Classification:

SERVICE BULLET

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# CVT / TCM CALIBRATION DATA "WRITE" PROCEDURE

**APPLIED VEHICLES:** 2013 JX35 (L50)

2014 - 2016 QX60 (L50)

APPLIED VIN / DATE: 2013 JX35 – vehicles built after 5N1ALOM(\* \*)DC 343902 / March 26, 2013

2014 - 2016 QX60 - ALL

APPLIED TRANSMISSION: CVT

**NOTE**: Does not apply to QX60 Hybrid

#### SERVICE INFORMATION

The Service Procedure (starting on page 2) in this bulletin contains the steps to perform TCM Calibration Data "Write" Procedures. These procedures are used when a complete CVT is replaced, or a CVT control valve (valve body) is replaced, or a Transmission Control Module (TCM) is replaced.

**NOTE**: The following information may be helpful when performing the TCM Calibration Data "Write" Procedures:

• When starting the calibration "write" procedure in CONSULT-III (C-III) plus, and after selecting START under Work Support, the C-III plus screen may only blink.

If this occurs, close ASIST (if open) and then select Start again.

- If there is still no change: reboot the CONSULT PC, keep ASIST closed, and restart this procedure from step 1.
- If error "STOPPED, no comm. with ECU" shows when trying to write calibration data, verify that the vehicle is in park (P).

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### SERVICE PROCEDURE

IMPORTANT: If replacing the TCM only, skip to page 14:

(SAVE / WRITE CALIBRATION DATA WHEN REPLACING THE TCM)

### ERASE / WRITE CALIBRATION DATA WHEN REPLACING CVT or VALVE BODY

### NOTE:

- Use the following steps when a complete CVT, or valve body is replaced.
- Also use the following steps if the TCM was replaced with a complete CVT or valve body.

### Before starting, make sure:

- ASIST on the CONSULT PC has been freshly synchronized to the current date.
- All C-III plus software updates (if any) have been installed.
- 1. Obtain the calibration file disk (provided with the new CVT or valve body).
- 2. Match the numbers on the disk with the new CVT or new valve body and QR label.
  - See pages 3 and 4 for number matching examples.

# If a <u>complete CVT</u> is being replaced; match the following number (calibration file)

• Disc (CD) provided with the new CVT.



Figure A

QR label on the new CVT.

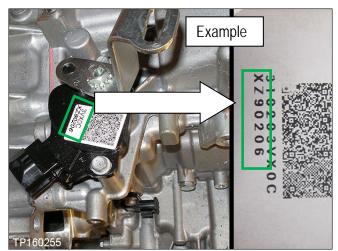


Figure B

Calibration file number on the CVT case or label.

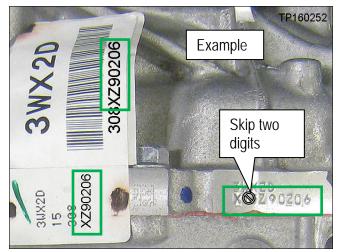


Figure C

**IMPORTANT**: All three of the above numbers must be the same (they must match).

If a new valve body is being replaced; match the following number (calibration file)

• Disc (CD) provided with the new valve body.



Figure D

• QR label provided with the new valve body.

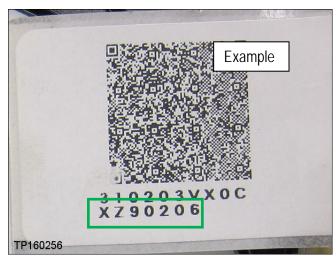


Figure E

• Calibration file number on the valve body.

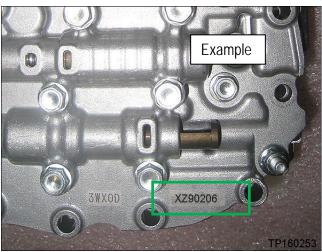


Figure F

**IMPORTANT**: All three of the above numbers must be the same (they must match).

3. Connect the external disk drive to the CONSULT PC.

**NOTE:** Use the external disk drive provided with the C-III plus kit.

- 4. Load the CD into the external disc drive.
- 5. Connect the CONSULT PC to the vehicle with the VI and then open / start C-III plus.
  - Make sure ASIST and other programs are closed.
- 6. After the plus VI to be recognized, select **Diagnosis (All Systems)**.

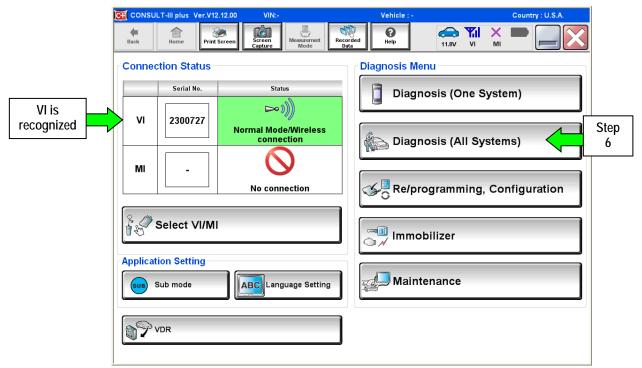


Figure 1

7. Navigate C-III plus to **TRANSMISSION** > **Work Support**.

8. Select the scroll arrow shown Figure 2.

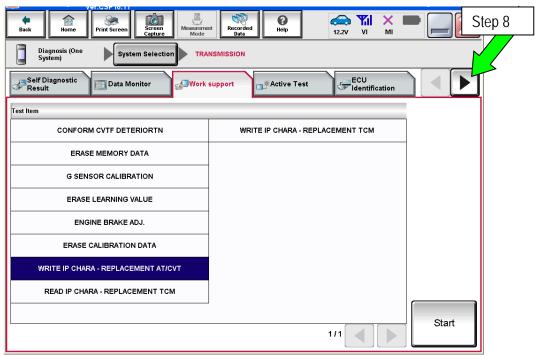


Figure 2

9. Print a copy of the screen shown in Figure 3 and attach it to the repair order.

### NOTE:

- Make sure to print page 1 of 7 (1 / 7).
- This screen print is used for warranty documentation.
- 10. Select scroll arrow shown Figure 3.

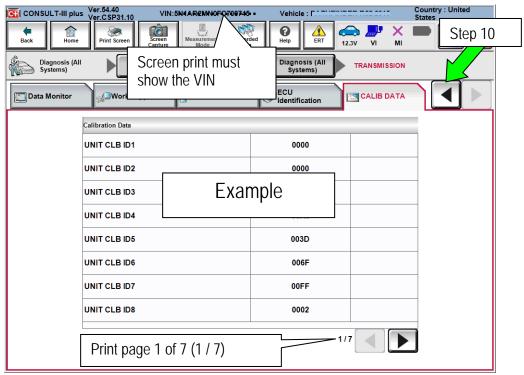


Figure 3

### 11. Select WRITE IP CHARA - REPLACEMENT AT/CVT and then Start.

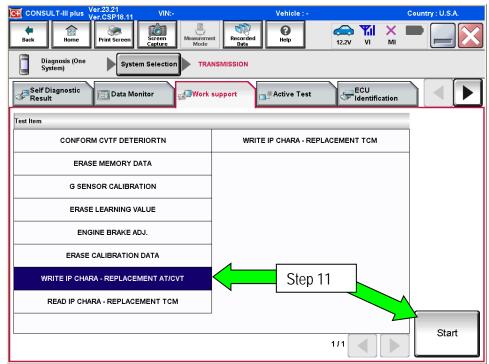


Figure 4

**IMPORTANT:** When starting the calibration "write" procedure in C-III plus, and after selecting **Start** under **Work Support**, the C-III screen may only blink.

- If this occurs, confirm ASIST is closed and then perform step 11 above.
  - ➤ If there is still no change: reboot the CONSULT PC, <u>keep ASIST closed</u>, and restart this procedure from step 1.
  - ➤ If error "STOPPED, no comm. with ECU" shows when trying to write calibration data, verify that the vehicle is in park (P).

## 12. Select OK.

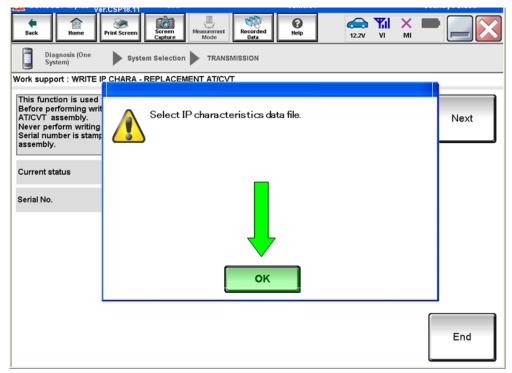


Figure 5

# 13. Select My Computer.

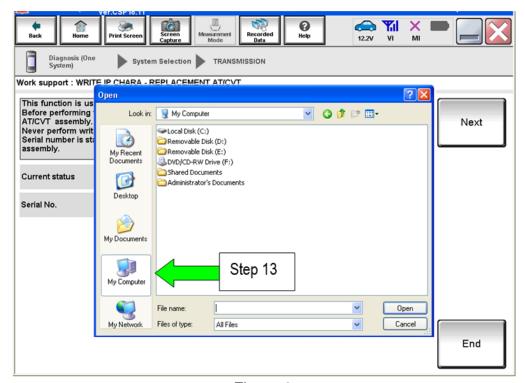


Figure 6

# 14. Select DVD/CD-RW Drive (F:)

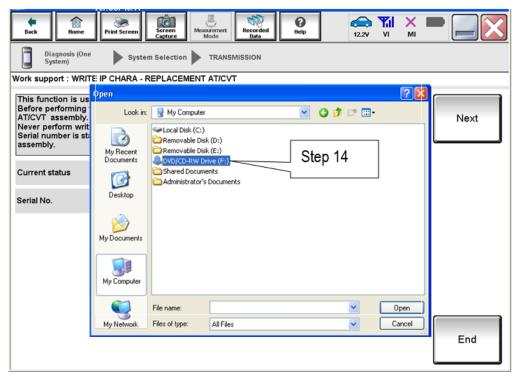


Figure 7

15. Highlight the File and then select **Open**.

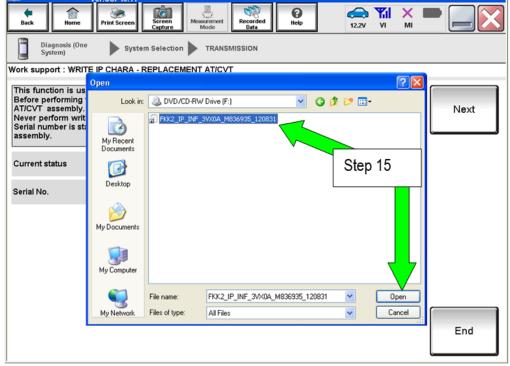


Figure 8

- 16. Verify that the serial number (calibration file number) matches the numbers from step 2 on page 2 (see Figures on pages 3 and 4).
  - If the numbers do not match, call TECH LINE.

#### 17. Select Next.

**NOTE:** If error message "Stopped, No Comm with ECU" is displayed, confirm that the vehicle is in Park.

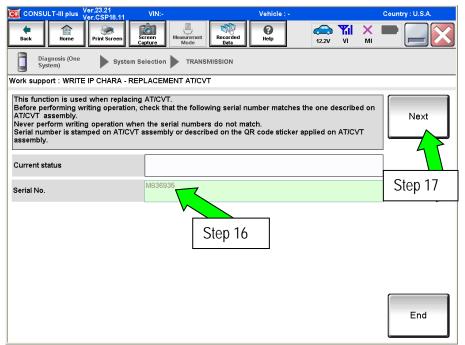


Figure 9

- **18**. **Before selecting Start**, follow the directions in Figure 10.
  - **Do not** follow the directions on the C-III plus screen.

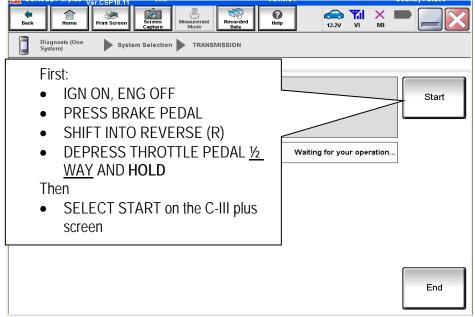


Figure 10

19. Follow the on screen instructions.

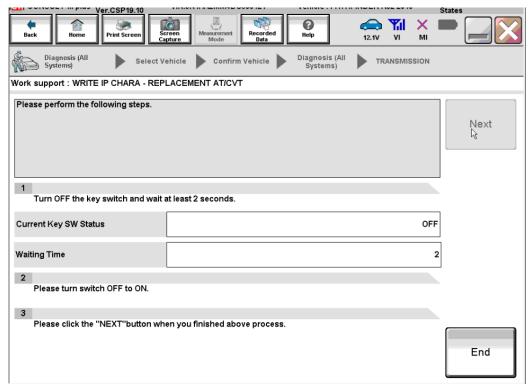


Figure 11

20. Follow the on screen instructions.

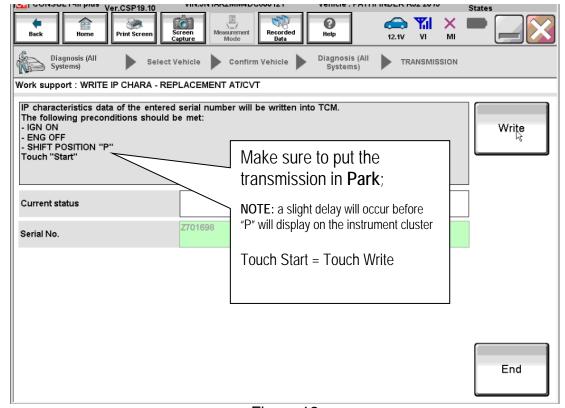


Figure 12

# 21. After Complete, select End.

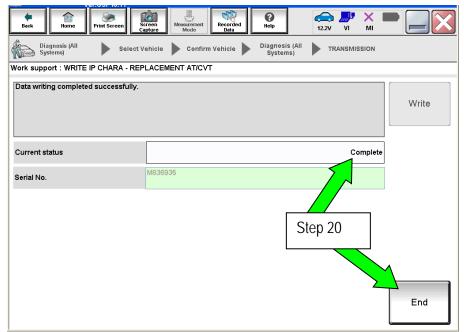


Figure 13

- 22. Select **Home** to return to the screen shown in Figure 1 page 5.
- 23. Perform steps 6 9, starting on page 5.
- 24. Attach the second screen print to the repair order.

NOTE: Screen prints are used for warranty documentation

25. Clear any DTCs that may have set and then test drive the vehicle.

**NOTE**: Any DTCs that will not clear or that are set during the test drive are not covered by this bulletin. Refer to the appropriate Service Manual for further diagnostic information

26. If the <u>valve body</u> was replaced, perform the <u>Drive / Reverse Learn Procedure</u> on the next page.

# **Drive / Reverse Learn Procedure**

1. Set the parking brake.

 $\textbf{NOTE:} \ \text{If a complete CVT was replaced, this procedure is } \underline{\text{not}} \ \text{needed}.$ 

2.	Start the Engine.
3.	Wait 5 seconds.
4.	Shift to Neutral.
5.	Shift to Drive and wait for transmission engagement.
6.	Repeat steps 4 and 5, ten (10) times.
7.	Shift to Neutral.
8.	Shift to Reverse and wait for transmission engagement.
9.	Repeat steps 7 and 8, ten (10) times.
10.	Shift to Park and turn the ignition OFF.
	END

#### SAVE / WRITE CALIBRATION DATA WHEN REPLACING THE TCM

# NOTE:

- The following steps are used if TCM only is replaced.
- If the CVT or valve body is being replaced, go back to page 2.
- Before starting, make sure:
  - ASIST on the CONSULT PC has been freshly synchronized to the current date.
  - All C-III plus software updates (if any) have been installed.

# Save Calibration Data Before TCM Replacement

- 1. Connect the CONSULT PC to the vehicle.
- 2. Open / start C-III plus.
  - Make sure ASIST and other programs are closed.
- 3. Wait for the plus VI to be recognized.
  - The serial number will display when the plus VI is recognized.
- 4. Select **Diagnosis (One System)**.

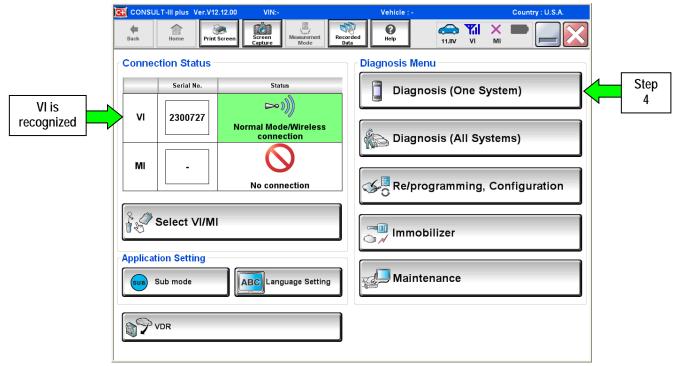


Figure A1

5. Navigate C-III plus to **TRANSMISSION** >> **Work Support**.

6. Select READ IP CHARA - REPLACEMENT TCM, and then Start.

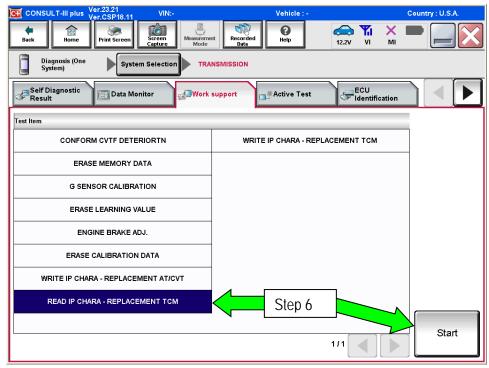


Figure A2

# 7. Select Start.

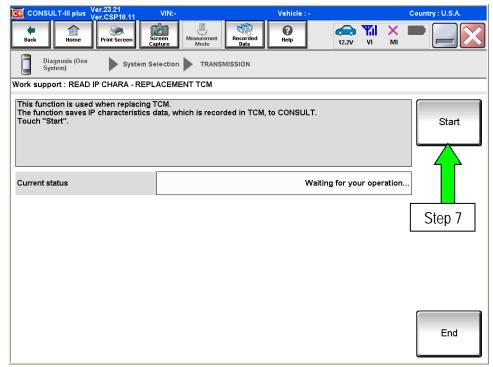


Figure A3

8. When the calibration data has been saved to the CONSULT PC, the message "Data saved successfully" will be displayed and Current status will indicate Completed (see Figure A4).

# 9. Select End.

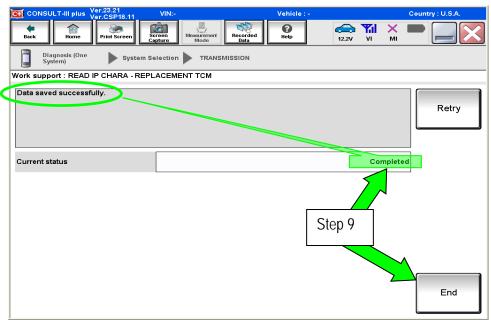


Figure A4

- 10. Replace the TCM.
- 11. After the TCM has been replaced, go to Write Calibration Data After TCM Replacement on the next page.

12. After the TCM has been replaced, select WRITE IP CHARA – REPLACEMENT TCM, then Start.

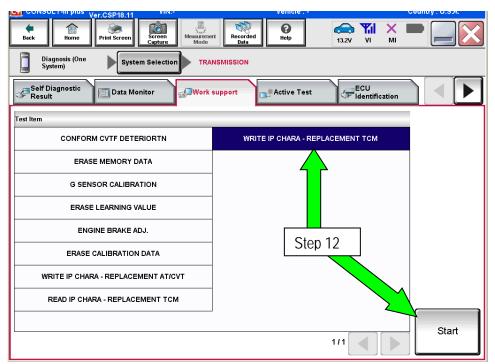


Figure A5

**IMPORTANT:** When starting the calibration "write" procedure in C-III plus, and after selecting **Start** under **Work Support**, the C-III plus screen may only blink.

- If this occurs, confirm ASIST is closed and then perform step 12 above.
  - ➤ If there is still no change: reboot the CONSULT PC, <u>keep ASIST closed</u>, and restart the procedure from the beginning.
  - ➤ If error "STOPPED, no comm. with ECU" shows when trying to write calibration data, verify that the vehicle is in park (P).

# 13. Select Start again.

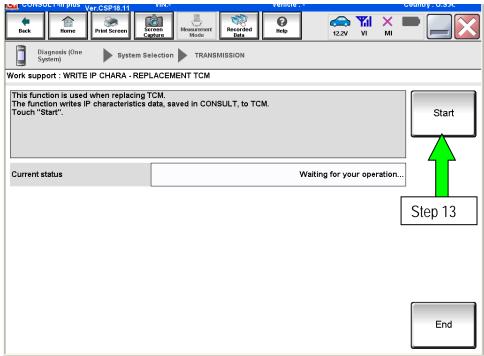


Figure A6

# 14. Select Yes.

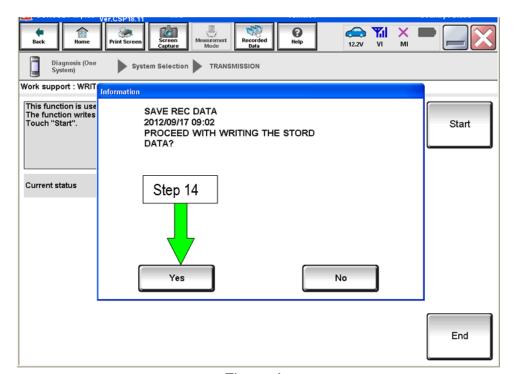


Figure A7

- 15. When the calibration data has been written to the TCM, the message "Data writing completed successfully" will be displayed and Current status will indicate Complete (Figure A8).
- 16. After Complete, select **End** to finish.

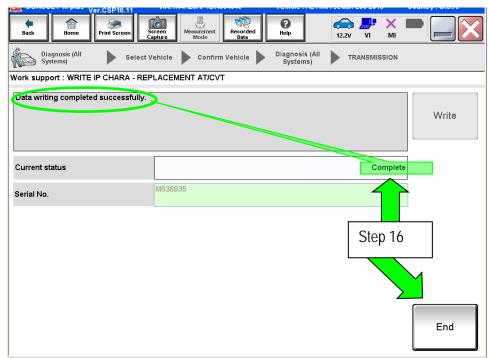


Figure A8

17. Clear any DTCs that may have set and then test drive the vehicle.

**NOTE:** Any DTCs that will not clear or that are set during the test drive are not covered by this bulletin. Refer to the appropriate Service Manual for further diagnostic information.