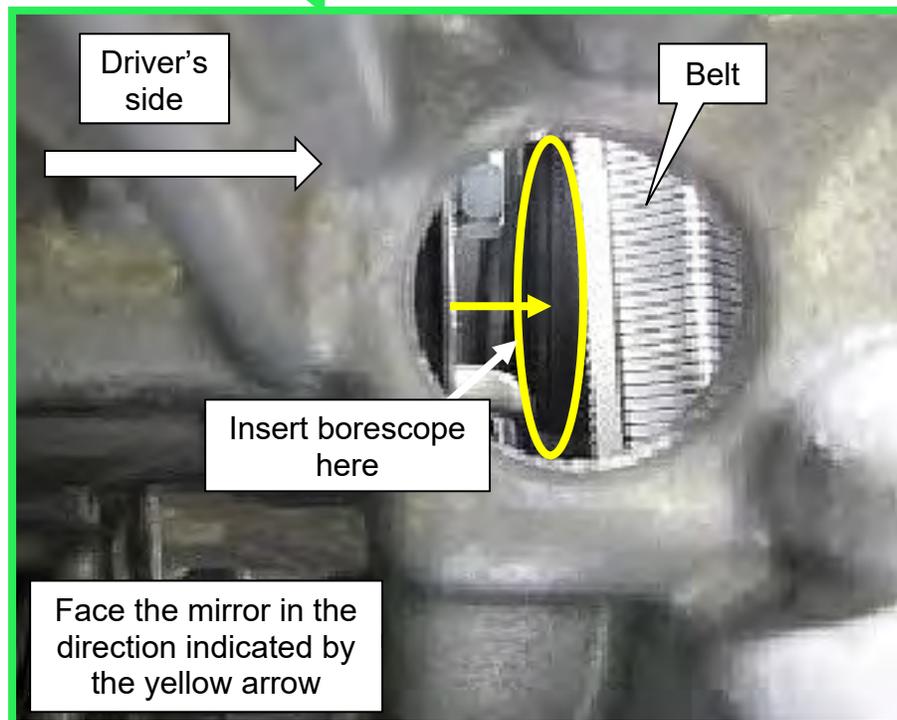


Figure 16

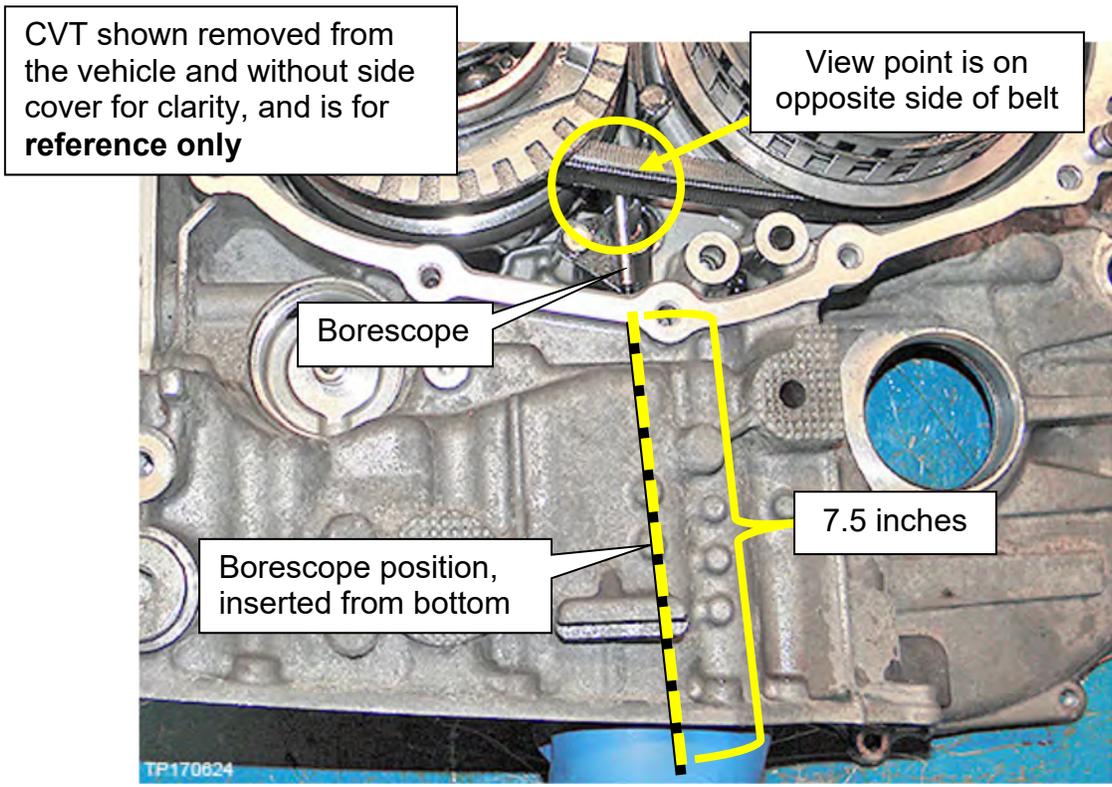


Figure 17

d. Using the mark applied to the left front tire for reference, slowly and carefully rotate the front left tire one full turn in either direction to view all of the belt.

- Holding the borescope (camera flexible tube) with one hand allows rotation of the tire with the other hand (see Figure 18).
- If evidence of belt slip is identified as shown in Figure 27 and Figure 28 on page 18, skip to step 26 on page 19.



Figure 18

- If the belt does not move when rotating the front left tire, return to step 16b on page 10.

e. If the inspection result confirms that no slippage has occurred on the observed side, inspect the other side of the belt as follows:

For the following steps print this page as a template and then shape the borescope camera flexible tube like the image in Figure 19.

- Do not shrink or enlarge the sheet size when printing.
- The template shown is actual size.

**Camera view**

- Face the mirror in the direction of the yellow arrow.

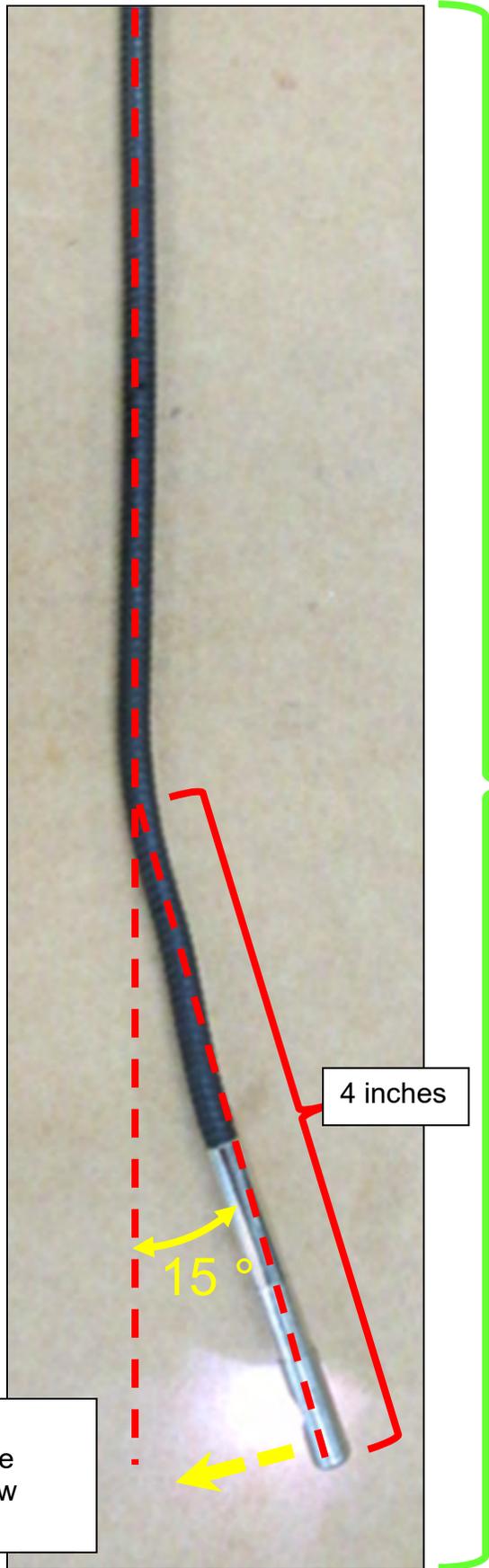


Figure 19

17. Face the mirror of the borescope toward passenger side (engine side).
18. Insert the borescope in the second location where shown in Figure 20.

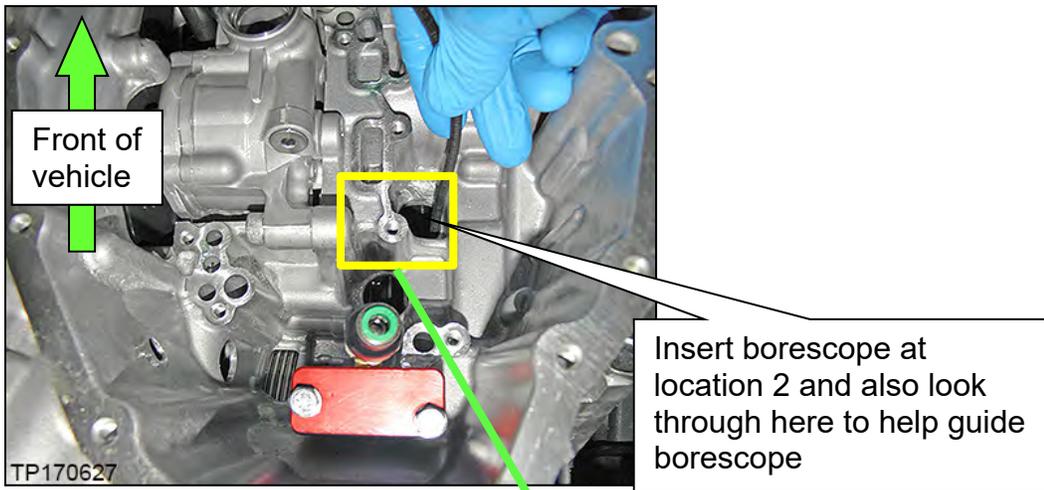


Figure 20

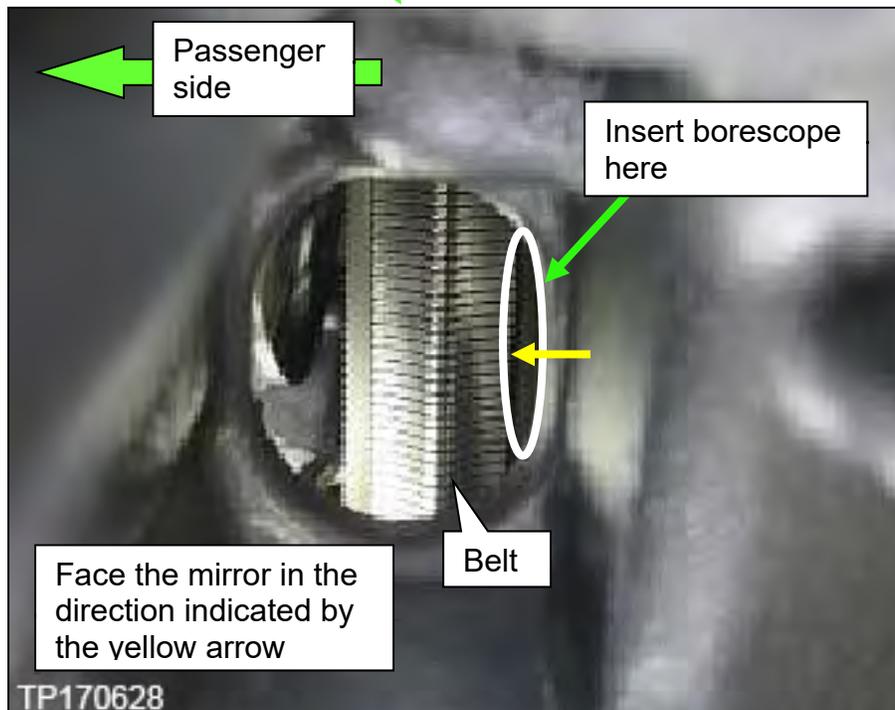


Figure 21

19. Insert the lens approximately 8.7 inches from the CVT case rim (Figure 22)
- View the side of the belt that contacts the pulley.

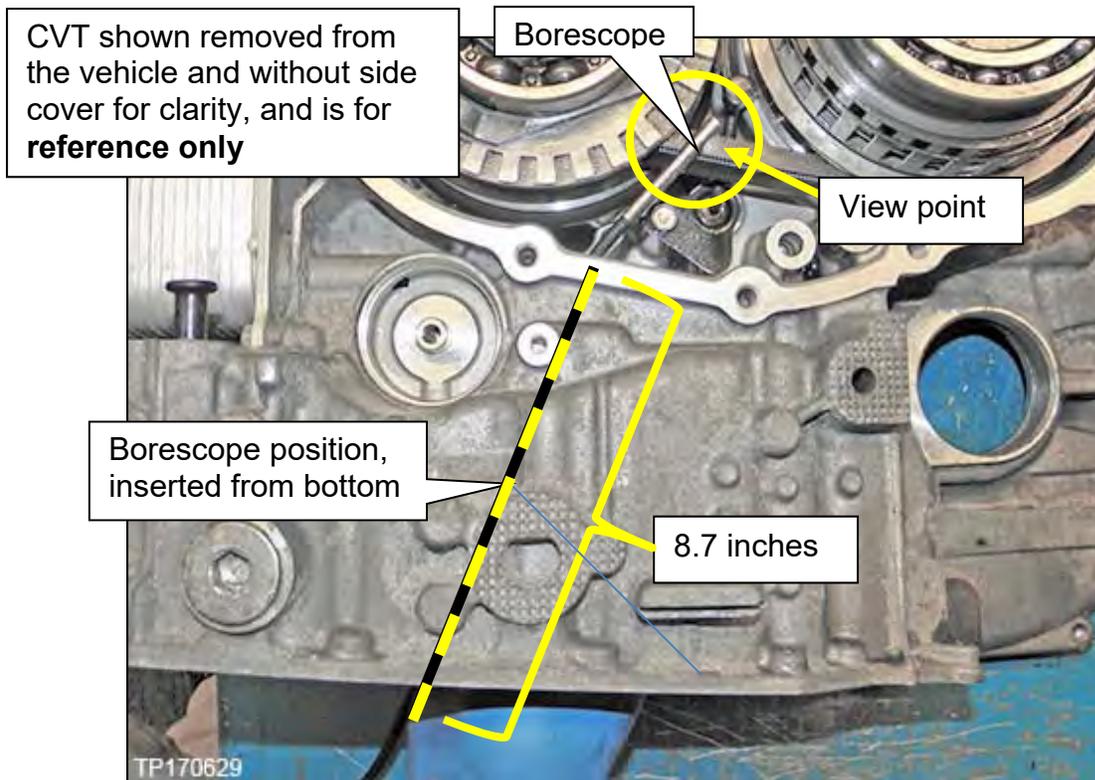


Figure 22

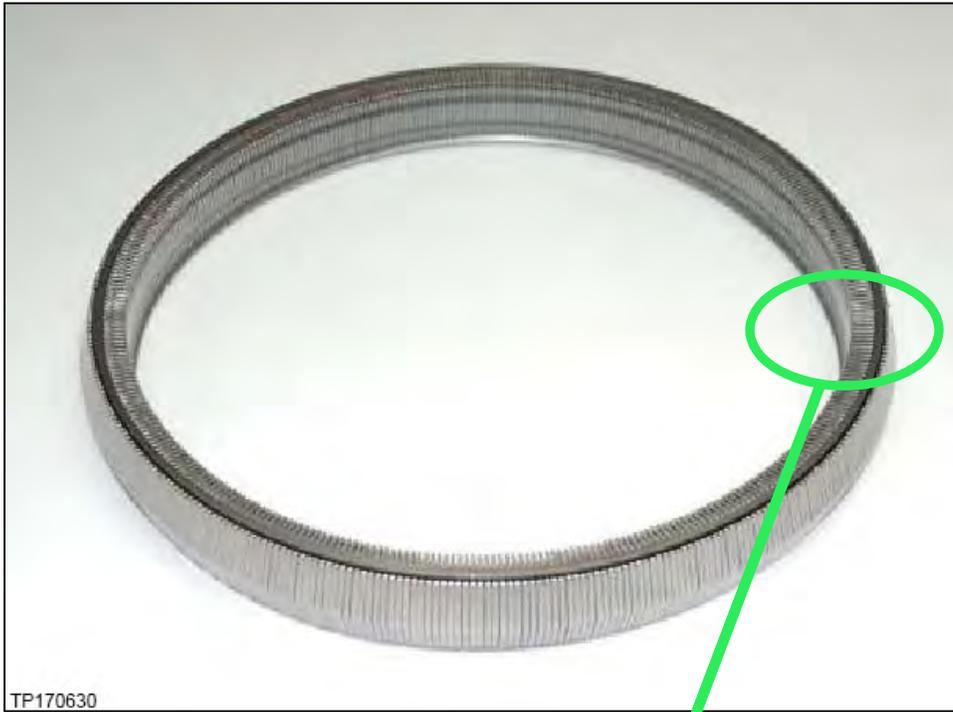
20. Using the mark applied to the left front tire for reference, slowly and carefully rotate the front left tire one full turn in either direction to view all of the belt.
- Holding the borescope (camera flexible tube) with one hand allows rotation of the tire with the other hand (Figure 18).
- HINT:** If the belt does not move when rotating the front left tire, supply additional air with hand pump (J-45664) to re-engage the clutch as necessary.
- Look for evidence of belt slip as shown in Figure 23 through Figure 28 on pages 16-18.
21. Remove the Clutch Engagement Tool (J-52273) from the CVT.

**CAUTION** To avoid the risk of minor personal injury, place a rag over the Clutch Engagement tool and **SLOWLY** loosen the two bolts until the audible depressurization is noted. The remaining CVT fluid may spray when the Clutch Engagement Tool is removed.

Is the inspection result OK (no evidence of slip) for 360° rotation of both sides of the belt?

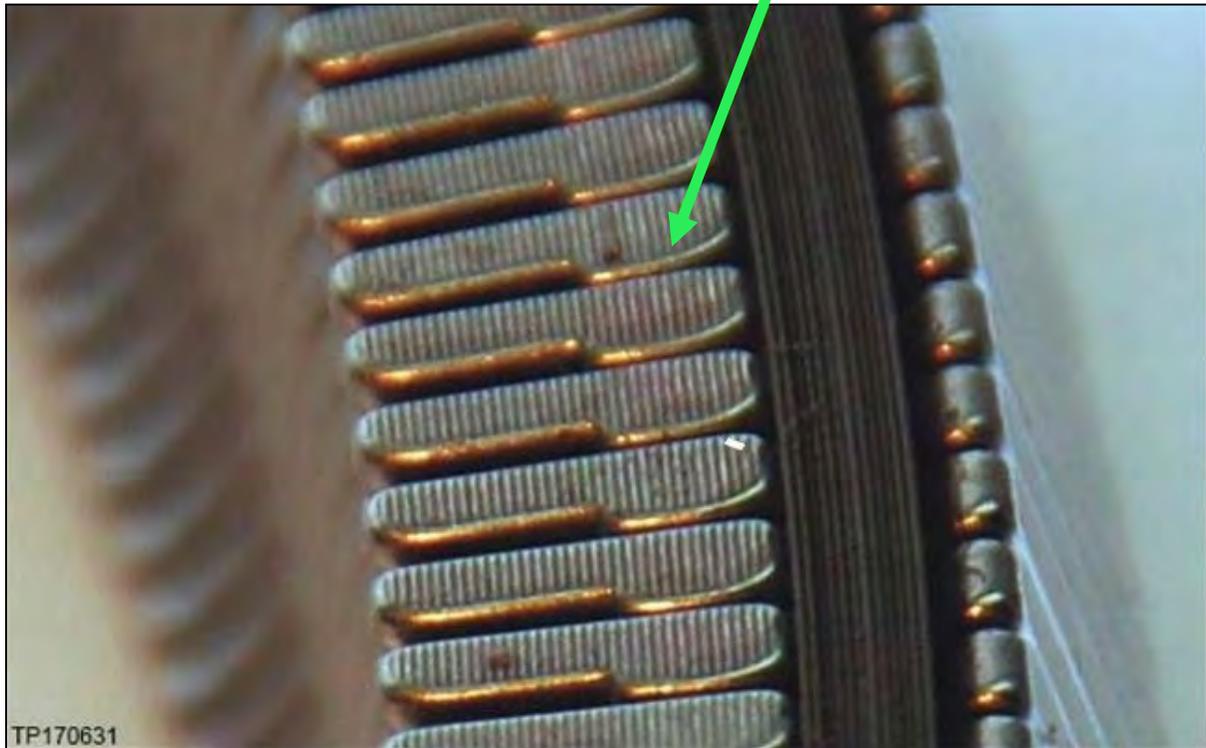
If YES go to step 31 on page 20 No Belt Damage – Control Valve Replacement.

If NO, continue to step 22 on page 19. CVT replacement is required.



TP170630

Figure 23



TP170631

Figure 24

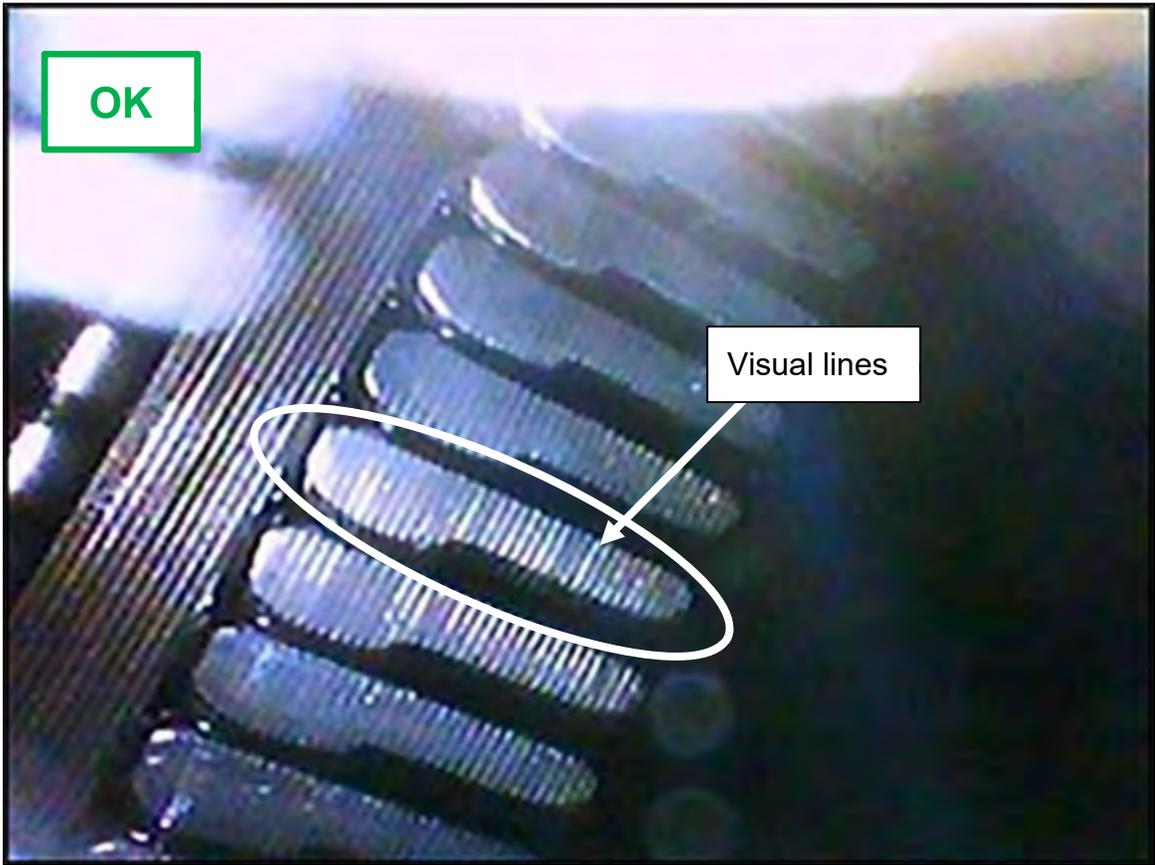


Figure 25

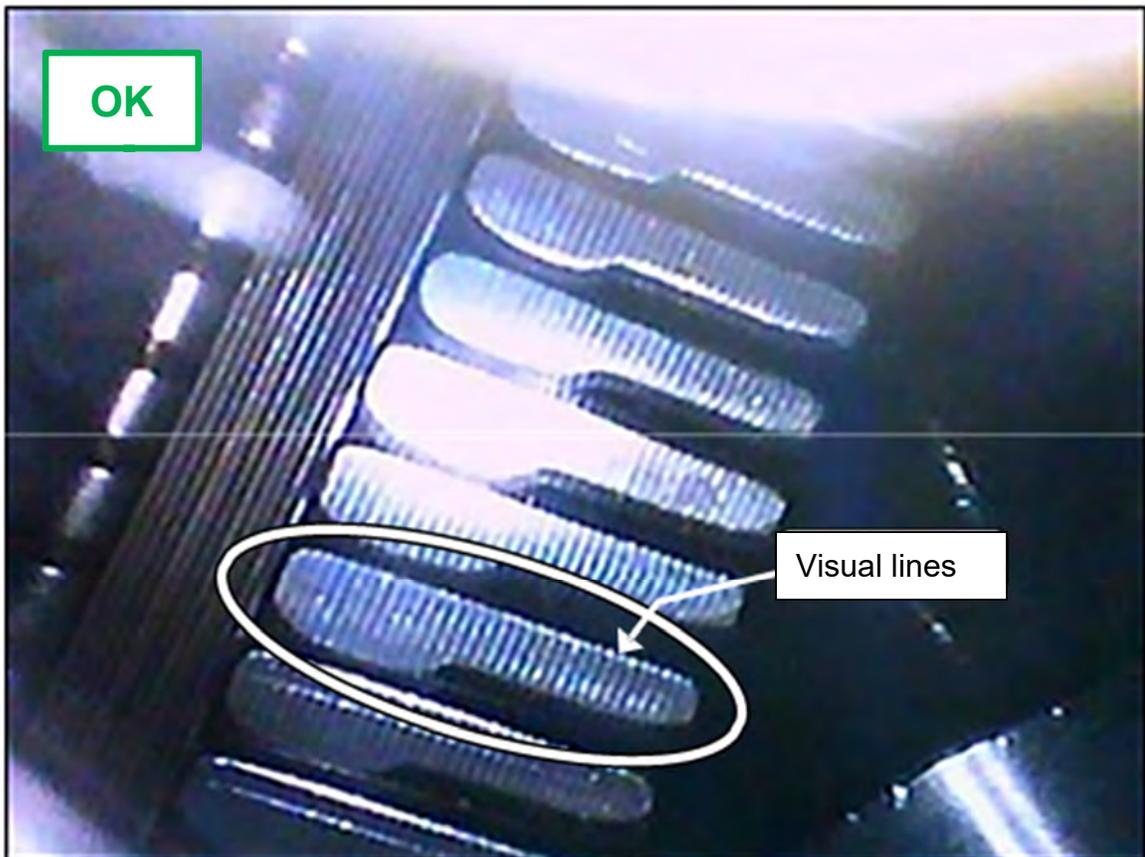


Figure 26

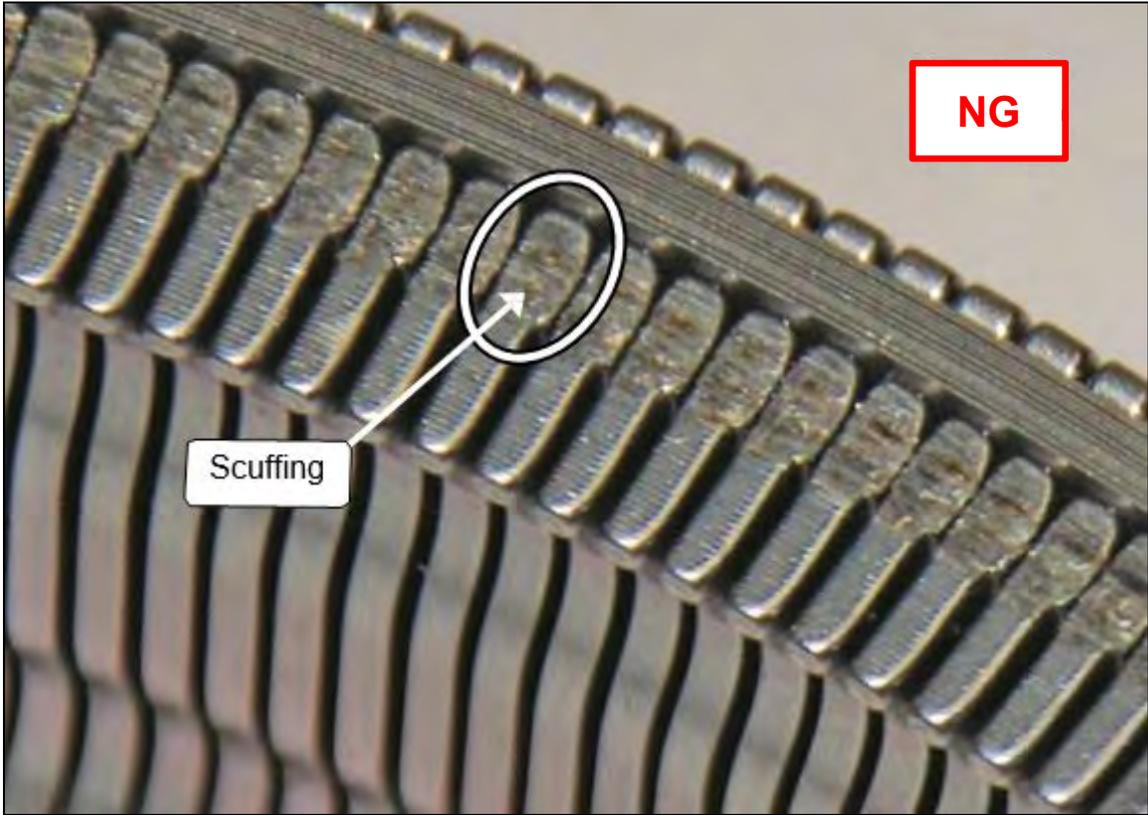


Figure 27

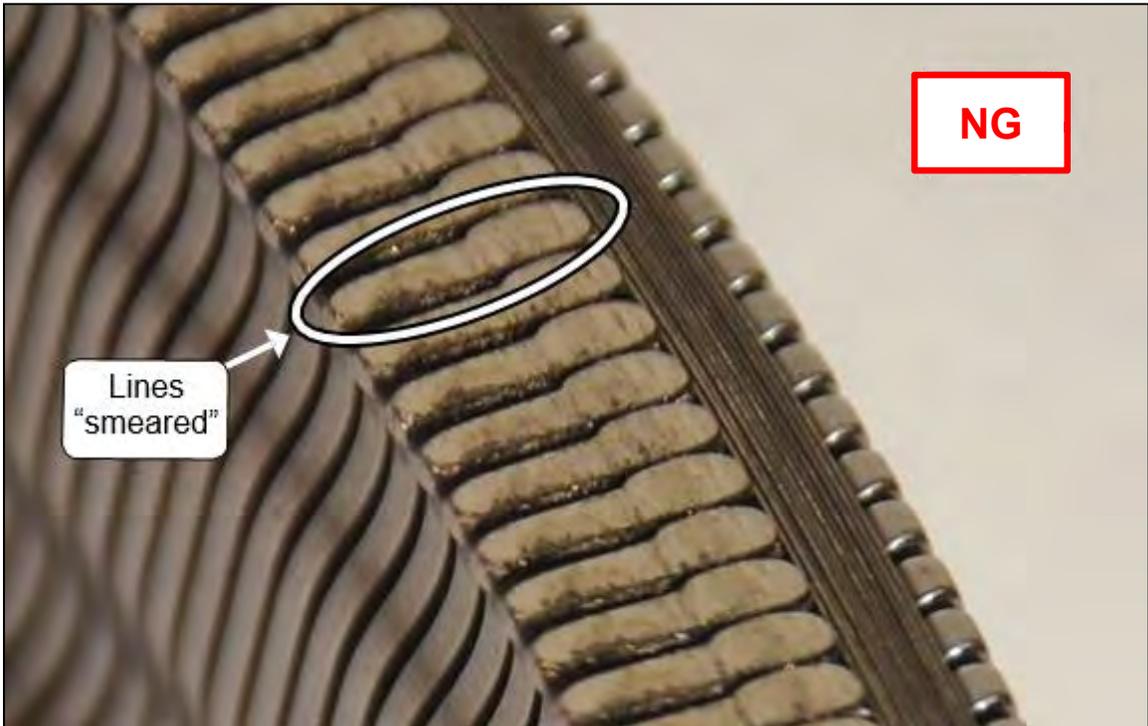


Figure 28

22. Reinstall the original (removed) control valve, oil pan gasket, oil pan, drain plug, and drain plug washer hand tight.

### CVT Assembly Replacement Approval Procedure

23. Complete the Powertrain Call Center (PCC) CVT Preauthorization Form in ASIST.

24. If CVT inspection indicates a CVT replacement is required:

- Use borescope J-51951 to record a continuous video, 15 seconds or less, of the most severe evidence of belt slip and the VIN on the FMVSS certification label (VIN label).



Figure 29

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

- The video will show a backward or reversed image when the mirror end is used; this is okay.
  - The required video must show clear evidence of belt slippage and be 15 seconds or less.
25. Call the PCC for authorization at 800-973-9992 (opt 2).

### Belt Damage – CVT Replacement

26. Replace the CVT.

- Refer to the **PARTS INFORMATION** section on page 21 of this bulletin.
- Refer to the ESM for CVT replacement: **TRANSMISSION & DRIVELINE > TRANSAXLE & TRANSMISSION – CVT; RE0F11A > UNIT REMOVAL AND INSTALLATION > TRANSMISSION ASSEMBLY.**

27. Connect both battery cables, negative cable last.

28. Fill the transmission with CVT fluid.
29. Reset/reinitialize systems as needed.
  - For a listing of systems that require reset/initialization after reconnecting the 12V battery refer to the ESM: **ELECTRICAL & POWER CONTROL > POWER SUPPLY, GROUND & CIRCUIT ELEMENTS > BASIC INSPECTION > INSPECTION AND ADJUSTMENT > ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL.**
  - This list often includes items such as radio, power windows, clock, sunroof, etc.
30. Perform Additional Service when Replacing Transaxle.
  - For a list of additional services, refer to the ESM: **TRANSMISSION & DRIVELINE > TRANSAXLE & TRANSMISSION > CVT: RE0F11A > BASIC INSPECTION > ADDITIONAL SERVICE WHEN REPLACING TRANSAXLE ASSEMBLY.**

### **No Belt Damage – Control Valve Replacement**

31. Install a new control valve from the **PARTS INFORMATION** on page 21 of this bulletin.
  - Refer to the ESM for control valve installation: **TRANSMISSION & DRIVELINE > TRANSAXLE & TRANSMISSION – CVT; RE0F11A > REMOVAL AND INSTALLATION > OIL PAN, CONTROL VALVE.**
  - Ensure to install the new strainer that is included in the KIT-CONTROL VALVE listed under **PARTS INFORMATION** on page 21 of this bulletin.
32. Remove the magnets from the oil pan.
33. Clean the magnets.
34. Clean the CVT oil pan.
35. Reinstall the magnets to the oil pan in their original positions.
36. Install the original oil pan with a new oil pan gasket using the original bolts.
  - See Figure 4 on page 5.
37. Reset/reinitialize systems as needed.
  - For a listing of systems that require reset/initialization after reconnecting the 12V battery refer to the ESM: **ELECTRICAL & POWER CONTROL > POWER SUPPLY, GROUND & CIRCUIT ELEMENTS > BASIC INSPECTION > INSPECTION AND ADJUSTMENT > ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL.**
  - This list often includes items such as radio, power windows, clock, sunroof, etc.

38. Erase the CVT fluid deterioration data.

### ADDITIONAL SERVICE REQUIRED

39. Perform Additional Service when replacing the control valve.

- Refer to the ESM for additional service when replacing the control valve:  
**TRANSMISSION & DRIVELINE > TRANSAXLE & TRANSMISSION > CVT:  
RE0F11A > BASIC INSPECTION > ADDITIONAL SERVICE WHEN REPLACING  
CONTROL VALVE.**

### PARTS INFORMATION

REPAIR	DESCRIPTION	PART #	QUANTITY
Control Valve Replacement	KIT-CONTROL VALVE <b>(For Sentra)</b>	3170E-X428C	1
	KIT-CONTROL VALVE <b>(For Versa Sedan and NOTE)</b>	3170E-X428B	1
CVT Replacement	CVT Assembly	(1)	1
Applies to all repairs	Nissan NS-3 CVT Fluid (2) (3)	999MP-CV0NS3	As needed
	Additional Engagement Tool O-Rings (4)	11440	As needed
	WASHER-DRAIN (CVT Oil Pan Drain Plug Gasket)	11026-JA00A	1
	Lens Swab packet	J-51963	(5)

- (1) Refer to the Electronic Parts Catalog (EPC) and utilize the specific VIN to obtain the correct part number.
- (2) Nissan 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.
- (3) For warranty repairs, Nissan NS-3 CVT Fluid **must** be used. For customer pay repairs, Nissan NS-3 CVT or an equivalent is recommended.
- (4) The engagement tool will initially come with 10 O-rings. Additional O-rings are available from Tech•Mate online: [www.nissantechmate.com](http://www.nissantechmate.com), or by phone: 1-800-662-2001.
- (5) Shop supply.

## CLAIMS INFORMATION

If belt inspection shows signs of belt slip, NG

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Replace CVT Assembly	(1)	JD01AA	ZE	32	(2)
		JD023A			
CVT Belt Inspect – NG		JX36AA			1.2

- (1) Reference the electronic parts catalog and use the CVT Assembly as the Primary Failed Part (PFP).
- (2) Reference the current Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time (FRT).

OR

If belt inspection shows 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
CVT Belt Inspect – OK	(1)	JX37AA	ZE	32	0.4
Replace Control Valve (Valve Body)		JD48AA			(2)

- (1) Reference the electronic parts catalog and use the Control Valve Assembly as the Primary Failed Part (PFP).
- (2) Reference the current Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time (FRT).

## AMENDMENT HISTORY

PUBLISHED DATE	REFERENCE	DESCRIPTION
September 6, 2019	NTB19-068	Original bulletin published