SERVICE BULLETIN

Classification:	Reference:	Date:
AT16-004b	NTB16-068b	November 8, 2016

2016-2017 TITAN XD; TRANSMISSION SHIFT QUALITY ISSUES

This bulletin has been amended. Changes have been made throughout.
Please discard previous versions of this bulletin.

APPLIED VEHICLES: 2016-2017 Titan XD (A61)

APPLIED VIN & DATE: 2016: All
2017:
4WD - Built before 1N6BA1F(**)HN 509376 // Sep 30, 2016
2WD - Built before 1N6BA1F(**)HN 509429 // Oct 1, 2016

APPLIED ENGINE: Cummins 5.0L V8 Diesel

APPLIED TRANSMISSION: 6AT: RE6R01A

IF YOU CONFIRM

Any of the following issues:

- 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.
- While slowing to a stop, a 2-1 down shift bump is felt just before stopping.
- Harsh up-shifts.
- Shift shock when lifting foot from accelerator.
- Gear hunting while driving in city traffic.

ACTION

1. Compare the vehicle's current TCM part number to the part number listed in **Table A** on page 7.
2. If the current TCM part number matches a part number listed in **Table A**, follow the instructions in Table A.

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

Reprogram the TCM

NOTE:

- Most instructions for reprogramming with CONSULT-III plus (C-III plus) are displayed on the CONSULT PC screen.

- 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**.

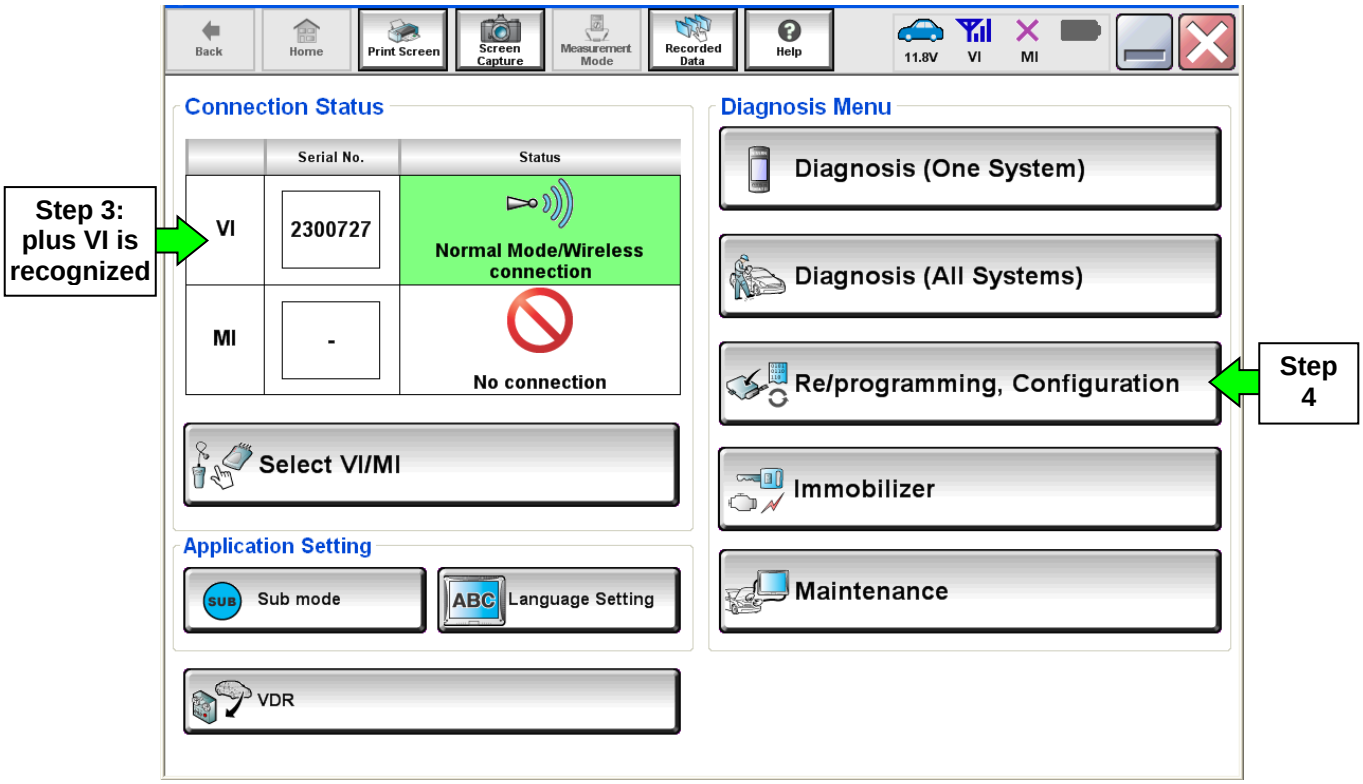

Figure 1A

5. Use arrows (if needed) to view and read all precautions.
6. Check the box confirming the precautions have been read.
7. Select **Next**.

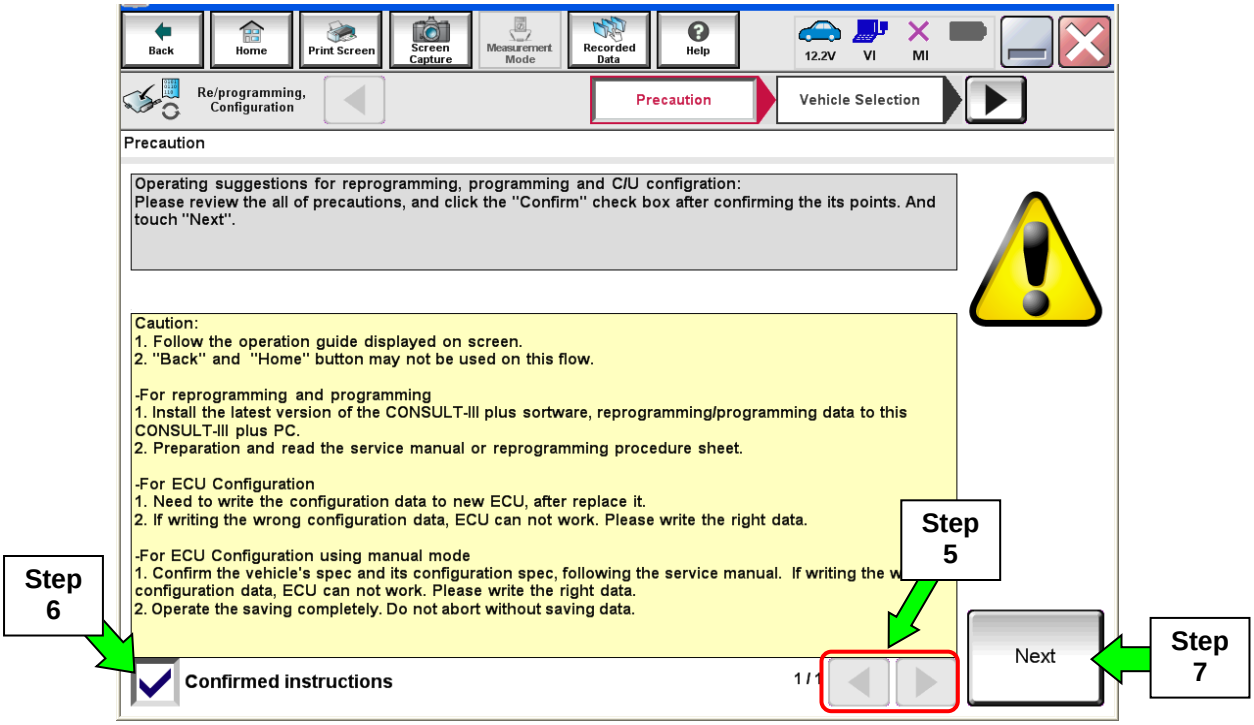

Figure 2A

8. Select **Nissan**, **Vehicle Name,** and then the correct **Model Year**.
   - If the screen in Figure 3A does not display, skip to step 9.

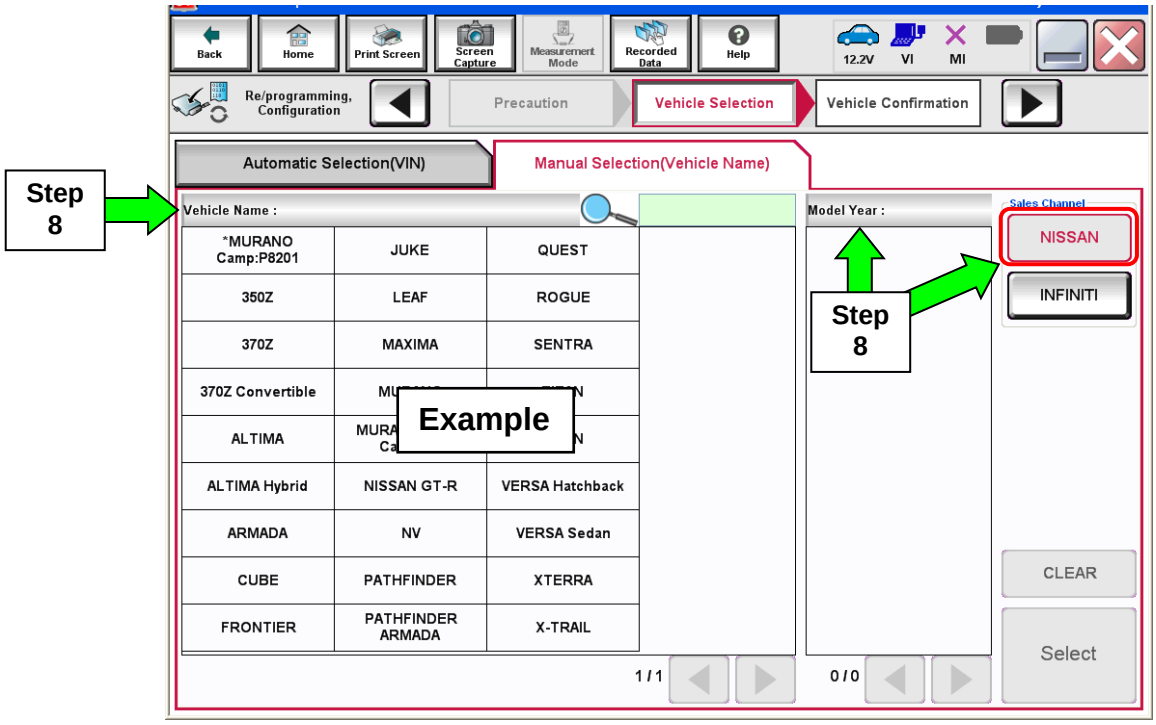

Figure 3A

9. Make sure **VIN or Chassis #** matches the vehicle VIN.

10. If the correct VIN is displayed, select **Confirm**.

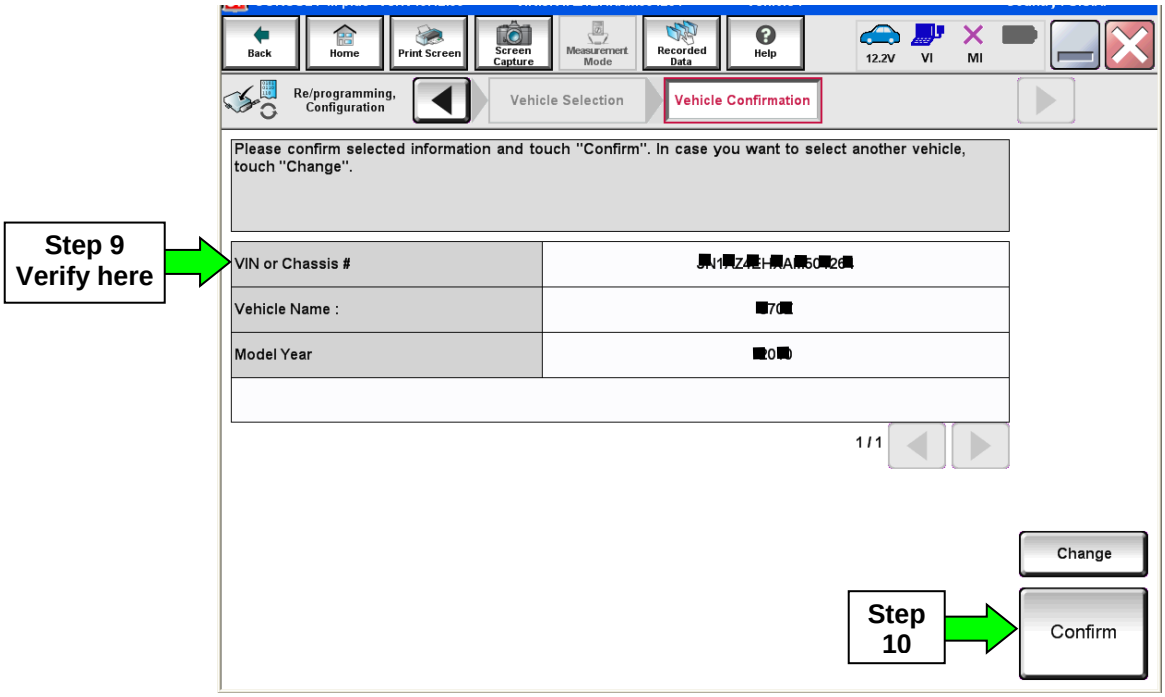

Figure 4A

11. Select **Confirm**.

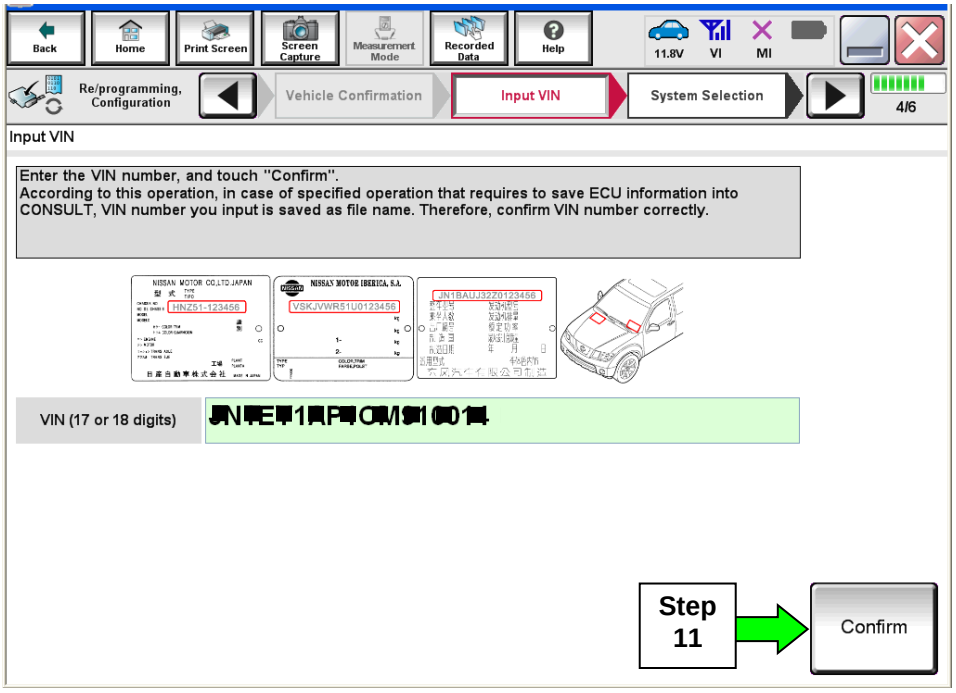

Figure 5A

12. Select **TRANSMISSION** on page 2.

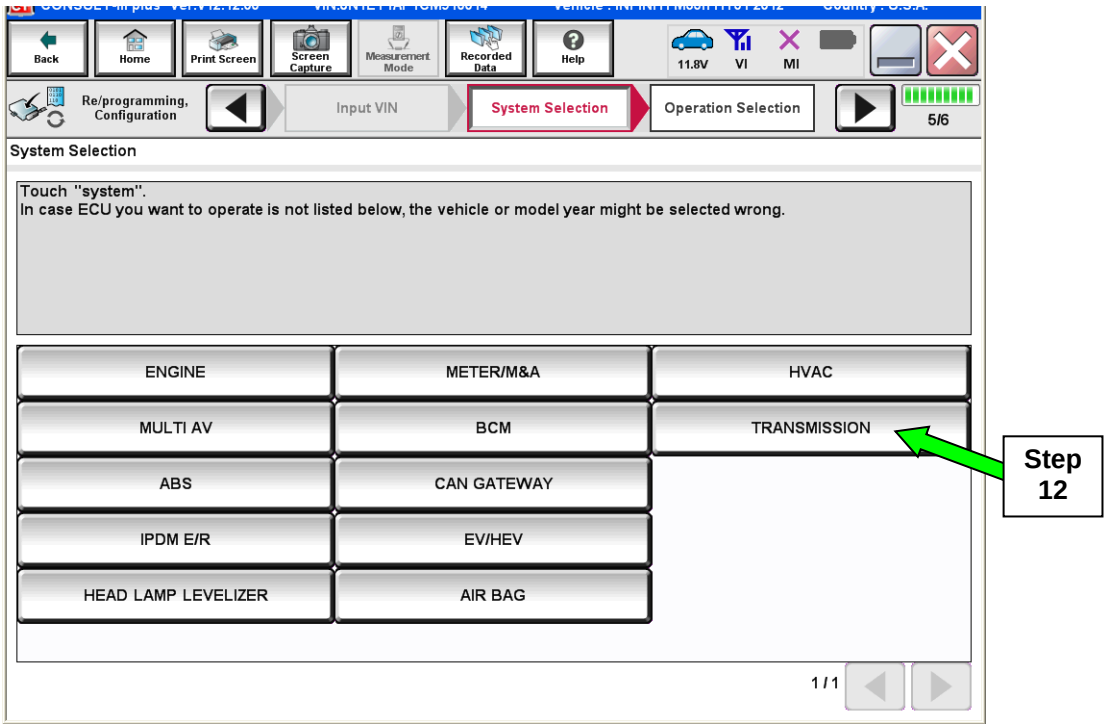

Figure 6A

13. Select **Reprogramming**.

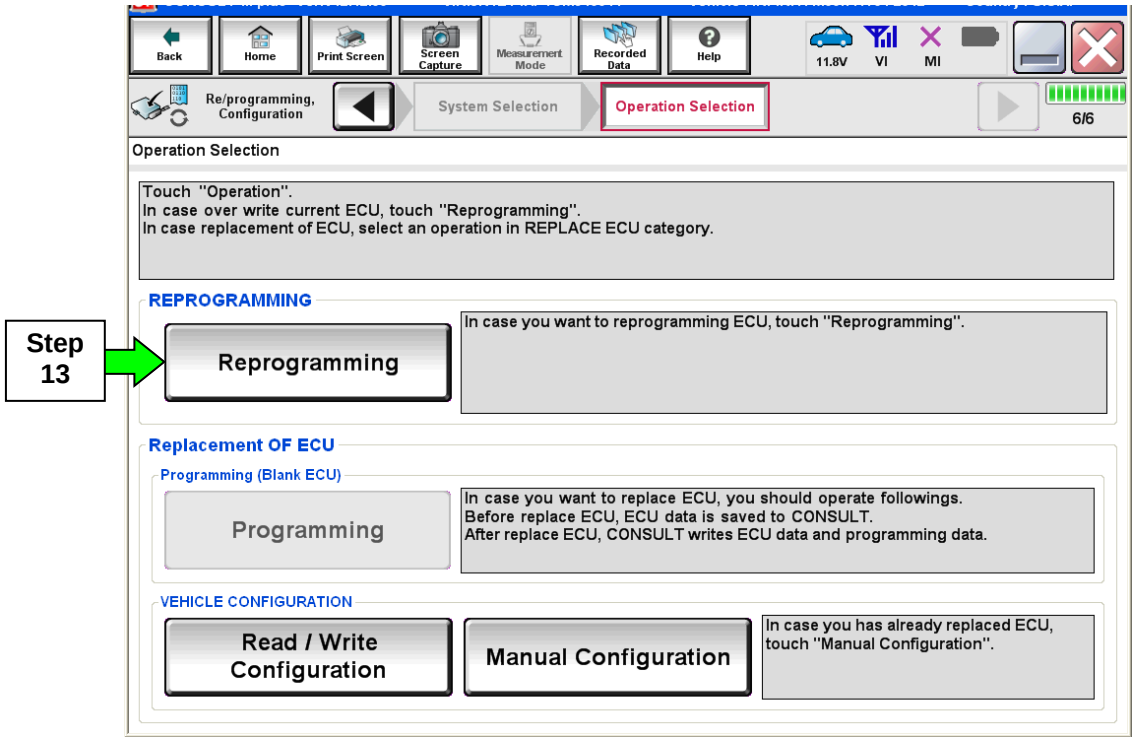

Figure 7A

14. When you get to the screen shown in Figure 8A, 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).

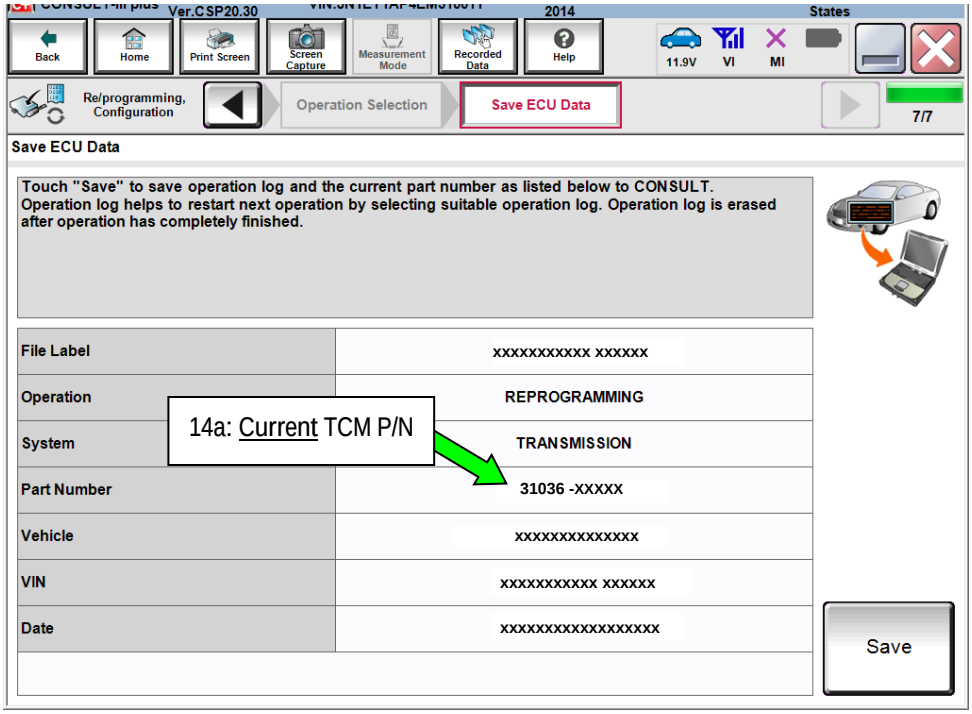

Figure 8A

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, follow the instructions in Table A.
- If there is not a match, this bulletin does not apply. Refer to ASIST for further diagnosis.

Table A

Current TCM Part Number: 31036 -	Instructions
EZ02B, EZ02D, EZ03B, EZ03D	1. Complete the Reprogramming. 2. Perform Transmission Calibration.
EZ04B, EZ04D	1. Complete the Reprogramming **only**. No other producers in this bulletin are required.

15. Select **Save**.

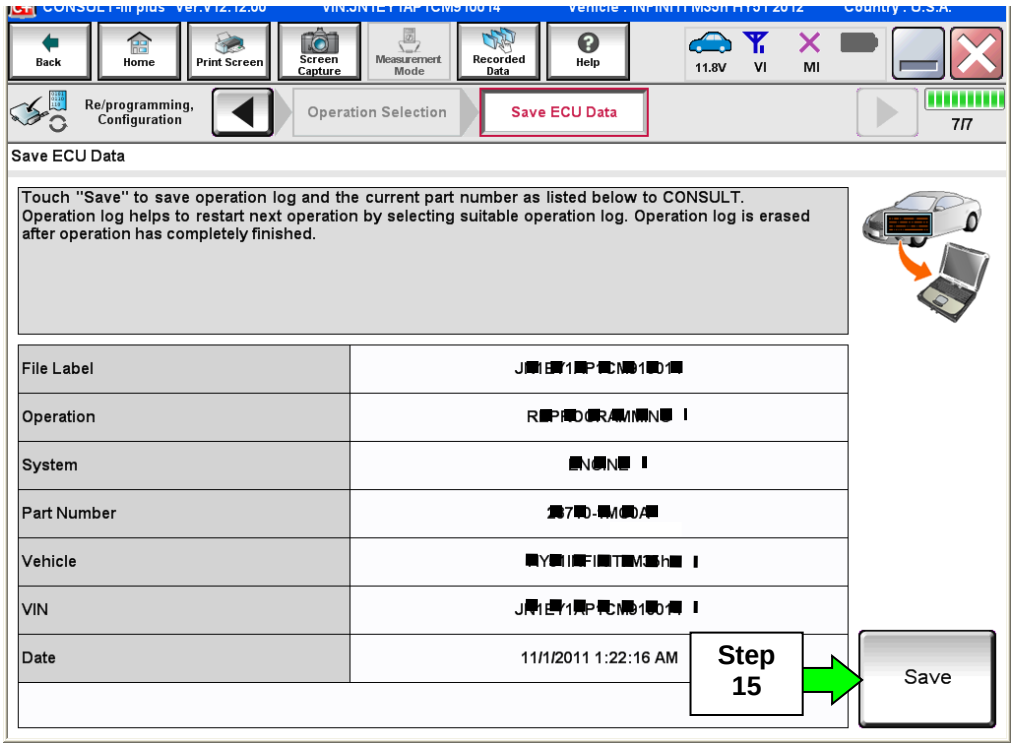

Figure 9A

16. Use arrows (if needed) to view and read all precautions.
17. Check the box confirming the precautions have been read.
18. Select **Next**.

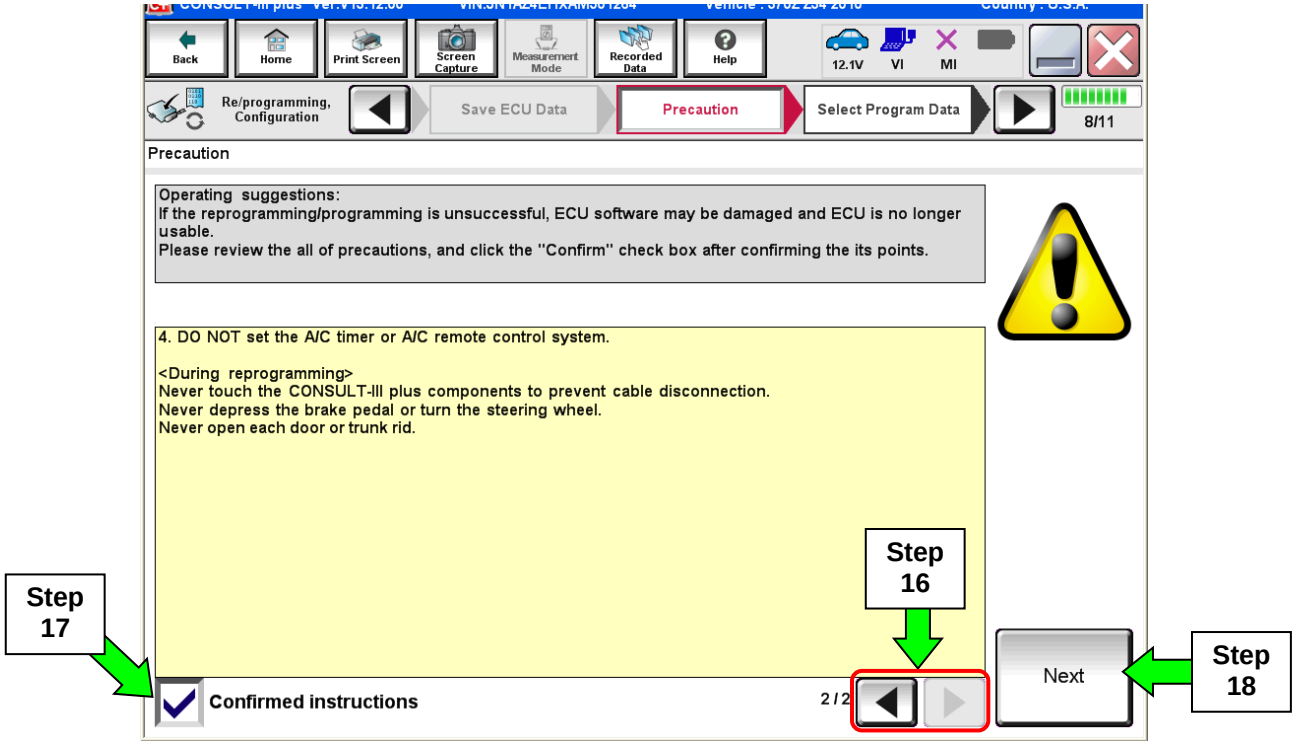

Figure 10A

19. Read the **Current Part Number** and **Part Number After Reprogramming**. They should be different.

20. Select **Next**.

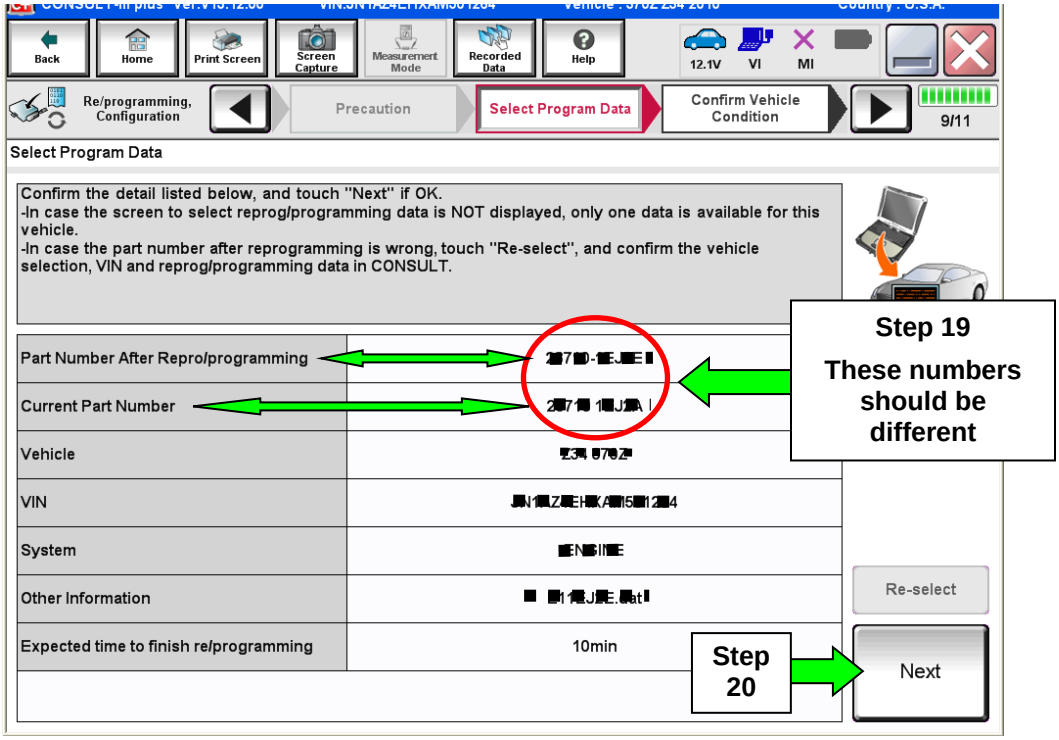

Figure 11A

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 12A 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.

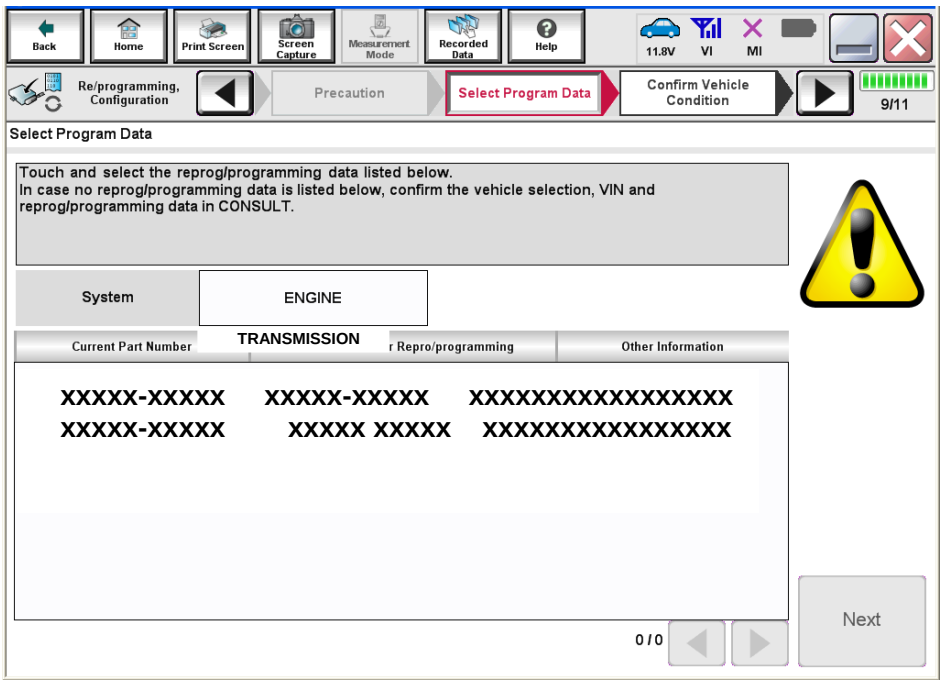

Figure 12A

21. Make sure **OK** is highlighted **green** (battery voltage must be between **12.0 and 15.5 Volts**).

22. Select **Next**.

IMPORTANT: Battery voltage must stay between **12.0 and 15.5 Volts** during reprogramming or ECM reprogramming may be interrupted and ECM may be damaged.

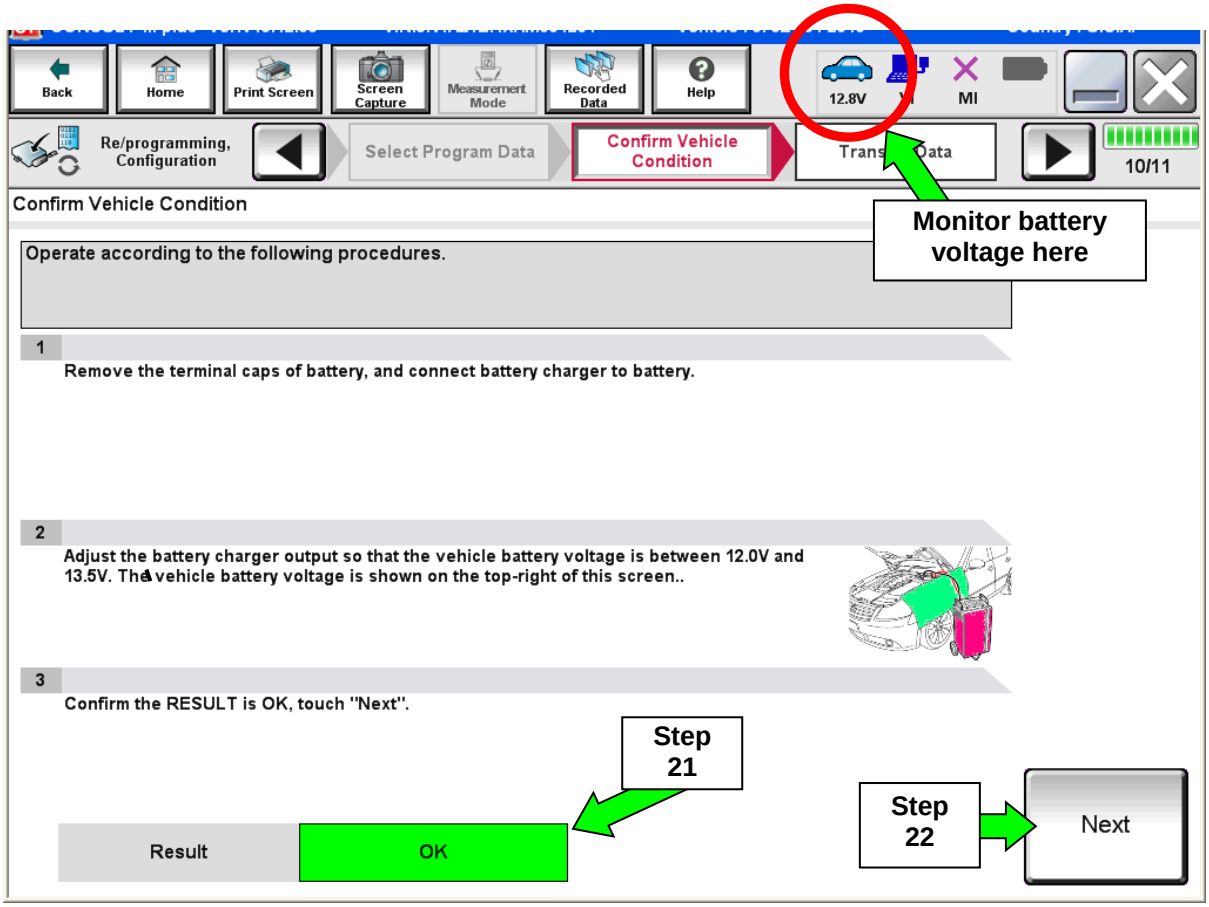

Figure 13A

23. Change the ignition to **ACC mode**.

- Make sure the IGN status judgement changes to **OK**. See Figure 15A.

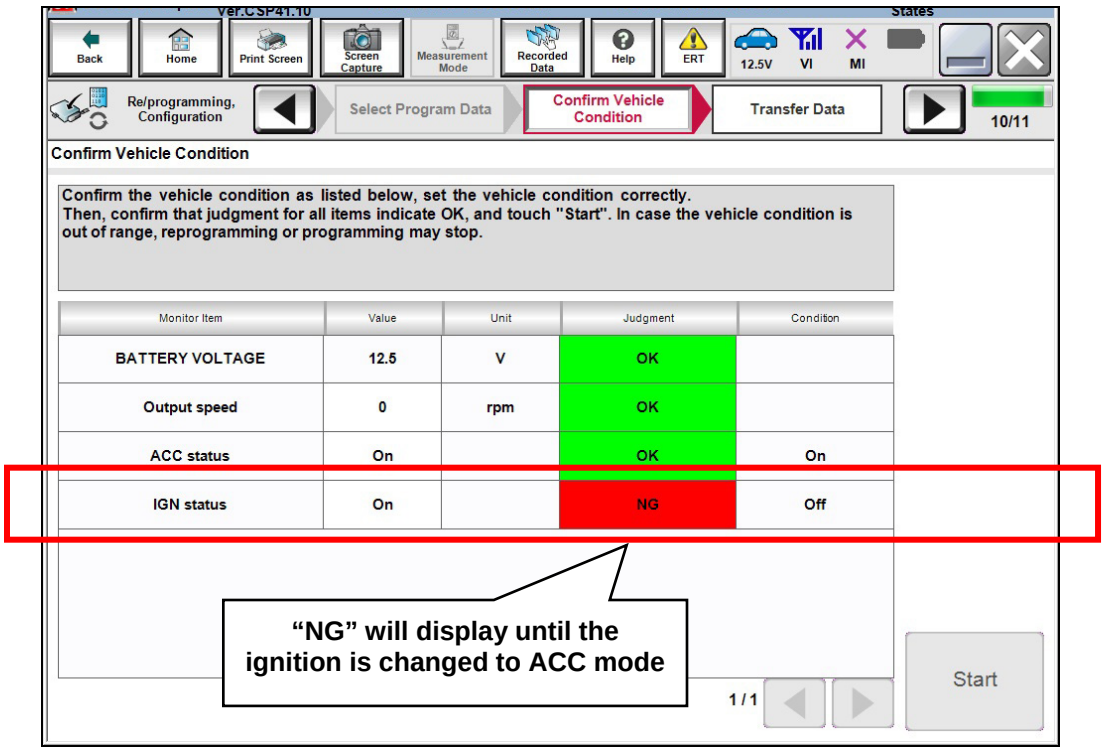

Figure 14A

NOTE: In the next step, the reprogramming process will begin when **Start** is selected.

24. Select **Start**.

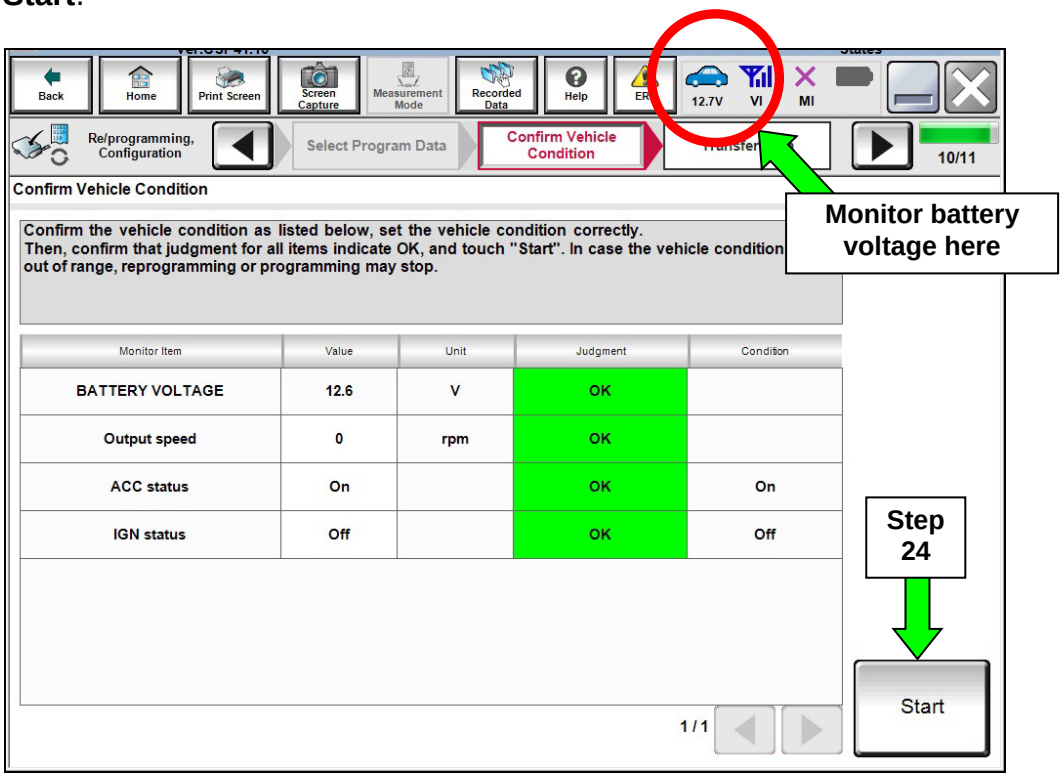

Figure 15A

25. Wait for both progress bars to complete.

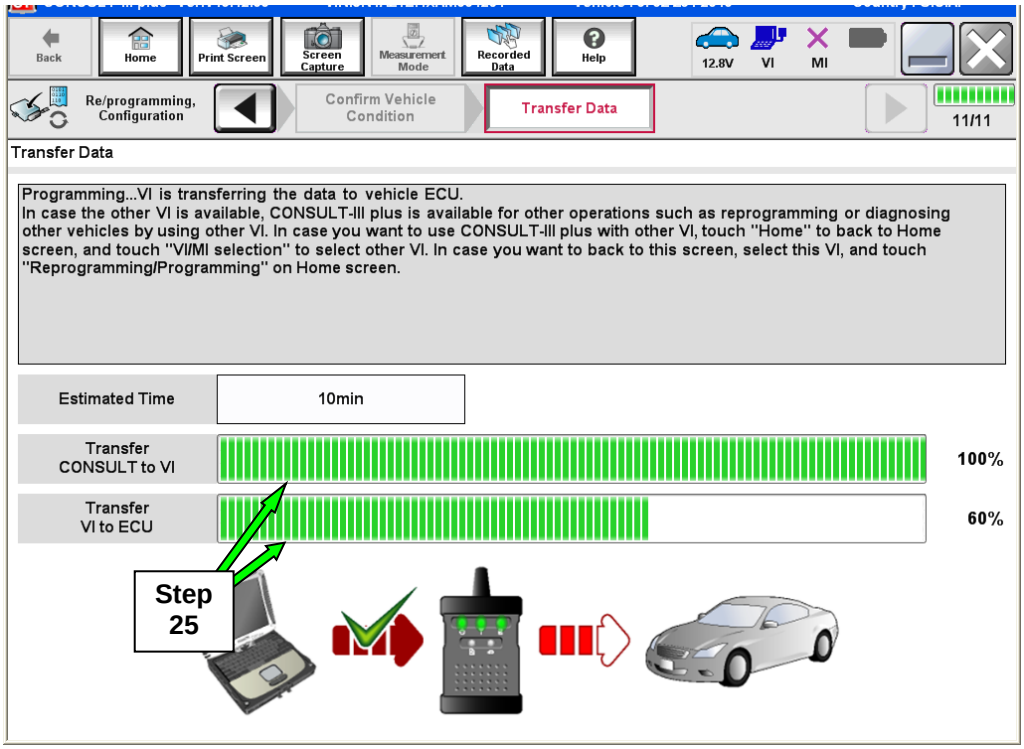

Figure 16A

NOTE: If the message shown in Figure 17A appears, there is data stored in the plus VI. Select "**Yes**" to proceed with reprogramming.

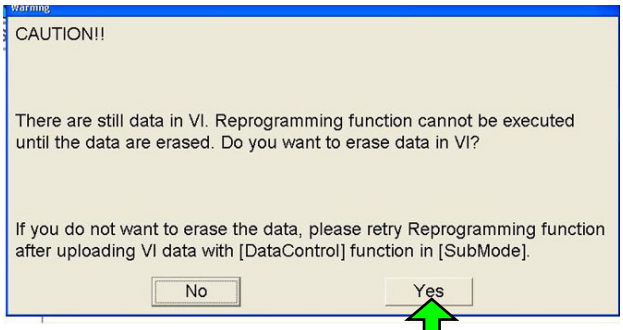

Figure 17A

26. When the screen in Figure 18A displays, reprogramming is complete.

    NOTE: If the screen in Figure 18A does not display (indicating that reprogramming did not complete), refer to ECM recovery on the next page.

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

28. Select **Next**.

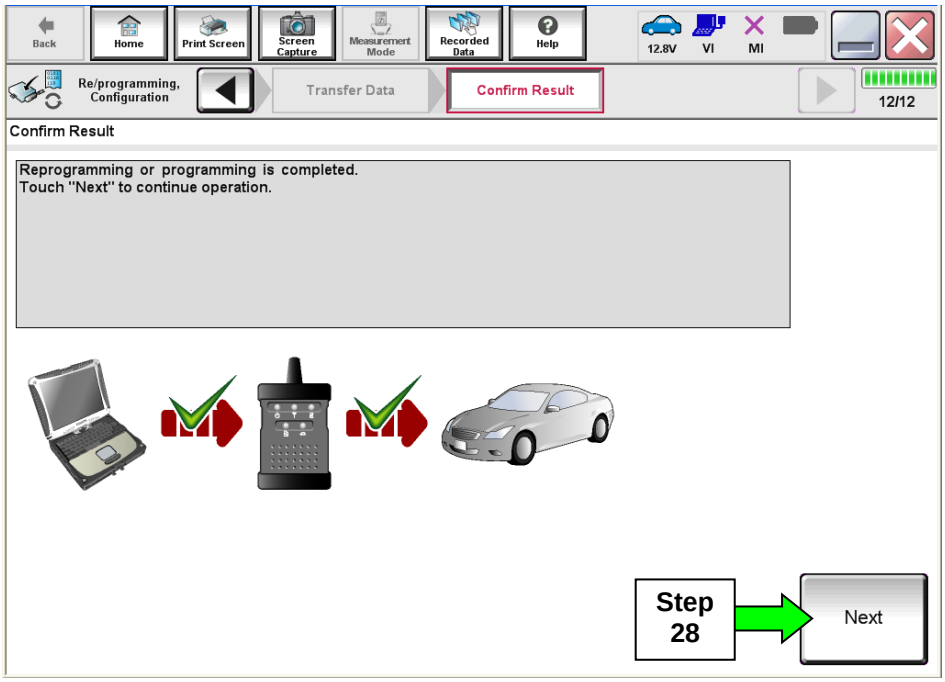

Figure 18A

29. Follow the on-screen instructions and change the ignition to **ON mode**.

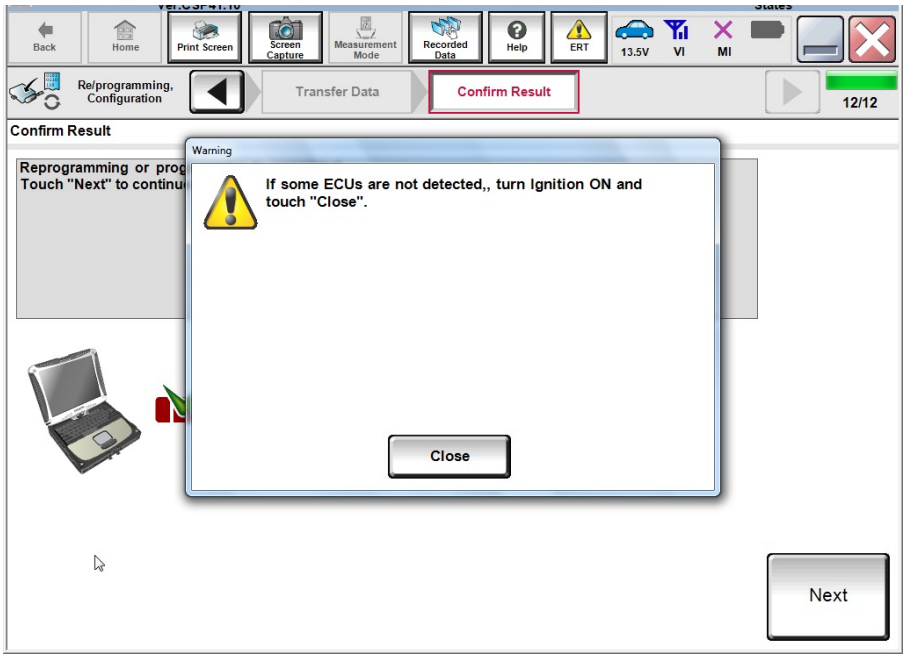

Figure 19A

NOTE:

- In the next step (page 16), 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 20A:

- 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>.

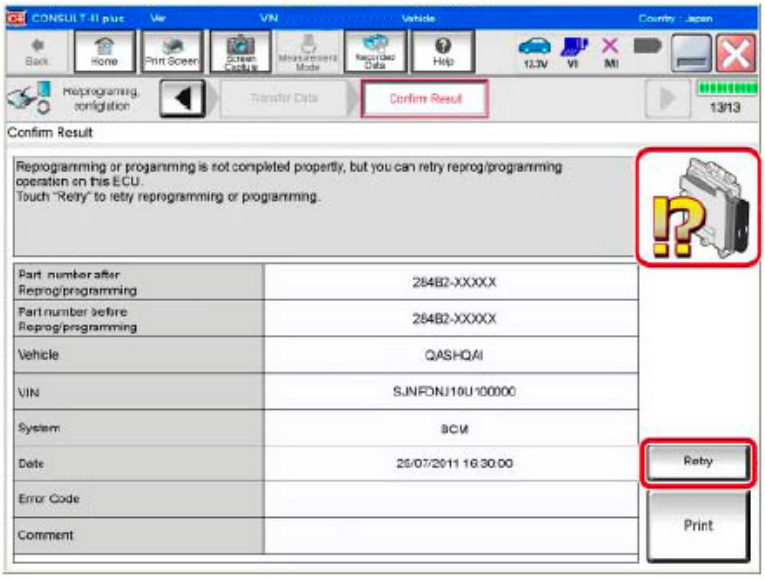

Figure 20A

If reprogramming does <u>not</u> complete and the "X" icon displays as shown in Figure 21A:

- 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.**

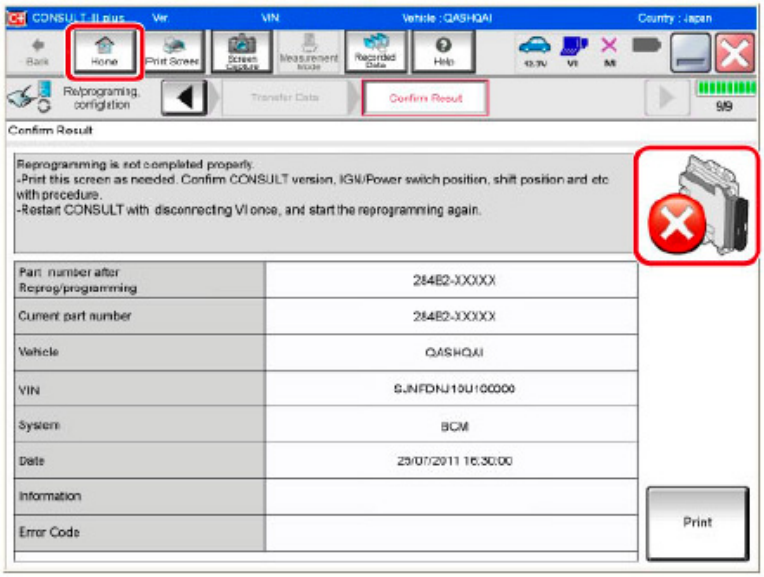

Figure 21A

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

31. When the entire reprogramming process is complete, the screen in Figure 22A will display.

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

33. Print a copy of this screen (Figure 22A) and attach it to the repair order for warranty documentation.

34. Select **Confirm**.

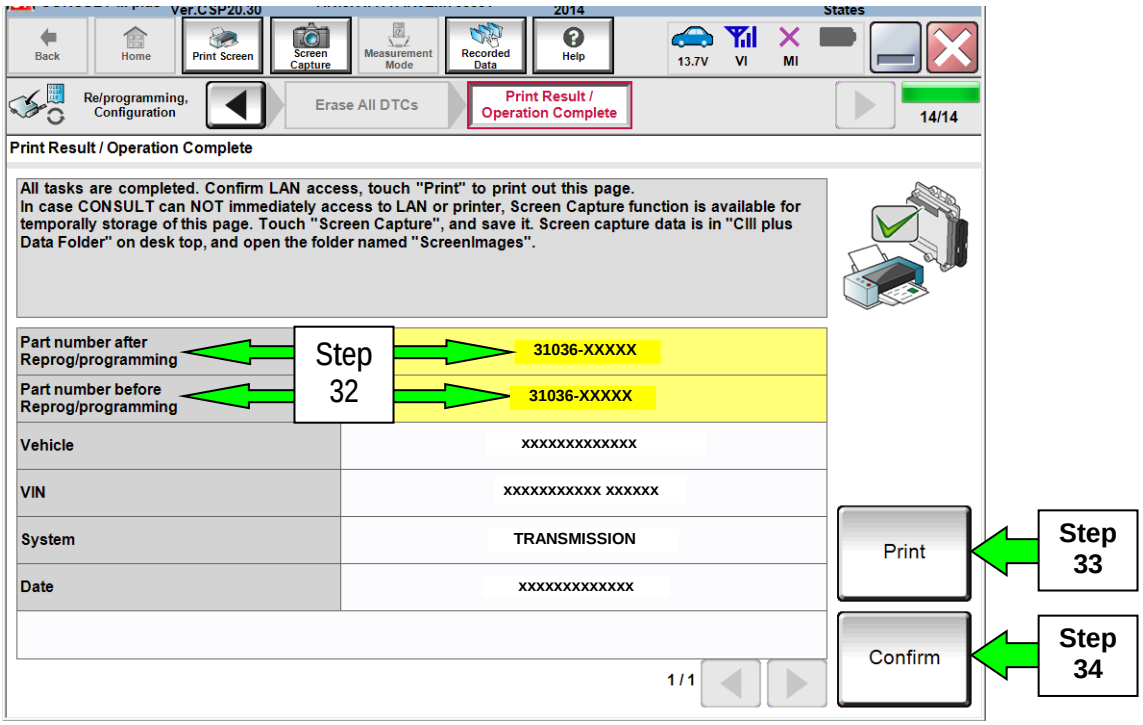

Figure 22A

Continue to the next page.

Transmission Calibration

NOTE: Before continuing, refer to page 7 to confirm Transmission Calibration is required.

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)**.

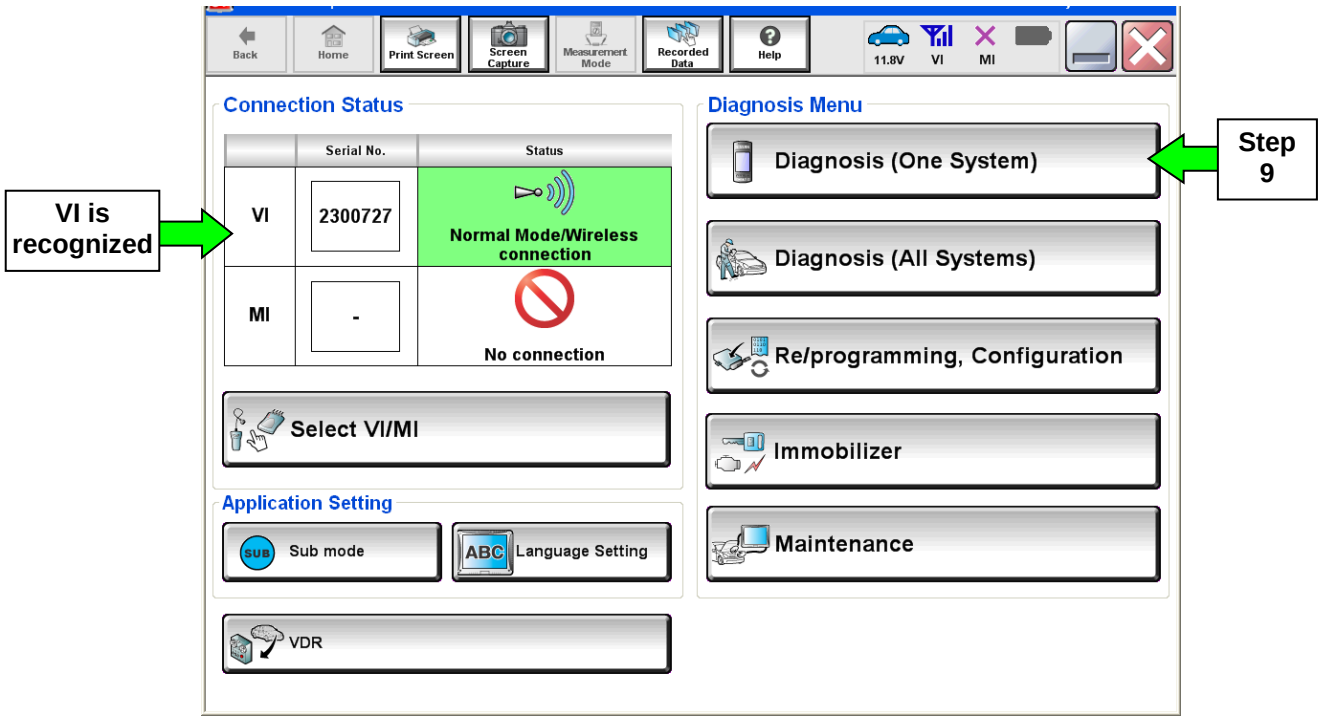

Figure 1B

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

11. Select **Transmission adjustment**.

12. Select **Start**.

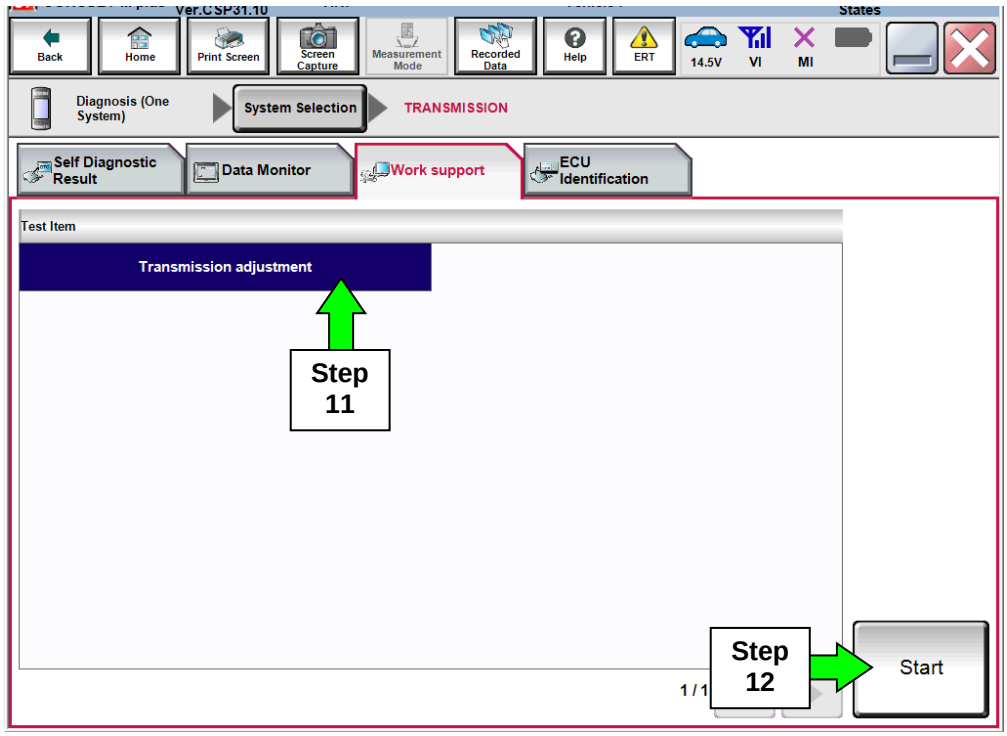

Figure 2B

NOTE:

- While performing the Transmission Adjustment procedure, a screen like the one in Figure 3B will display.
- Review the call outs in Figure 3B 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.

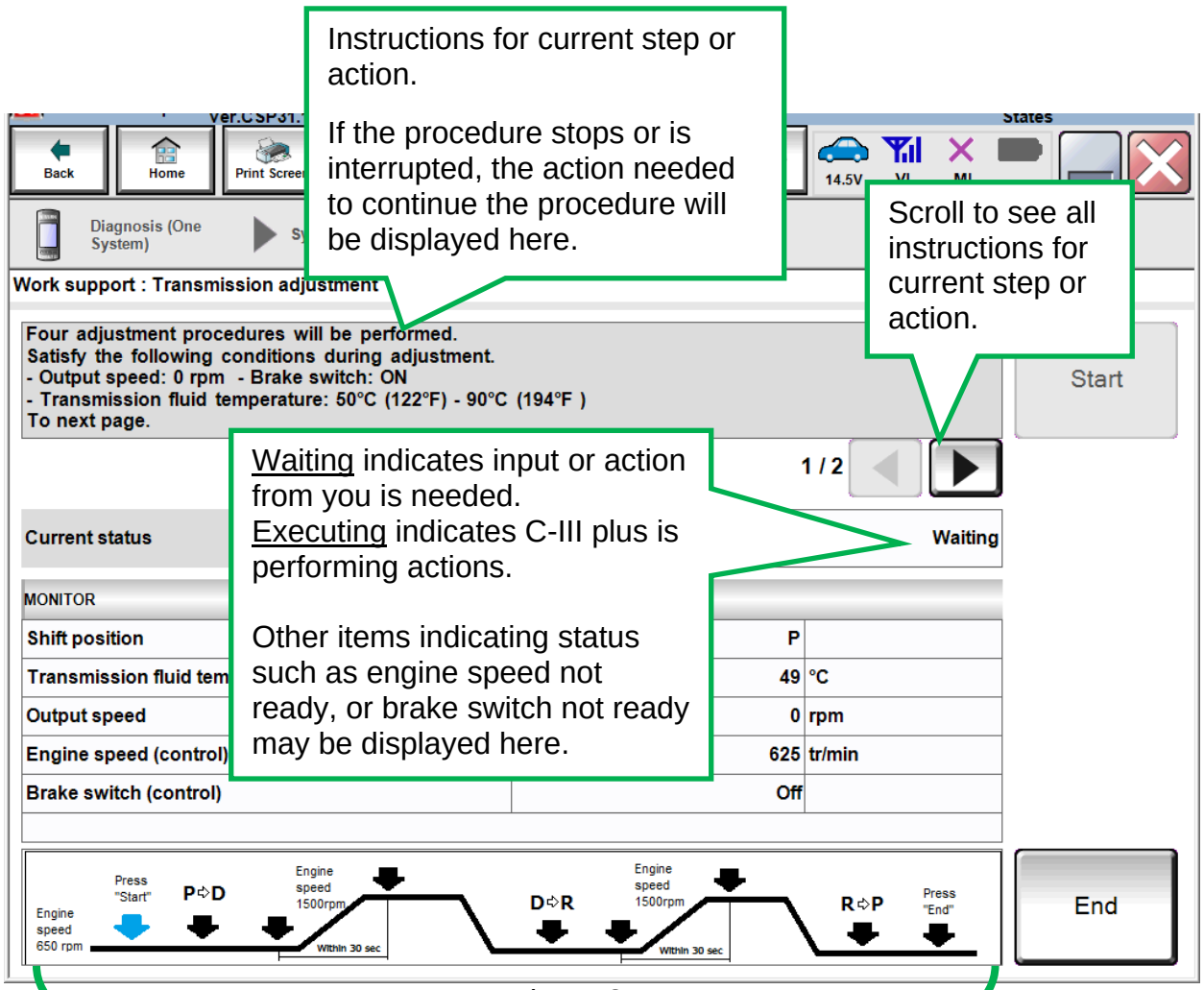

Figure 3B

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**.

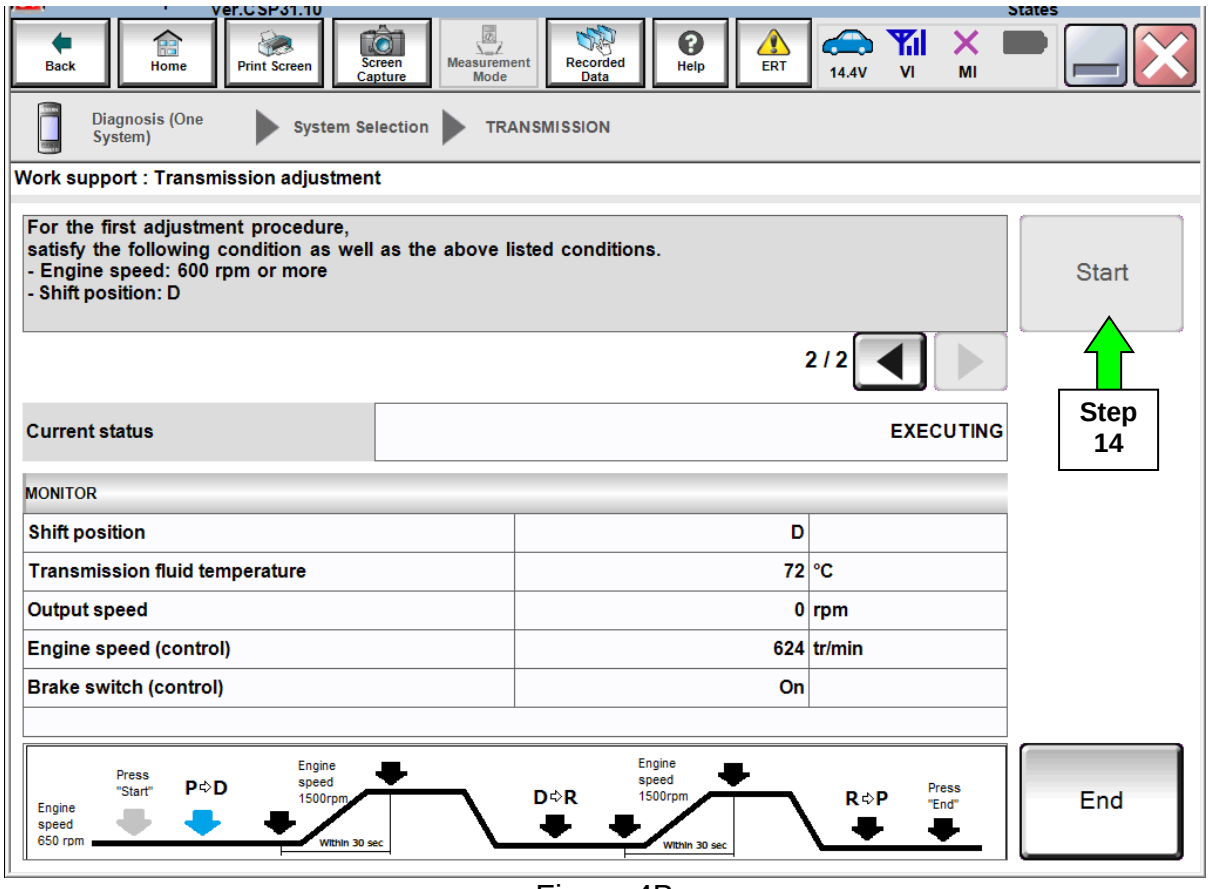

Figure 4B

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 1,500** 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**.

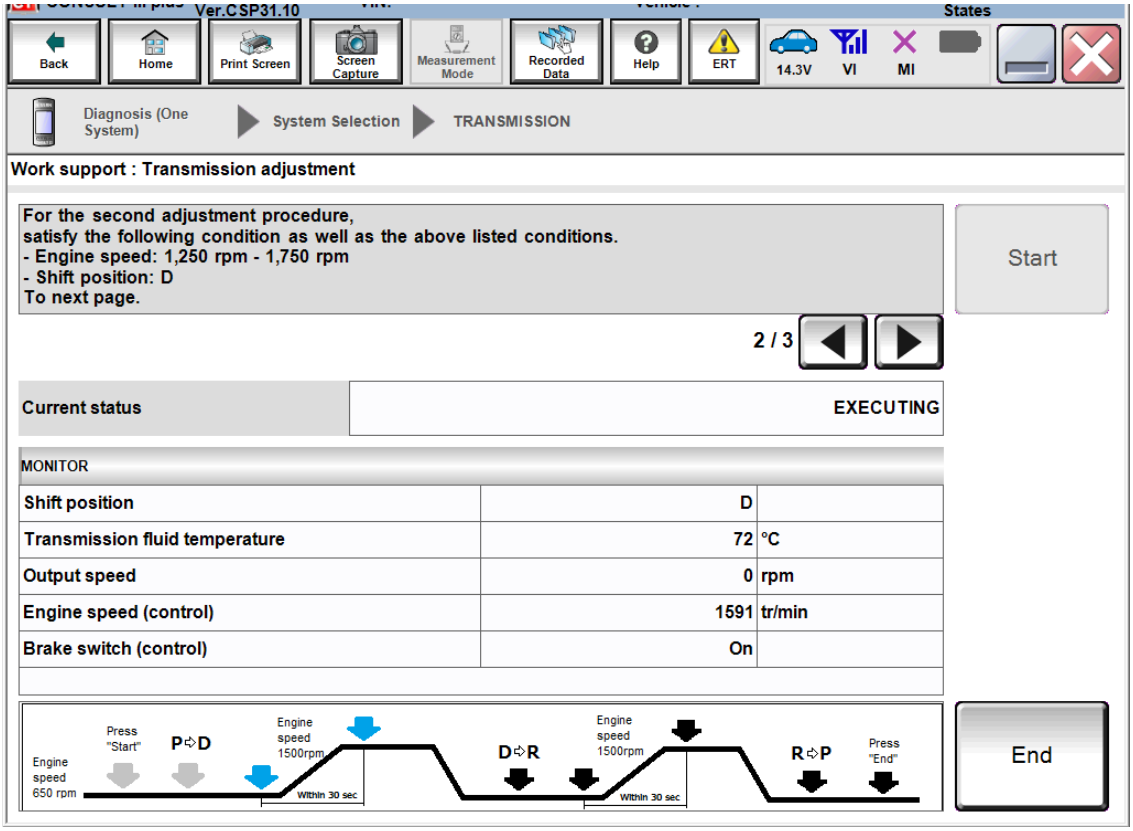

Figure 5B

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**.

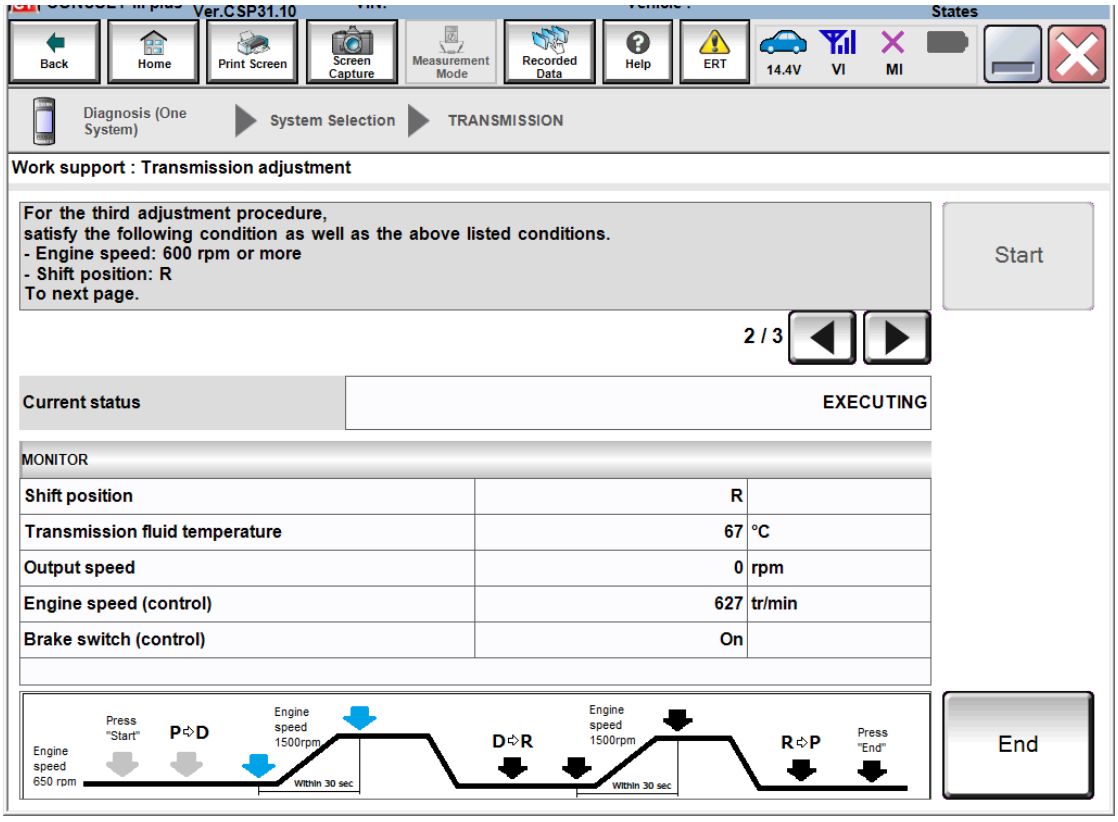

Figure 6B

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 1,500** 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 8B (next page) will display.

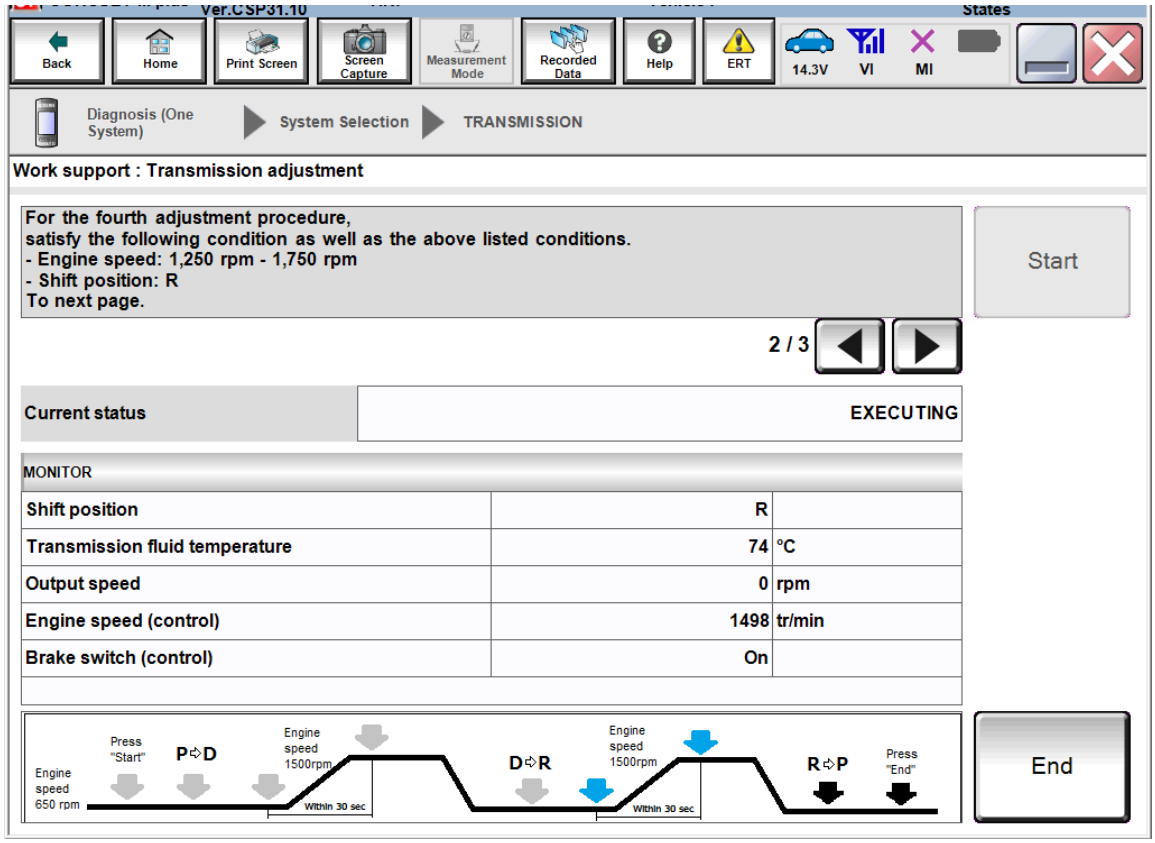

Figure 7B

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

26. Turn the ignition OFF.

27. Select **End**.

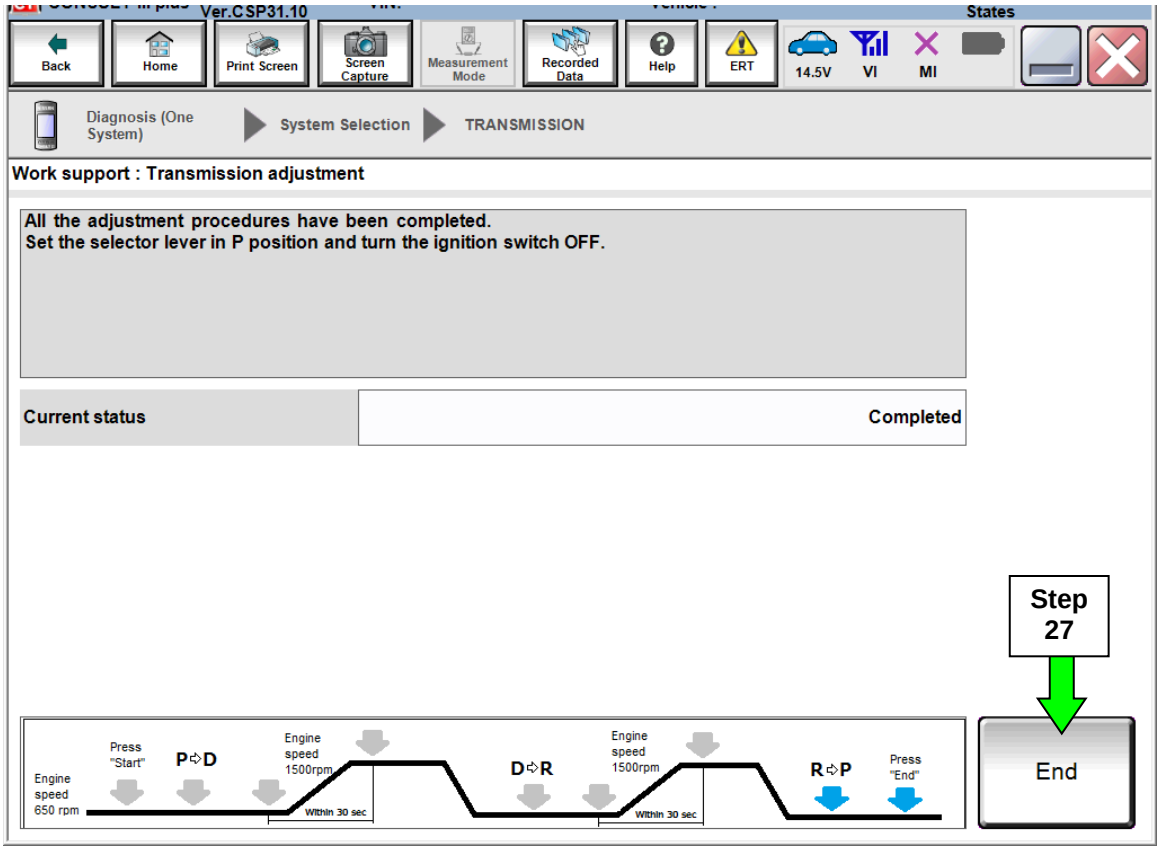

Figure 8B

The information on page 26 is provided as Service Information for the customer and is not part of the Service Procedure in this bulletin.

*** * Print the last page (26) and provide it 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)	JX46AA	ZE	32	0.6

OR

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Reprogram Transmission Control Module and Perform Adjustment	(1)	JX47AA	ZE	32	1.1

(1) Refer to the electronic parts catalog (FAST) and use the TCM assembly part number (31036 - XXXXX) as the Primary Failed Part (PFP).

IMPORTANT INFORMATION FOR THE CUSTOMER

- Completing the transmission adjustment procedure has 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).

- The Aisin 6-speed A/T has the ability to enter into a learning mode once the vehicle meets the following criteria:

  - The vehicle will need to be driven above 55 mph for a minimum of 5 miles to bring the exhaust and after treatment systems up to normal operating temperatures.

  - Make sure there are no warnings in the Meter pertaining to reduced power mode such as low fuel or low DEF.

  - Confirm the vehicle is not in Tow Mode. If in Tow Mode, the vehicle will be prevented from entering into the learn mode.

- Learning takes place with upshifts at steady accelerator positions from 1st gear through 5th gear continuously and repeatedly once the above criteria have been met. Improvements occur during repeated upshifts.