SERVICE CAMPAIGN BULLETIN

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Reference:	Date:
NTB13-061	June 6, 2013

VOLUNTARY SERVICE CAMPAIGN
2011-2012 LEAF; LI-ION BATTERY CONTROLLER AND ON-BOARD CHARGER REPROGRAM

CAMPAIGN I.D. #: P3227

APPLIED VEHICLE: 2011-2012 LEAF® (ZE0)

Check Service Comm to confirm campaign eligibility.

INTRODUCTION

This voluntary service campaign provides complimentary update of certain vehicle software in MY11-12 LEAFs to match current MY13 production specifications. The reprogramming of the Lithium Ion Battery controller is intended to improve the accuracy of the Battery Capacity Level Gauge. The reprogramming of the On-Board Charger is intended to expand the number of compatible chargers.

IDENTIFICATION NUMBER

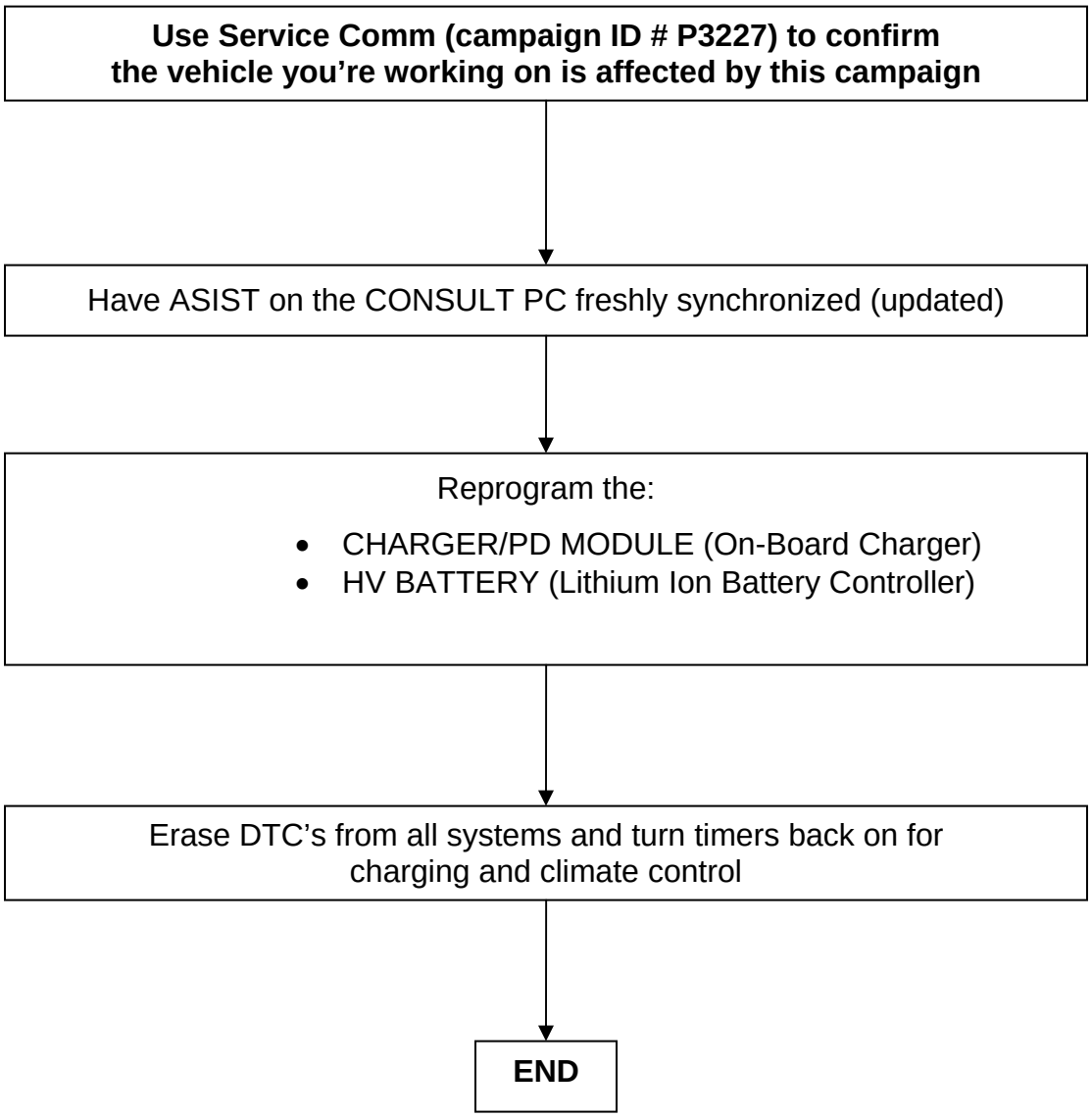
Nissan has assigned identification number P3227 to this campaign. This number must appear on all communications and documentation of any nature dealing with this campaign.

DEALER RESPONSIBILITY

Dealers are to repair vehicles falling within range of this campaign that enter the service department. This includes vehicles purchased from private parties, vehicles presented by transient (tourists) owners, and vehicles in a dealer's inventory.

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

REPAIR OVERVIEW



SERVICE PROCEDURE

Reprogram the CHARGER/PD MODULE (On-Board Charger) and the HV BATTERY (Lithium Ion Battery Controller)

1. **Before continuing, it is IMPORTANT to make sure:**
   - **ASIST on the CONSULT PC has been freshly synchronized (updated).**
   - **All CONSULT related software updates (if any) have been installed.**

     NOTE: The CONSULT PC automatically gets all reprogramming software during ASIST synchronization.

CAUTION:

- Turn off all cell phones and external Bluetooth devices within range of C-III plus.
- Do not touch C-III plus during reprogramming.
- Do not disconnect the AC adaptor during reprogramming.
- Do not disconnect the "plus" VIs diagnostic cables during reprogramming.
- Do not touch the power ("ignition") switch during reprogramming.
- Do not touch any electrical switch during reprogramming.

2. Have the **GR8 Multitasking Battery Diagnostic Station** (battery tester/charger) available and ready to use.
   - For proper setup, go to Page 38, **GR8 Multitasking Battery Diagnostic Station**.
   - Do not connect the battery tester/charger at this time. The battery tester/charger will be set up later in this bulletin.

     CAUTION: Battery voltage must stay between 12 volts and 15.5 volts during each reprogramming or module recovery may not be available.

     CAUTION: Do not charge the High Voltage (HV) Lithium Ion battery during reprogramming and disconnect Electric Vehicle Service Equipment (EVSE).

     NOTES:

     - Check to see if the timer for either charging or climate control is on. If on, turn it off and make sure to turn it back on after reprogramming.

3. Once all ASIST and CONSULT related updates have been performed, attach the CONSULT PC to vehicle.
   - Connect the plus VI to the vehicle and then to the Consult PC with the USB cable.
   - Connect the AC adapter to the CONSULT PC.

4. Turn on the CONSULT PC, and then open C-III plus.

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.

     NOTE: Make sure all accessories are turned off.

6. After the plus VI is recognized, select **Diagnosis (All Systems)** and then **Confirm**.
   - After system call has completed erase all DTCs.

7. Select the **Home** button and then **YES** to return to the screen shown in Figure 1, and then select **Re/programming, Configuration.**

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

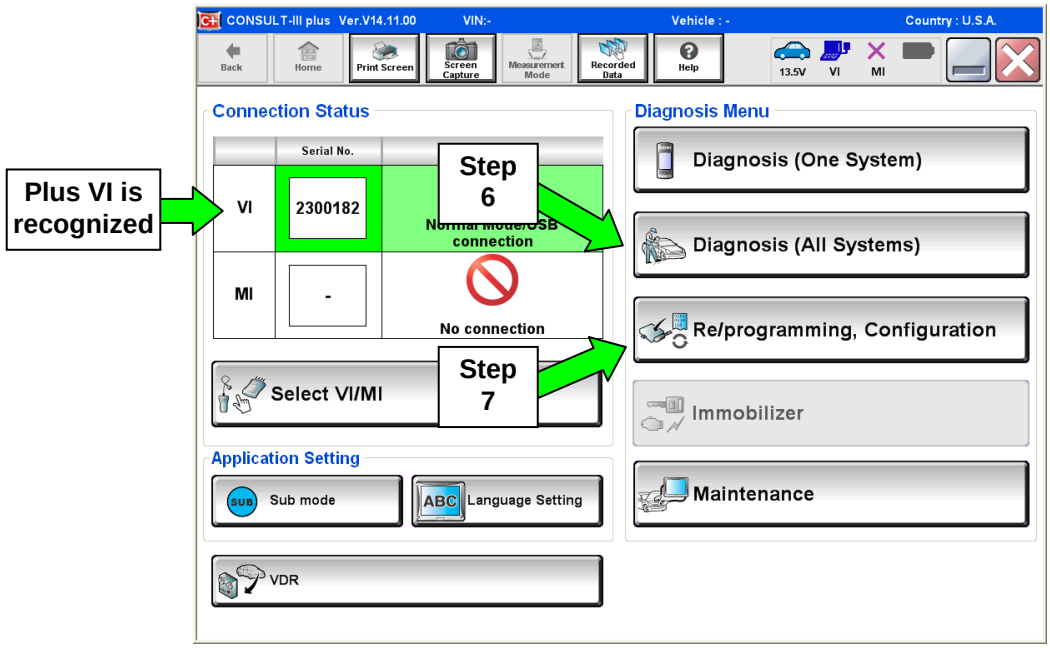


Figure 1

8. Check mark box for **Confirmed Instructions** (circled in green) by selecting it, and then select **Next**.

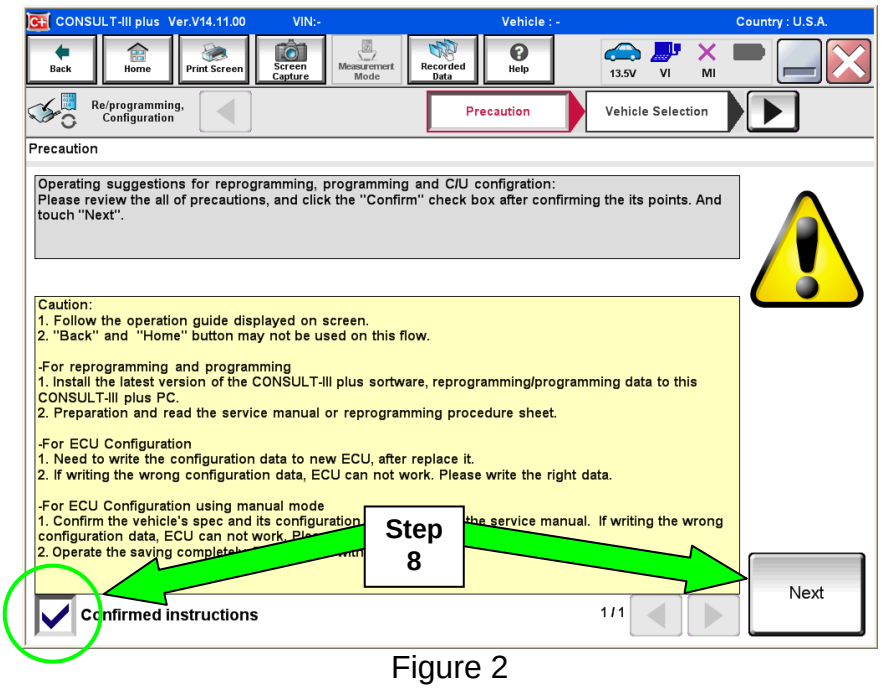


Figure 2

9. Select **LEAF** and **2011** or **2012,** or **Automatic Selection (VIN)**.

   - If **Automatic Selection (VIN)** is selected, wait for the **Reading VIN** screen to complete (picture not shown).

10. Select **Select**.

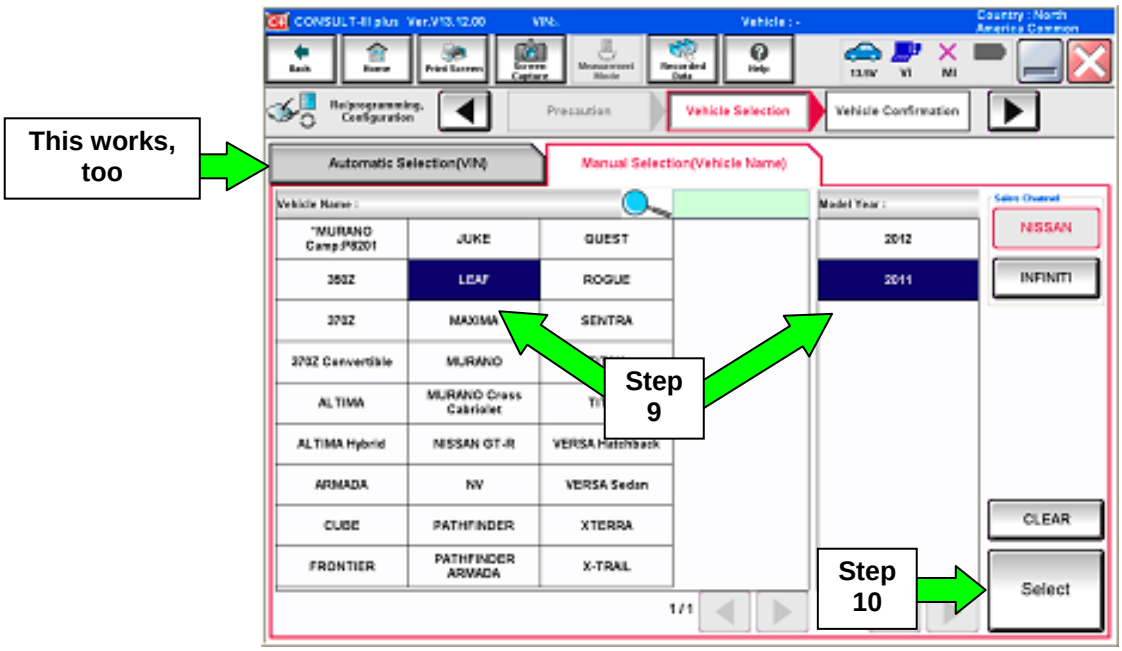


Figure 3

11. Verify the VIN in **VIN or Chassis #** matches that of the vehicle.
    - If the correct VIN is displayed, select **Confirm**.

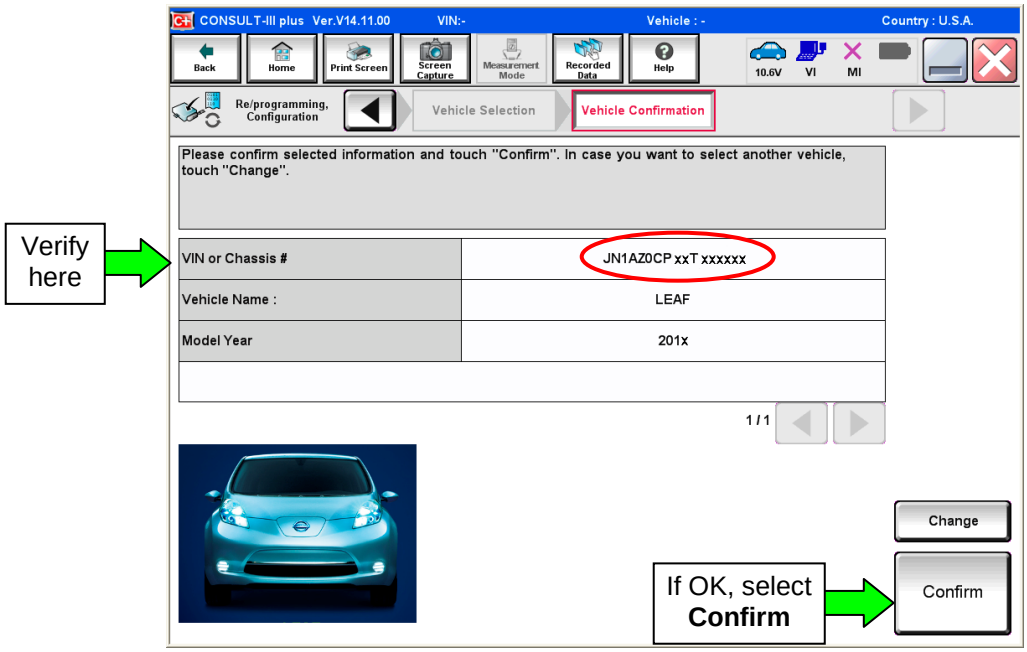


Figure 4

12. Select **Confirm** again.

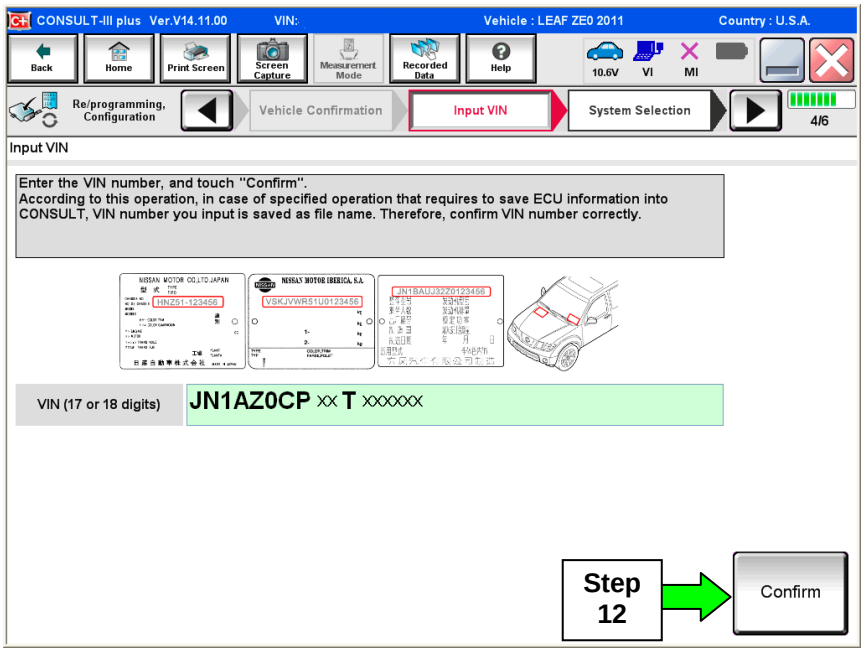


Figure 5

CHARGER/PD MODULE (On-Board Charger) update

13. Select **CHARGER/PD MODULE.**

- Wait for system call to complete.

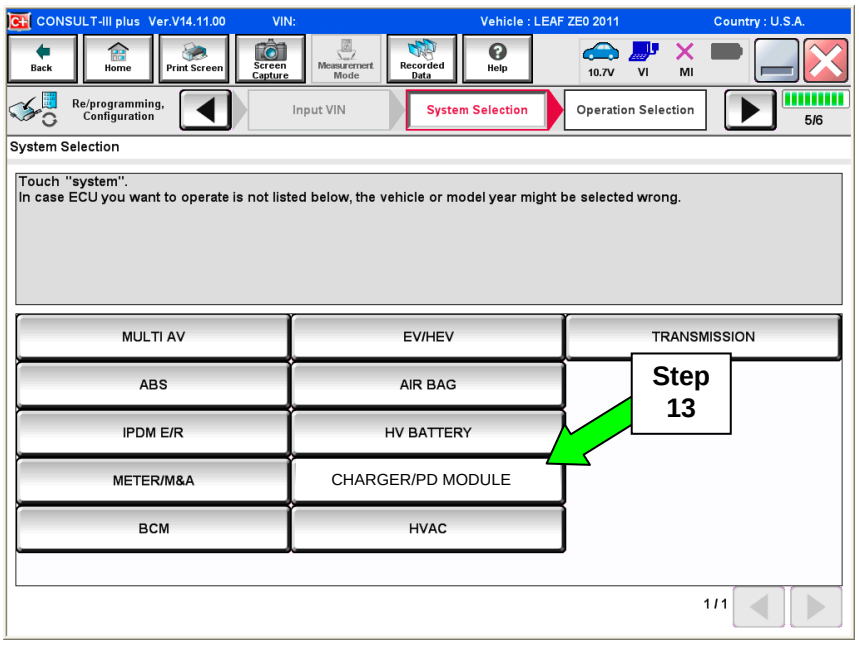


Figure 6

14. Select **Reprogramming**.

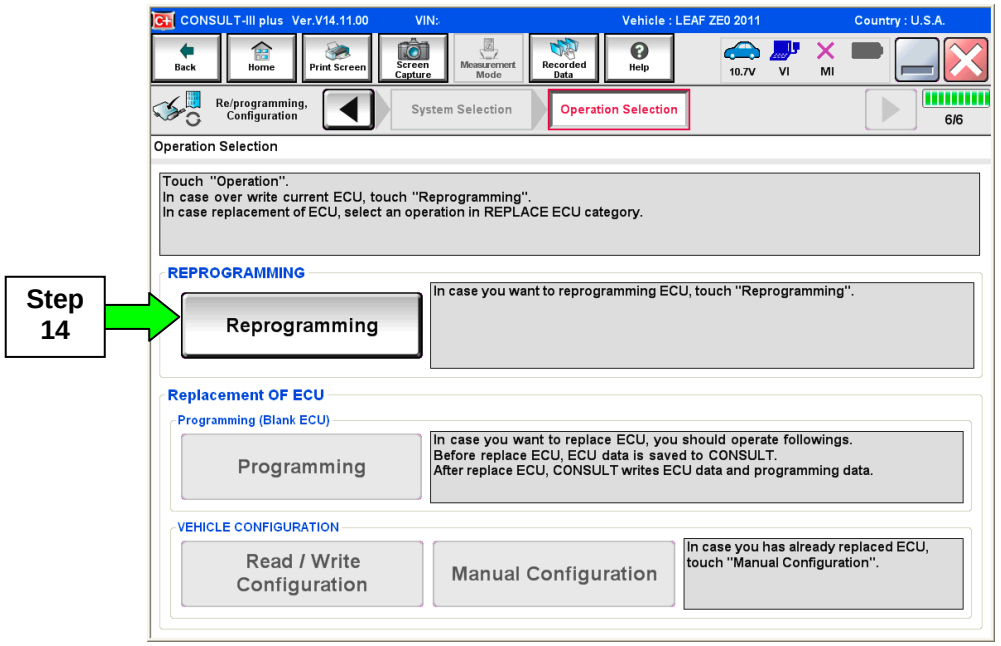


Figure 7

15. Write down the **Part Number** on the vehicle's repair order (see Figure 8) and confirm if it matches one of the part numbers in Table "A" below.

Table A

MODEL YEAR	CURRENT CHARGER/PD MODULE PART NUMBER: 296A0-
2011-2012 LEAF (ZE0)	3NA0A, 3NA1A, 3NA2A, 3NA3A, 3NA4A, 3NA5A, 3NA6A, 3NA4E

- If the CHARGER/PD MODULE part number is one of the part numbers listed in the table above, continue with reprogramming.
  - ➢ Select **Save**, and then go to Step 16.
- If the CHARGER/PD MODULE part number is not listed, proceed to the HV BATTERY module update on page 18.
  - ➢ If the CHARGER/PD MODULE part number **is not** in the table above, this campaign may not apply or it has already been done. Recheck Service Comm for campaign eligibility.

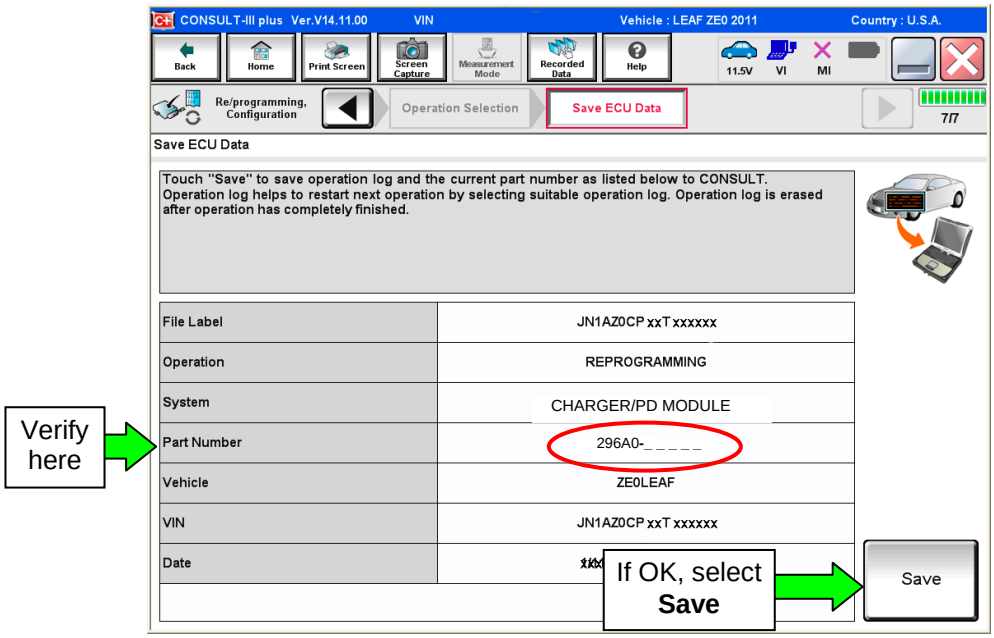


Figure 8

16. Read the precautions on page 1, and then select page 2 (page 2 not shown) with arrow. After reading page 2, select **Confirmed instructions**, and then select **Next**.

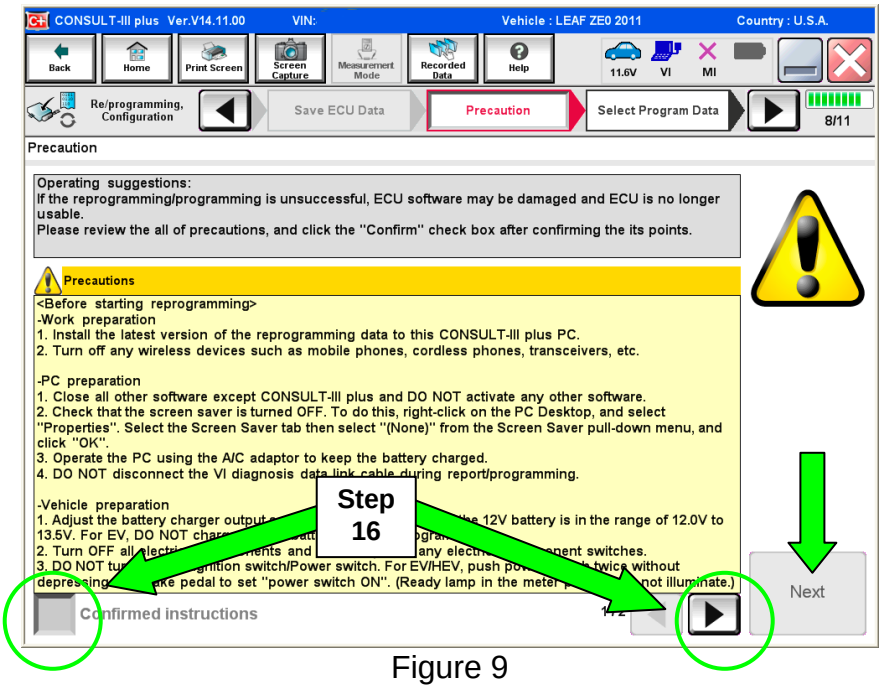


Figure 9

NOTE: In some cases, more than one new P/N for reprogramming is available.

- In this case, the screen in Figure 10 will display.
- Select and use the reprogramming option that **<u>does not</u>** have the message "Caution! Use ONLY with NTBXX-XXX".

- If you get this screen and it is <u>blank</u> (no reprogramming listed), it may mean that there is no reprogramming available for this vehicle, this <u>campaign does not apply</u> or it has already been done. Recheck Service Comm for campaign eligibility.

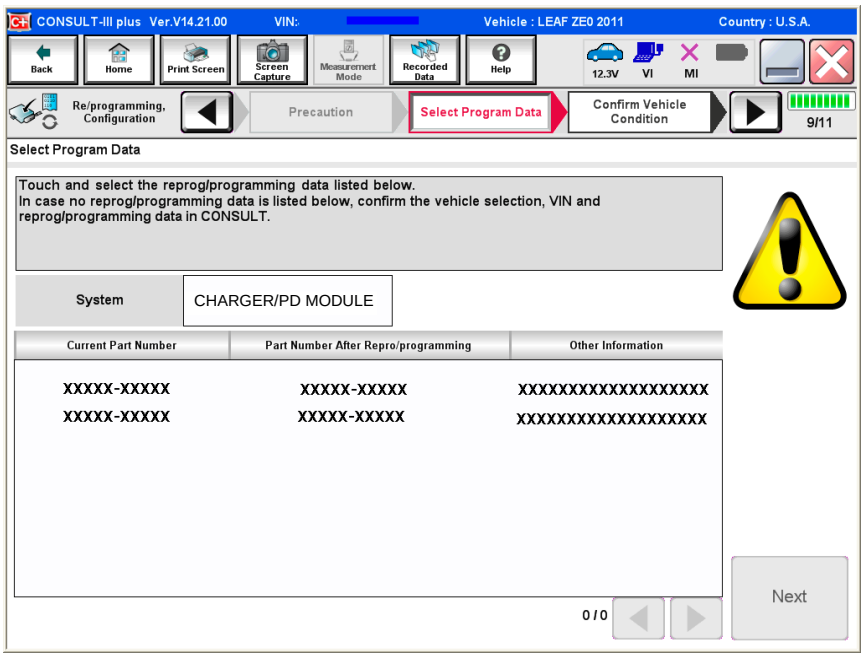


Figure 10

17. Verify the **Current Part Number** matches the Part Number written down in step 15, and then select **Next**.

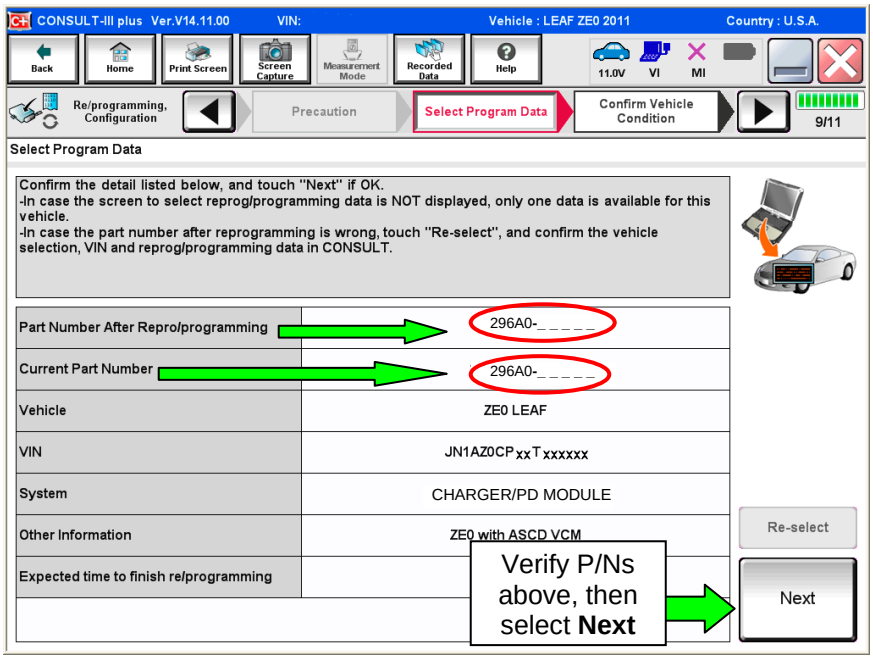


Figure 11

18. If the screen in Figure 12 appears, first select **Delete** then **Confirm,** and then **Other Operation**.

- This will erase the **Saved Data List** and restart the reprogram from step 13.
- If no **Saved Data List** is stored Figure 14 will be displayed. Proceed to step 19.

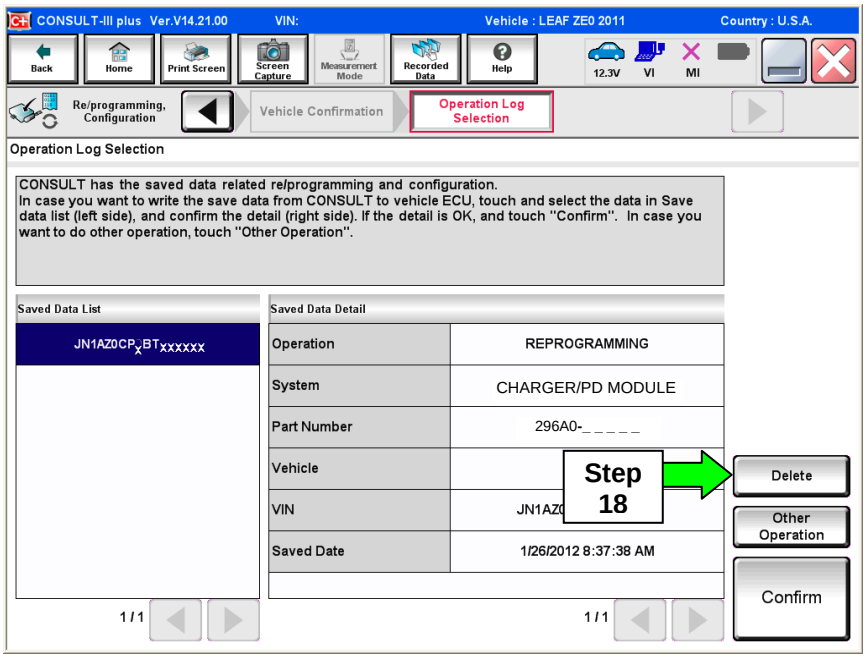


Figure 12

19. Open the hood, and then set up the GR8 Multitasking Battery Diagnostic Station (battery tester/charger) for the 12V battery.
    - For battery charger/tester setup, refer to Page 38, **GR8 Multitasking Battery Diagnostic Station Setup**.

      CAUTION: Battery voltage must stay between 12 volts and 15.5 volts.

      CAUTION: Do not charge the High Voltage (HV) Lithium Ion battery during reprogramming.

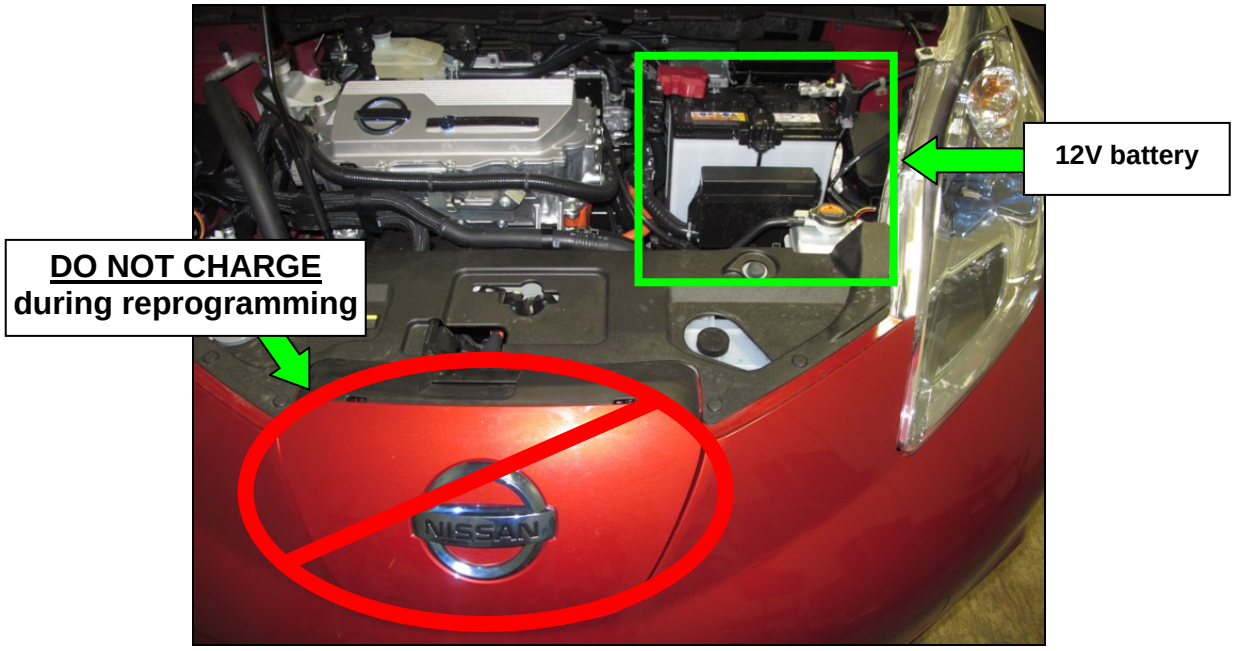


Figure 13

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

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

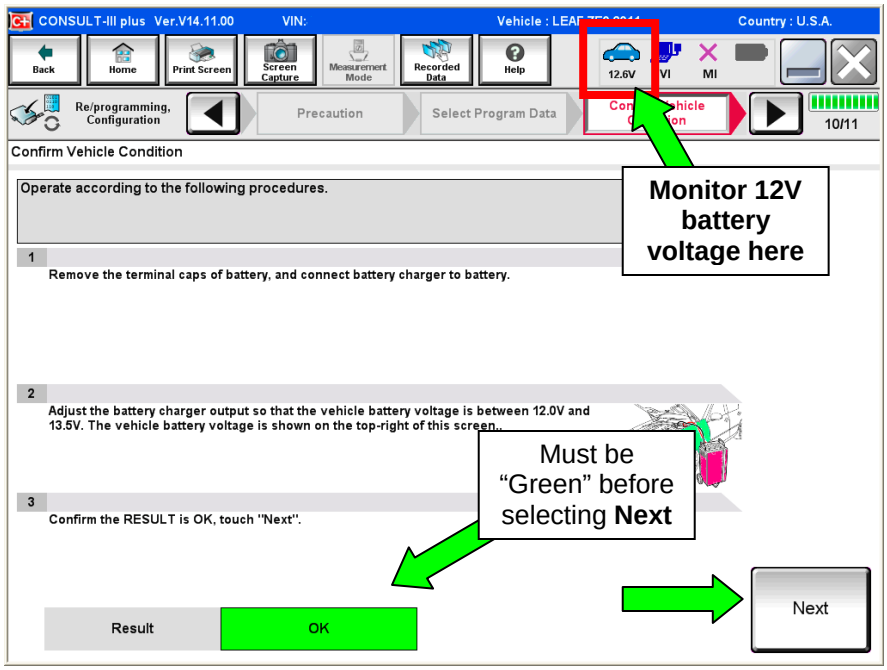


Figure 14

21. 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.

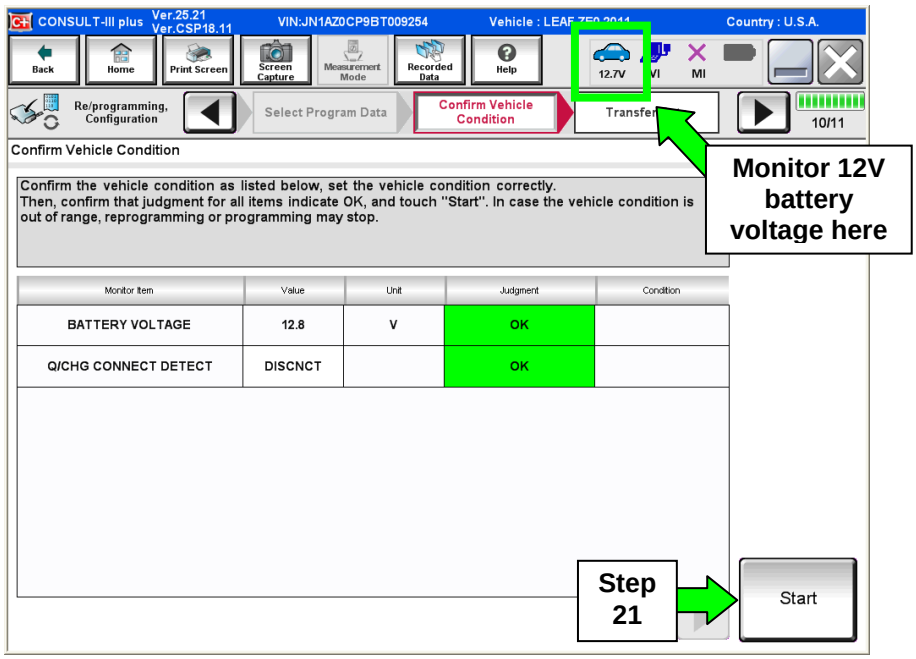


Figure 15

22. Wait for both bar graphs to complete.

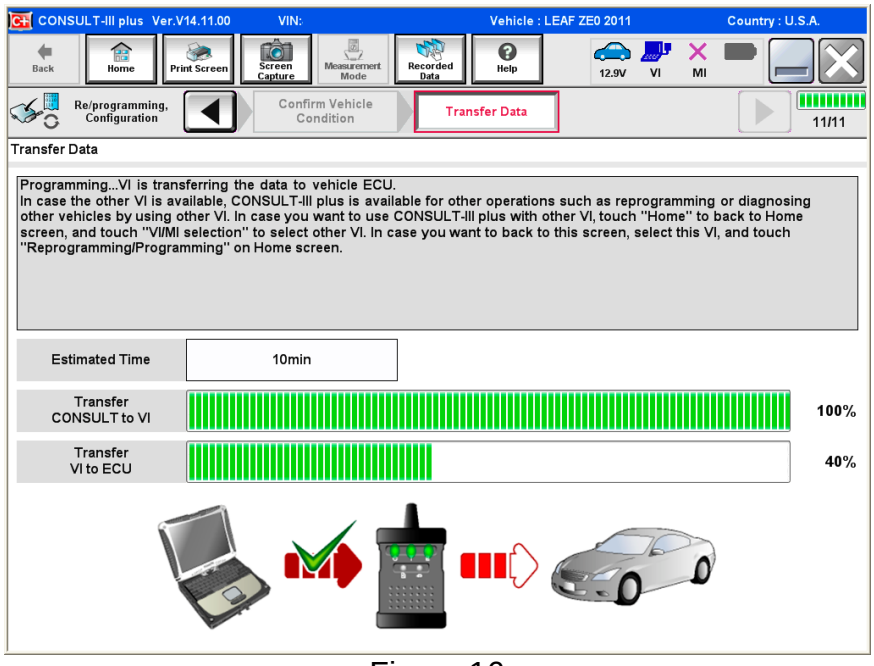


Figure 16

23. When the screen in Figure 17 appears, reprogramming is complete.
    a. Select **Next**, and then wait for System Call to complete.
    b. Proceed to step 24 on page 15 to erase DTCs.

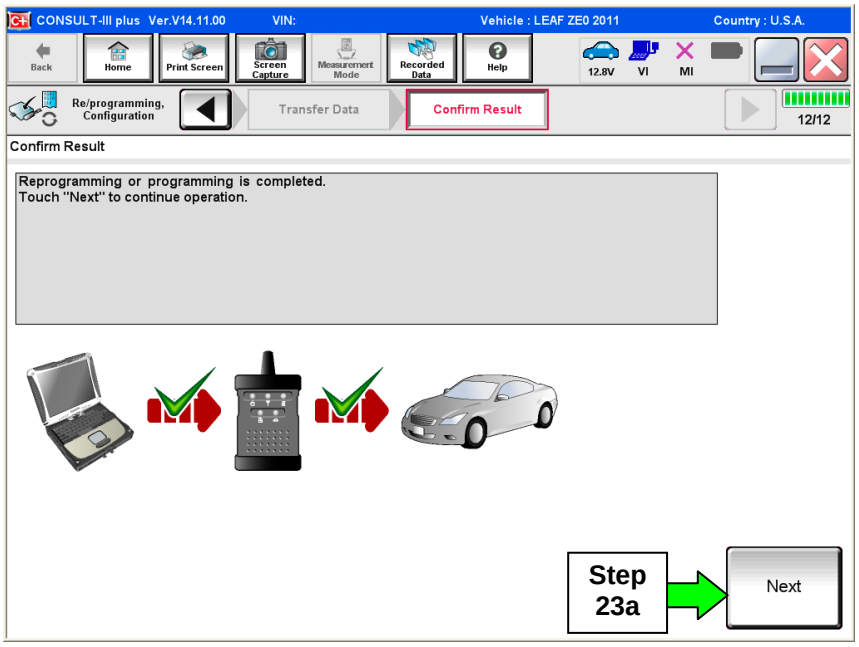


Figure 17

NOTE: If the reprogram will not complete, see the next page (page 14) to **RETRY** the reprogram update.

CHARGER/PD MODULE (On-Board Charger) recovery

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

- 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 first attempt and can be selected more than once.

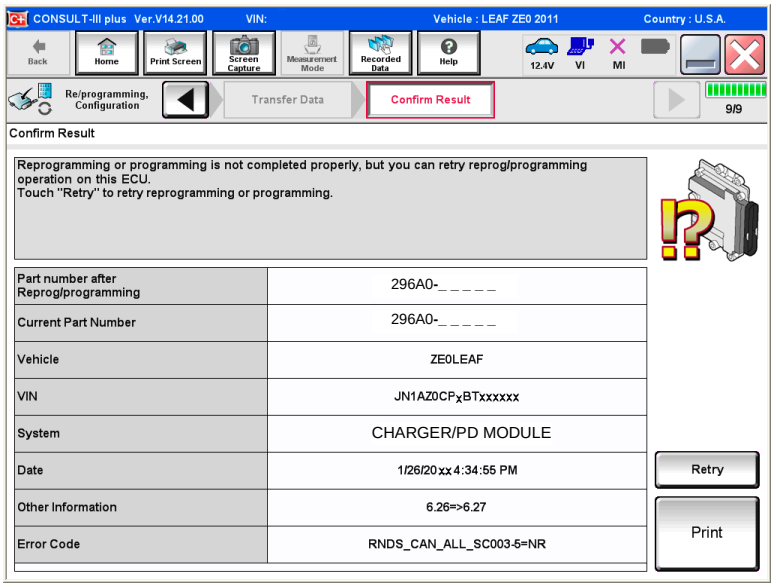


Figure A

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

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.**

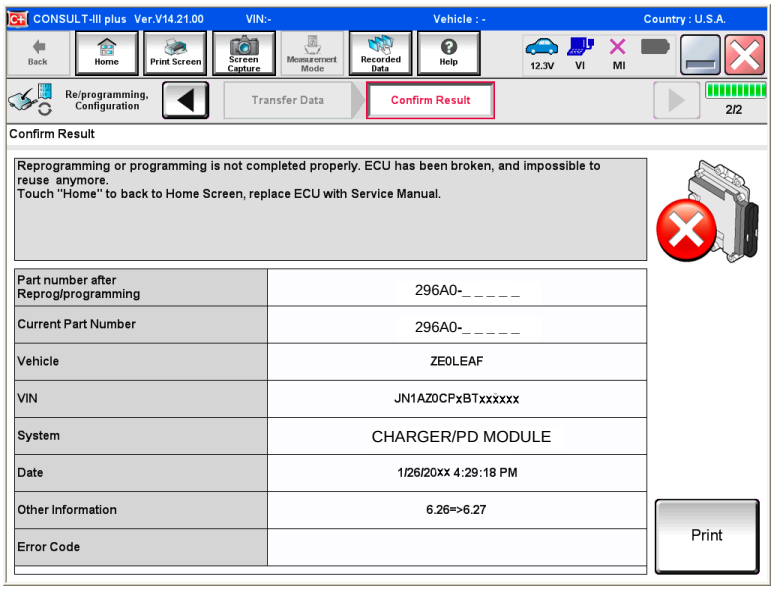


Figure B

24. Erase all DTCs:

a. Turn “ignition” off by depressing the power switch once.

- The screen in Figure 18 will read **OFF** after pressing the power switch <u>once</u>.

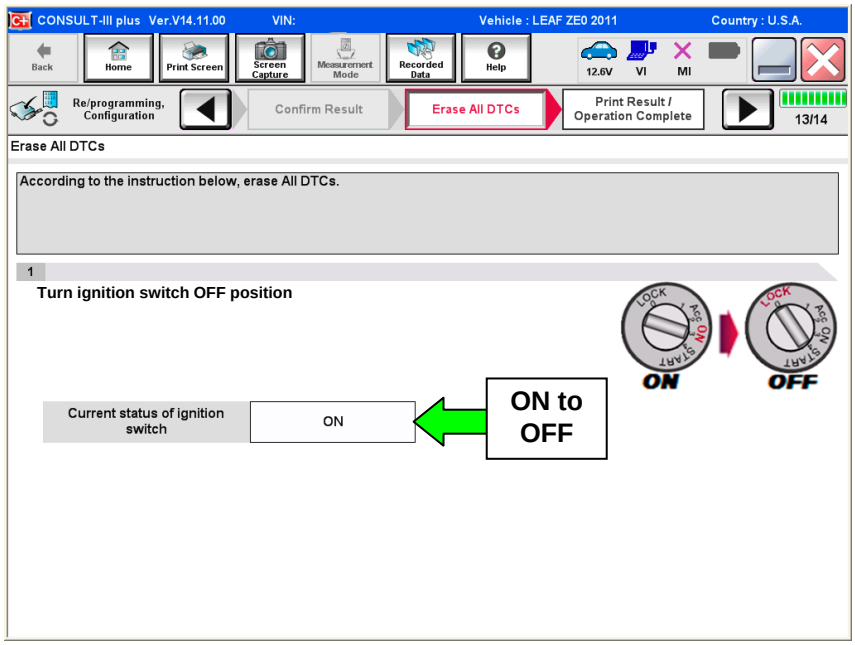


Figure 18

b. <u>Wait 1 minute with the ignition **OFF**</u>.

c. Turn “ignition” on by depressing the power switch twice.

- 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 <u>twice</u>.

NOTE: Do not be confused by any screen messages. At this point, simply turn the “ignition” on.

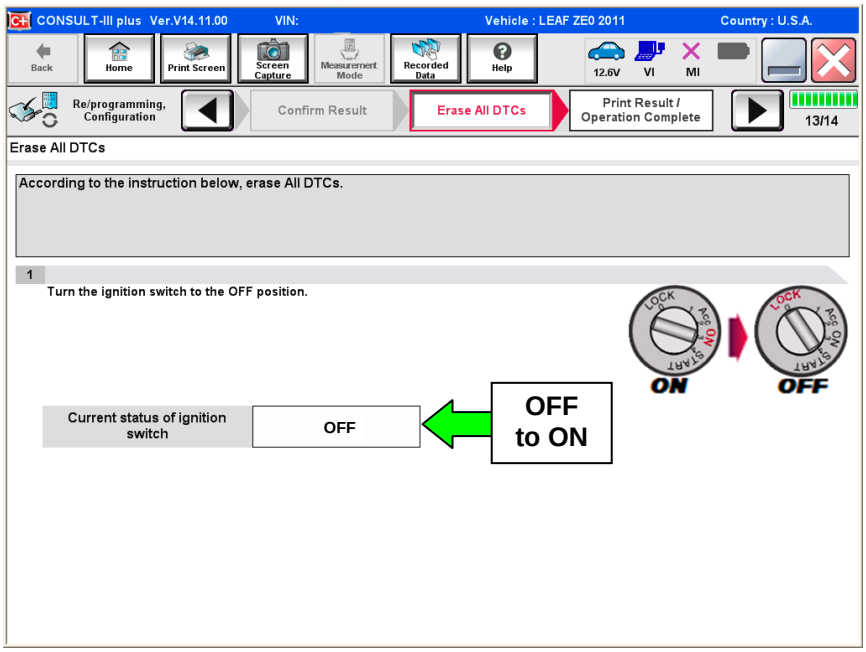


Figure 19

d. Wait for the bar graph in the **ERASE** window to complete 100%.

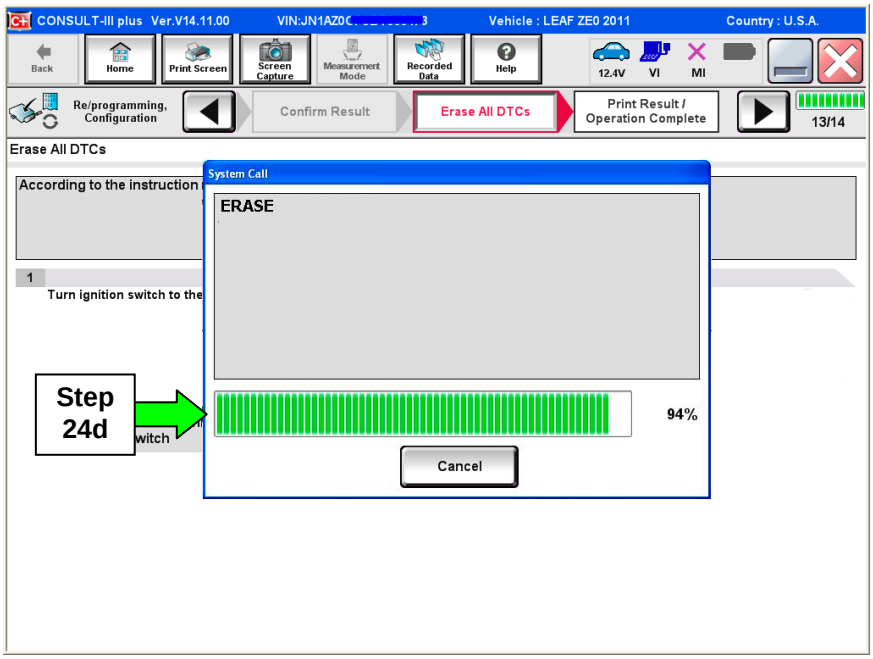


Figure 20

25. Verify the part number has changed.

a. Print a copy by selecting **Print**.

NOTE: Before and after part numbers on your print-out may be switched compared to your CONSULT PC screen. This is ok.

b. Attach the copy to the repair order.

c. Once a copy has been printed, select **Confirm**.

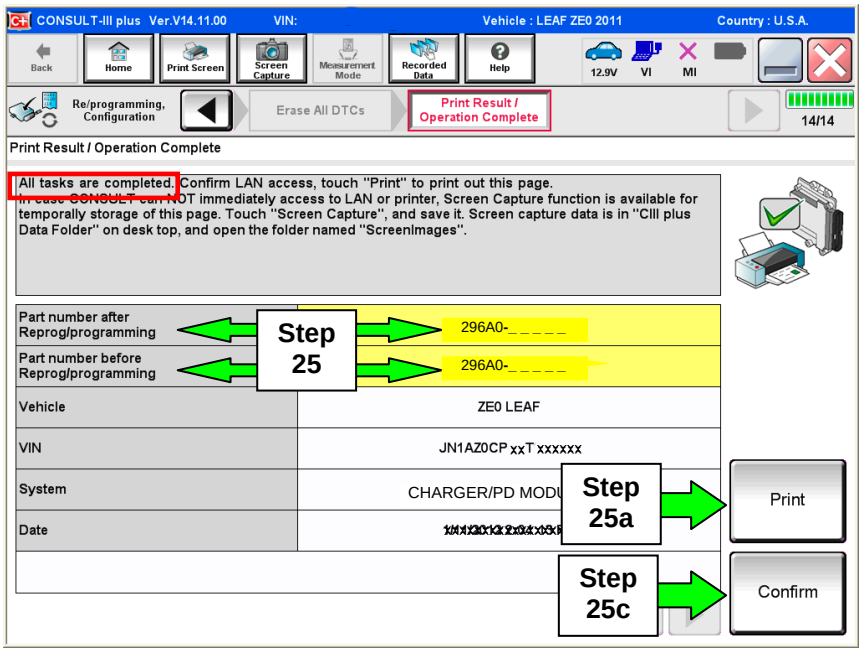


Figure 21

26. After Confirmation has completed, select **Home**.

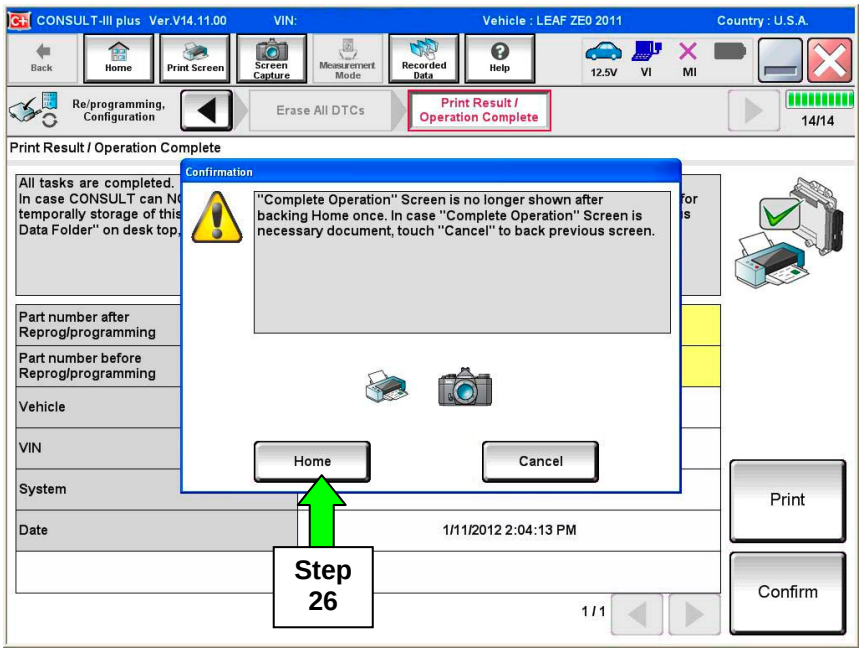


Figure 22

Go the next page.

HV BATTERY (Lithium Ion Battery Controller) module update

27. Perform steps 7 through 12 on pages 4 through 6.

28. Select **HV BATTERY.**

- Wait for System Call to complete.

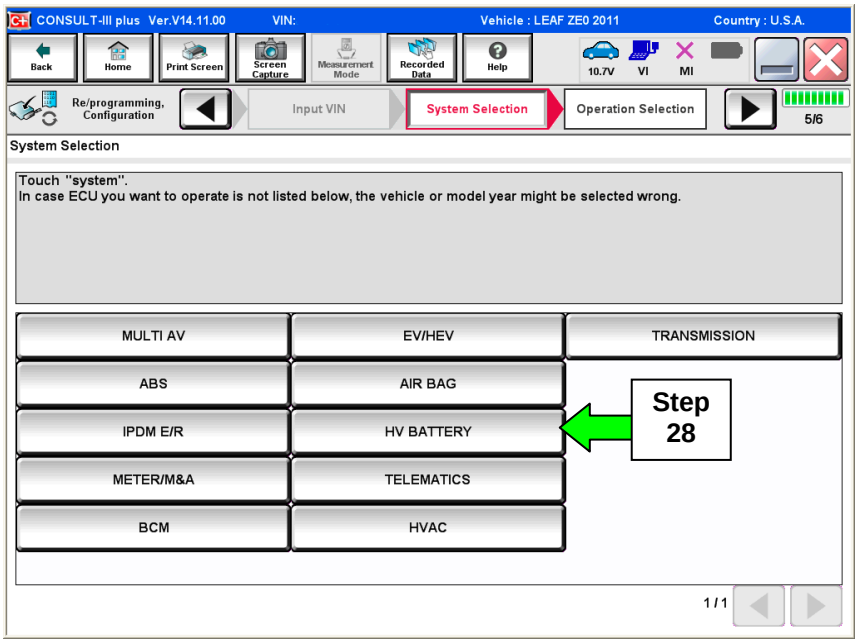


Figure 23

29. Select **Reprogramming**.

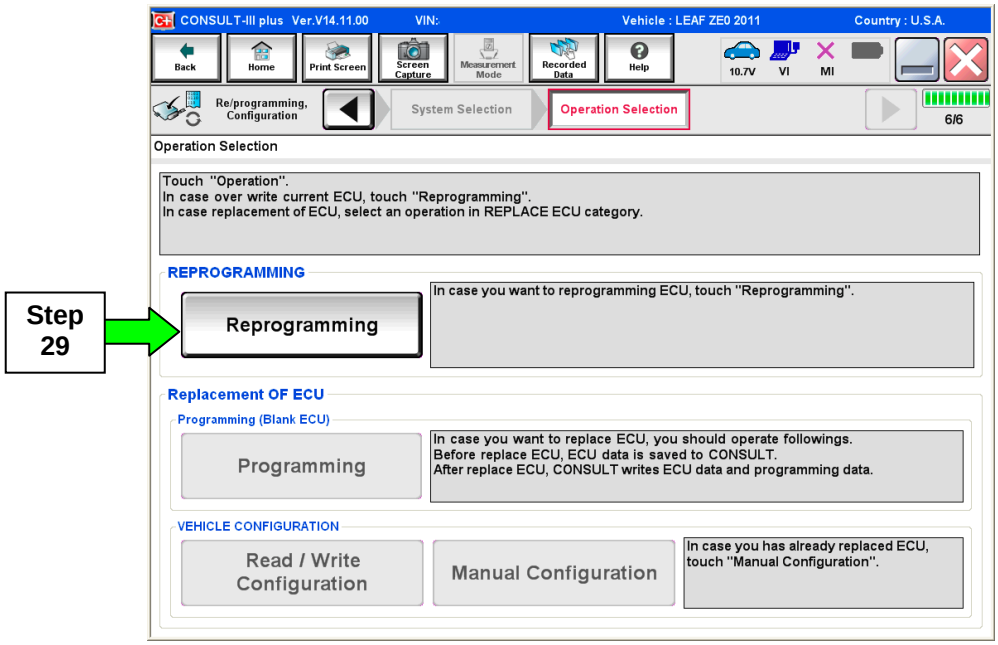


Figure 24

30. Write down the **Part Number** on the vehicle's repair order from Figure 25 and confirm if it matches one of the part numbers in Table "B" below.

Table B

MODEL YEAR	CURRENT HV BATTERY PART NUMBER: 293A0-
2011-2012 LEAF (ZE0)	3NA0B, 3NA0C, 3NA1B

- If the HV BATTERY part number is one of the part numbers listed in the table above, continue with reprogramming.
  - ➢ Select **Save**, and then go to Step 31.

- If the HV BATTERY part number **is not** in the table above, this campaign may not apply or it has already been done. Recheck Service Comm for campaign eligibility.

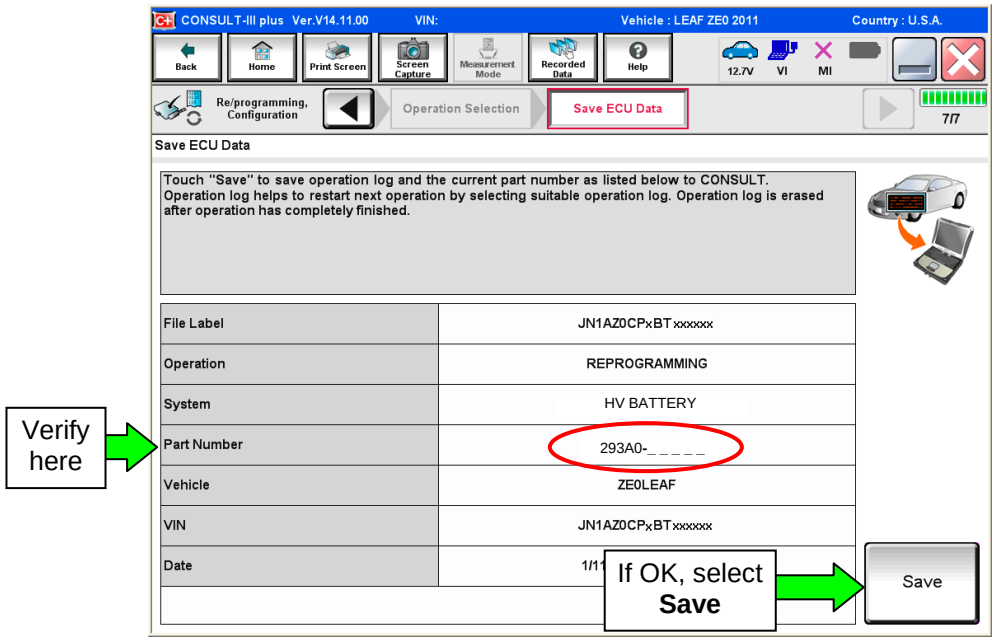


Figure 25

31. Read the precautions on page 1, and then select page 2 (page 2 not shown) with arrow. After reading page 2, select **Confirmed instructions**, and then select **Next**.

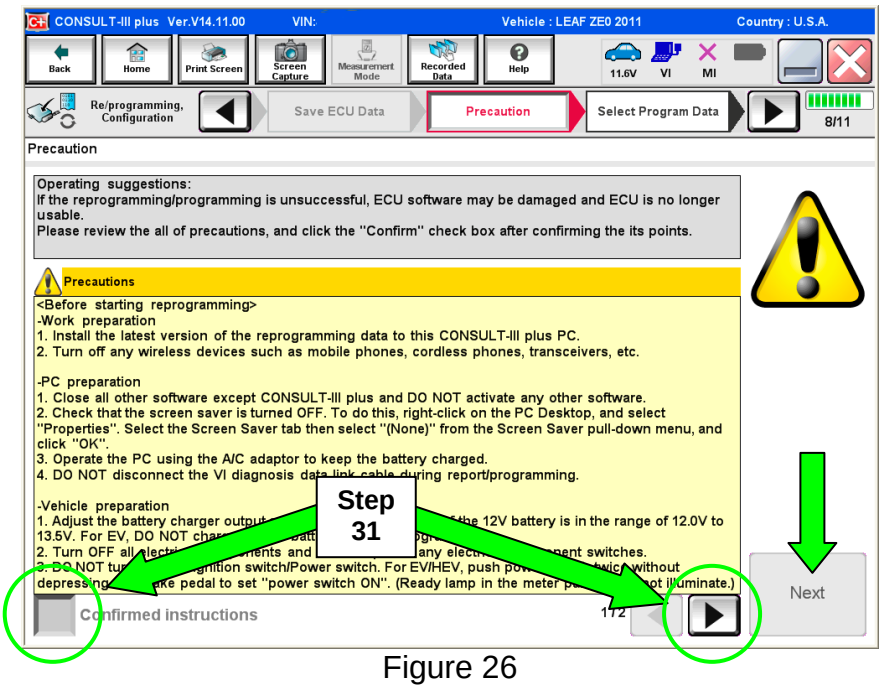


Figure 26

NOTE: In some cases, more than one new P/N for reprogramming is available.

- In this case, the screen in Figure 27 will display.
- Select and use the reprogramming option that **<u>does not</u>** have the message "Caution! Use ONLY with NTBXX-XXX".

- If you get this screen and it is <u>blank</u> (no reprogramming listed), it may mean that there is no reprogramming available for this vehicle, this <u>campaign does not apply</u> or it has already been done. Recheck Service Comm for campaign eligibility.

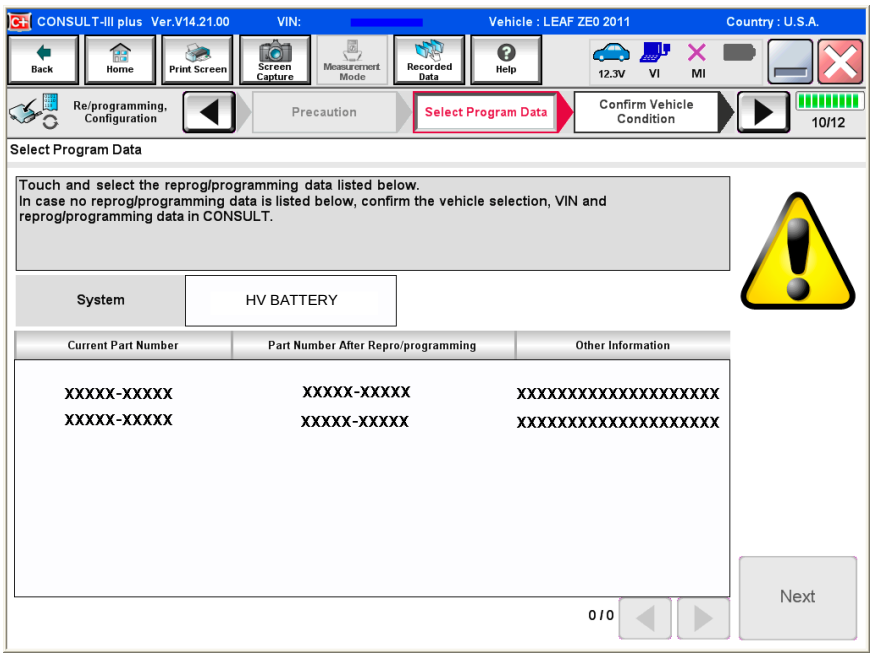


Figure 27

32. Verify the **Current Part Number** matches the Part Number written down in step 30, and then select **Next**.

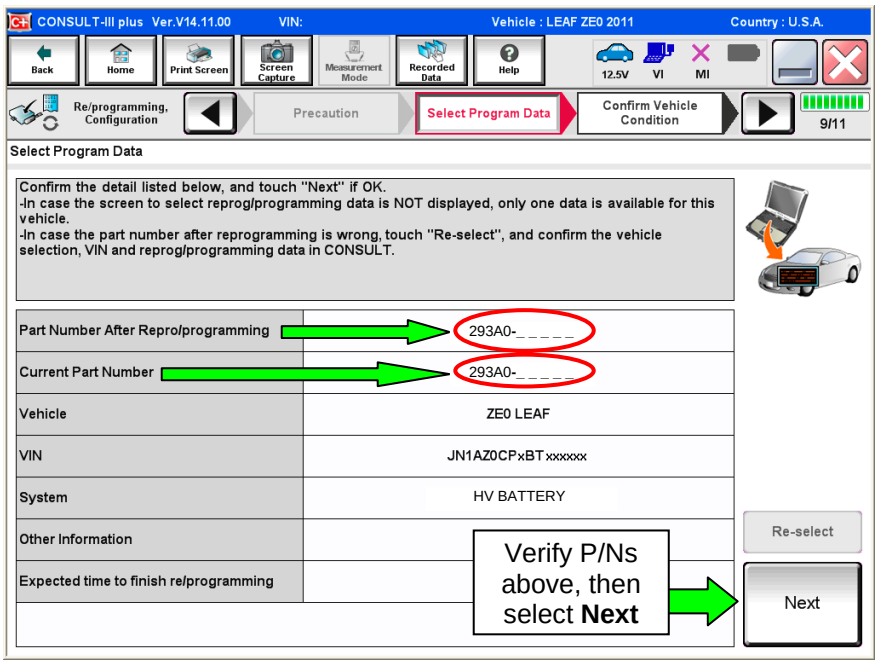


Figure 28

33. If the screen in Figure 29 appears, first select **Delete** then **Confirm,** and then **Other Operation**.

- This will erase the **Saved Data List** and restart the reprogram from step 28.
- If no **Saved Data List** is stored Figure 31 will be displayed. Proceed to step 34.

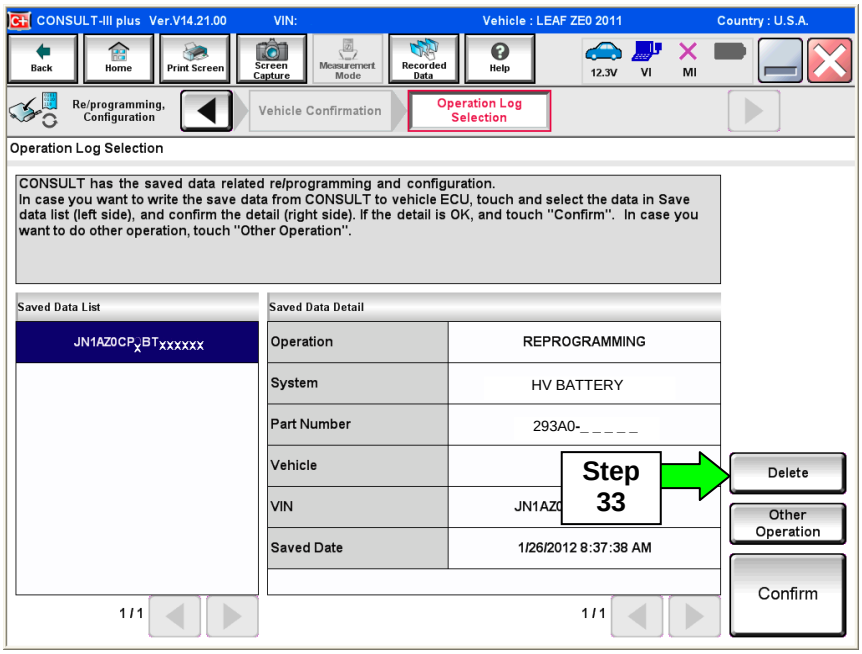


Figure 29

34. Open the hood, and then set up the GR8 Multitasking Battery Diagnostic Station (battery tester/charger) for the 12V battery.
    - For battery charger/tester setup, refer to Page 38, **GR8 Multitasking Battery Diagnostic Station Setup**.

      CAUTION: Battery voltage must stay between 12 volts and 15.5 volts.

      CAUTION: Do not charge the High Voltage (HV) Lithium Ion battery during reprogramming.

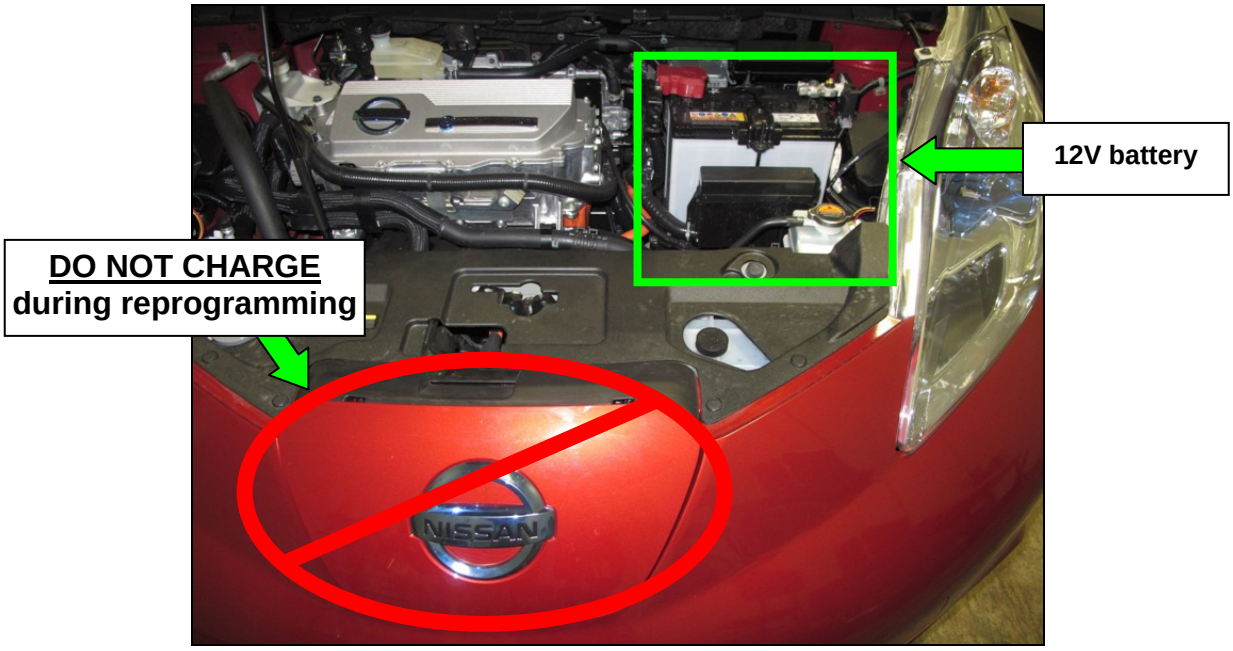


Figure 30

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

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

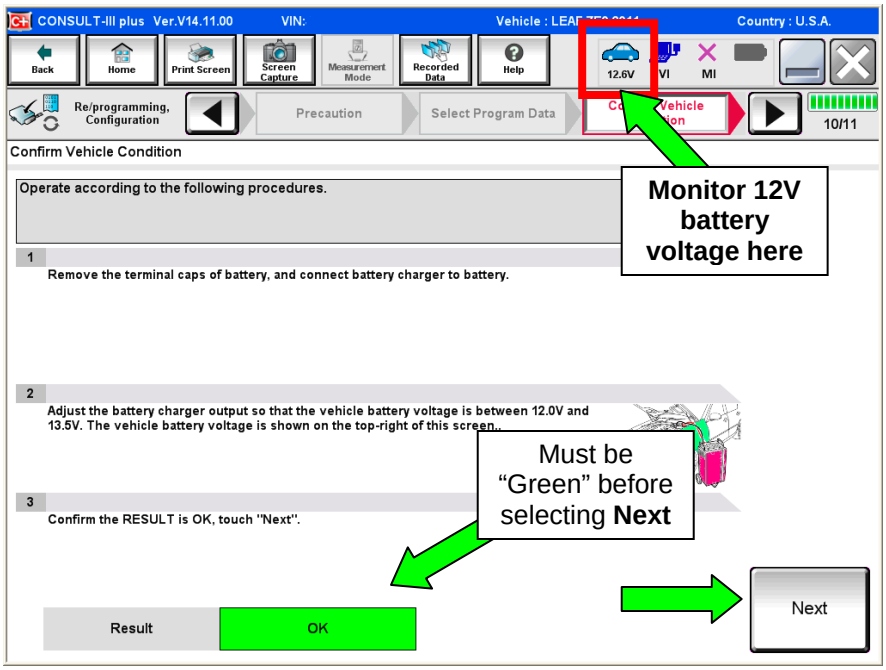


Figure 31

36. 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.

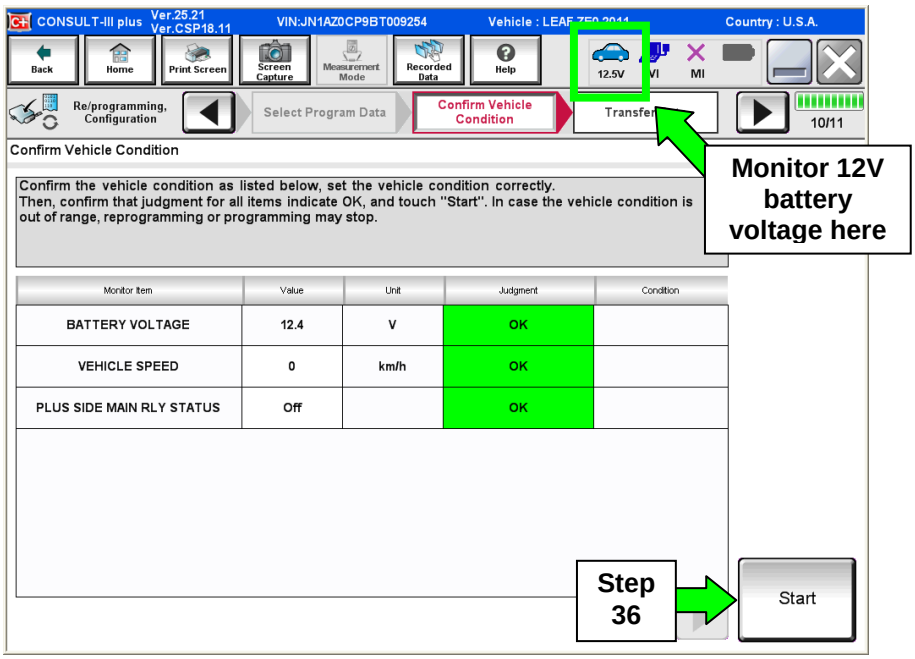


Figure 32

37. Wait for both bar graphs to complete.

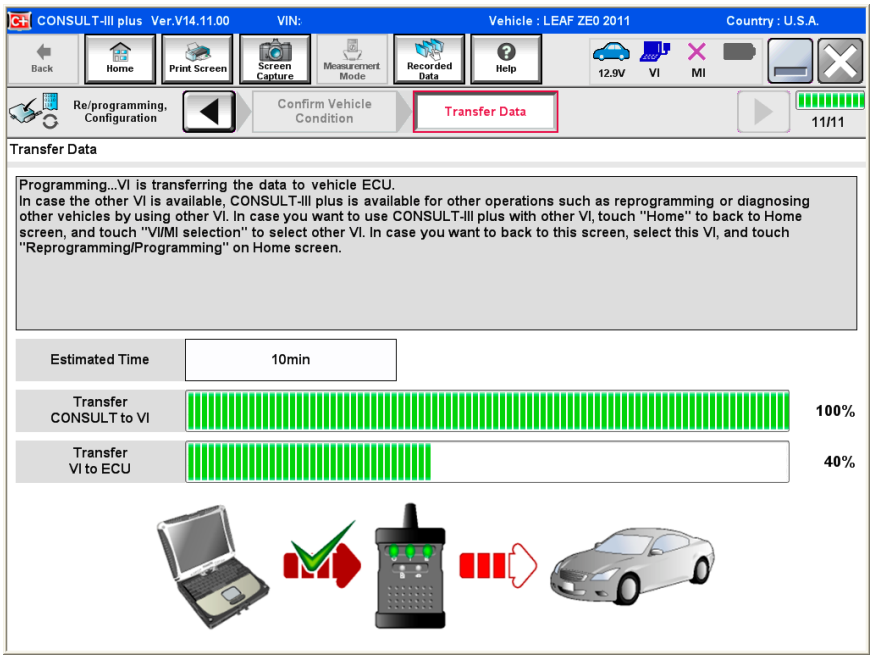


Figure 33

38. When the screen in Figure 34 appears, reprogramming is complete.
    a. Select **Next** and wait for System Call to complete.
    b. Proceed to step 39 on page 26 to erase DTCs.

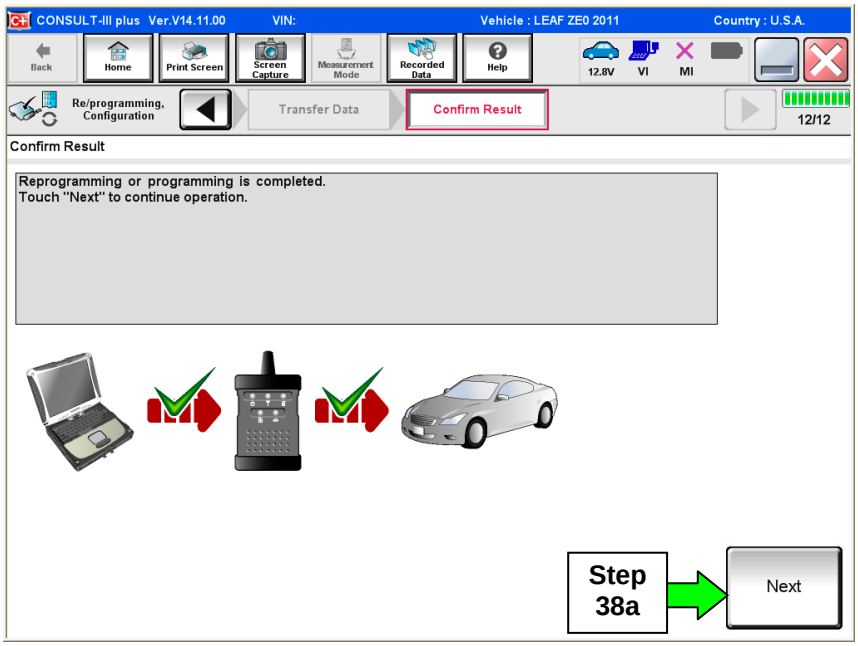


Figure 34

NOTE: If the reprogram will not complete, see the next page (page 25) to **RETRY** the reprogram update.

HV BATTERY (Lithium Ion Battery Controller) module recovery

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

- 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 first attempt and can be selected more than once.

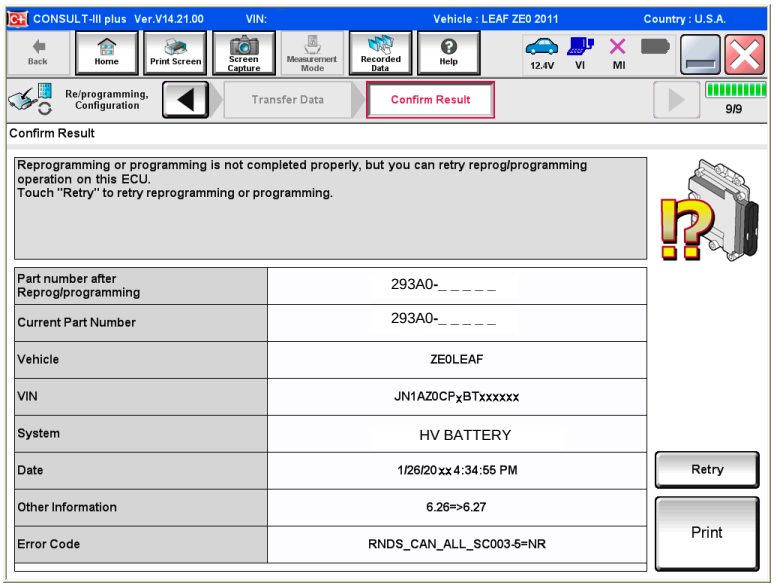


Figure C

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

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.**

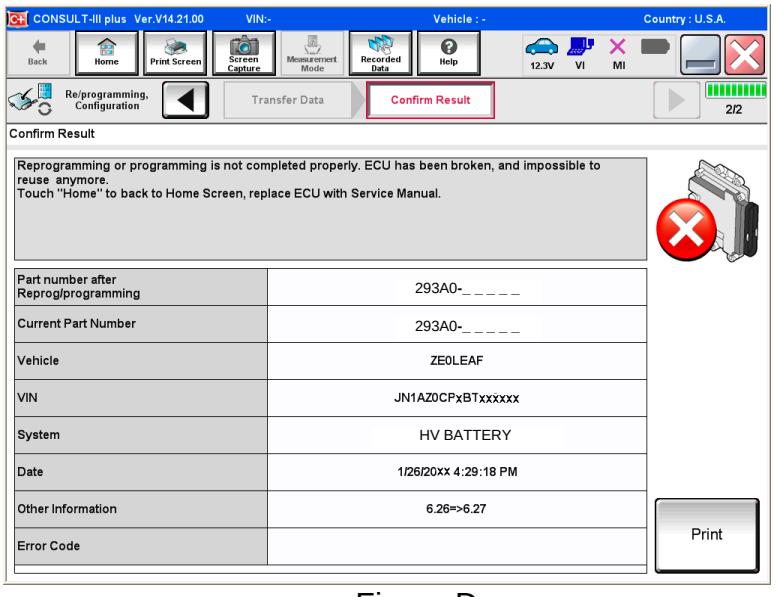


Figure D

39. Erase all DTCs:

a. Turn “ignition” off by depressing the power switch once.

- The screen in Figure 35 will read **OFF** after pressing the power switch <u>once</u>.

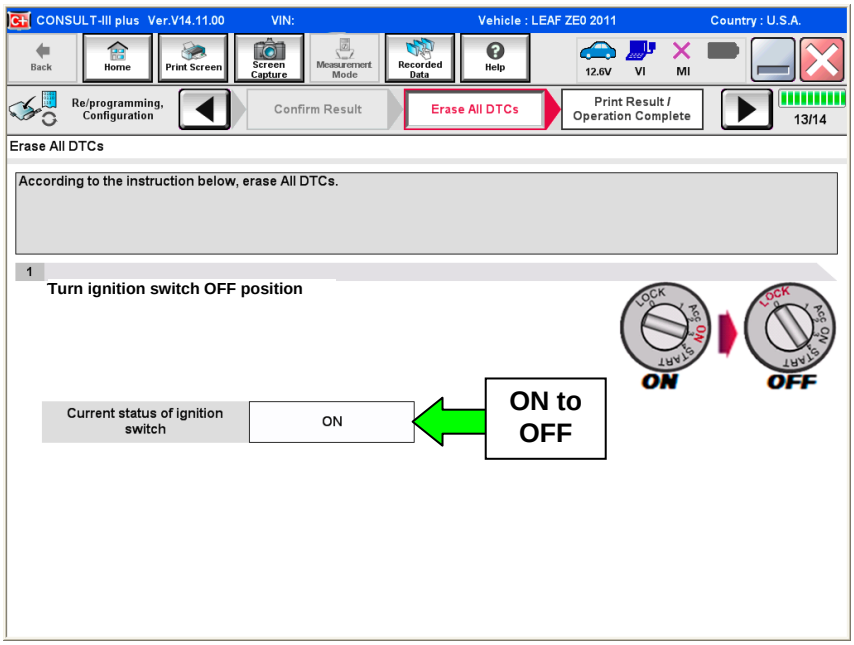


Figure 35

b. <u>Wait 1 minute with the ignition **OFF**</u>.

c. Turn “ignition” on by depressing the power switch twice.

- 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 <u>twice</u>.

NOTE: Do not be confused by any screen messages. At this point, simply turn the “ignition” on.

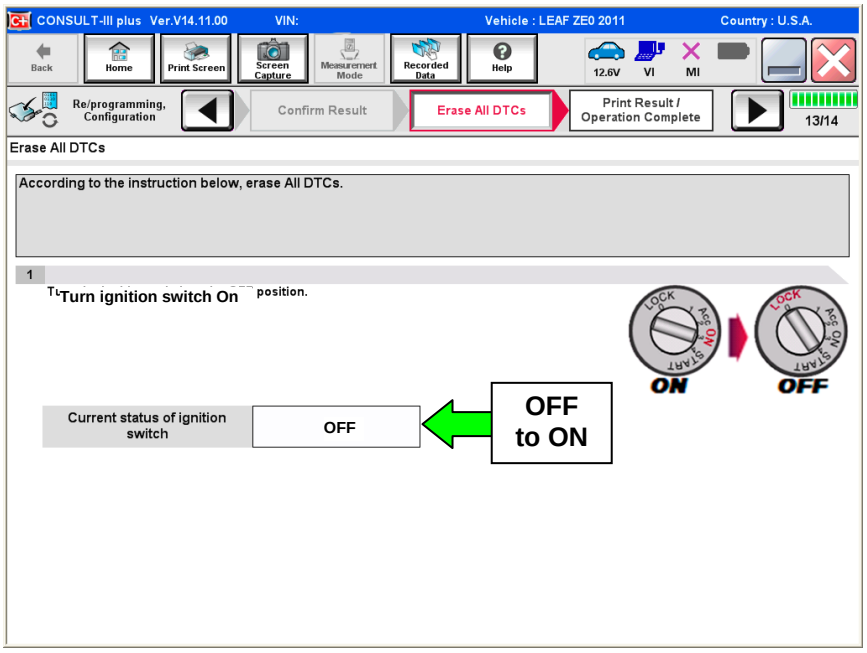


Figure 36

d. Wait for the bar graph in the **ERASE** window to complete 100%.

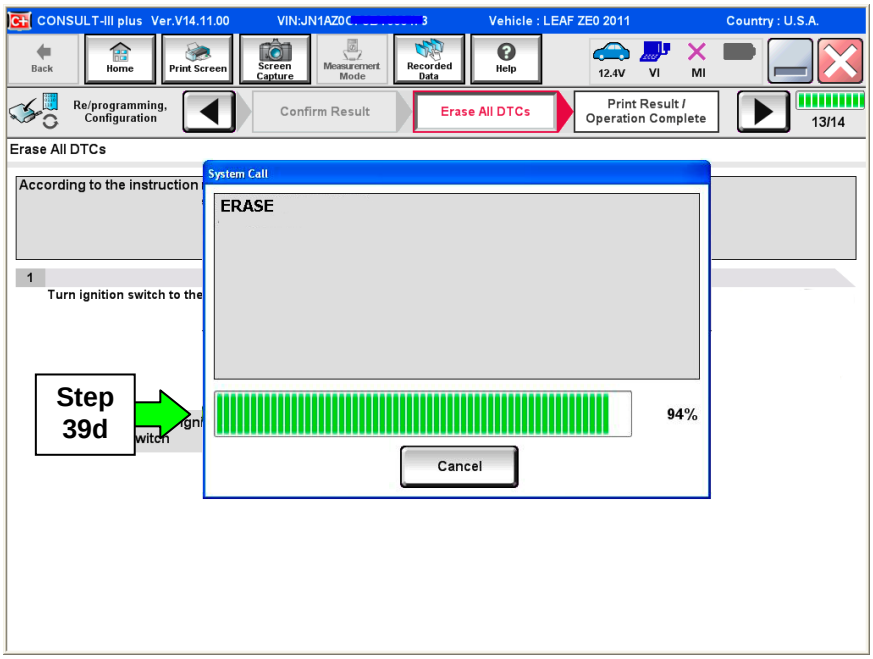


Figure 37

40. Verify the part number has changed.

a. Print a copy by selecting **Print**.

NOTE: Before and after part numbers on your print-out may be switched compared to your CONSULT PC screen. This is ok.

b. Attach the copy to the repair order.

c. Once a copy has been printed, select **Confirm**.

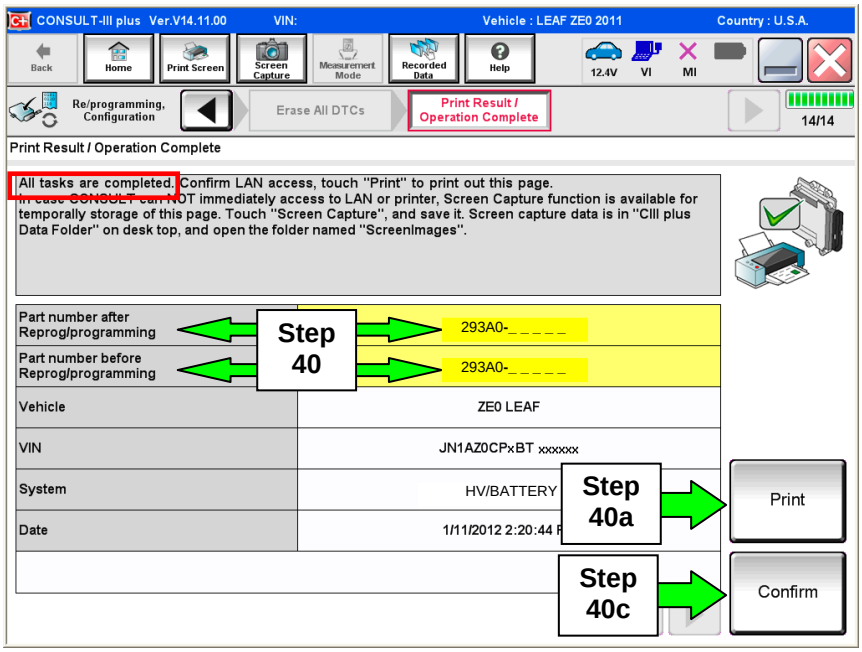


Figure 38

41. After Confirmation has completed, select **Home**.

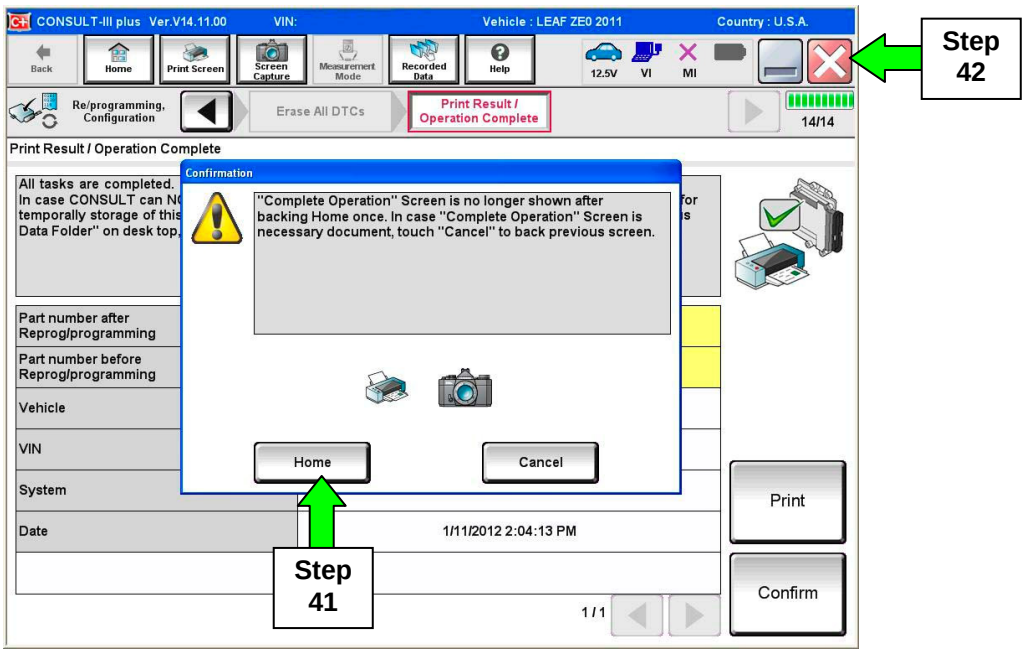


Figure 39

42. Close C-III plus by selecting “X” in Figure 39.

- Do not turn off the CONSULT PC.

43. Place the vehicle in “READY to drive” mode:
    - Apply the parking brake.
    - Depress the brake pedal.
    - Depress the power switch once.
    - The meter and gauges will illuminate.

44. Open C-III plus.

45. Once the plus VI is recognized, select **Diagnosis (All Systems)**.

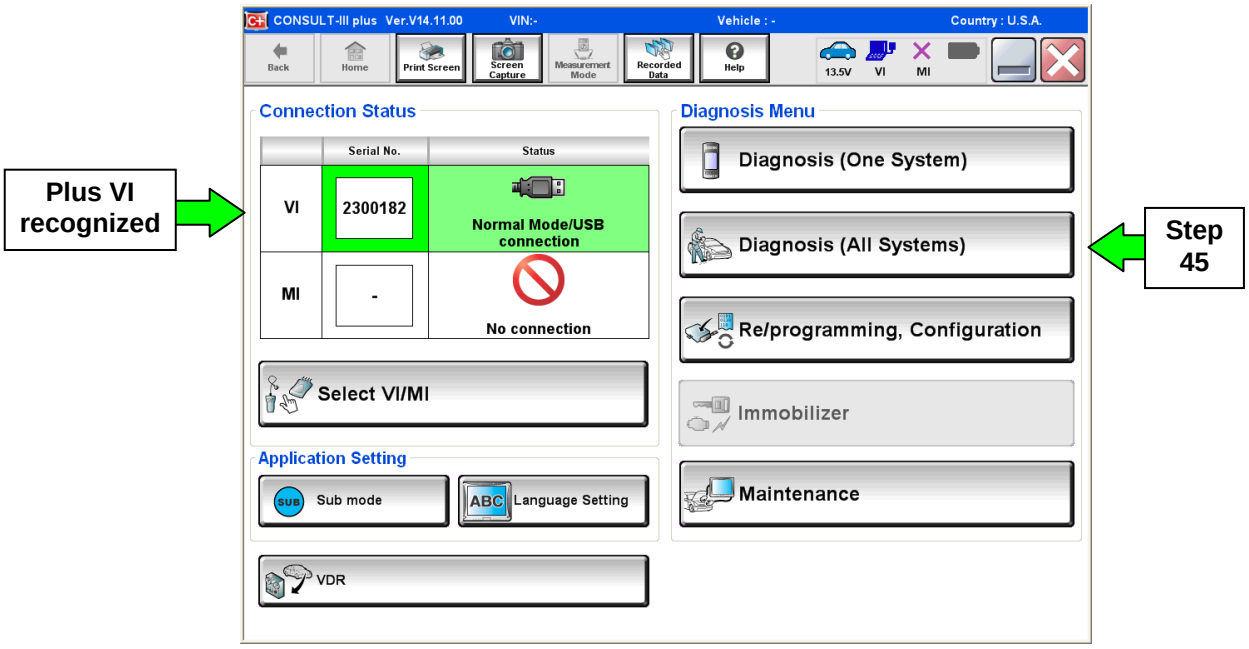


Figure 40

46. Select **LEAF** and **2011** or **2012,** or **Automatic Selection (VIN)**.
    - If **Automatic Selection (VIN)** is selected, wait for the **Reading VIN** screen to complete.
47. Select **Select** or **Detect Vehicle**, whichever displays.

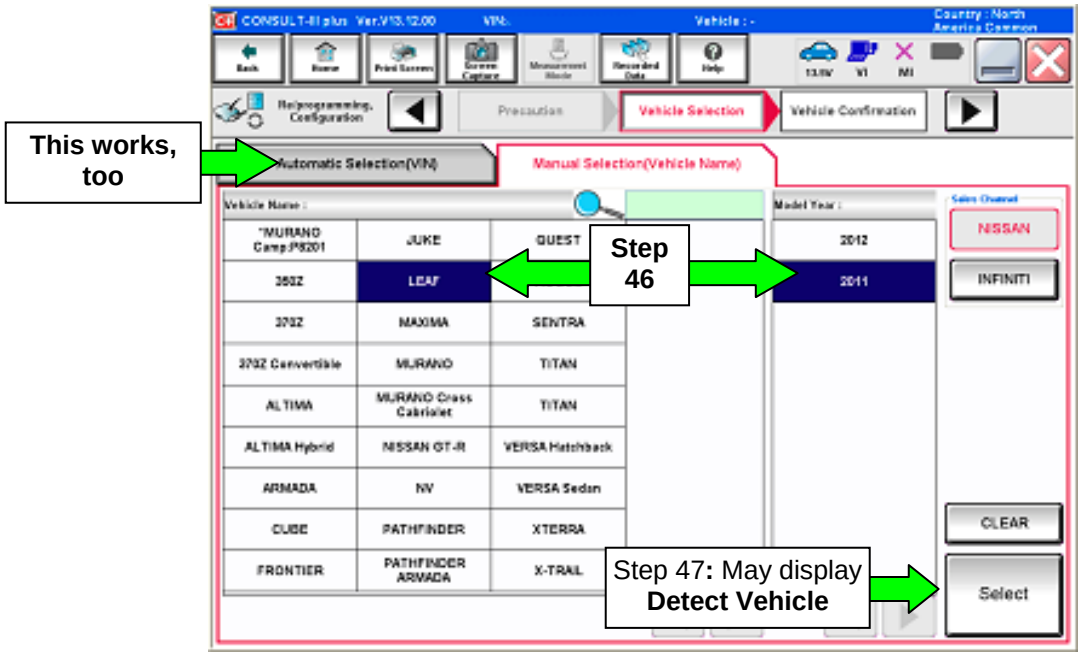


Figure 41

48. Verify the VIN in **VIN or Chassis #** matches that of the vehicle.

- If the correct VIN exists, select **Confirm**.

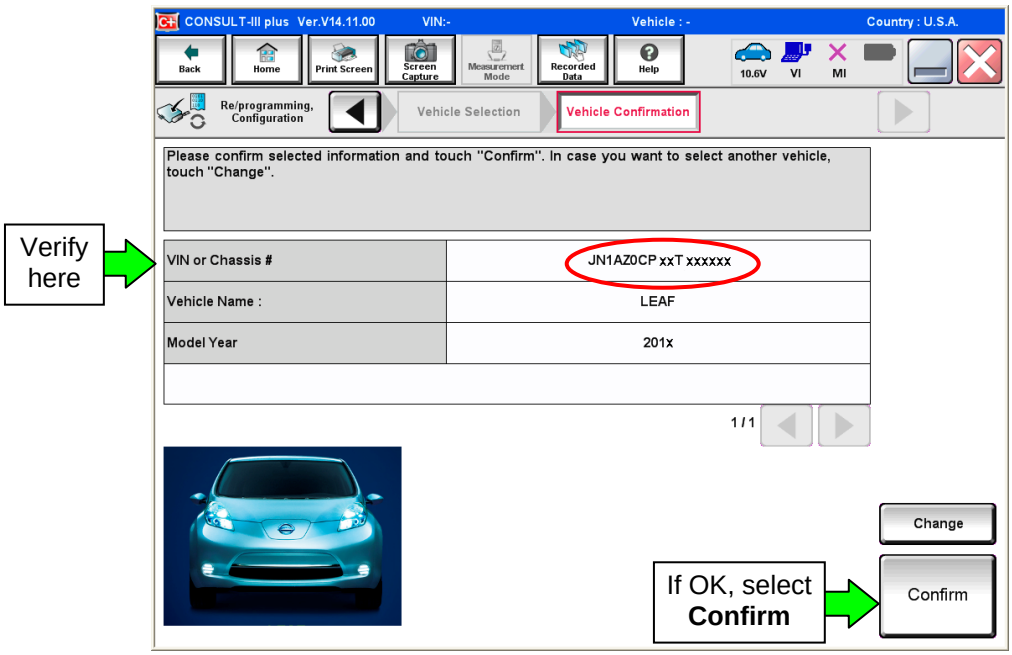


Figure 42

49. Wait for System Call to complete.

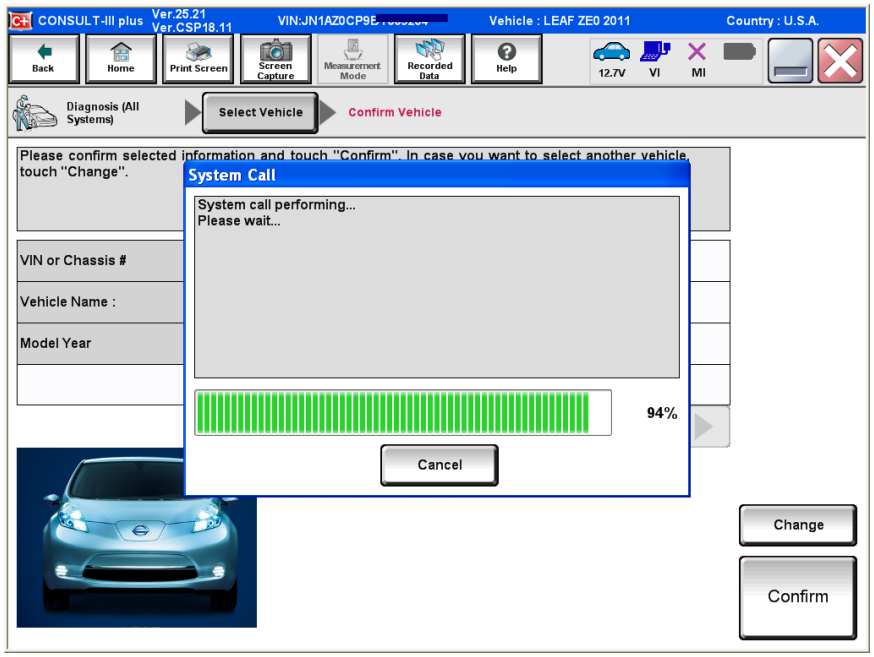


Figure 43

50. If DTCs are present, select **ERASE**.
    - If no DTCs are present, skip to Step 53.

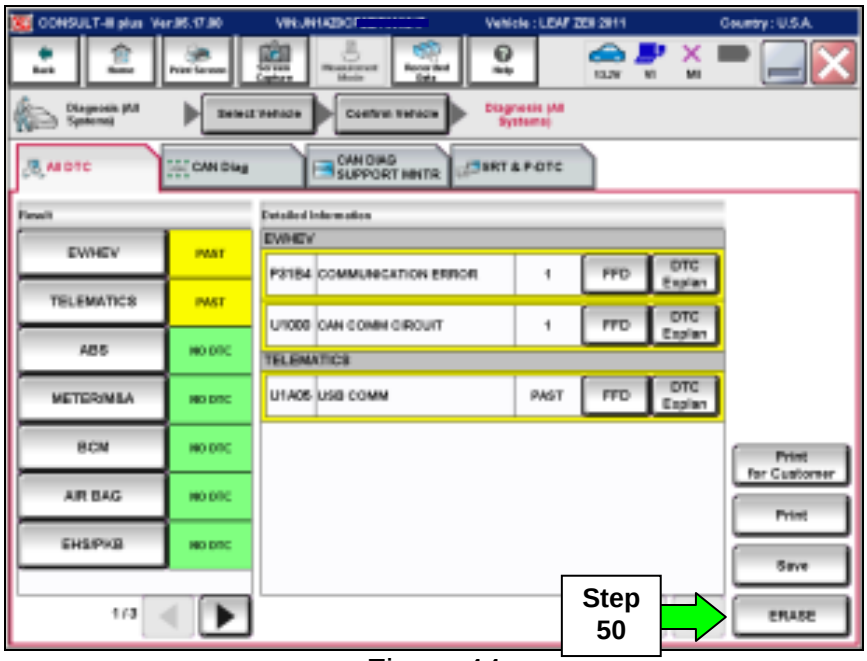


Figure 44

51. Select **ERASE**.

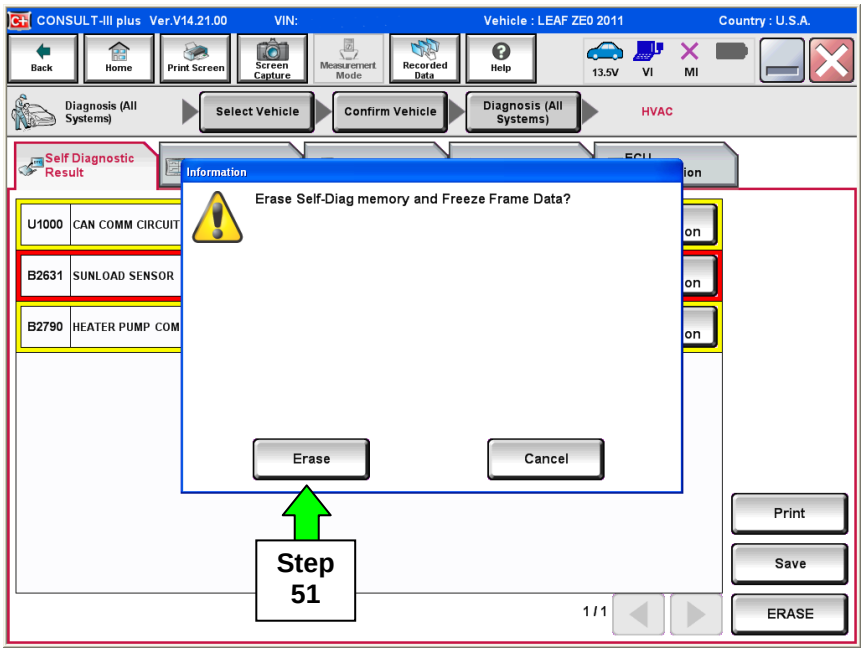


Figure 45

52. Select **Close**.

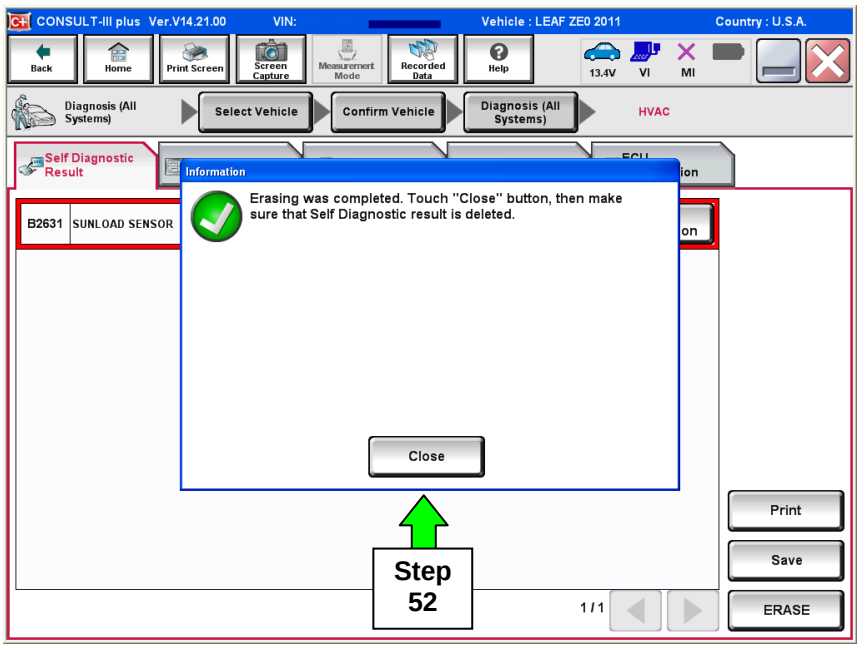


Figure 46

53. Using the arrow keys, select Page **3/3**, and then select **HVAC**.

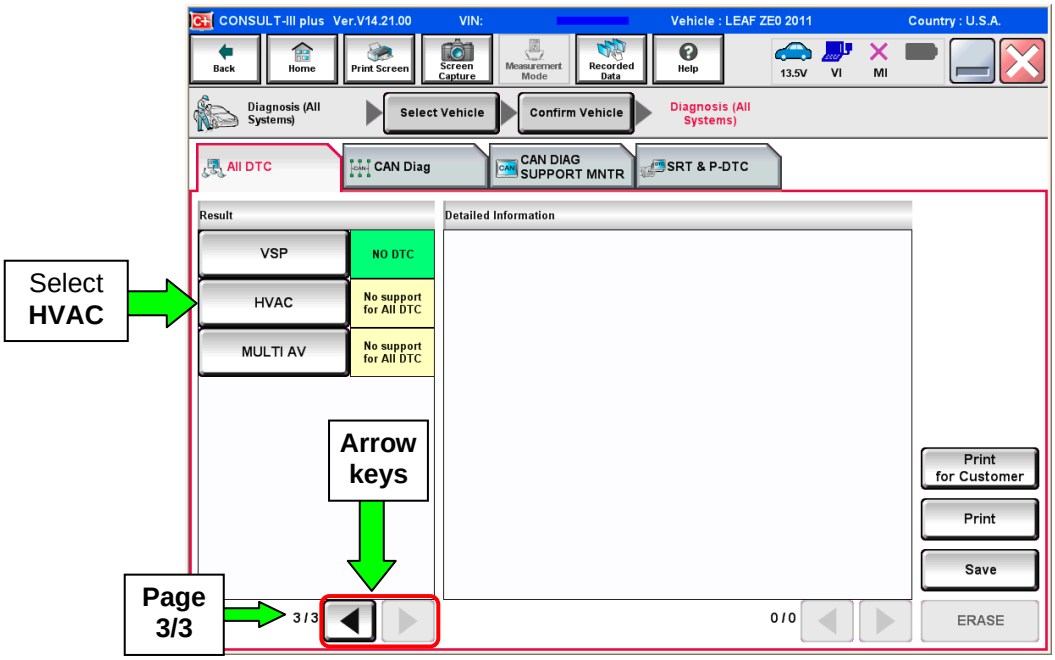


Figure 47

54. Select **ERASE**.

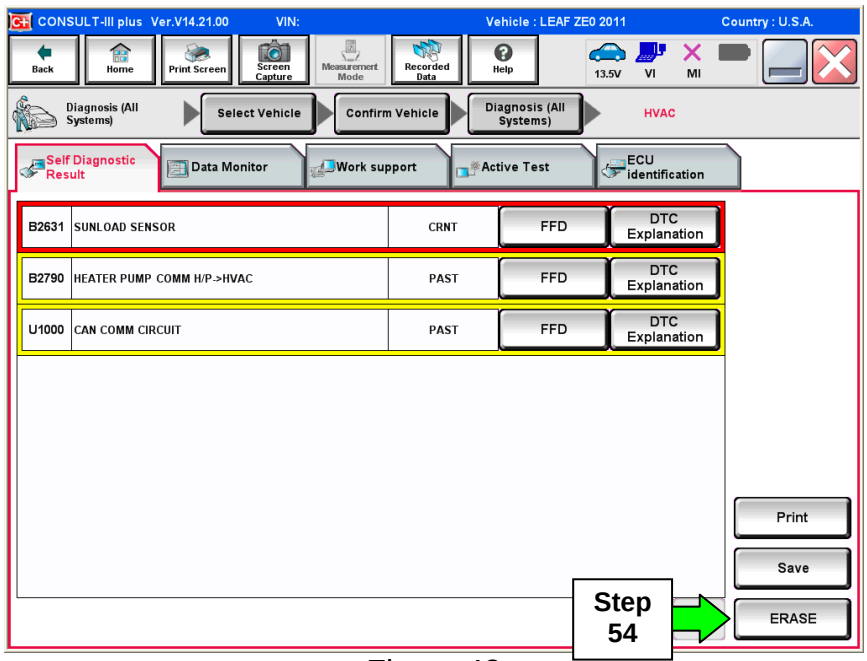


Figure 48

55. Select **ERASE**.

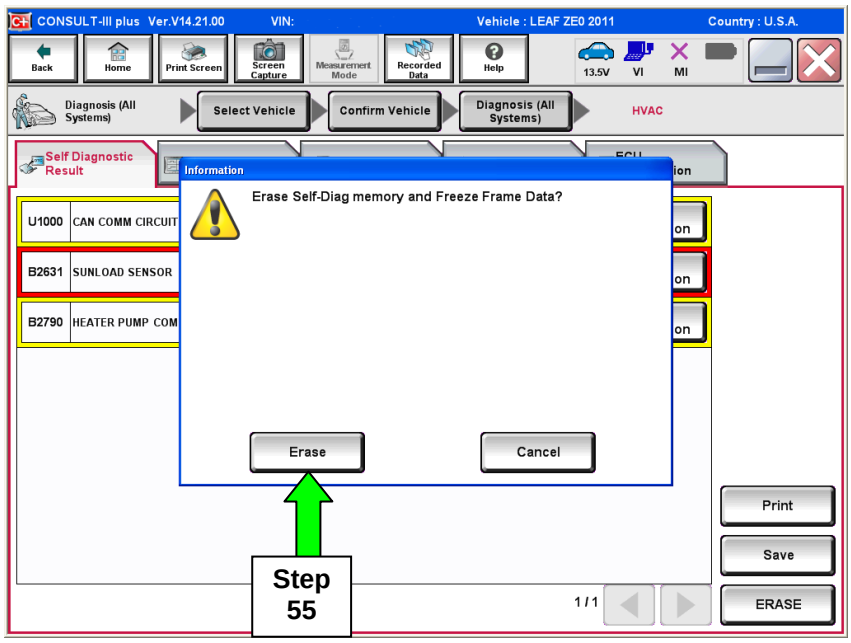


Figure 49

56. Select **Close**.

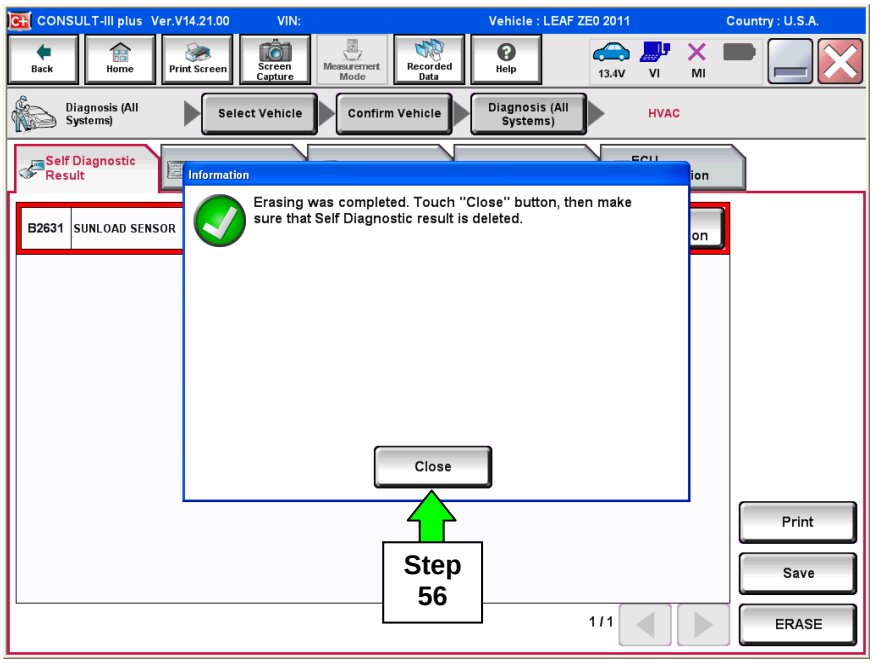


Figure 50

NOTE: If DTC B2631 (SUNLOAD SENSOR) sets again, this is okay.

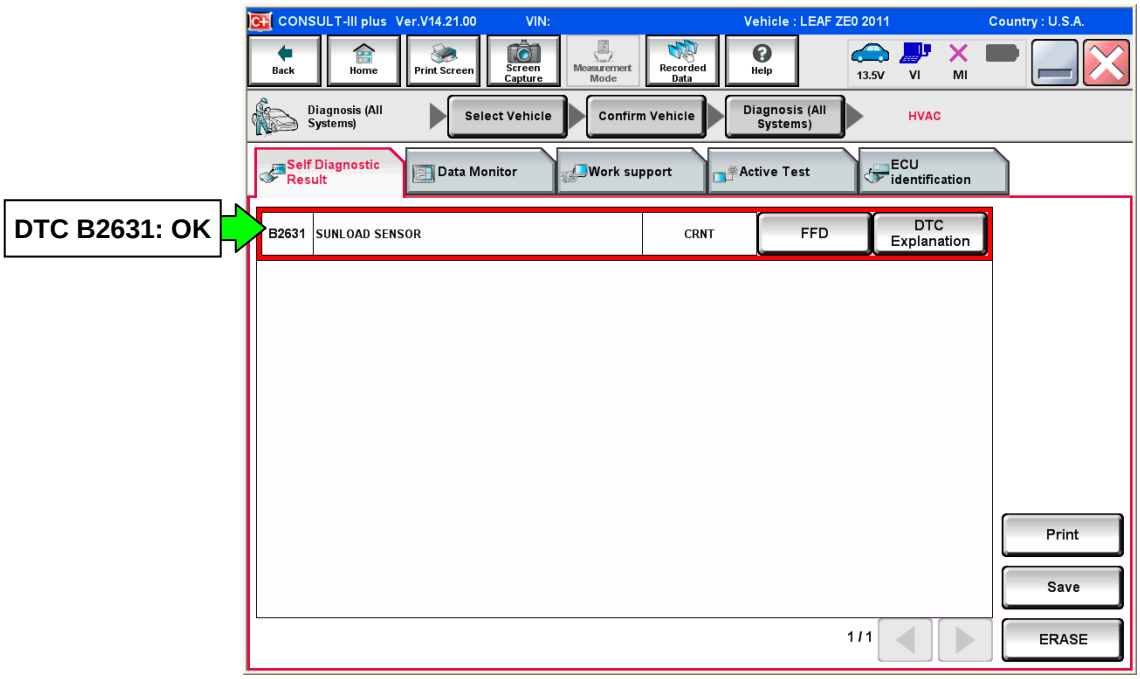


Figure 51

57. Select **Back**.

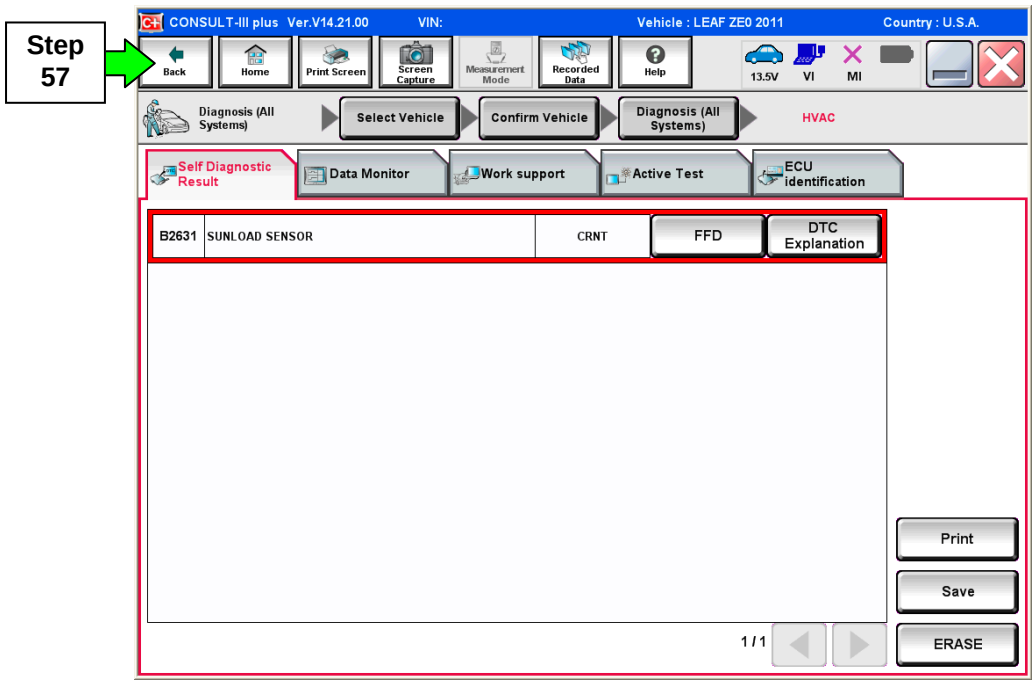


Figure 52

58. Using the arrow keys, go to Page **3/3**, and then select **MULTI AV**.

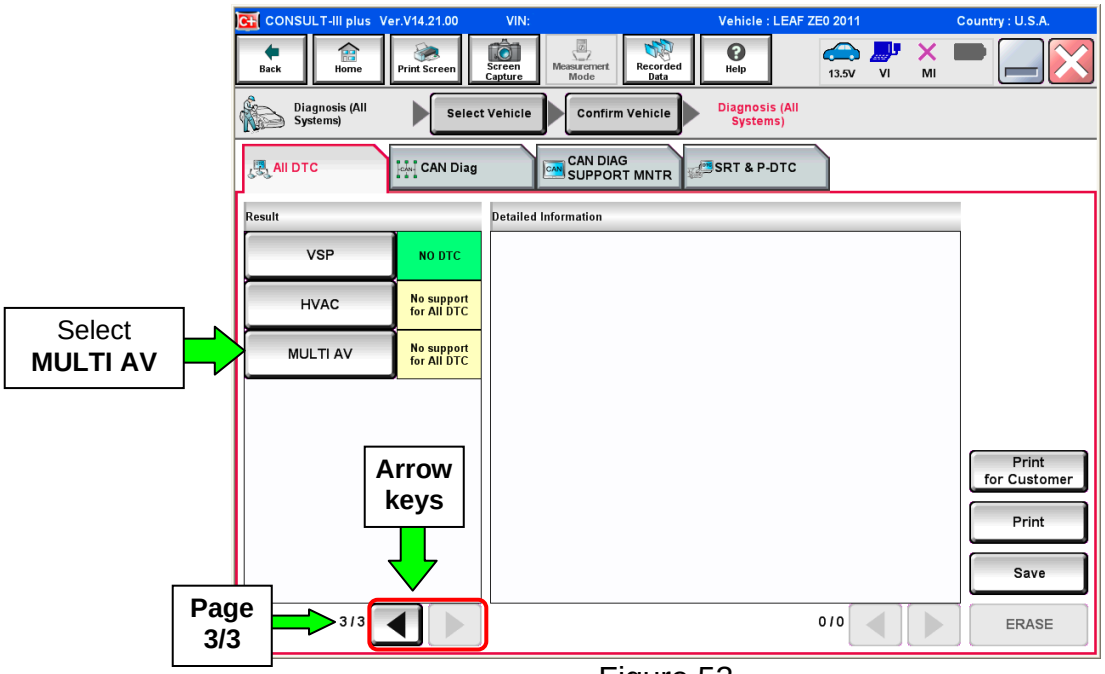


Figure 53

59. Select **ERASE**.

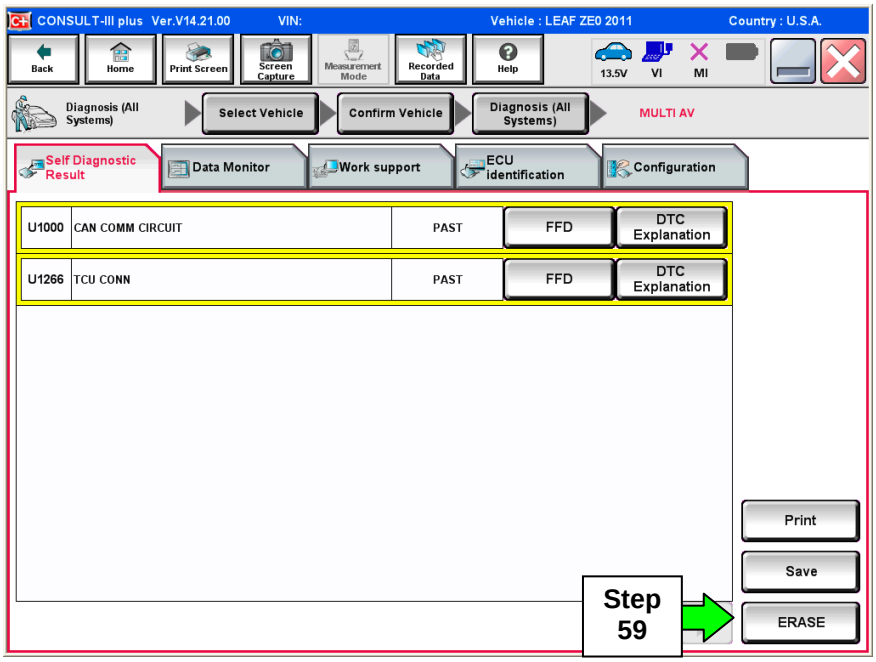


Figure 54

60. Select **Erase**.

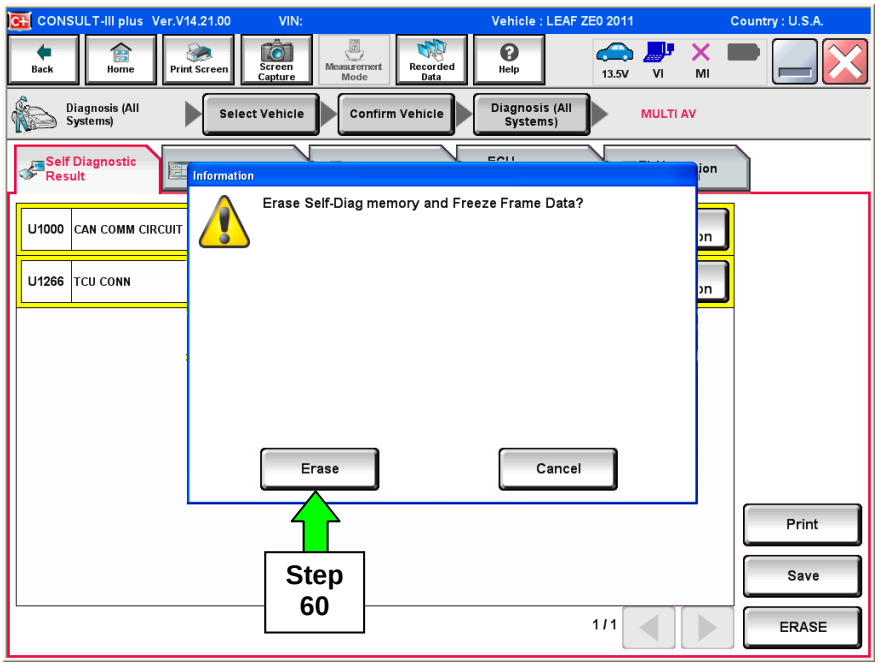


Figure 55

61. Select **Close**.

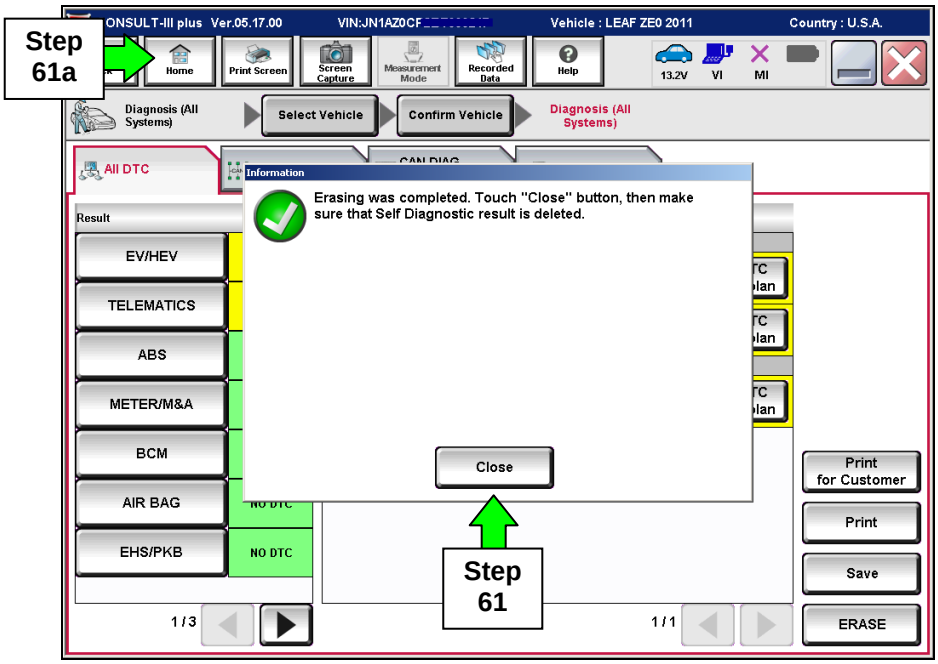


Figure 56

62. Once all DTCs have been erased:
    a. Select **Home**, and then on the next screen, select **Yes** (picture not shown).
    b. Close C-III plus, turn off the CONSULT PC, and then disconnect the CONSULT PC and plus VI from the vehicle.
    c. Turn “ignition” off (depress power switch once).

63. Verify the repair is complete:
    a. Place the vehicle in the “READY to drive” mode (press power switch while stepping on the brake pedal).
    b. Verify no error messages are displayed in the meter and gauges or center multi-function control panel.
    c. If the timer for either charging or climate control were “on” prior to reprogramming, turn them back on.

CAUTION: Battery voltage must stay between 12 volts and 15.5 volts during each reprogramming or module recovery may not be available.

GR8 Multitasking Battery Diagnostic Station Setup

1. Connect the battery tester/charger to the 12V battery, positive cable first.
2. Plug in the battery tester/charger (AC voltage supply), and then turn on the battery tester/charger.
3. Select the preferred language, and then depress NEXT.
4. Select the USER, and then depress NEXT.
5. Confirm the USER, and then depress NEXT.
6. Select System Test, and then depress the “down” arrow.
7. Select the Manual icon, and then depress NEXT.
8. Select REGULAR FLOODED, and then depress NEXT.
9. Select LIMIT VOLTAGE, and then depress NEXT.
10. Set MIN VOLTAGE to 12.40 volts, and then depress NEXT.
    - Use the arrows to raise and lower the voltage setting.
11. Set the charging time for 40 minutes, and then depress NEXT.
12. Wait for the system to go through Test mode and Advanced Test mode.
13. Perform **CHARGER/PD MODULE** or **HV BATTERY** module reprogramming now.
14. Once **CHARGER/PD MODULE** or **HV BATTERY** module reprogramming has completed:
    - Depress STOP
    - depress the power switch to OFF
    - unplug the battery tester charger from the AC voltage supply

NOTE: For further details on battery tester/charger connection and set-up, refer to the battery tester/charger’s instruction manual.

CLAIMS INFORMATION

Submit a "CM" line claim using the following claims coding:

"CM" I.D.: P3227

CAMPAIGN ID	DESCRIPTION	OP CODE	FRT
P3227	Reprogram Lithium Ion Battery Controller and the On-Board Charger module	P32270	0.7

Dear Nissan LEAF Owner:

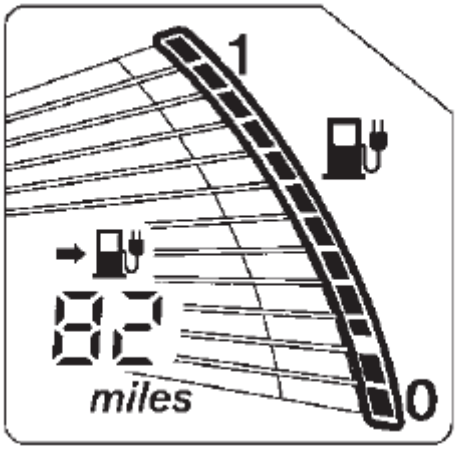
Nissan values the feedback that we receive from our owners, and we try to use your comments to improve our products. With the goal to provide the highest level of customer satisfaction, Nissan is now offering two ongoing improvements for your Nissan LEAF.

First, Nissan is providing a new software enhancement for model year 2011-2012 LEAF vehicles, updating them with the software currently used in production for 2013 model year LEAF vehicles. The software enhancement is aimed at improving the accuracy of the battery capacity level gauge and providing greater compatibility with an expanded range of EV charging equipment.

Second, Nissan is now implementing expanded coverage under its New Electric Vehicle Limited Warranty, to protect against capacity loss in your LEAF's lithium-ion battery, as previously announced by Nissan in December 2012.

SOFTWARE ENHANCEMENT

The 2013 LEAF features many improvements, including updated software that improves the performance of the battery capacity level gauge (outlined below) to more accurately reflect actual battery capacity. This update does not change the amount of capacity represented by the each of the bars in the meter.



In addition, the vehicle's on-board charger software has been enhanced to improve compatibility with a broader range of EV charging equipment. By updating the software for 2011 and 2012 vehicles, Nissan is providing customers with the benefits of these ongoing improvements enjoyed by owners of the 2013 LEAF.

WHAT NISSAN WILL DO

To ensure your continued satisfaction and confidence in your car, your EV Certified Nissan dealer will update the software as described above at no cost to you for parts and labor.

WHAT YOU SHOULD DO

Contact your EV Certified Nissan dealer at your earliest convenience in order to arrange your appointment. This service is free of charge and the work should take less than 2 hours to complete. **To ensure the greatest convenience to you, it is important that you have an appointment before bringing your vehicle to the dealer for this service.** Please bring this notice with you to your service appointment. Detailed instructions have been sent to your EV Certified Nissan dealer.

EXPANDED WARRANTY COVERAGE

In addition to the existing lithium-ion battery coverage provided under the Nissan Electric Vehicle Limited Warranty for defects in materials or workmanship, the lithium-ion battery for your 2011 or 2012 Nissan LEAF is now also warranted against capacity loss below nine (9) bars (or approximately below 70 percent) as shown on the vehicle's battery capacity level gauge for a period of 60 months or 60,000 miles, whichever comes first.

This warranty covers any repairs needed to return battery capacity to a level of nine remaining bars on the vehicle's battery capacity level gauge. If possible, the lithium-ion battery components will be repaired or replaced, and the original battery pack will be returned to the vehicle. If necessary, the lithium-ion battery will be replaced with either a new or remanufactured battery. Any repair or replacement made under this Lithium-Ion Battery Capacity Coverage may not return the battery to an "as new" condition with all 12 battery capacity bars, but it will provide the vehicle with a capacity level of nine bars or more on the battery capacity level gauge.

Please apply the label at the bottom of this letter to your Warranty Information Booklet. If your vehicle's battery capacity level is currently at or above nine (9) bars, no further action is required.

If your vehicle's battery capacity level gauge is already displaying eight (8) or fewer bars of capacity prior to the above referenced software update (and within the first 5 years or 60,000 miles, whichever comes first), your Nissan dealer will verify this condition and arrange for the repair or replacement of the lithium-ion battery in accordance with the terms of the warranty.

Please note that replacement lithium-ion batteries may require special ordering which may delay the actual repair by several weeks. Your patience in these circumstances is appreciated.

If you have any questions about this announcement, you may contact the Nissan LEAF Call Center at 877-N0-GAS-EV (877-664-2738), or by writing us at Nissan North America, Inc., P.O. Box 685003, Franklin, TN 37068-5003.

Thank you for providing us an opportunity to ensure your satisfaction. We hope you continue to enjoy smooth, zero emissions driving in your Nissan LEAF!

Peel and stick label into warranty book

NOTICE:

In addition to the Lithium-Ion Battery Coverage for defects in materials or workmanship, the Lithium-Ion battery for your 2011 or 2012 Nissan LEAF is now also warranted against capacity loss below nine (9) bars of capacity as shown on the vehicle's battery capacity level gauge for a period of 60 months or 60,000 miles, whichever comes first. All other warranty terms, limitations, and conditions remain unchanged.

Nissan North America WBI/13-xxx