SERVICE BULLETIN

Classification:	Reference:	Date:
AT16-004	NTB16-068	July 20, 2016

2016 TITAN XD; ENGINE RPM FLARE DURING UP SHIFT AND/OR DOWN SHIFT BUMP

APPLIED VEHICLES: 2016 Titan XD (A61)
APPLIED ENGINE: Cummins 5.0L V8 Diesel
APPLIED TRANSMISSION: 6AT: RE6R01A

IF YOU CONFIRM

- When cold (transmission fluid below 140°F [60°C]), there is an engine RPM rise (200 to 500 rpm flare) during the 1-2 shift, 2-3 shift, and/or the 3-4 shift.

  and/or

- While slowing to a stop, a 2-1 down shift bump is felt just before stopping.

ACTION

1. Compare the vehicle's current TCM part number to the part number listed in **Table A** on page 4.
2. If the current TCM part number matches a part number listed in **Table A**:
   a. Reprogram the TCM.
   b. Perform Transmission Calibration.

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.

SERVICE PROCEDURE

NOTE:

- Performing this procedure will completely erase **ALL** of the TCM “adaptive learning values” that have accumulated over time. The transmission will shift differently than it did before the procedure was performed (especially for vehicles that have been driven more than 1,000 miles).
- As the customer drives their vehicle in their normal daily drive patterns, the TCM will again accumulate “adaptive learning values”; shift timing and feel will improve.
- If a Low DEF warning is displayed, the TCM **will not** perform “adaptive lean mode”. Make sure no Low DEF warnings are displayed before releasing the vehicle to the customer.

Reprogram the TCM

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 (C-III plus) Reprogramming" general procedure.
- For the Titan XD Diesel, the GR8 set to ECM power supply mode can be attached to either 12 volt battery.

CAUTION:

- Connect the GR8 to the 12V battery and set to ECM power supply mode.
  If the vehicle battery voltage goes below 12.0V or 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 plus 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 plus VI to the vehicle and open/start CONSULT-III plus.

2 Confirm the ignition is ON, with engine OFF.

3. Confirm the plus VI is recognized.

   - The **Serial No.** will display when the plus VI is recognized.

4. Select **Re/programming, Configuration**.

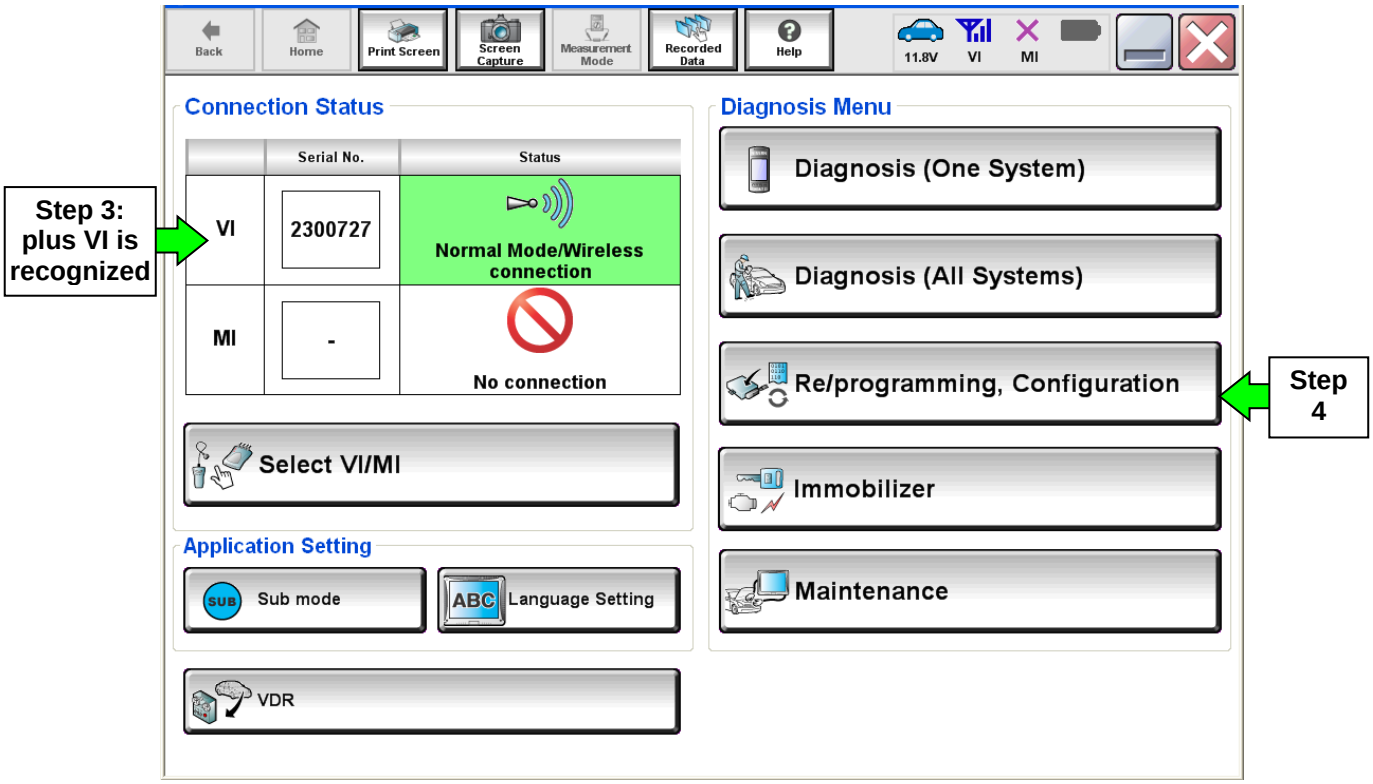

Figure 1A

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

6. When you get to the screen shown in Figure 2A, 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).

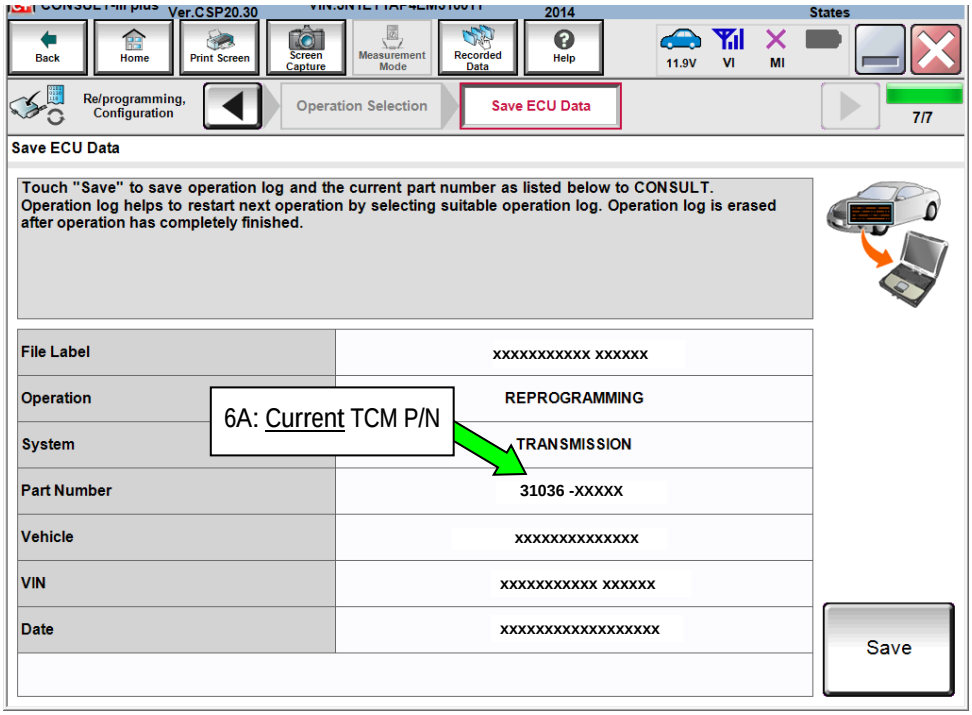

Figure 2A

   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, continue with the reprogramming procedure.

      - If there is not a match, this bulletin does not apply. Refer to ASIST for further diagnosis.

Table A

Model	Current TCM Part Number: 31036 -
2016 Titan XD Cummins Diesel w/6AT Transmission	EZ02B, EZ02D, EZ03B, EZ03D

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 3A 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. Close C-III plus and refer back to ASIST for further diagnosis.

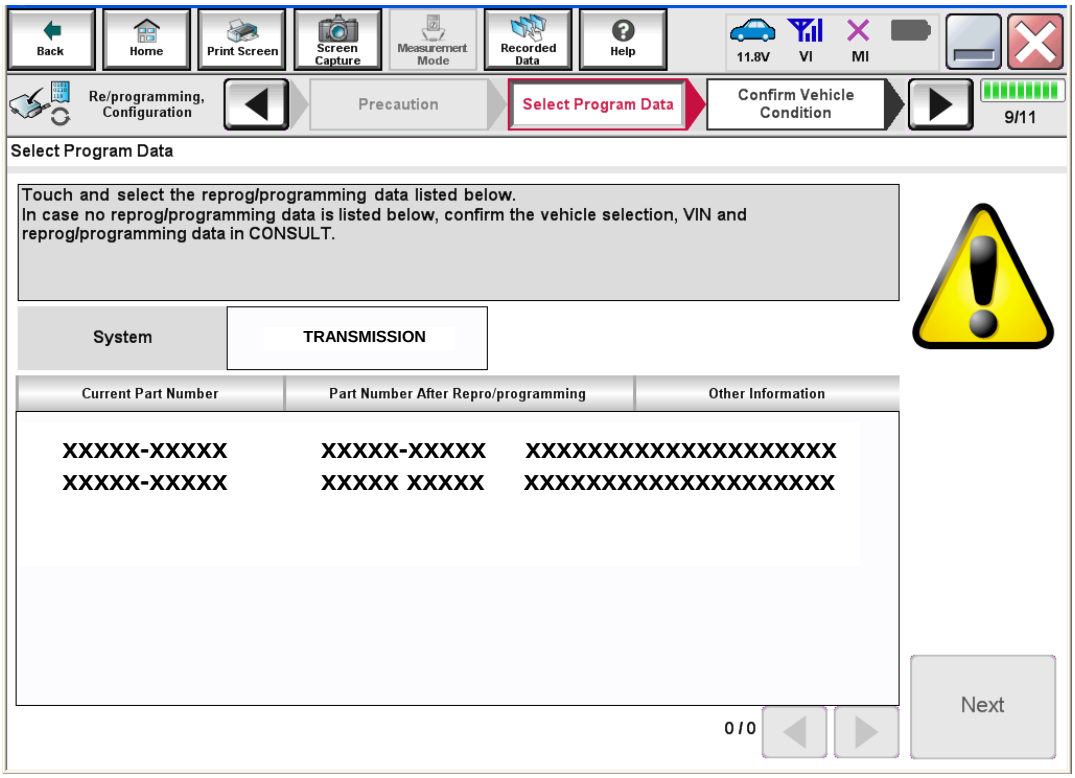

Figure 3A

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

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

9. Disconnect the GR8 (battery charger) from the vehicle.

10. Select **Next**.

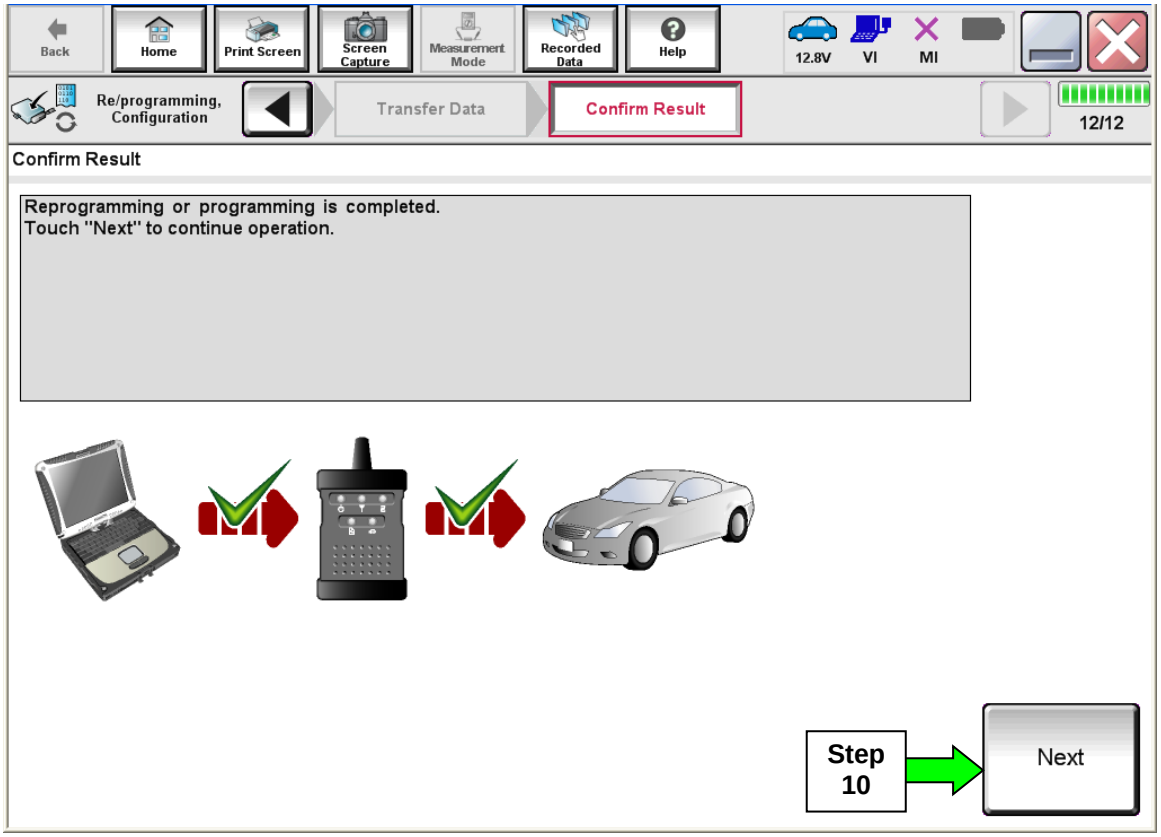

Figure 4A

NOTE:

- In the next step (page 8), you will perform DTC erase.
- This operation is required before C-III plus will provide the final reprogramming confirmation report.

ECM Recovery

<u>Do not disconnect the plus VI or shut down C-III plus if reprogramming does not complete</u>.

If reprogramming does <u>not</u> complete and the "!?" icon displays as shown in Figure 5A:

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

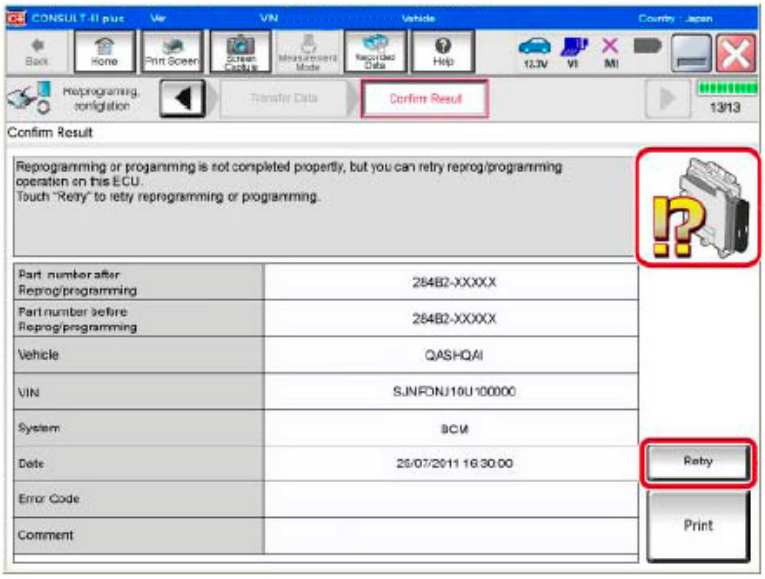

Figure 5A

If reprogramming does <u>not</u> complete and the "X" icon displays as shown in Figure 6A:

- 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 <u>Home</u>, and restart the reprogram procedure from the beginning.**

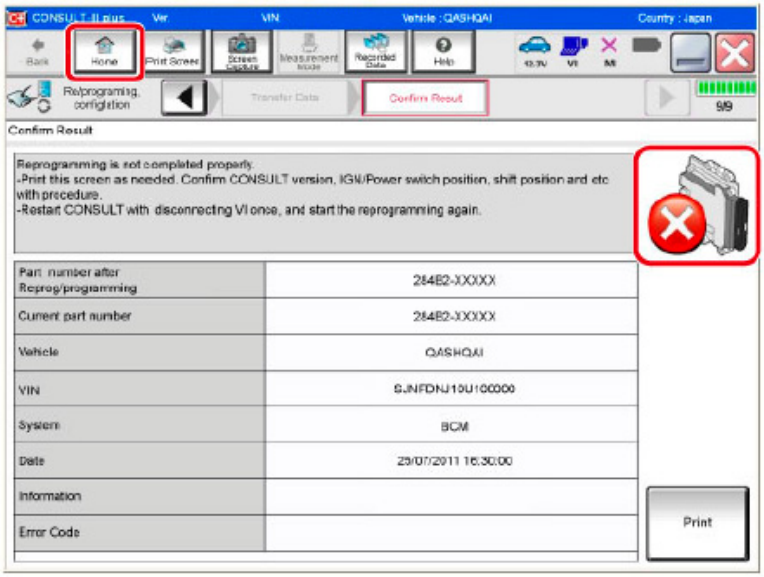

Figure 6A

11. Follow the on-screen instructions to **Erase DTCs**.

12. When the entire reprogramming process is complete, the screen in Figure 7A will display.

13. Verify the before and after part numbers are different.

14. Print a copy of this screen (Figure 7A) and attach it to the repair order for warranty documentation.

15. Select **Confirm**.

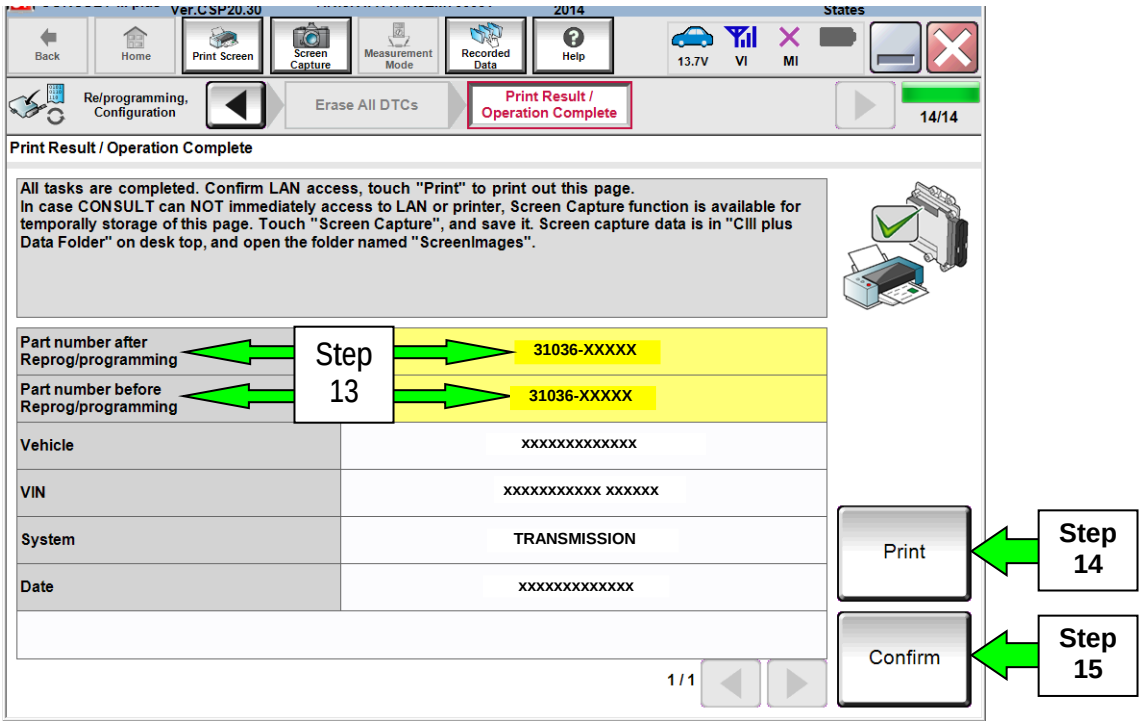

Figure 7A

Continue to the next page.

Transmission Calibration

1. Make sure the transmission is warm.

    - It may be helpful to take the vehicle for a drive (approximately 10 minutes) to warm the transmission.

2. Confirm the transmission fluid level is correct.

    - Follow the procedure for Checking the AT Fluid Level in the Electronic Service Manual (ESM), section TM-Transaxle & Transmission.

3. Set the parking brake.

4. Chock the wheels.

5. Connect the CONSULT PC to the vehicle with the plus VI.

6. Start the engine.

7. Turn the A/C system OFF.

8. Start CONSULT-III plus (C-III plus).

9. When the VI is recognized, select **Diagnosis (One System)**.

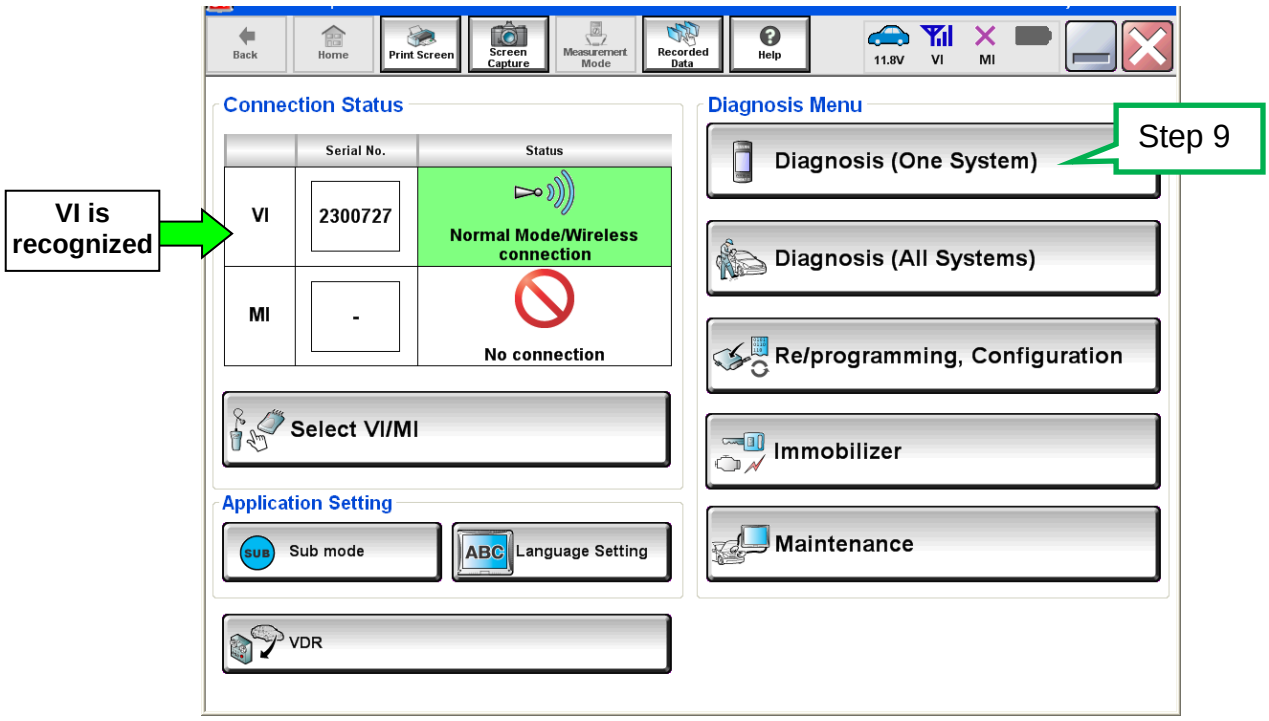

Figure 1

10. Navigate C-III plus to Transmission > Work support (see Figure 2).

11. Select **Transmission adjustment**.

12. Select **Start**.

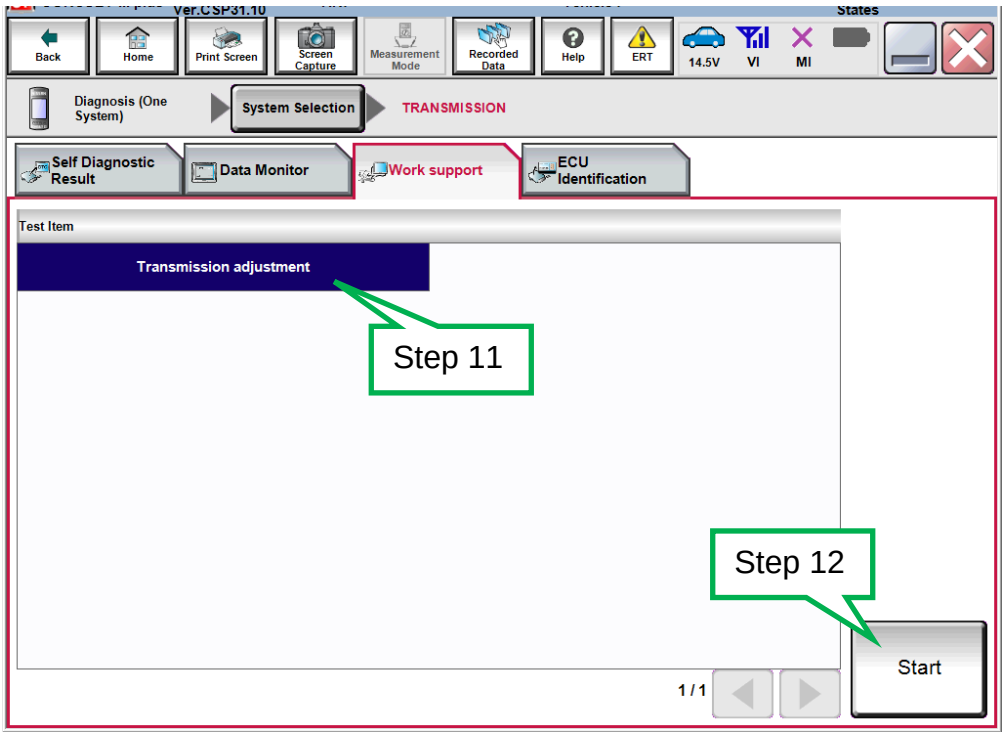

Figure 2

NOTE:

- While performing the Transmission Adjustment procedure, a screen like the one in Figure 3 will display.
- Review the call outs in Figure 3 explaining the information on this screen.
- This information will be helpful as you perform the Transmission Adjustment procedure.
- While C-III plus is performing automatic adjustments, you will hear and feel the transmission changing gear position.

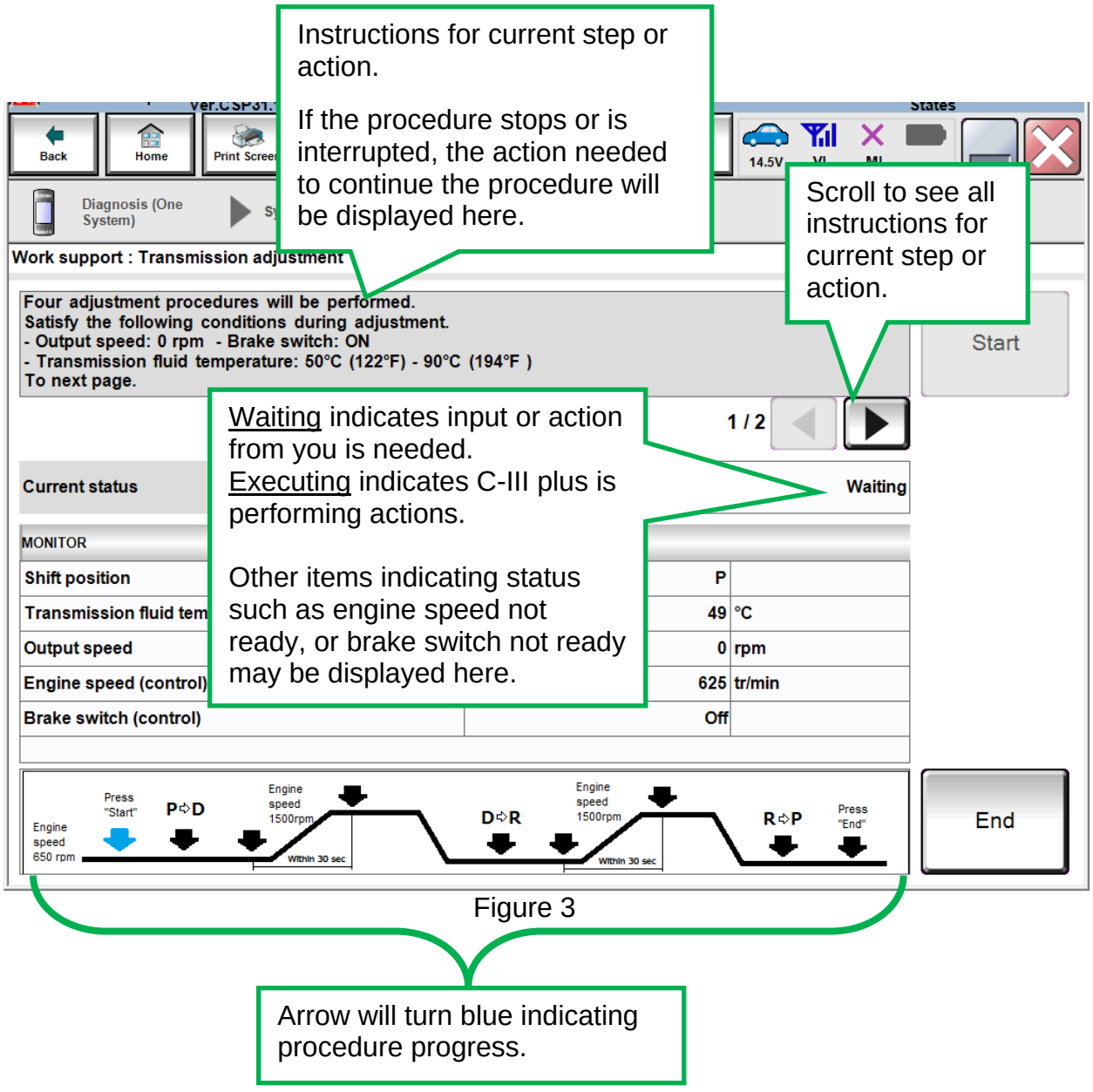

Figure 3

NOTE: There are 4 adjustment procedures within the Transmission Adjustment.

First Adjustment Procedure

13. Confirm the following conditions (refer to the C-III plus screen):
    - Shift position: D
    - Transmission fluid temperature: 75°C (167°F) – 90°C (194°F)
    - Output speed: 0 rpm
    - Engine speed (control): 600 tr/min (rpm) or more
    - Brake switch (control): On

14. When the above conditions are met, select **Start**.
    - Current status will change from Waiting to **EXECUTING**.

      NOTE: If current status indicates EXECUTING, wait (about 3 minutes) for the first adjustment procedure to complete.

15. Wait for the first adjustment procedure to complete (about 3 minutes).
    - When complete, current status will change to **Waiting**.

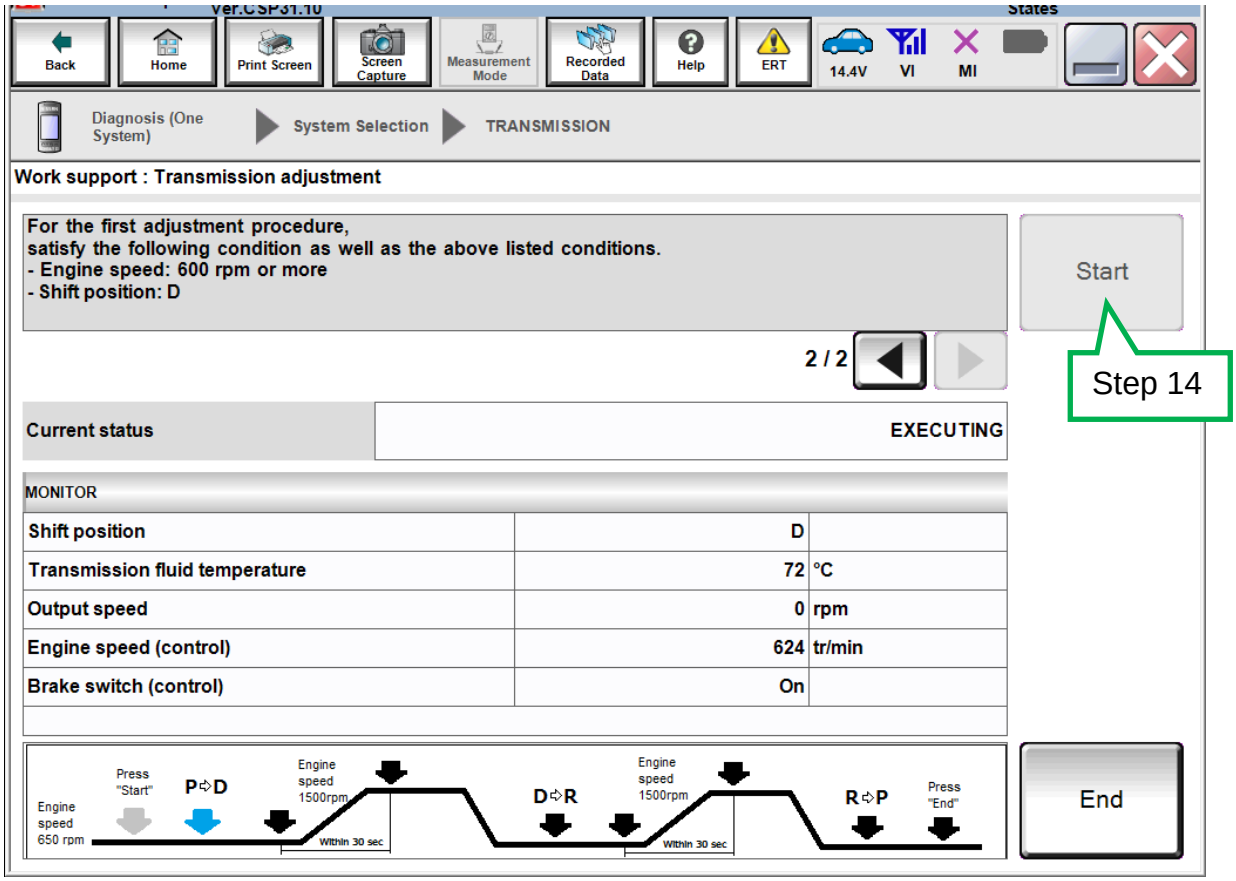

Figure 4

Second Adjustment Procedure

16. Confirm the following conditions (refer to the C-III plus screen):
    - Shift position: D
    - Transmission fluid temperature: 75°C (167°F) – 90°C (194°F)
    - Output speed: 0 rpm
    - Engine speed (control): 1,250 – 1,750 tr/min (rpm)
    - Brake switch (control): On

17. When the above conditions are met:
    - Current status will change from Waiting to **EXECUTING.**
    - **Keep the rpm about 1,600** so that when the rpm drops, caused by transmission shifts, it will not interrupt the procedure.
    - If the procedure is interrupted; follow the on screen instructions (which includes turning the ignition OFF and back ON) and then start from the beginning (step 13).

      NOTE: Keeping the rpm in the correct range is a bit challenging, and may take a few tries (practice) to get it right.

18. Wait for the second adjustment procedure to complete.
    - When complete, current status will change to **Waiting**.

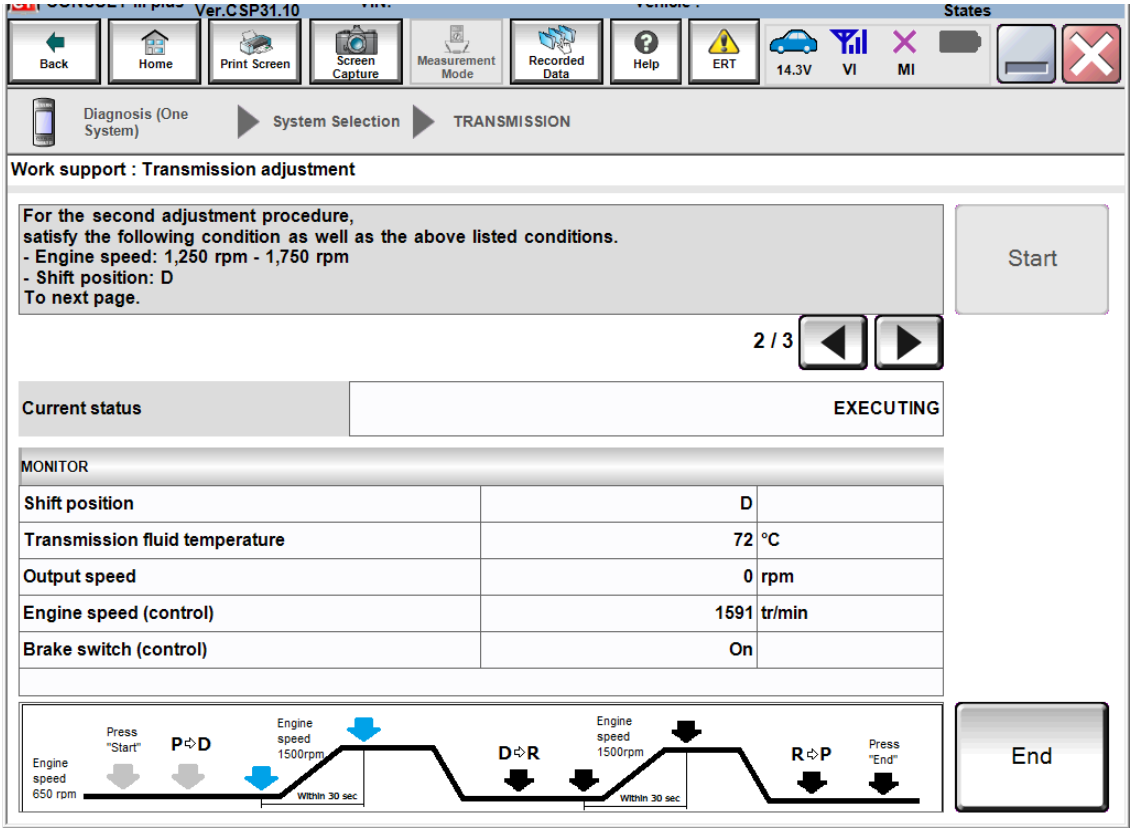

Figure 5

Third Adjustment Procedure

19. Confirm the following conditions (refer to the C-III plus screen):
    - Shift position: **R**
    - Transmission fluid temperature: 75°C (167°F) – 90°C (194°F)
    - Output speed: 0 rpm
    - Engine speed (control): 600 tr/min (rpm) or more
    - Brake switch (control): On

20. When the above conditions are met:
    - Current status will change from Waiting to **EXECUTING.**

21. Wait for the third adjustment procedure to complete.
    - When complete, current status will change to **Waiting**.

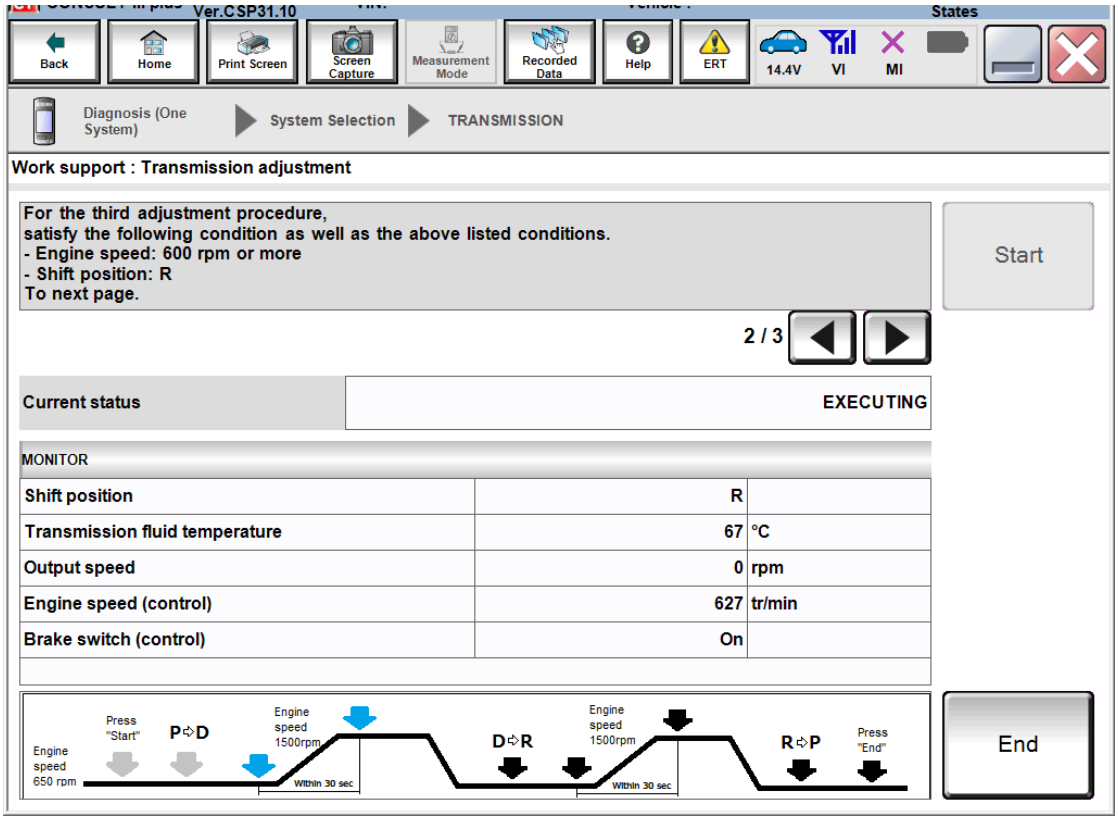

Figure 6

Fourth Adjustment Procedure

22. Confirm the following conditions (refer to the C-III plus screen):
    - Shift position: R
    - Transmission fluid temperature: 75°C (167°F) – 90°C (194°F)
    - Output speed: 0 rpm
    - Engine speed (control): 1,250 – 1,750 tr/min (rpm)
    - Brake switch (control): On

23. When the above conditions are met:
    - Current status will change from Waiting to **EXECUTING.**
    - **Keep the rpm about 1,600** so that when the rpm drops, caused by transmission shifts, it will not interrupt the procedure.
    - If the procedure is interrupted, follow the on screen instructions and start from the beginning (step 13).

24. Wait for the fourth adjustment procedure to complete.
    - When complete the screen in Figure 8 (next page) will display.

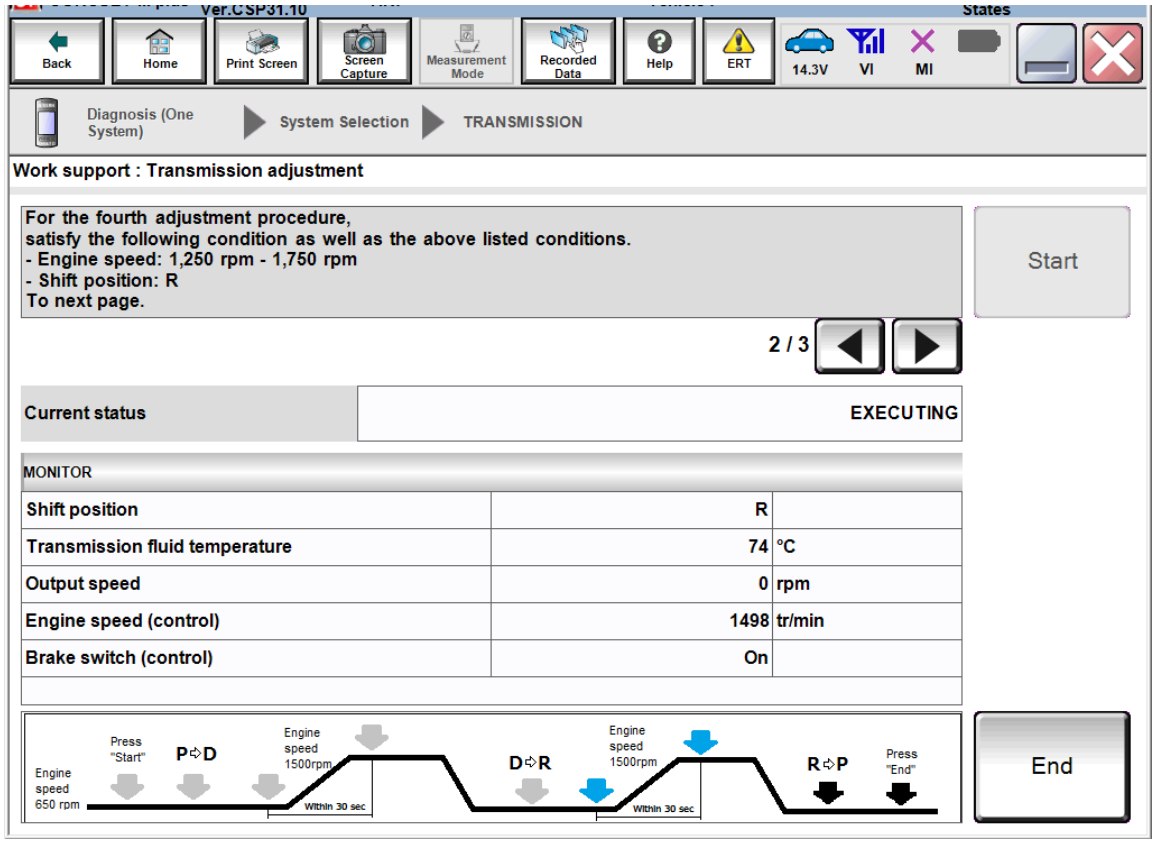

Figure 7

25. When the Transmission Adjustment has completed (see Figure 8), shift the transmission to Park.

26. Turn the ignition OFF.

27. Select **End**.

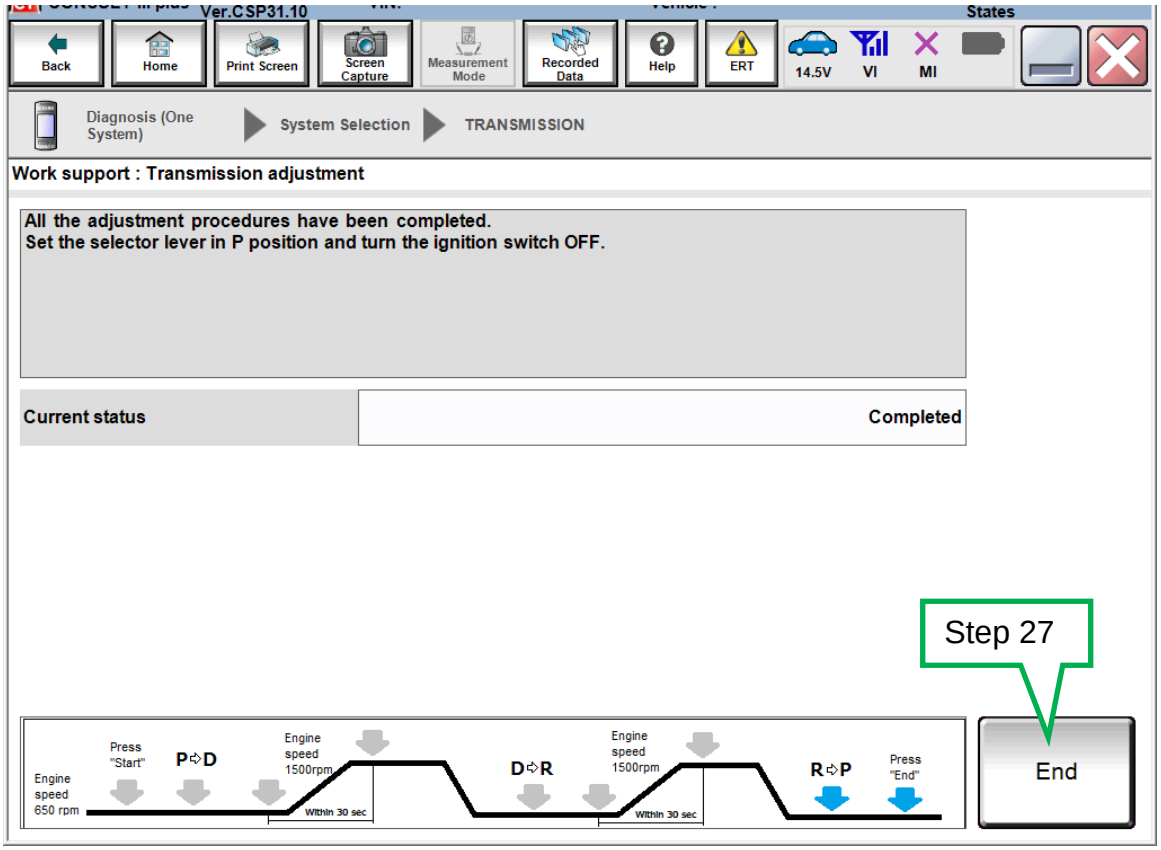

Figure 8

NOTE:

- Completing this procedure has completely erased **ALL** of the TCM “adaptive learning values” that have accumulated over time. The transmission will shift differently than it did before this procedure was performed (especially for vehicles that have been driven over 1,000 miles).
- As the customer drives their vehicle in their normal daily drive patterns, the TCM will again accumulate “adaptive learning values”; shift timing and feel will improve.
- If a Low DEF warning is displayed, the TCM **will not** perform “adaptive lean mode”. Make sure no Low DEF warnings are displayed before releasing the vehicle to the customer.

CLAIMS INFORMATION

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Reprogram Transmission Control Module	(1)	JE99AA	ZE	32	(2) (3)

(1) Refer to the electronic parts catalog (FAST) and use the TCM assembly part number (31036 - XXXXX) as the Primary Failed Part (PFP).
(2) Reference the current Nissan Warranty Flat Rate Manual and use the indicated FRT.
(3) FRT allows adequate time to access DTC codes and reprogram TCM. No other diagnostic procedures subsequently required. Do NOT claim any Diagnostic Op Codes with this claim.