

Classification:

AT14-009

Reference:

ITB14-037

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Date:

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## 2012 – 2013 M HYBRID; HPCM AND TCM REPROGRAM

**APPLIED VEHICLE:** 2012-2013 M Hybrid (HY51)  
**APPLIED VIN AND DATE:** Built before JN1EY1AP(\*)DM 650167 and Feb 2, 2013  
**APPLIED TRANSMISSION:** Hybrid only

### IF YOU CONFIRM:

A delay or harsh engagement into reverse is present.

### ACTION:

1. Refer to step 20 in the SERVICE PROCEDURE to confirm this bulletin applies to the vehicle you are working on.
2. If this bulletin applies, reprogram the **EV/HEV** (Hybrid Power Control Module) and the **TCM** (Transmission Control Module).

**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 the repair.

Infiniti 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 Infiniti dealer to determine if this applies to your vehicle.

## SERVICE PROCEDURE

### Reprogram the HPCM Controller

**NOTE:** Follow all cautions, warnings, and notes in the ESM when working on or near a High Voltage (HV) System or Supplemental Restraint System (SRS), such as an airbag.

**IMPORTANT:** Before starting, make sure:

- **ASIST on the CONSULT PC has been freshly synchronized (updated).**
- **All CONSULT III PLUS (C-III plus) software updates (if any) have been installed.**

**NOTE:** The CONSULT PC automatically gets applicable reprogramming data during ASIST synchronization.

- A screen print for Warranty documentation can be done from the CONSULT PC during this process while still connected to the vehicle.
- **No DTCs stored.** Use C-III plus to perform Self Diagnosis for all systems and erase all DTCs.

1. Connect the plus VI to the vehicle, and then to the CONSULT PC with the USB cable.

**CAUTION:** Make sure the plus VI is securely connected. If the plus VI connections are loose during reprogramming, the process will be interrupted and the **Module may be damaged.**

2. Connect the AC Adapter to the CONSULT PC.

**CAUTION:** Be sure to connect the AC Adapter. If the CONSULT PC battery voltage drops during reprogramming, the process will be interrupted and the **Module May be damaged.**

3. Connect the GR8 (Multitasking Battery Diagnostic Station) to the vehicles 12V battery.

- Set the GR8 to ECM power supply mode.

**NOTE:** Battery voltage must stay between 12 volts and 15.5 volts or reprogramming may not start or be temporarily stopped. Returning battery voltage within the 12-15.5V volt range will resume the reprogramming procedure.

**CAUTION:** Be sure the GR8 is connected securely to the 12V battery. Make sure the battery voltage stays between 12.0V and 15.5V during reprogramming. If the battery voltage goes out of this range during reprogramming, the **Module may be damaged.**

4. Turn off all external Bluetooth® devices (e.g., cell phones, printers, etc.) within range of the CONSULT PC and the VI.

**CAUTION:** Make sure to turn off all external Bluetooth® devices. If Bluetooth® signal waves are within range of the CONSULT PC and the VI during reprogramming, reprogramming may be interrupted and the **Module may be damaged.**

5. Depress the vehicle's power ("ignition") switch twice without depressing the brake pedal.
  - The meter and gauges will illuminate.

**CAUTION:** Do Not set the vehicle in "READY to drive" mode or vehicle component damage may occur.

- Make sure the ready to drive indicator light is OFF (not illuminated).

Ready to drive indicator light  
(make sure it is **OFF**)



Figure A

6. Turn OFF all vehicle electrical loads such as exterior lights, interior lights, HVAC, blower, rear defogger, audio, NAVI, seat heater, steering wheel heater, etc.

**IMPORTANT:** Make sure to turn OFF all vehicle electrical loads. Make sure the battery voltage stays between 12.0V and 15.5V during reprogramming. If the battery voltage goes out of this range during reprogramming, the **Module may be damaged**.

7. Turn ON the CONSULT PC.
8. Select CONSULT-III plus (open C-III plus).

**NOTE:** Make sure all applications other than C-III plus are closed.

9. Wait for the plus VI to be recognized.
10. Select Re/programming, Configuration.

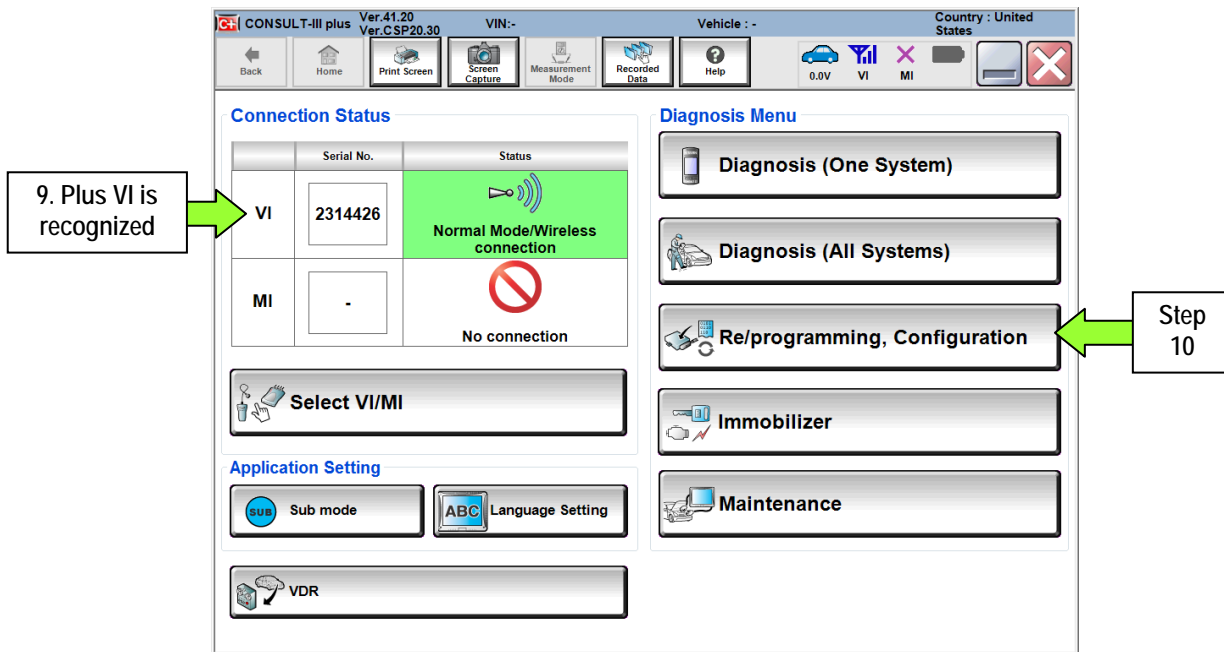


Figure 1

11. Use arrows (if needed) to view and read all precautions.
12. Check the box confirming the precautions have been read.
13. Select Next.

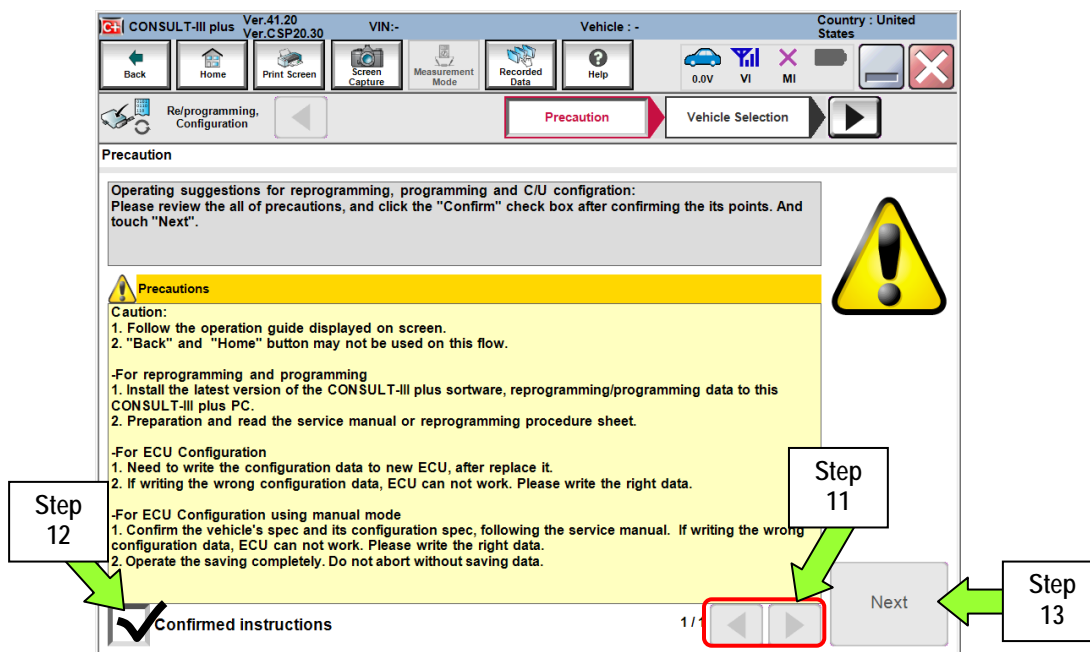


Figure 2

14. Select M35h and 2012 - 2013, or Automatic Selection (VIN).

- If Automatic Selection (VIN) is selected, wait for the Reading VIN screen to complete.
- If the screen in Figure 3 does not display, skip to step 16.

15. Select Select.

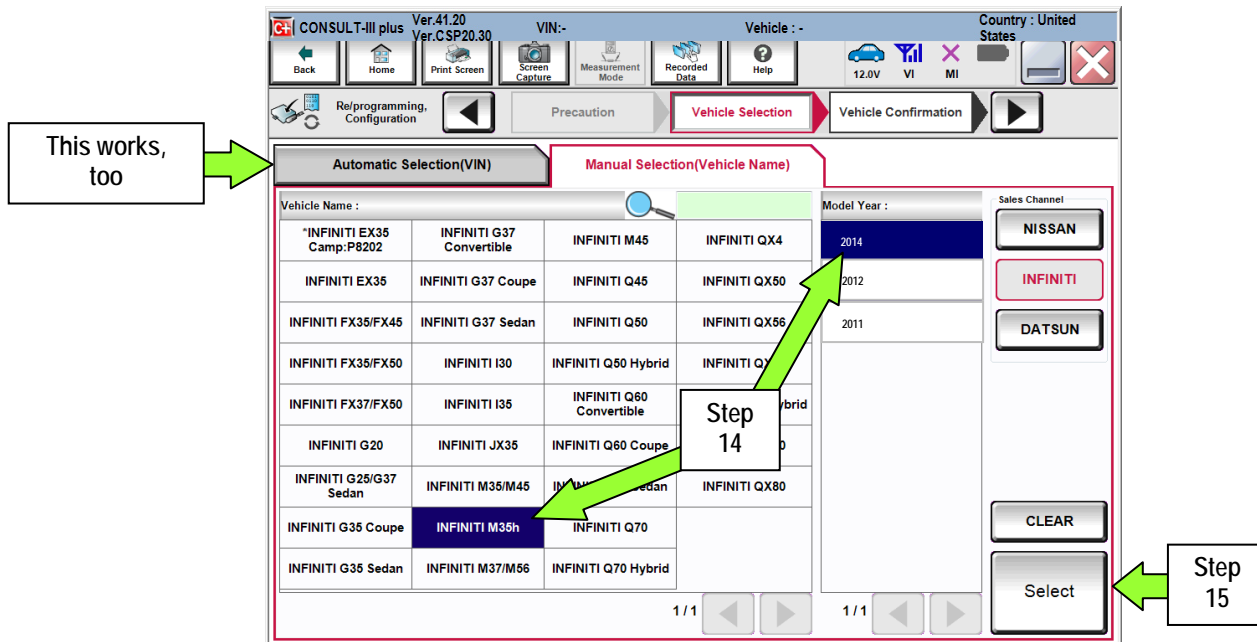


Figure 3

16. Verify the VIN in VIN or Chassis # matches the vehicle being reprogrammed.

- If the correct VIN is displayed, select Confirm.

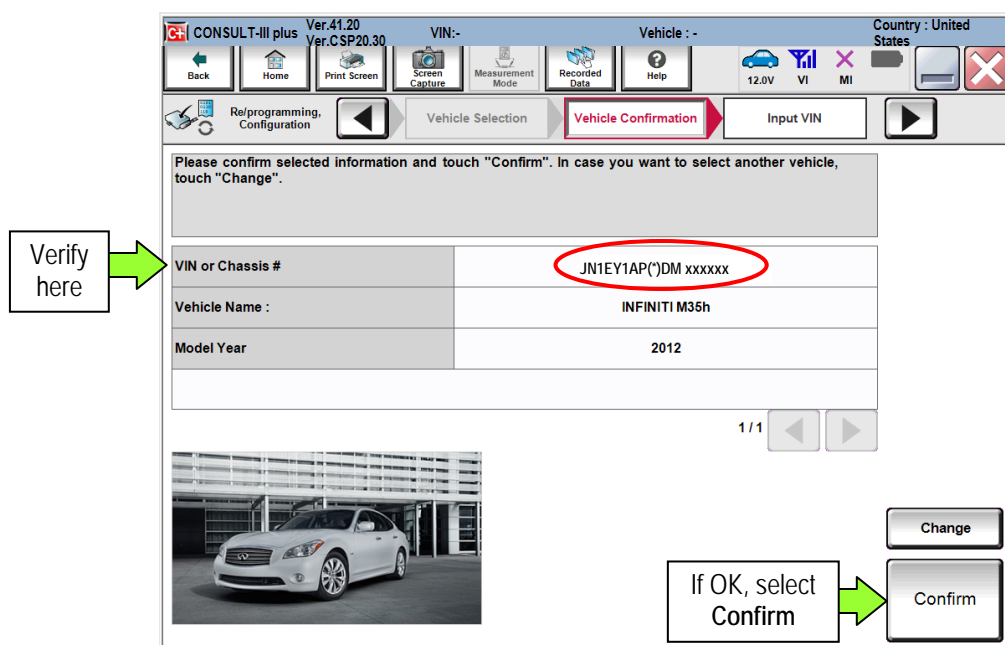


Figure 4

17. Wait for system call to complete, and then select **Confirm** again.

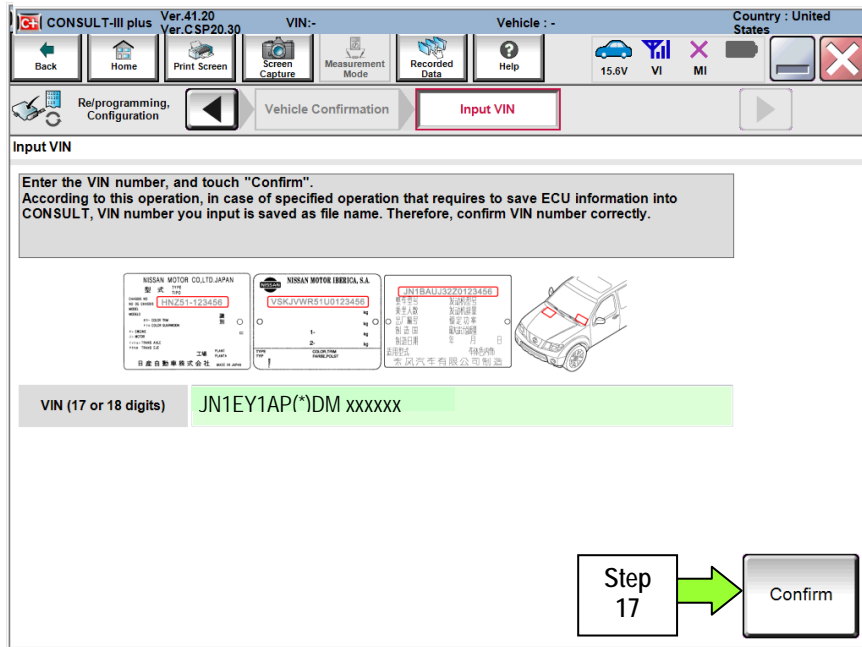


Figure 5

18. Select **EV/HEV**.

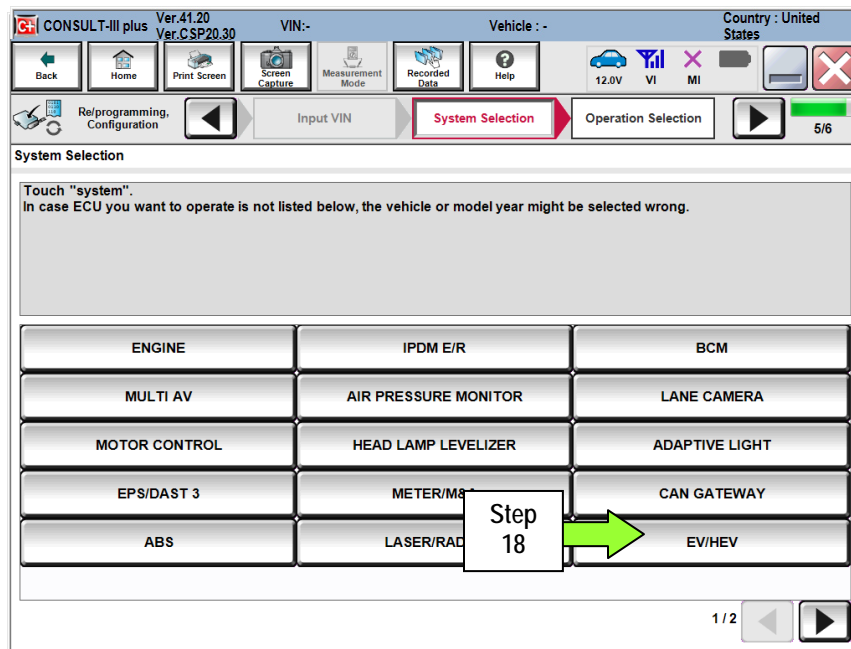


Figure 6

## 19. Select Reprogramming.

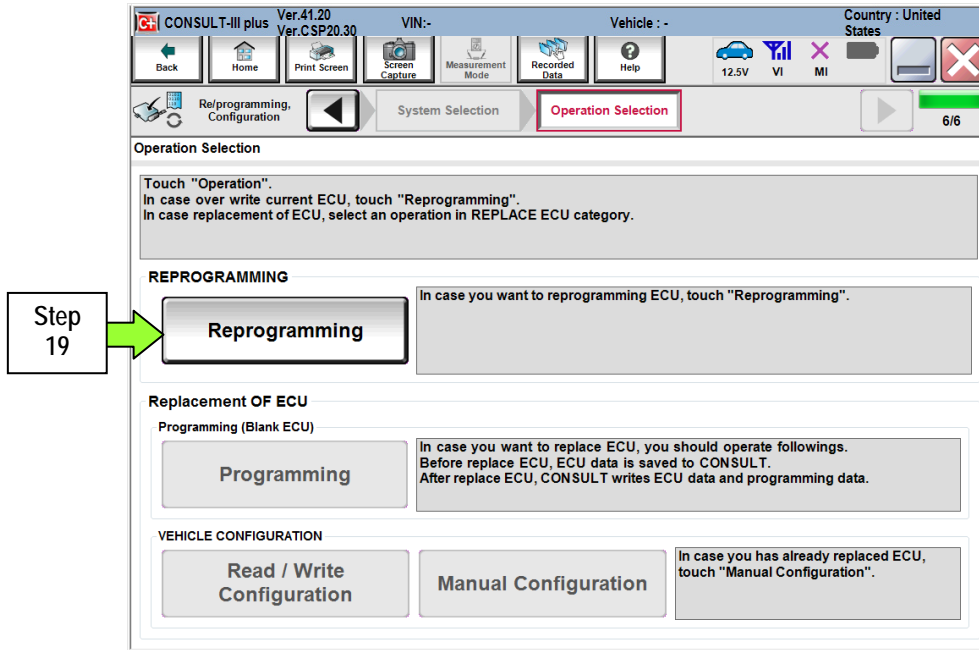


Figure 7

20. When you get to the screen shown in Figure 8, confirm this bulletin applies as follows.

- a. Find the **EV/HEV Part Number** and write it on the repair order.

**NOTE:** This is the current **EV/HEV Part Number (P/N)** and will also be needed for claims information.

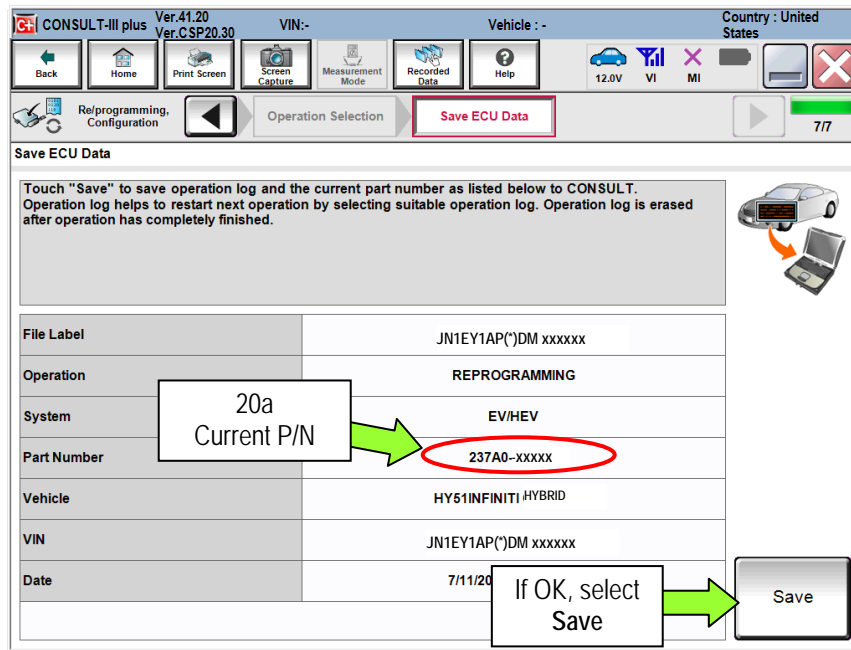


Figure 8

- b. Compare the P/N you wrote down to the numbers in the **CURRENT EV/HEV PART NUMBER** column in **Table A** below.

- If the **EV/HEV** part number is one of the part numbers listed in the **Table A**, continue with reprogramming.
  - Select **Save**, and then go to the next step.
- If the **EV/HEV** part number is not listed in **Table A**, this bulletin does not apply.
  - Disconnect the GR8 and CONSUTLT PC.

Table A

MODEL YEAR	CURRENT EV/HEV PART NUMBER: 237A0 -
2012 - 2013 M35 (HY51)	1MG0A, 1MG0B, 1MG0C, 1MG0D
	1MG4A, 1MG4B, 1MG4C, 1MG4D
	1MG8A, 1MG8B
	1PM0A, 1PM0B



21. Use arrows (if needed) to view and read all precautions, then check the box confirming the precautions have been read.
22. Select **Next**.

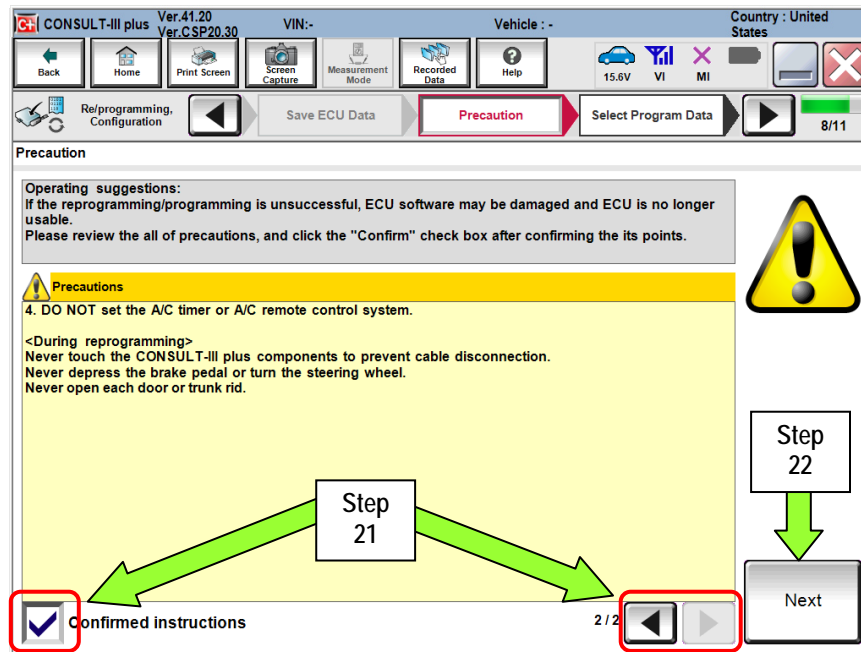


Figure 9

**NOTE:**

- In some cases, more than one new P/N for reprogramming is available.
  - If more than one P/N is available, the screen in Figure 10 will display. 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.

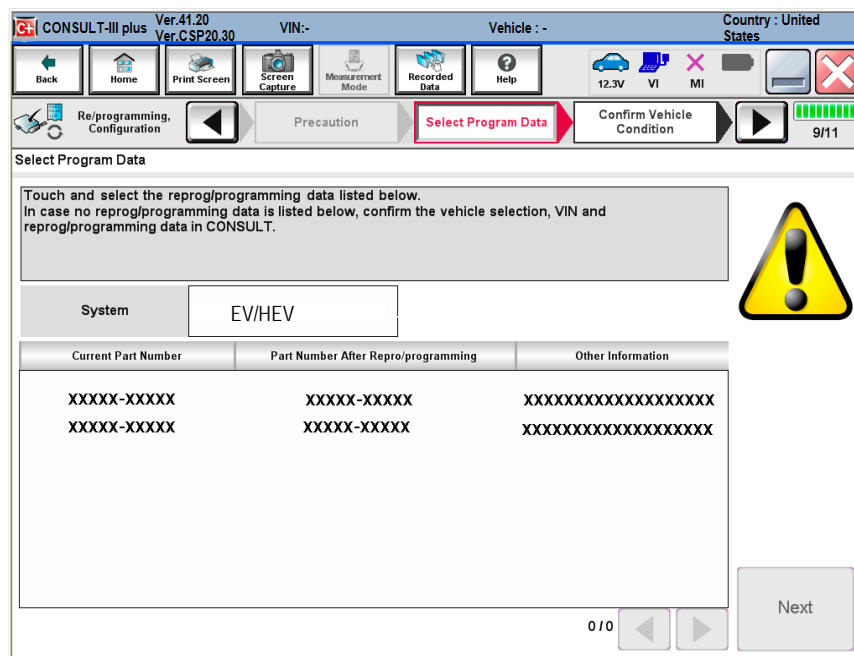


Figure 10

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

24. Select Next.

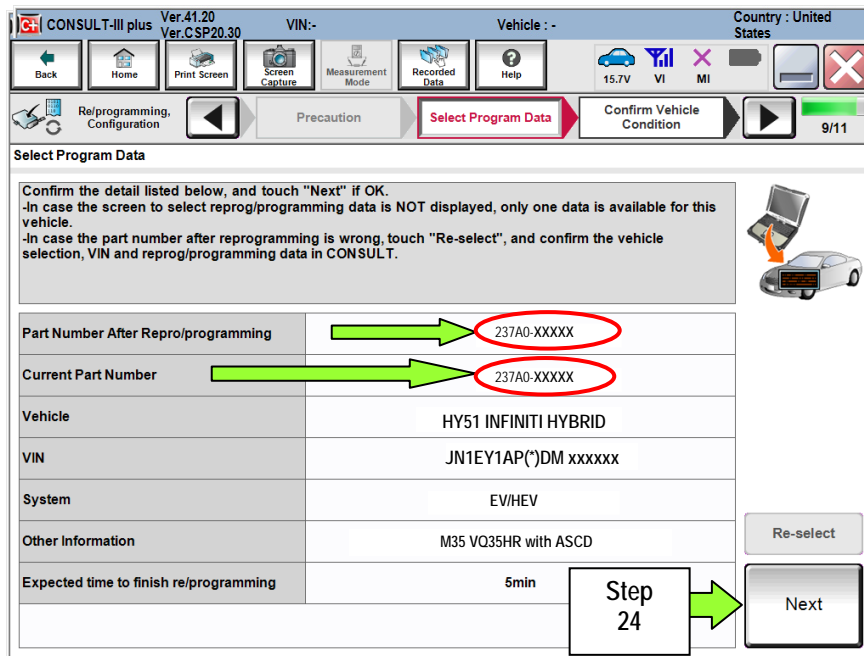


Figure 11

25. Confirm battery voltage is correct, and then select Next.

NOTE: Battery voltage must stay within specified range to make the indicator turn green.

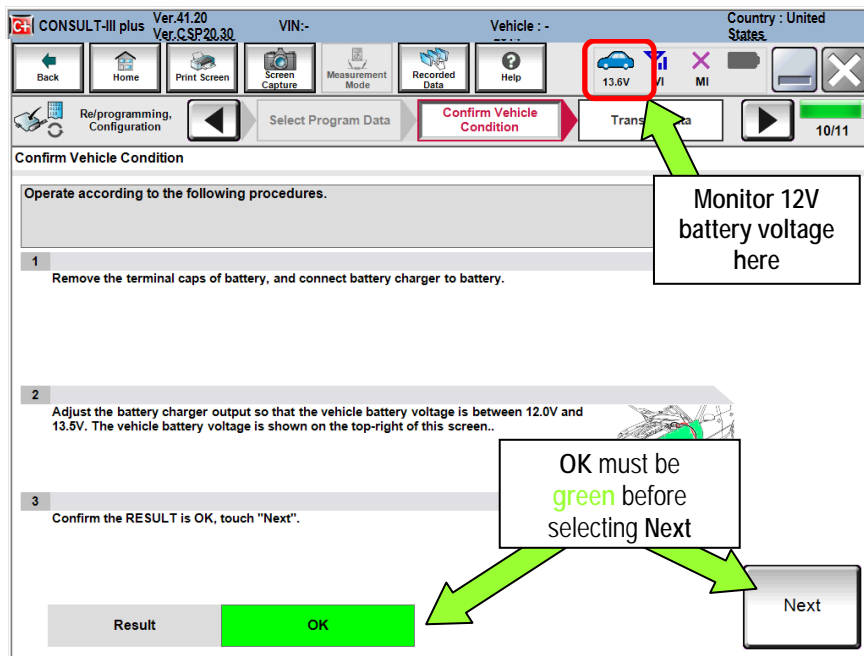


Figure 12

26. With battery voltage in the green, select **Start**.

- The reprogramming process begins when **Start** has been selected.

**NOTE:** For reprogramming to continue, vehicle 12V battery voltage must stay within 12 volts and 15.5 volts. Make sure the voltage level is sufficient.

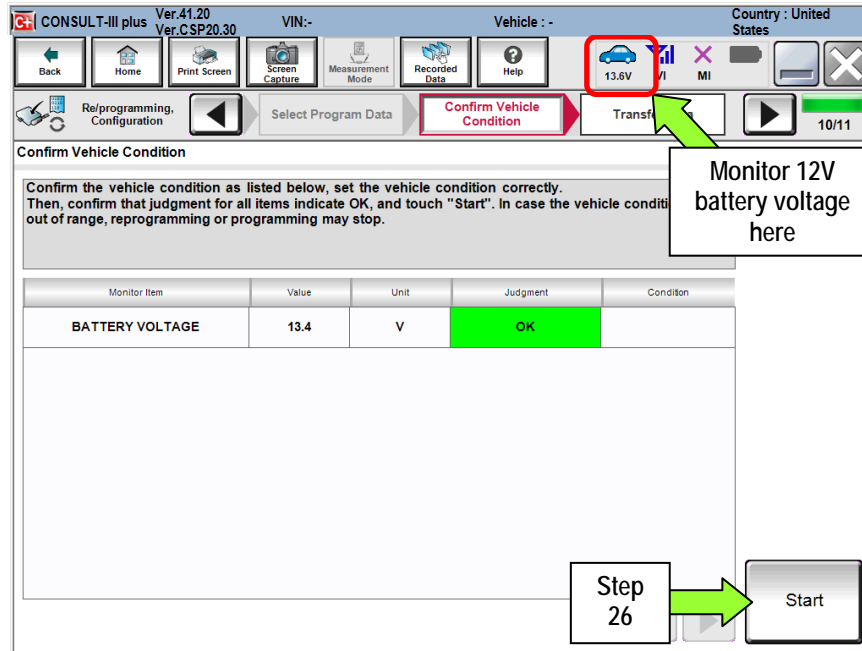


Figure 13

27. Wait for both bar graphs to complete.

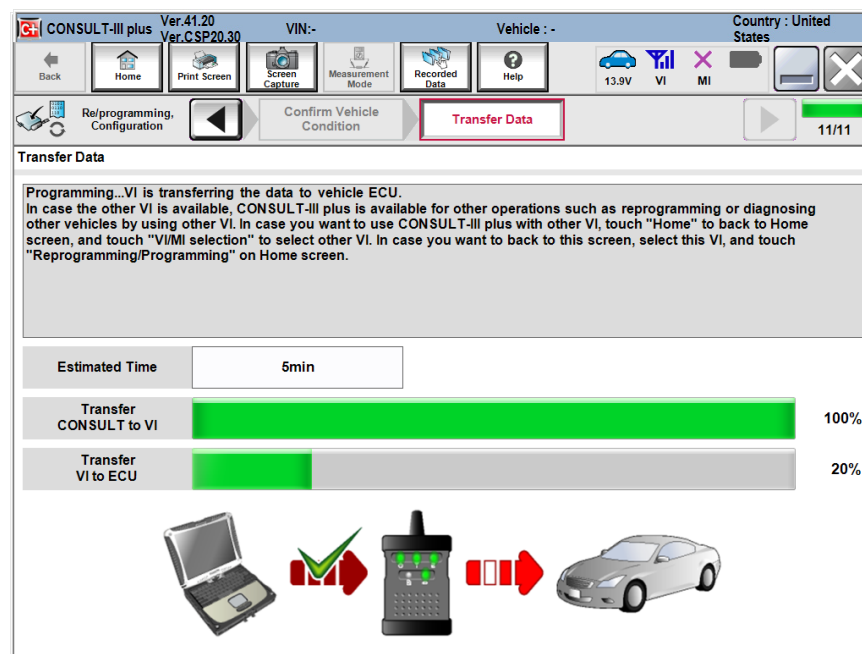


Figure 14

28. When the screen in Figure 15 displays, reprogramming is complete.
- a. Select **Next**, and then wait for System Call to complete.
  - b. Proceed to step 29 on page 14.

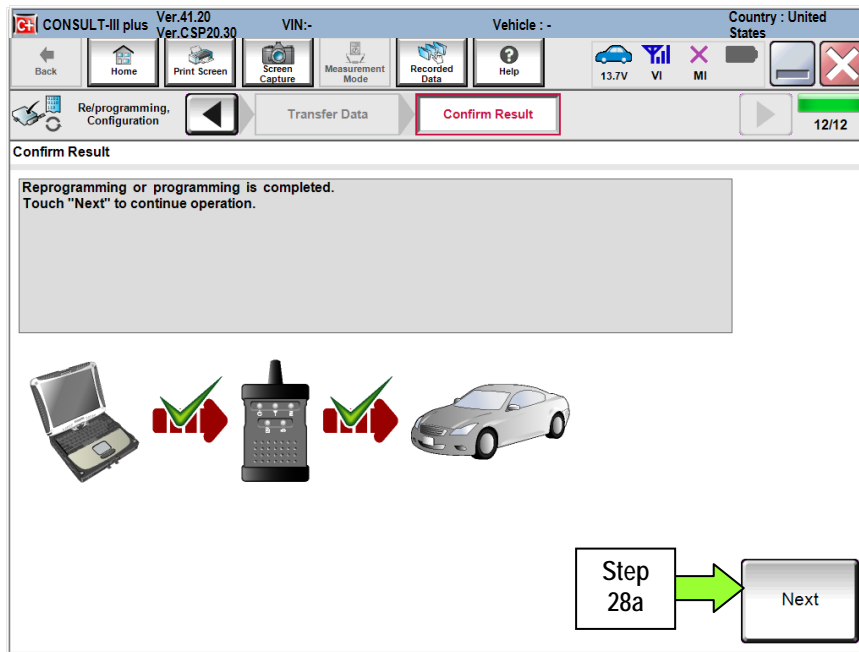


Figure 15

**NOTE:** If the reprogram will not complete, refer to the next page for "recovery" information.

## EV/HEV Module recovery

NOTE: If reprogramming does not complete and the **!?** displays as shown in Figure 16:

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

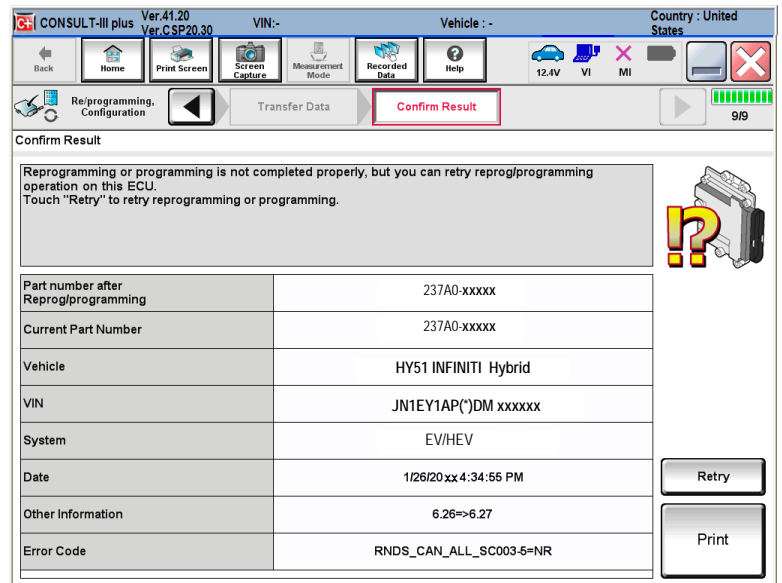


Figure 16

OR: If reprogramming does not complete and the **X** displays as shown in Figure 17:

**Do not disconnect plus VI or shut down Consult III plus if reprogramming does not complete.**

- Check battery voltage (12.0 - 15.5V).
- CONSULT A/C adapter is plugged in.
- Ignition is ON, Ready Mode is OFF.
- Transmission in Park.
- All C-III plus / plus VI cables are securely connected.
- All C-III plus updates are installed.
- Select **Home**, and then restart the reprogram procedure from the beginning.

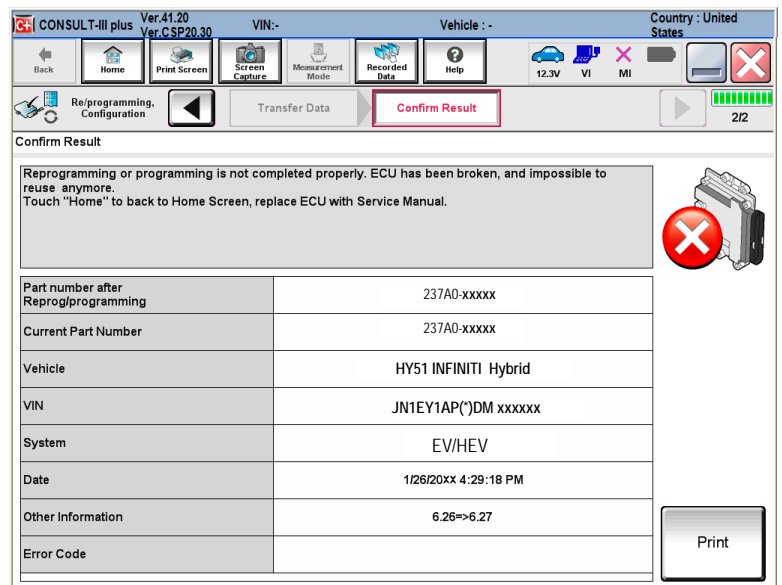


Figure 17

29. Erase all DTCs as follows:

- a. Turn the "ignition" off by depressing the power switch once.
  - The screen in Figure 18 will read **OFF** after pressing the power switch once.

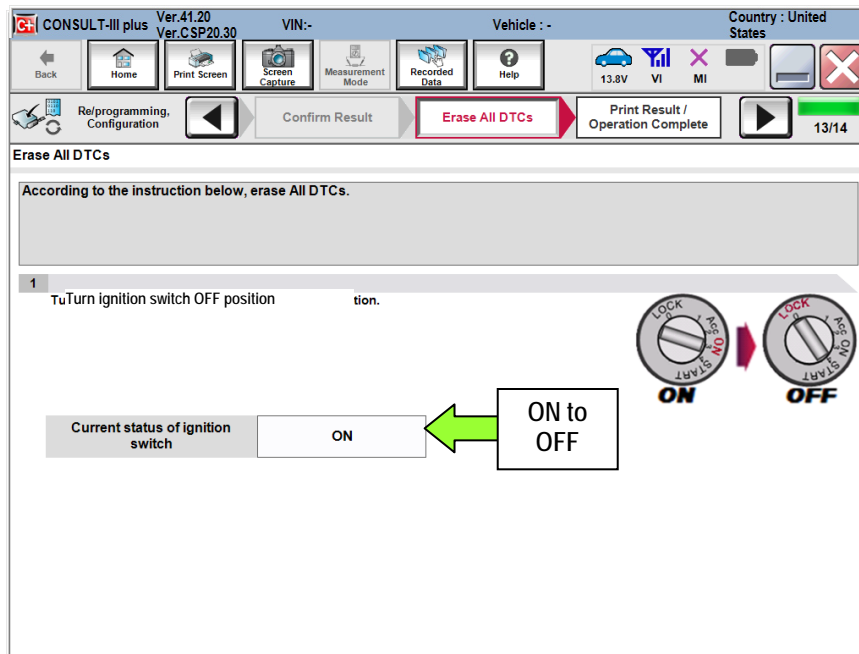


Figure 18

- b. Wait 1 minute with the ignition OFF.
- c. Turn the "ignition" ON by depressing the power switch twice (not Ready mode).
  - Do not step on the brake pedal when depressing the power switch.
  - The screen in Figure 19 will read **ON** after pressing the power switch twice.

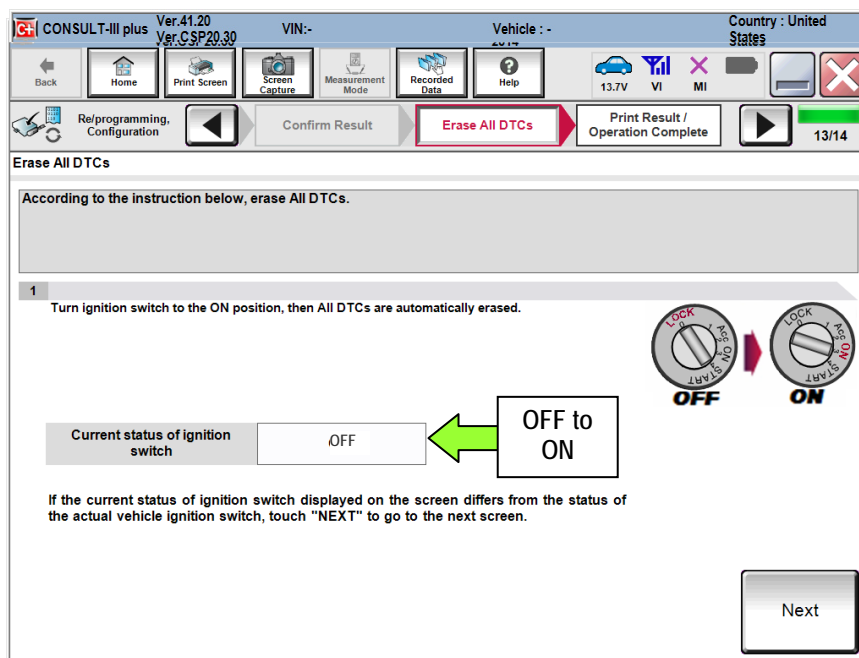


Figure 19

d. Wait for the ERASE function to complete.

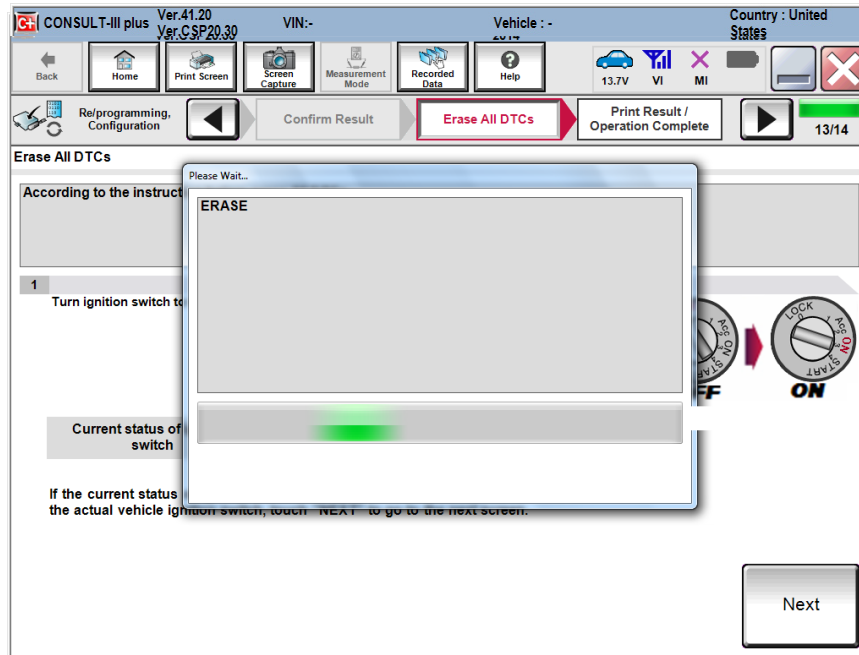


Figure 20

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

31. Print a copy of this screen (Figure 21) and attach it to the repair order.

32. Select Confirm.

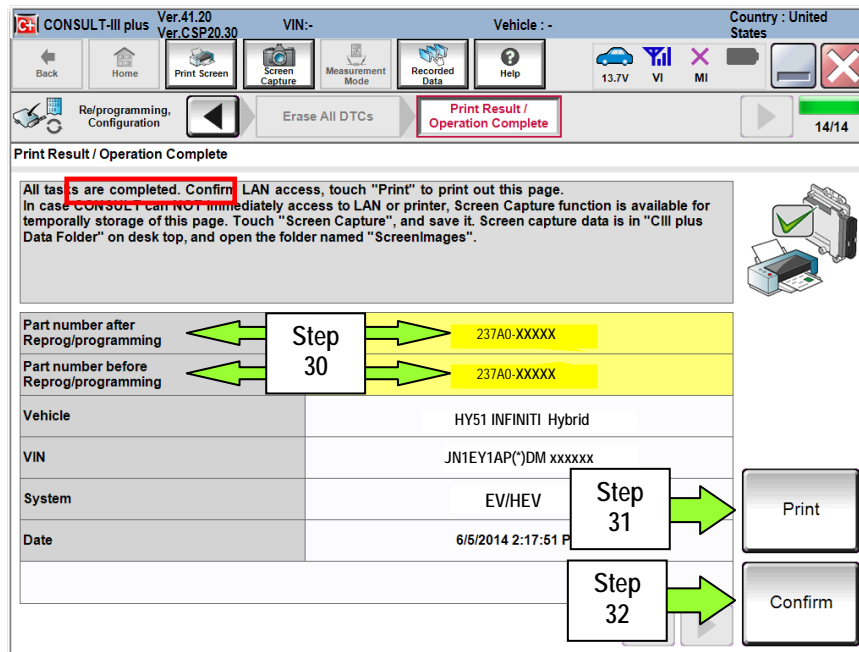


Figure 21

33. Select Home.

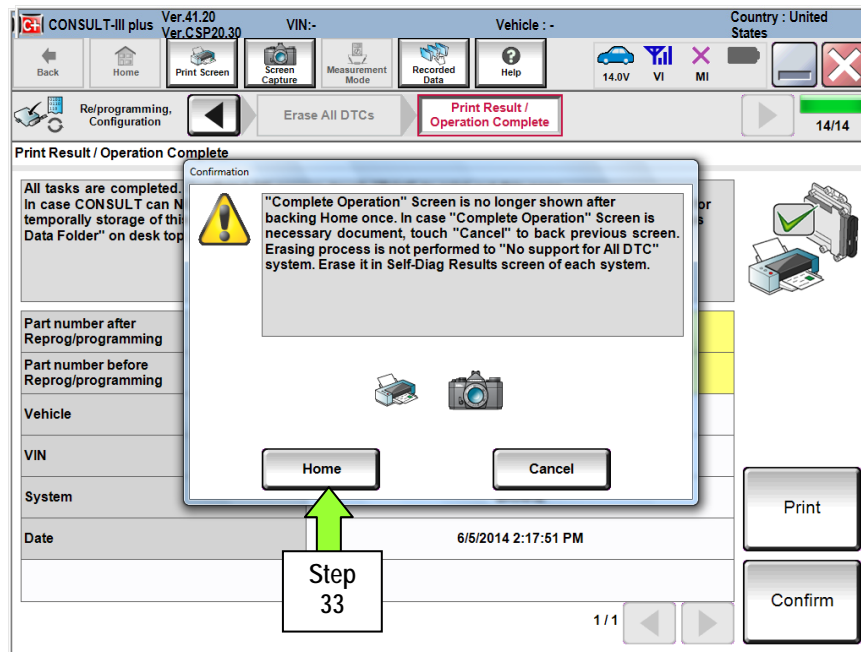


Figure 22



## Reprogram the TCM (Transmission Control Module)

1. Perform steps 10 – 17 starting on page 4 and then proceed to step 2 below.
2. Select **Transmission**.

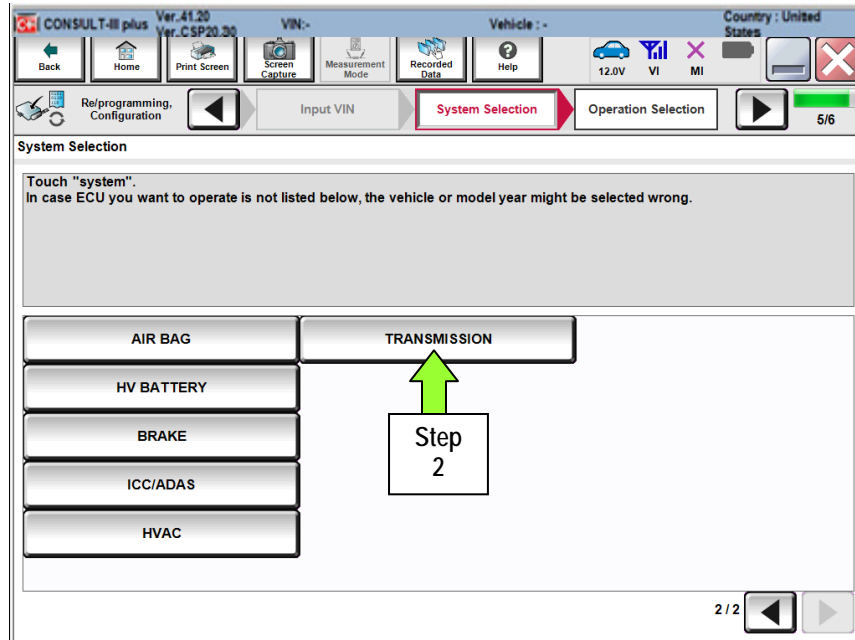


Figure 23

3. Select **Reprogramming**.

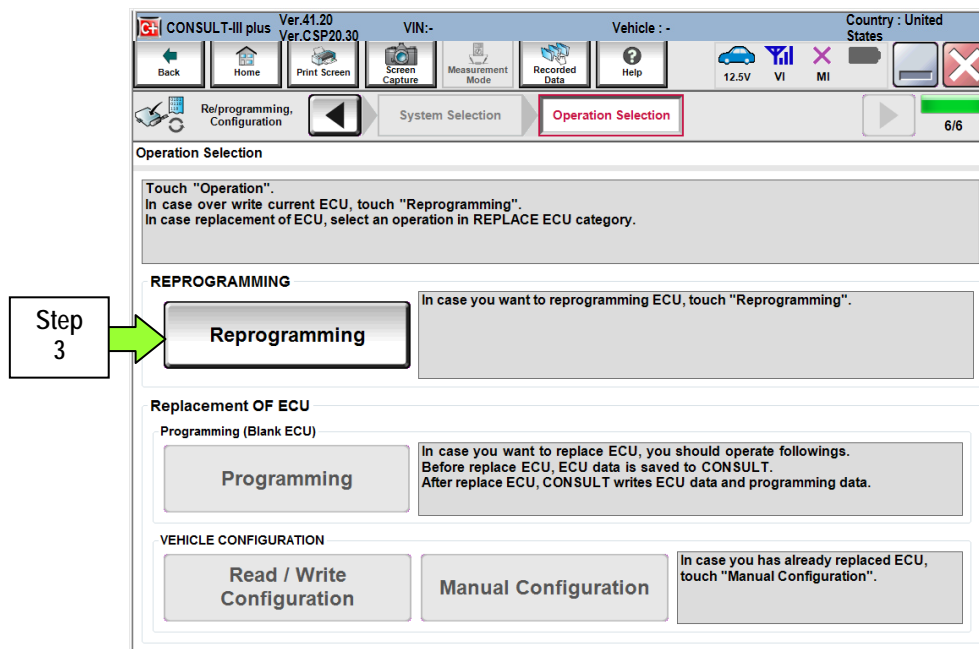


Figure 24

4. When you get to the screen shown in Figure 25, confirm if this TRANSMISSION (TCM) update has already been applied 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) and will also be needed for claims information.

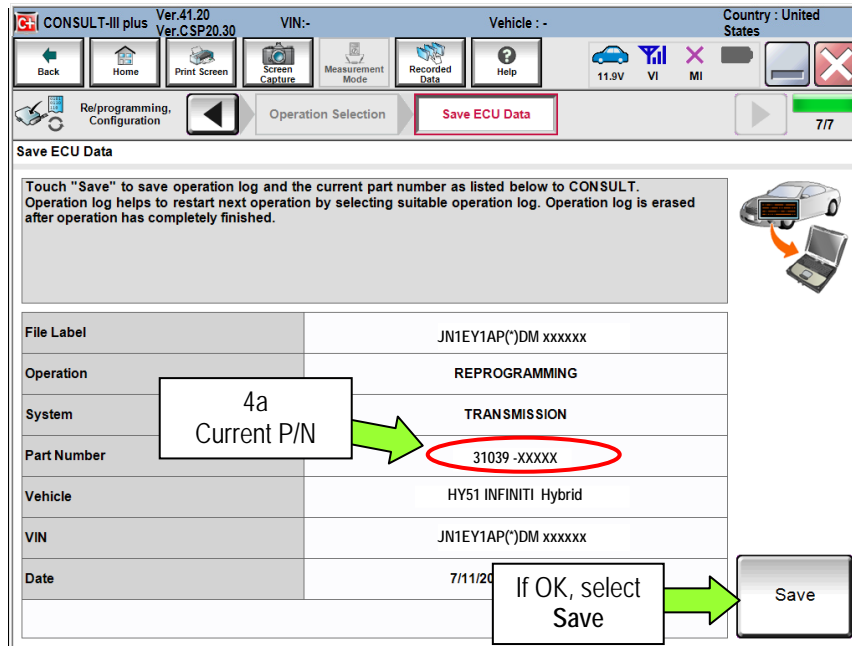


Figure 25

- b. Compare the P/N you wrote down to the numbers in the **CURRENT TCM PART NUMBER** column in **Table B** below.
  - If the TCM part number is one of the part numbers listed in the **Table B**, continue with reprogramming.
    - Select **Save**, and then go to the next step.
  - If the TCM part number is not listed in **Table B**, this part of the reprogram has already been performed.
    - Proceed to Step 18 on page 26.

Table B

MODEL YEAR	CURRENT TCM PART NUMBER: 31039 -
2012 - 2013 M35 (HY51)	3SX0A, 3SX1A, 3SX2A, 3SX3A, 3SX4A, 3SX5A, 3SX9A
	X960A, X961A, X963A, X964A, X966A

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

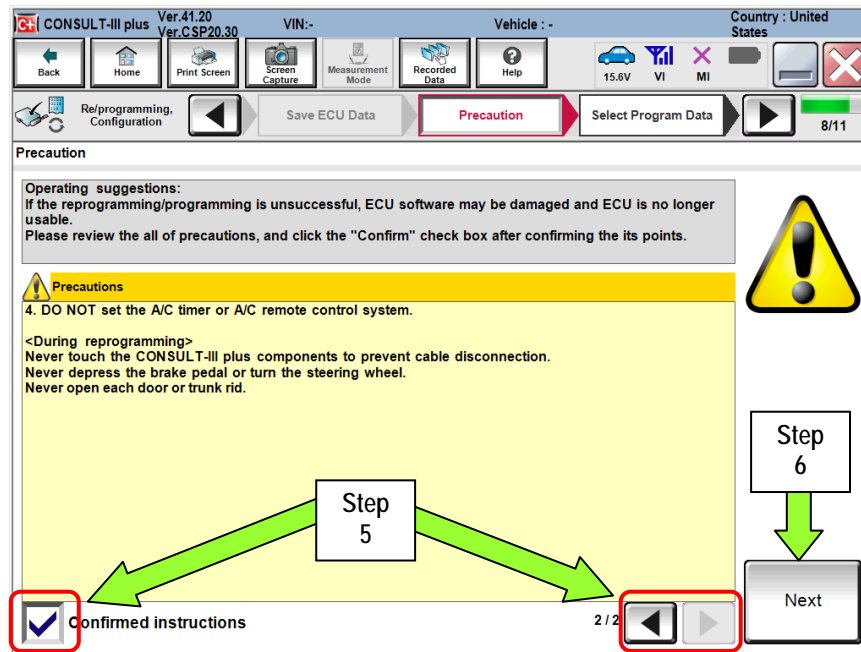


Figure 26

**NOTE:**

- In some cases, more than one new P/N for reprogramming is available.
  - If more than one P/N is available, the screen in Figure 27 will display. 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.

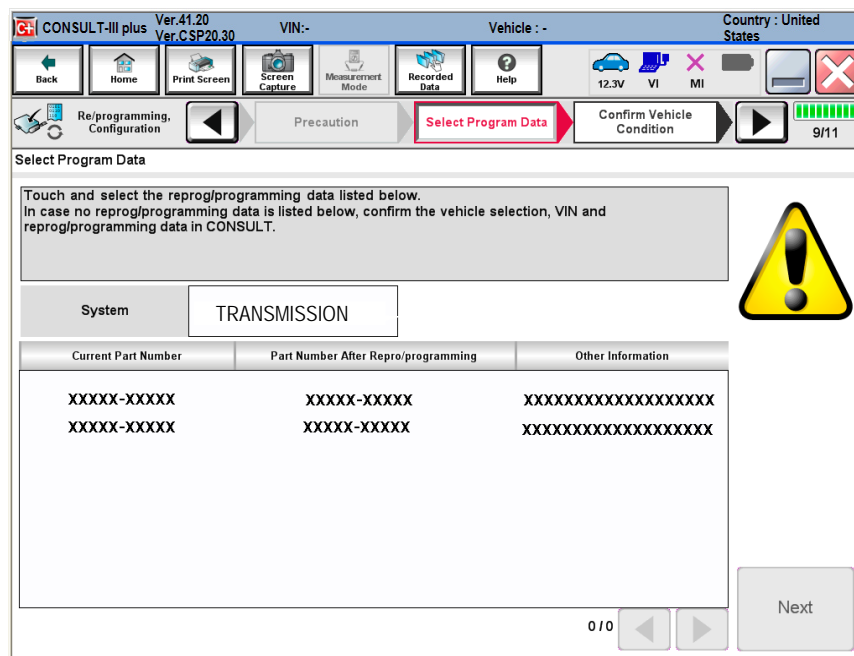


Figure 27

7. Read the **Current Part Number** and **Part Number After Reprogramming**. They should be different.
8. Select **Next**.

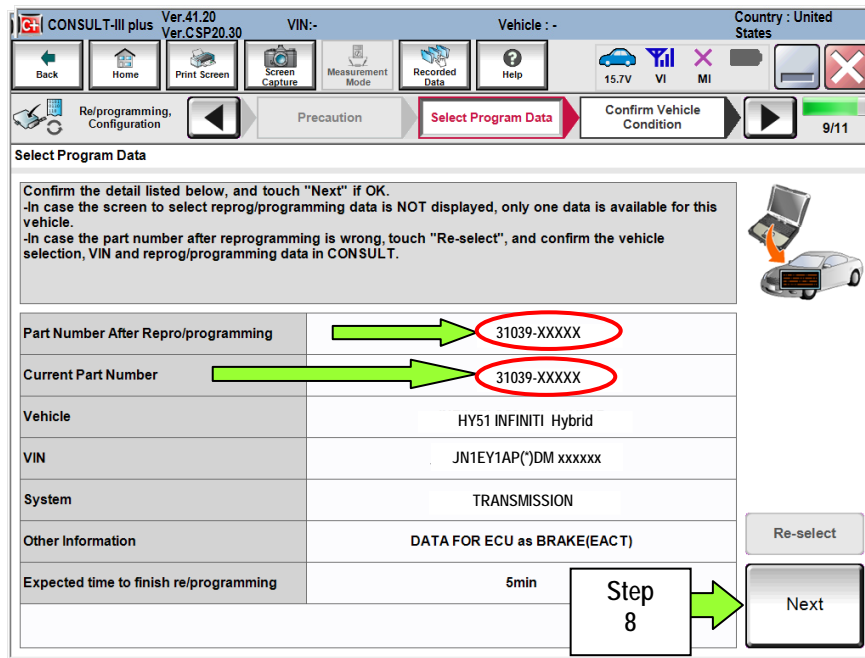


Figure 28

9. Confirm battery voltage is correct, and then select **Next**.

**NOTE:** Battery voltage must stay within specified range to make the indicator turn **green**.

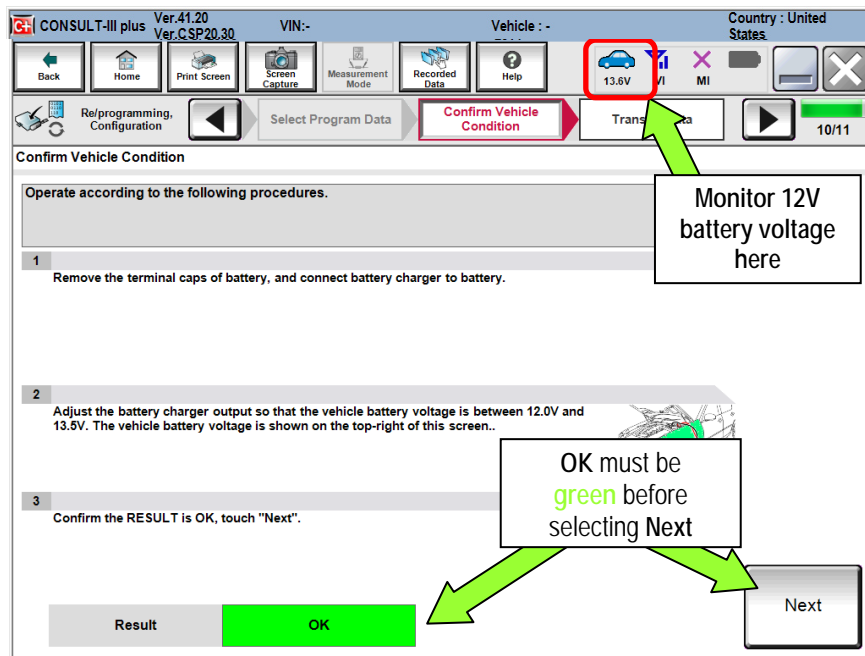


Figure 29

10. With battery voltage in the green, select **Start**.

- The reprogramming process begins when **Start** has been selected.

**NOTE:** For reprogramming to continue, vehicle 12V battery voltage must stay within 12 volts and 15.5 volts. Make sure the voltage level is sufficient.

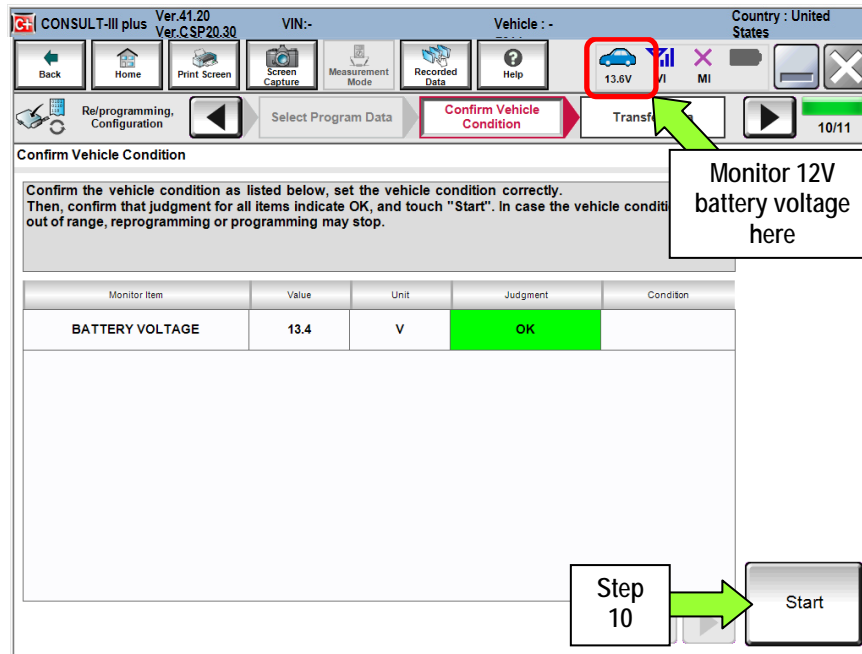


Figure 30

11. Wait for both bar graphs to complete.

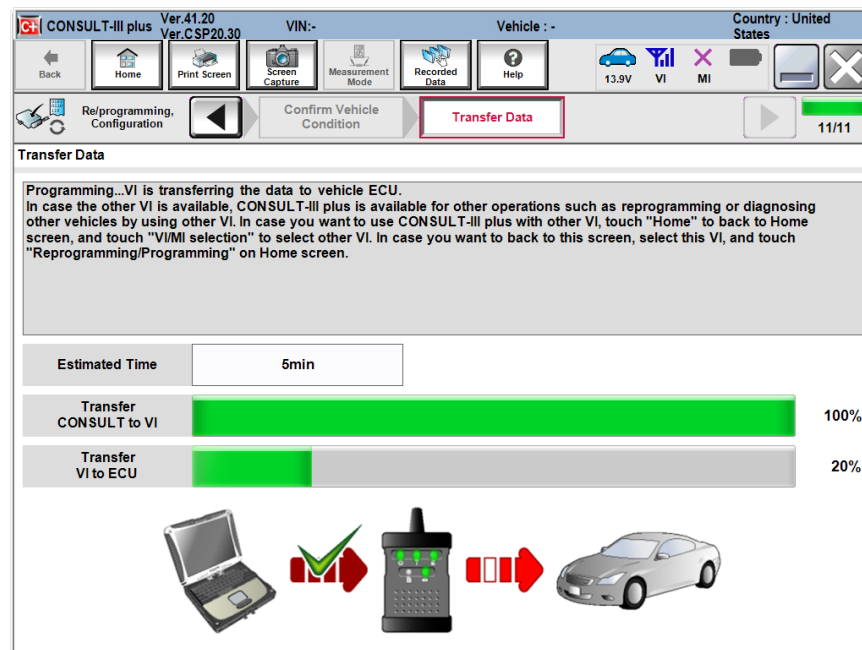


Figure 31

12. When the screen in Figure 32 displays, reprogramming is complete.
- a. Select **Next**, and then wait for System Call to complete.
  - b. Proceed to step 13 on page 24.

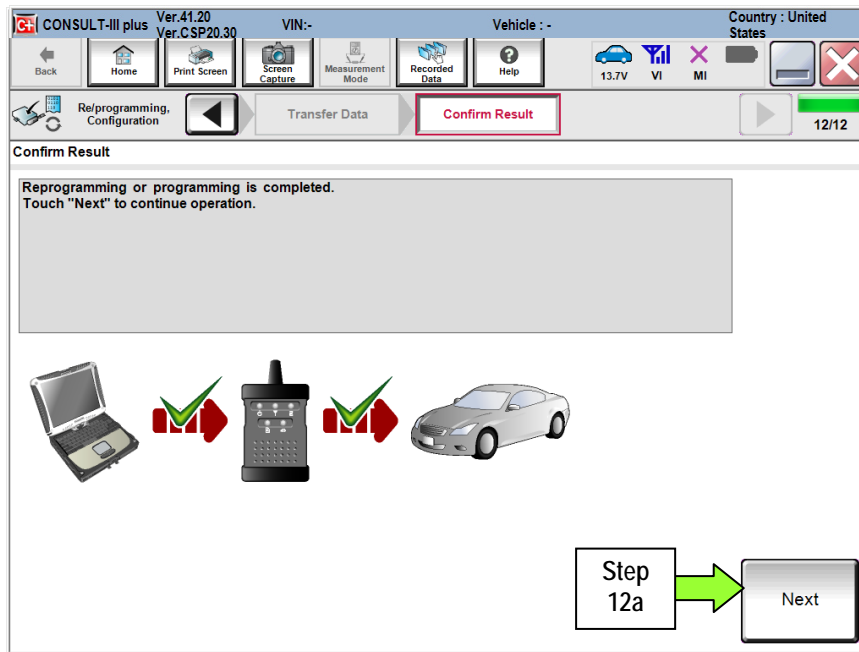


Figure 32

**NOTE:** If the reprogram will not complete, refer to the next page for "recovery" information.

## TCM (Transmission Control Module) recovery

NOTE: If reprogramming does not complete and the **!?** displays as shown in Figure 33:

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

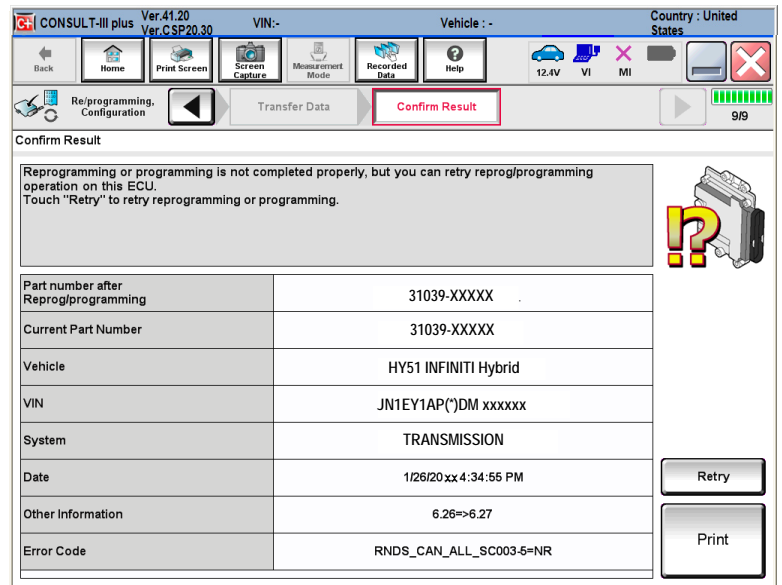


Figure 33

OR: If reprogramming does not complete and the **X** displays as shown in Figure 34:

**Do not disconnect plus VI or shut down Consult III plus if reprogramming does not complete.**

- Check battery voltage (12.0 - 15.5V).
- CONSULT A/C adapter is plugged in.
- Ignition is ON, Ready Mode is OFF.
- Transmission in Park.
- All C-III plus / plus VI cables are securely connected.
- All C-III plus updates are installed.
- Select **Home**, and then restart the reprogram procedure from the beginning.

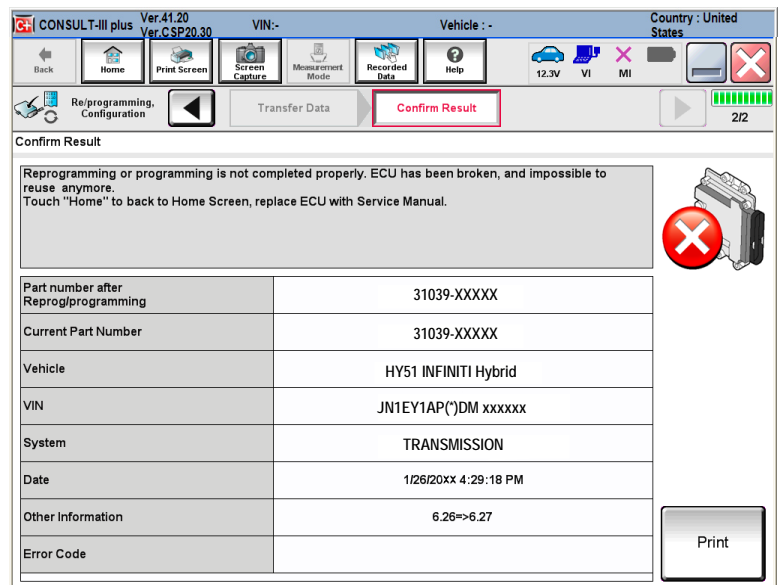


Figure 34

13. Erase all DTCs as follows:

- a. Turn the "ignition" off by depressing the power switch once.
  - The screen in Figure 35 will read **OFF** after pressing the power switch once.

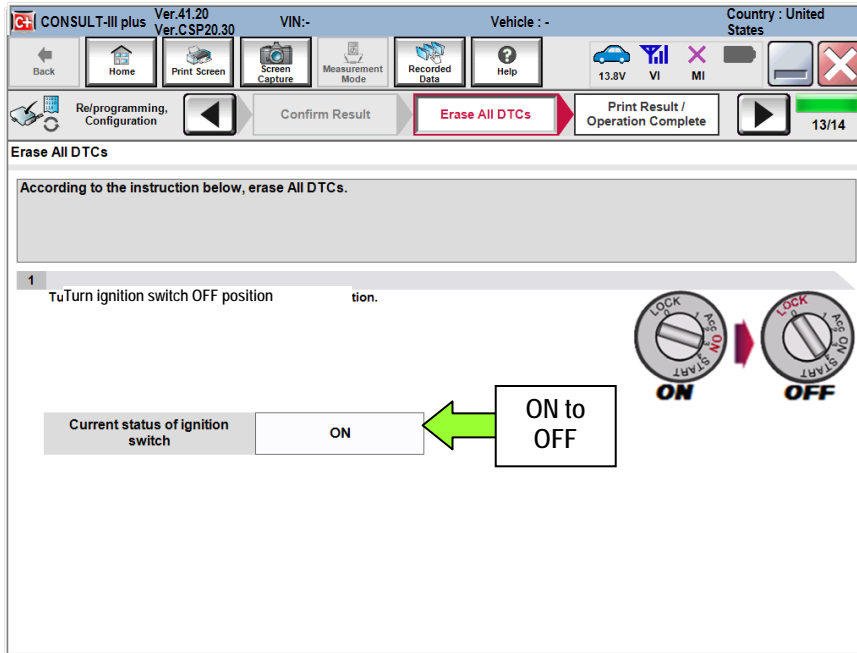


Figure 35

- b. Wait 1 minute with the ignition OFF.
- c. Turn the "ignition" ON by depressing the power switch twice (not "Ready" mode).
  - Do not step on the brake pedal when depressing the power switch.
  - The screen in Figure 36 will read **ON** after pressing the power switch twice.

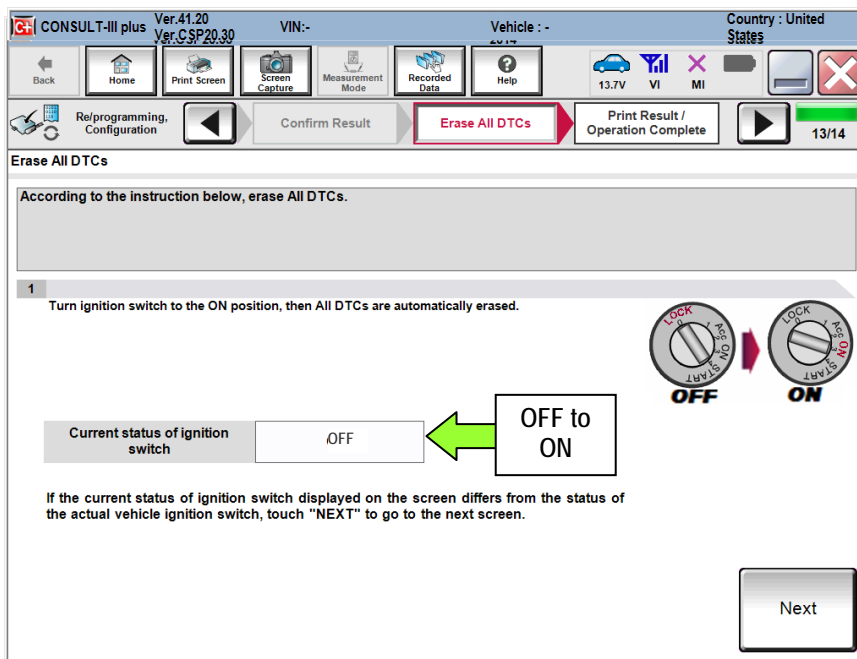


Figure 36



e. Wait for the **ERASE** function to complete.

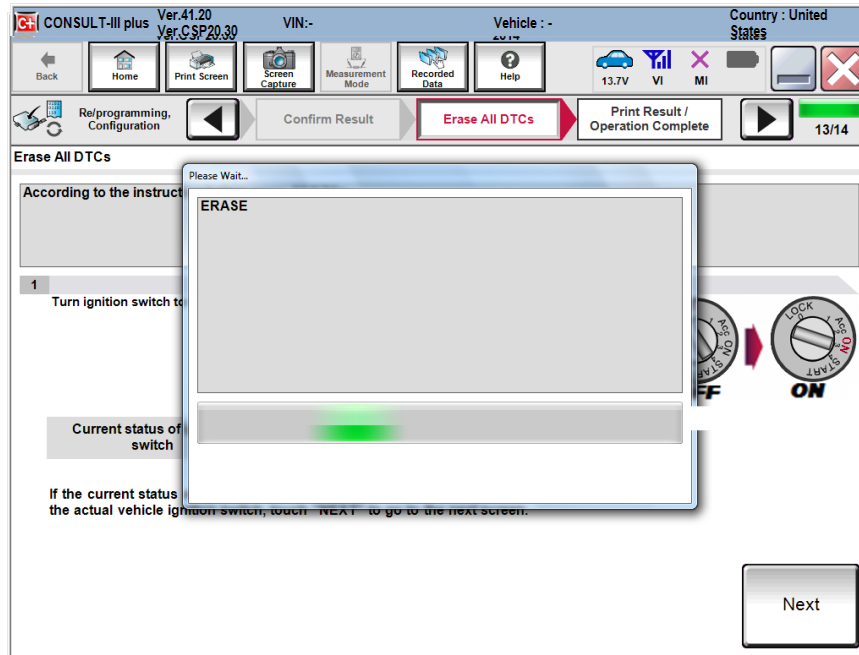


Figure 37

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

15. Print a copy of this screen (Figure 38) and attach it to the repair order.

16. Select **Confirm**.

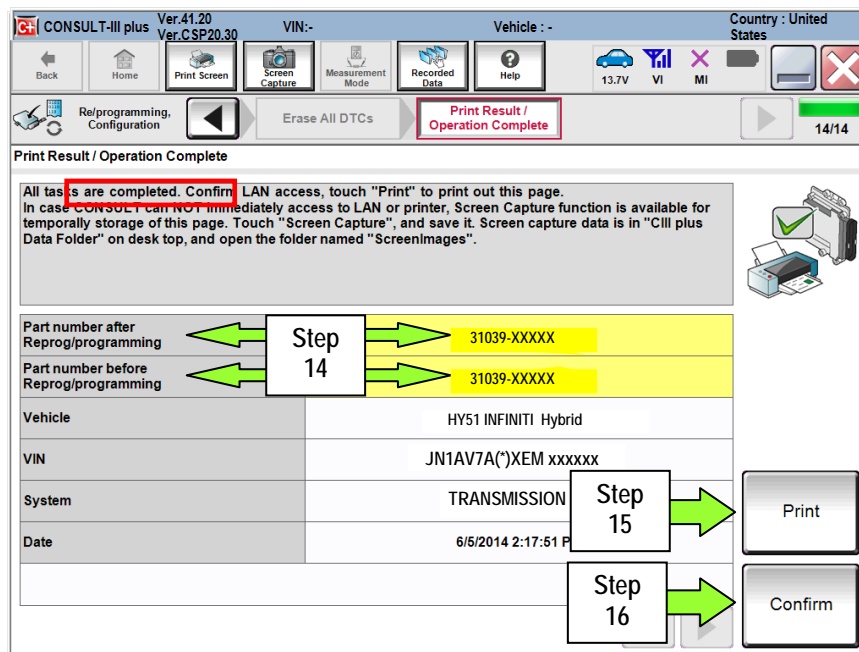


Figure 38

17. Select **Home**.

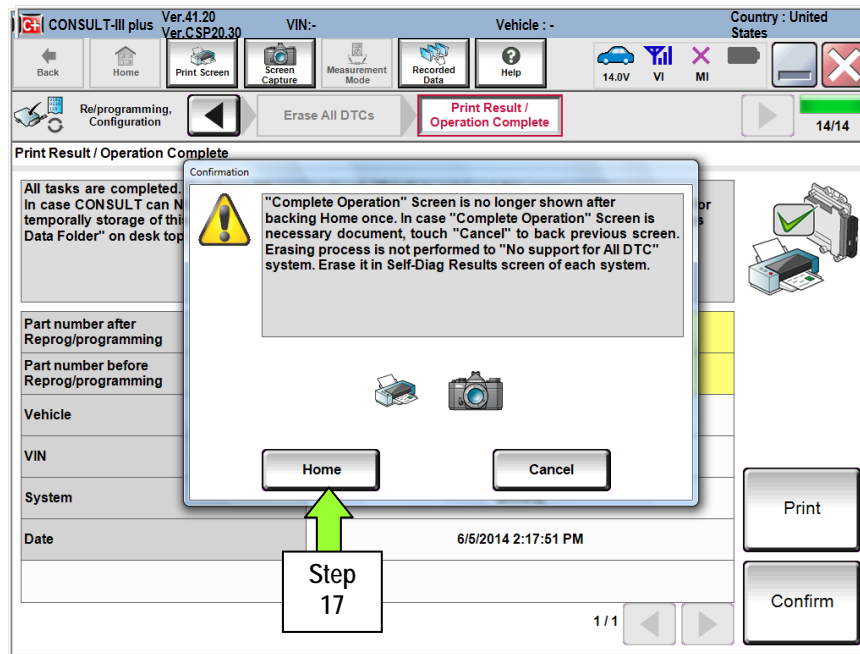


Figure 39

18. Select **Diagnosis (All Systems)**

19. After system call has completed select **ERASE** to clear any remaining DTCs.

20. Once all DTCs have been cleared turn "ignition" off (depress power switch once).

21. Select **Home**, and then on the next screen select **Yes** (screen not shown).

22. Close C-III plus, turn off the CONSULT PC, and then disconnect the CONSULT PC and plus VI from the vehicle.

23. Verify no additional error messages are displayed in the meter and gauges or center multi-function control panel.

## CLAIMS INFORMATION

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

OPERATION	OP CODE	PFP	SYM	DIAG	FRT
EV/HEV and TCM REPROGRAMMING	JX29AA	(1)	ZE	32	0.7

(1) Refer to the electronic parts catalog (FAST) and use the A/T Assembly part number (31020 - \*\*\*\*\*) as the Primary Failed Part (PFP).

