SERVICE BULLETIN

Classification:	Reference:	Date:
EL19-018a	NTB19-056a	February 4, 2020

2018-2019 LEAF;
LITHIUM-ION BATTERY WILL NOT QUICK CHARGE

> **This bulletin has been amended. See Amendment History on the last page.**
> **Discard all previous versions of this bulletin.**

APPLIED VEHICLE: 2018-2019 LEAF (ZE1)
APPLIED VIN: Vehicles built before 1N4AZ1(*)(*)(*)KC308034
APPLIED DATE: Vehicles built before January 24, 2019
APPLIED SYSTEM: Vehicles equipped with a 40 kWh lithium-ion battery

IF YOU CONFIRM

The customer states their vehicle will not charge with a quick charge setting after many back-to-back quick charges

Or

It takes too long to charge with a quick charge setting.

>   **NOTE:**
>
>   - DTC U1009-96 (Quick charger comm [Quick charger communication]) may be stored.
>
>   - This issue applies to vehicles equipped with a 40 kWh lithium-ion battery <u>only</u>.

ACTION

Refer to step 20 on page 7 under **SERVICE PROCEDURE** to confirm this bulletin applies to the vehicle being worked on.

  - If this bulletin applies, reprogram the lithium battery controllers (LBC) for **HV BATTERY 2** and **HV BATTERY**.

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

LBC (for HV BATTERY 2 and HV BATTERY) Reprogramming

IMPORTANT: Before continuing, make sure:

- ASIST on the CONSULT PC has been synchronized (updated) to the current date.
- All CONSULT-III plus (C-III plus) software updates (if any) have been installed.
- The CONSULT PC is connected to the Internet (Wi-Fi or cable).

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

NOTE: 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.

CAUTION:

- Connect a battery maintainer or smart charger set to reflash mode or a similar setting. If the vehicle's battery voltage drops below 12.0V or rises above 15.5V during reprogramming, the LBC may be damaged.

- Be sure to turn OFF all vehicle electrical loads. If a vehicle electrical load remains ON, the LBC 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 LBC 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 and/or the plus VI during reprogramming, reprogramming may be interrupted and the LBC may be damaged.
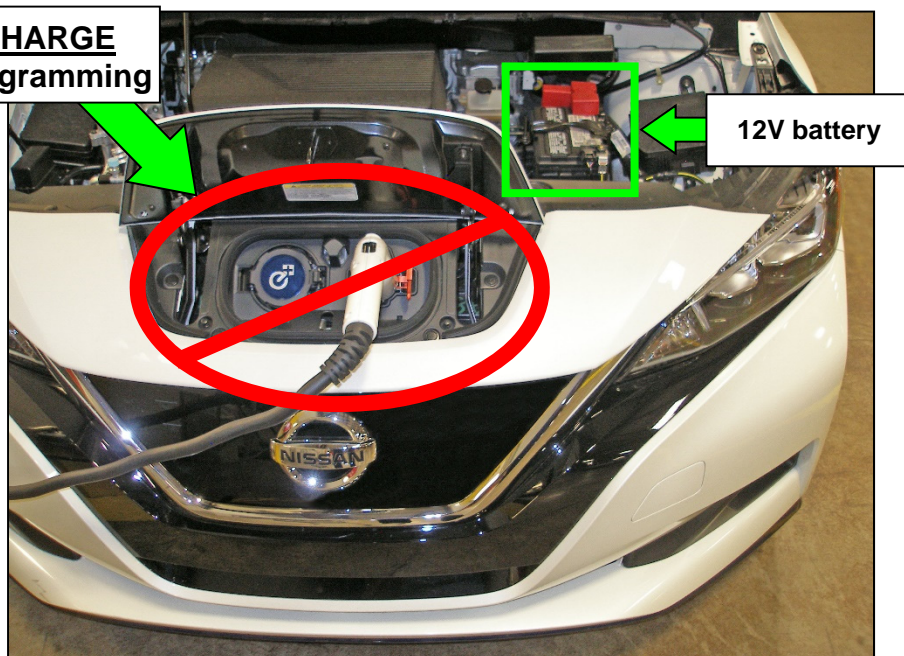

Figure 1

1.   Connect the plus VI to the vehicle.

2.   Connect the plus VI to the CONSULT PC with the USB cable.

3.   Connect the AC adapter to the CONSULT PC.

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

   • Turn OFF any screen savers that are on the CONSULT PC.

5.   Set the parking brake.

6.   Depress the power ("ignition") switch twice <u>without</u> depressing the brake pedal.

   • The meter and gauges will illuminate.

   CAUTION: Do <u>NOT</u> set the vehicle in "READY to drive" mode.

   NOTE: Make sure <u>all</u> accessories are turned OFF.

7.   After the plus VI is recognized, select **Diagnosis (All Systems)**, and then **Confirm**.

8.   After System Call has completed, erase all DTCs.

   • Make the necessary repairs for any DTCs that cannot be erased prior to performing the reprogram.

   NOTE: DTC diagnosis and repair is not covered under this bulletin.

9.   Select the **Home** button.

10.   Select **YES** to return to the screen shown in Figure 2.

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

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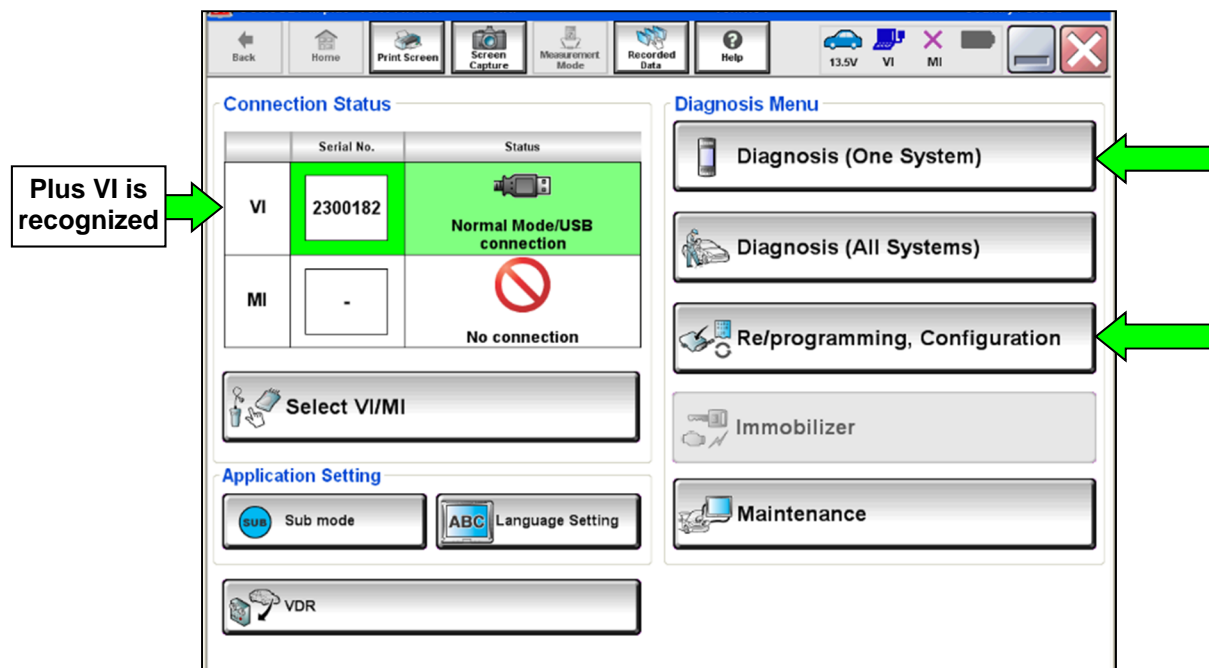

Figure 2

12. Read the **Precaution** and **Caution**.

13. After the **Precaution** and **Caution** have been read, check mark the box for **Confirmed Instructions** by selecting it, and then select **Next**.
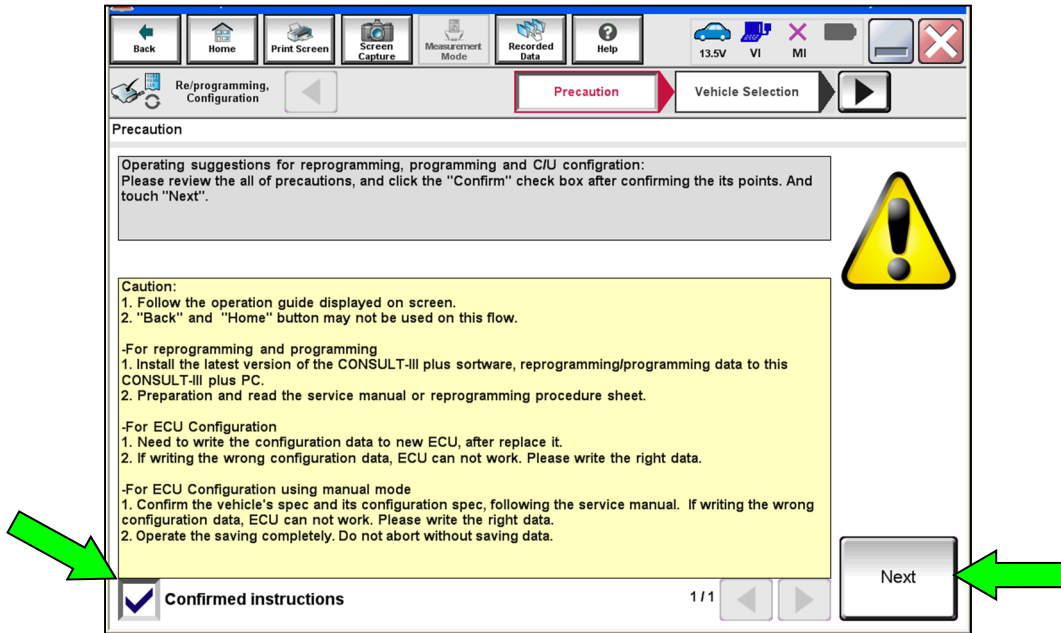

Figure 3

14. Select **LEAF** and the correct **Model Year,** or the **Automatic Selection(VIN)** tab.

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

- If the screen in Figure 4 does not display, skip to step 16 on page 5.

15. Select **Select**.
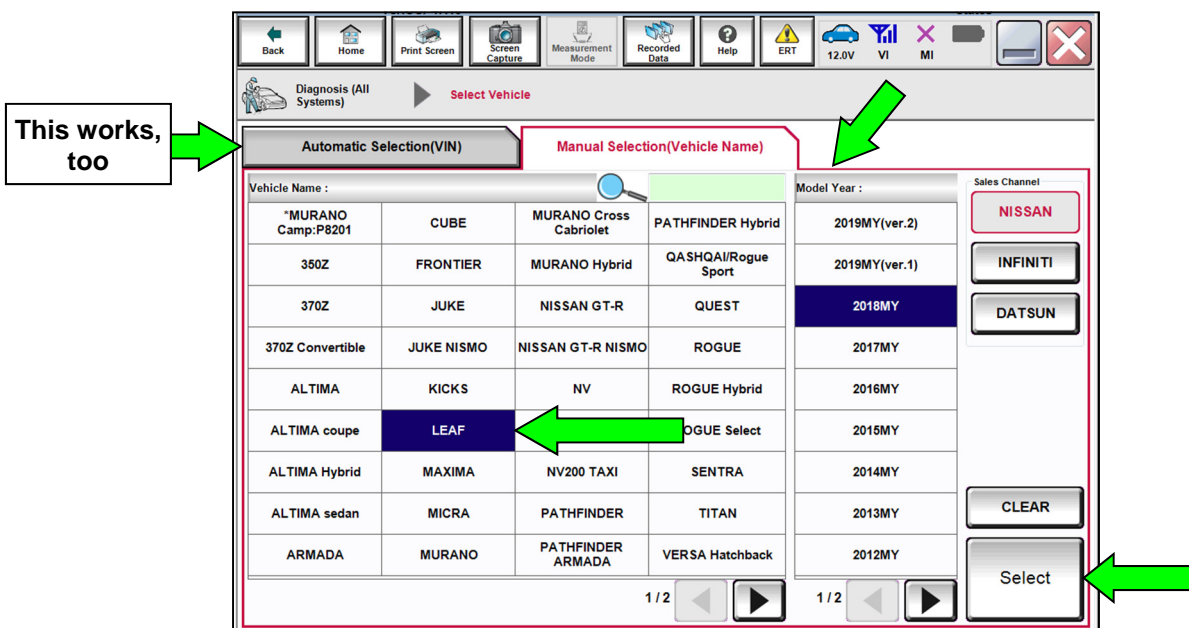
Figure 4

16. Verify the vehicle identification number (VIN) in VIN or Chassis # matches that of the vehicle, and then select Confirm.
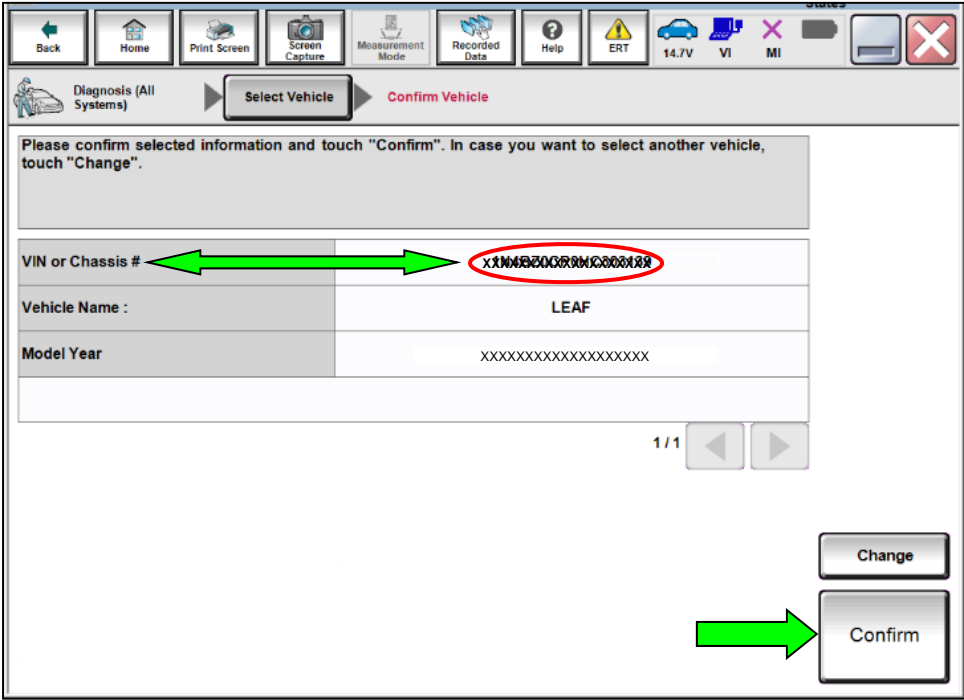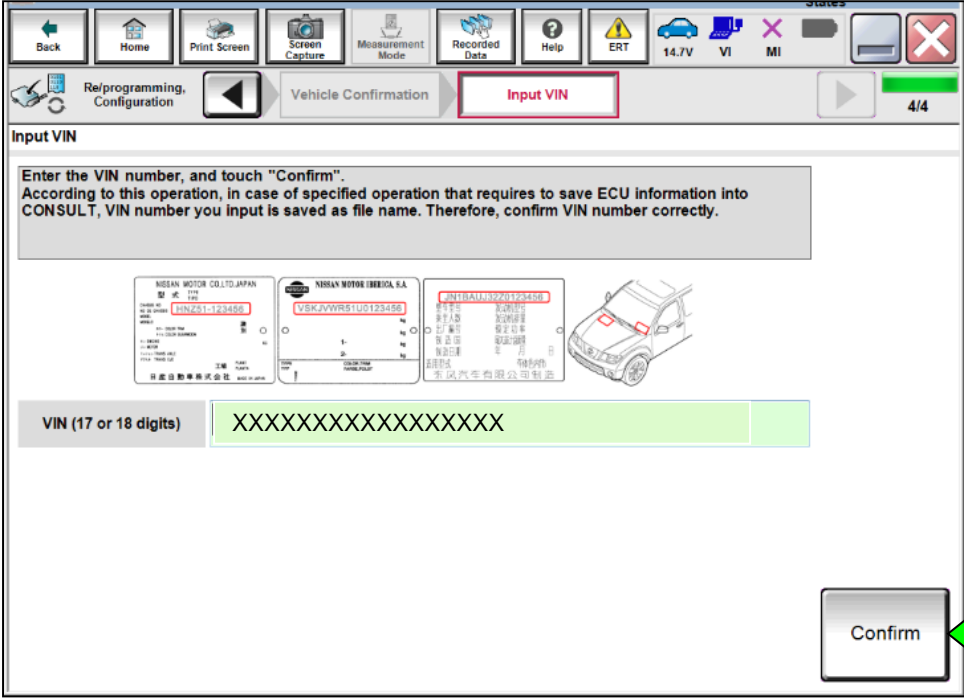

Figure 5

17. Select **Confirm**.

Figure 6

18. Use the arrow keys as needed to select **HV BATTERY 2.**
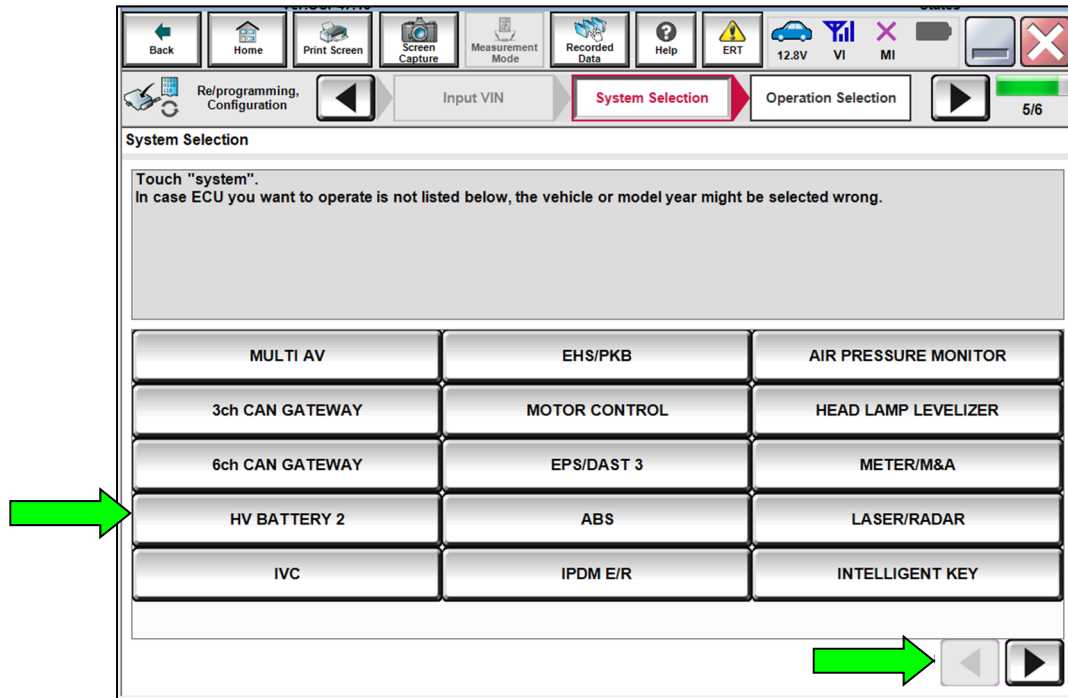
- Wait for System Call to complete.
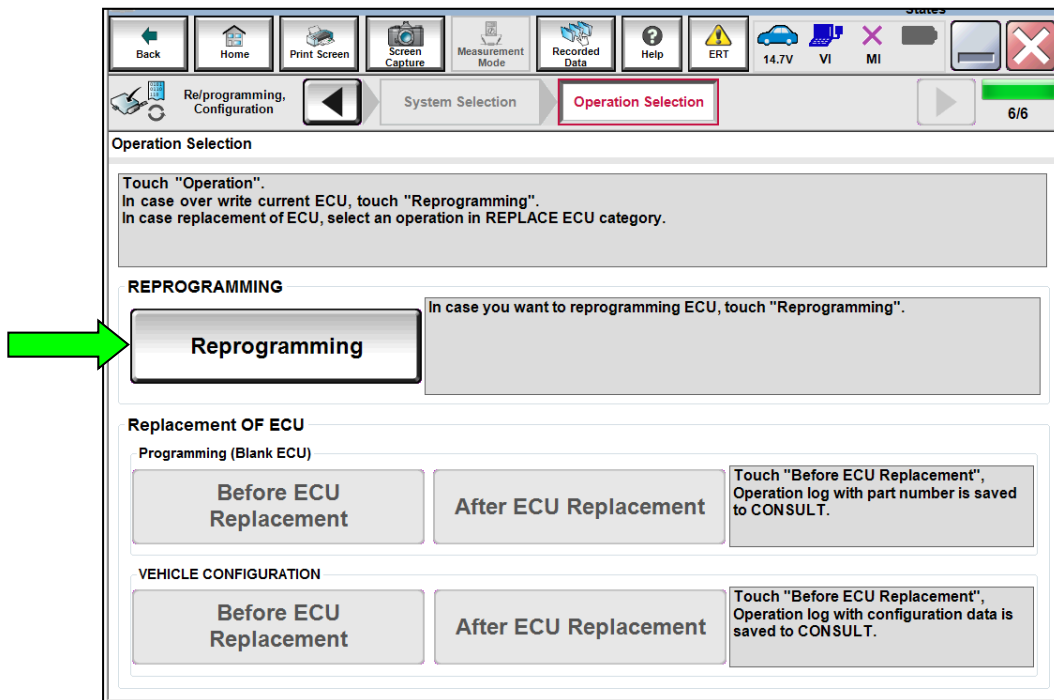

Figure 7

19. Select **Reprogramming**.

Figure 8

20. Find the **Part Number** (see Figure 9) and write it on the vehicle's repair order.

21. Compare the **Part Number** written down to those listed in **Table A** below.
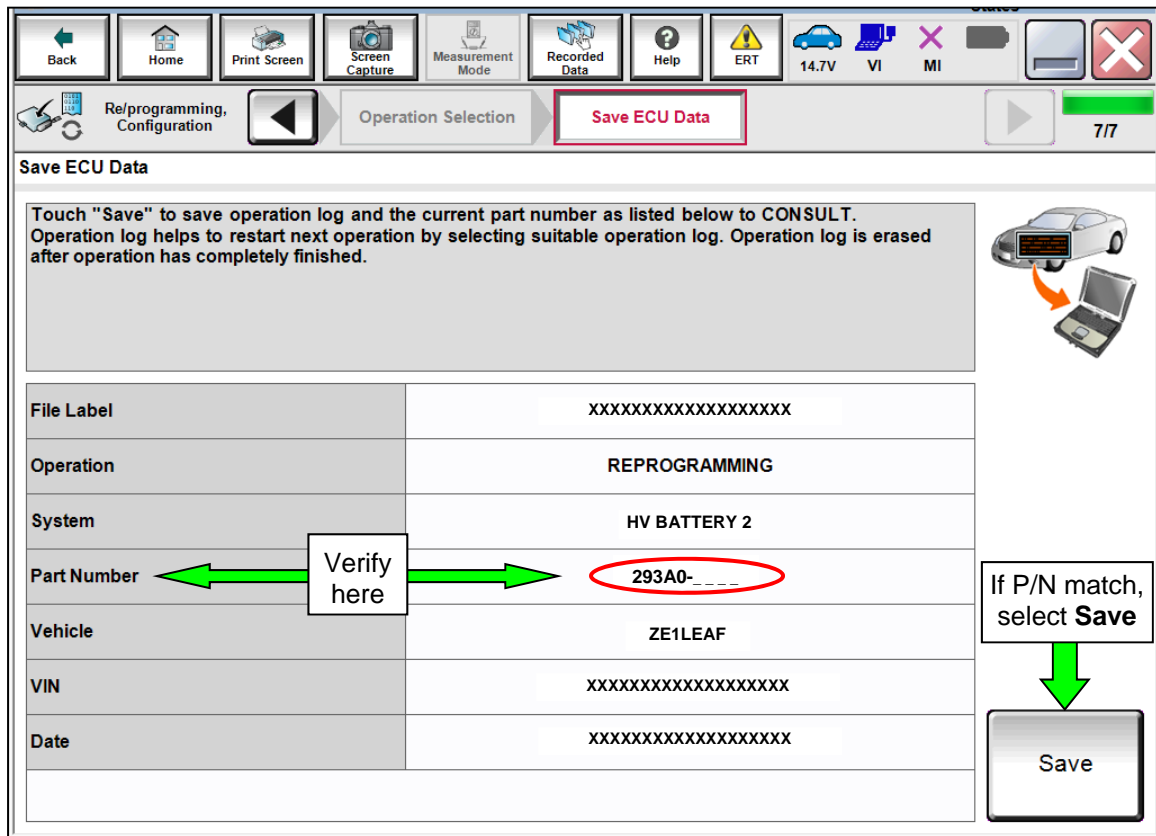

Figure 9

- If there is a match, select **Save**, and then continue to Step 22.

- If there is <u>not a match</u>, this bulletin <u>not</u> apply. Go to ASIST and the Electronic Service Manual (ESM) for further diagnosis.

Table A

MODEL	CURRENT LBC PART NUMBER: 293A0-
2018-2019 LEAF	5SA2A, 5SA3A

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22. Read the **Precaution** on page 1, and then select page 2 (Figure 10) with the arrows. After reading page 2, select **Confirmed instructions**, and then select **Next**.
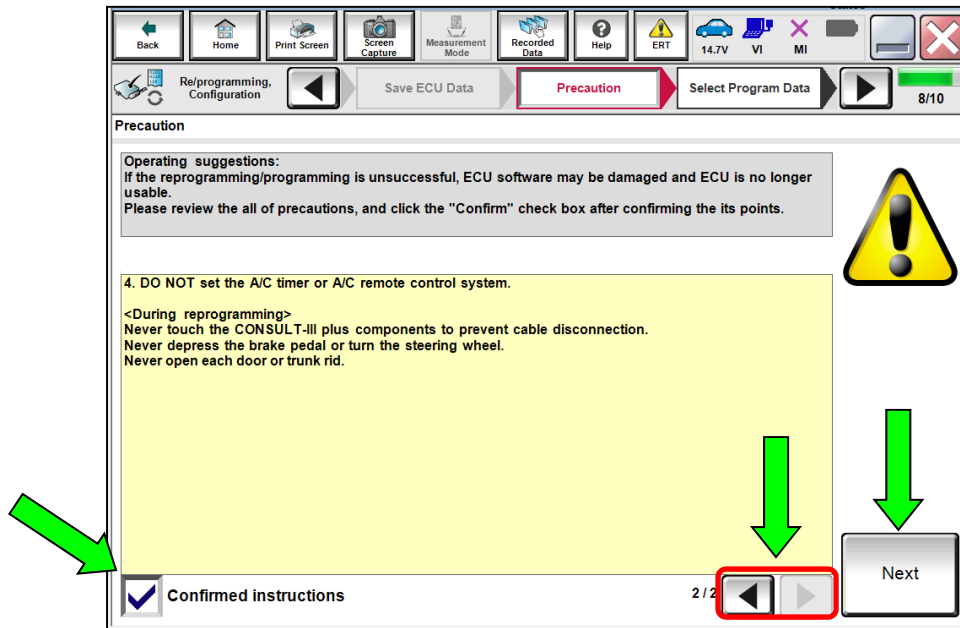

Figure 10

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

➢ In this case, the screen in Figure 11 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 <u>blank</u> (no reprogramming listed), it may mean that there is no reprogramming available for this vehicle, this <u>bulletin does not apply</u> or it has already been done.
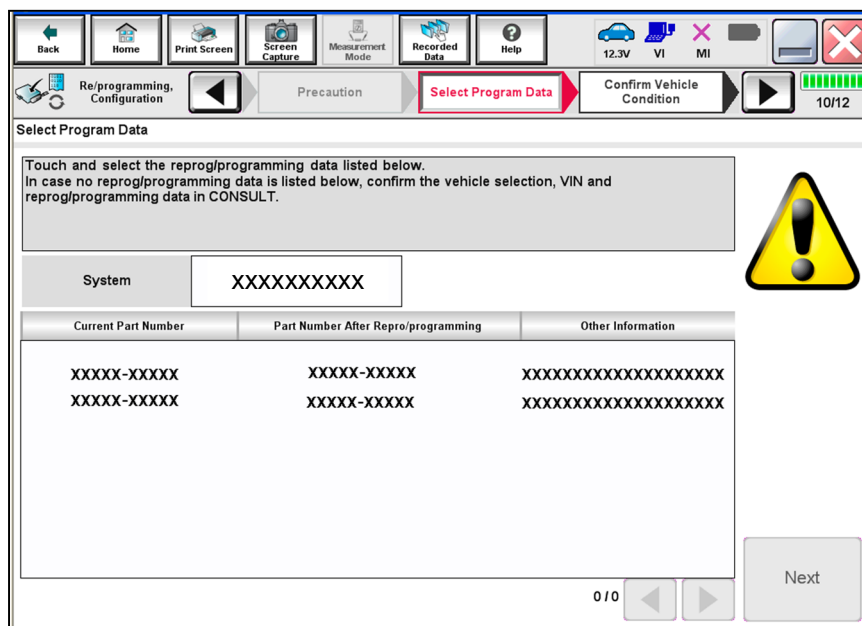

Figure 11

23. Verify the **Current Part Number** matches the Part Number written down in step 20 on page 7, and then select **Next**.
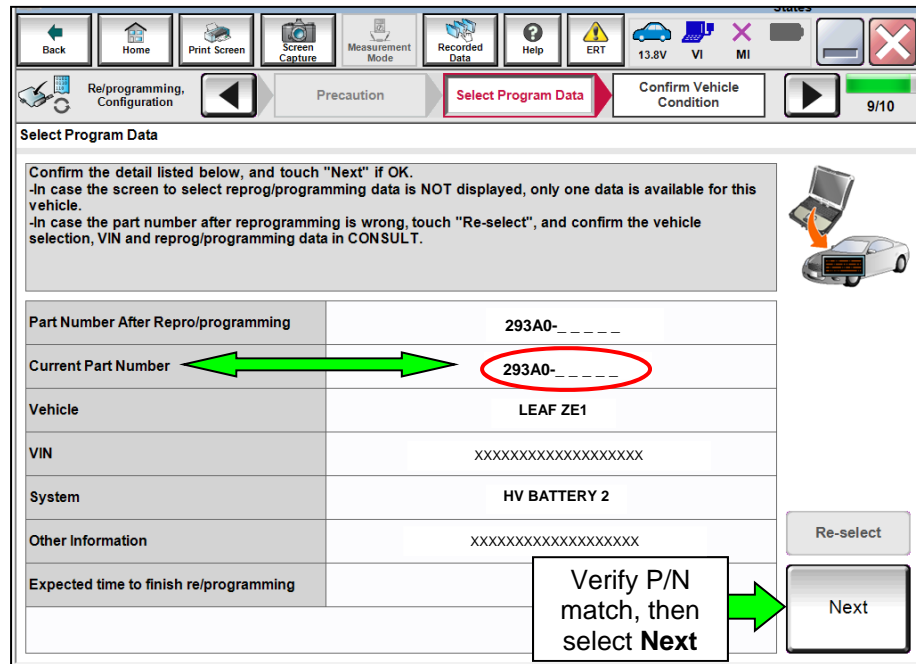

Figure 12

24. If the screen in Figure 13 appears, first select **Delete,** select **Confirm,** and then select **Other Operation**.

- This will erase the **Saved Data List** and restart the reprogram from step 18 on page 6.

- If no **Saved Data List** is stored, Figure 14 will be displayed. Proceed to step 25 on page 10.
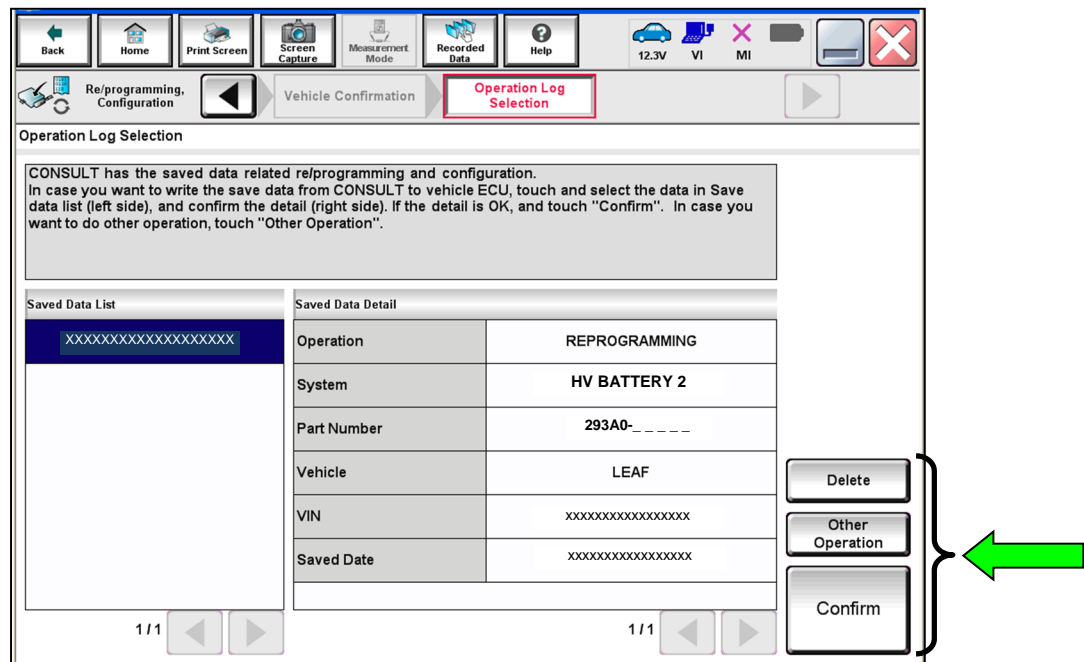

Figure 13

25. Confirm the battery voltage is within the specified range, and then select **Next**.

NOTE: The battery voltage must stay within the specified range to make the **Result** turn **GREEN**.
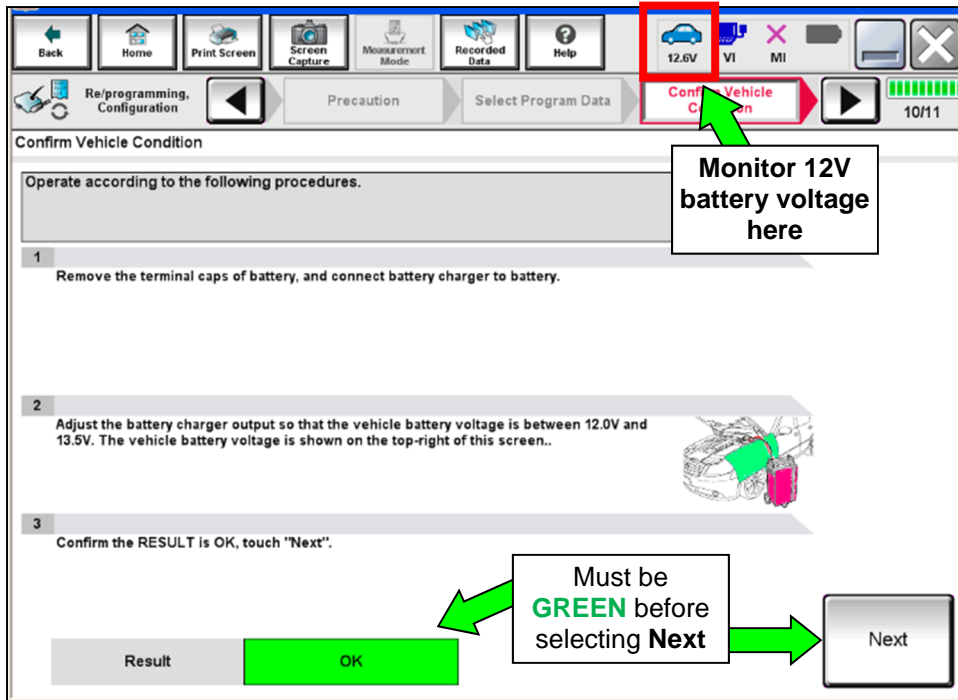

Figure 14

26. With the **BATTERY VOLTAGE** showing **GREEN**, select **Start**.

NOTE: For reprogramming to continue, the vehicle's 12V battery must stay between 12 volts and 15.5 volts.
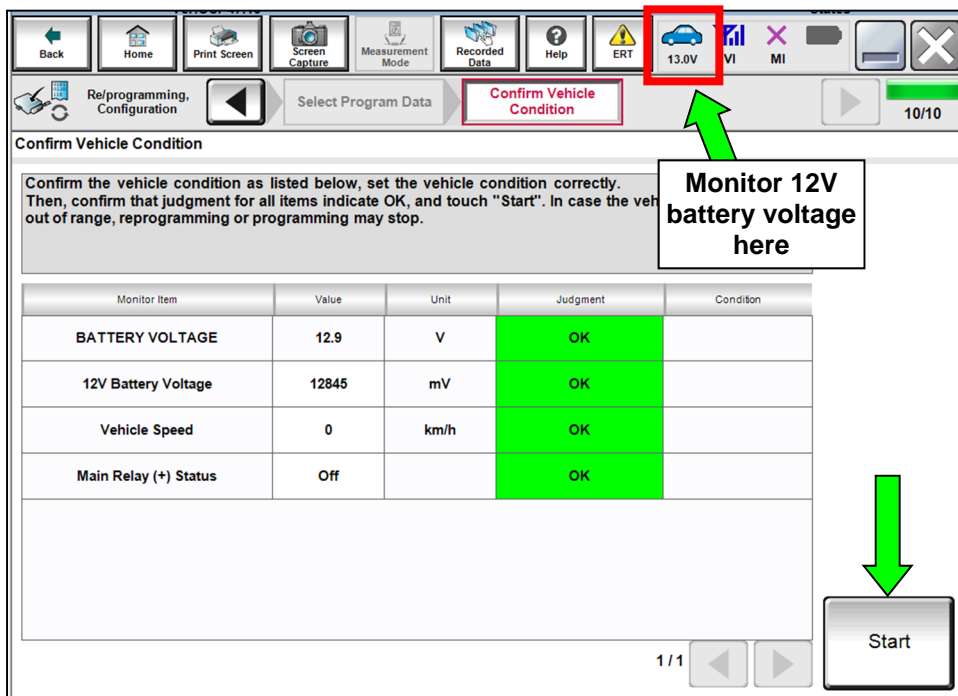

Figure 15

27. Select **USA/CANADA Dealers**.

28. Select **OK**.

    NOTE:

- Figure 16 may not display if the CONSULT PC has remained ON since the last reprogramming.
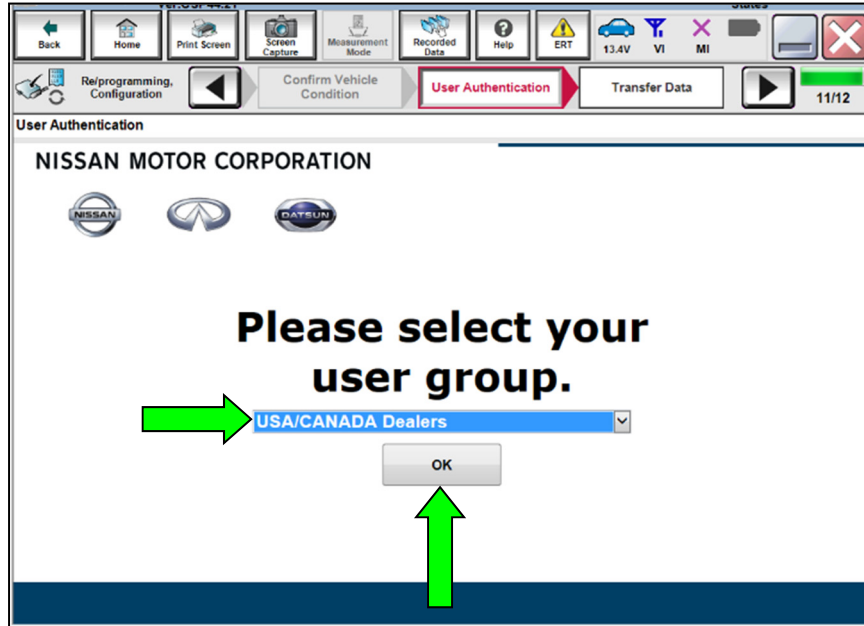

Figure 16

- If the CONSULT PC is not connected to the Internet, the screen in Figure 17 will display.
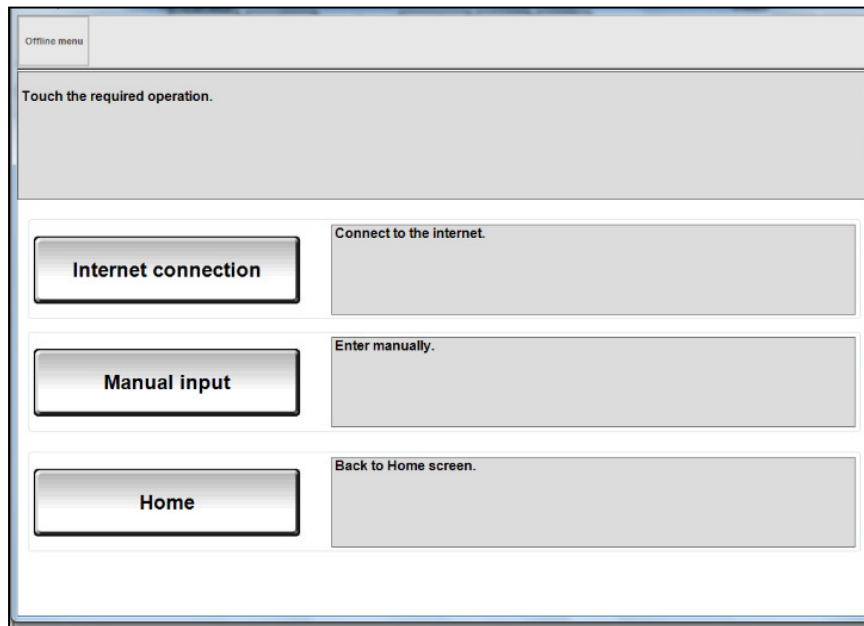

Figure 17

NOTE: In the next steps, the reprogramming process will begin when **Submit** is selected.

29. Enter your **Username** and **Password**.

    • The CONSULT PC must be connected to the Internet via cable or Wi-Fi.

    • If you do not know your User Name and Password, contact your service manager.
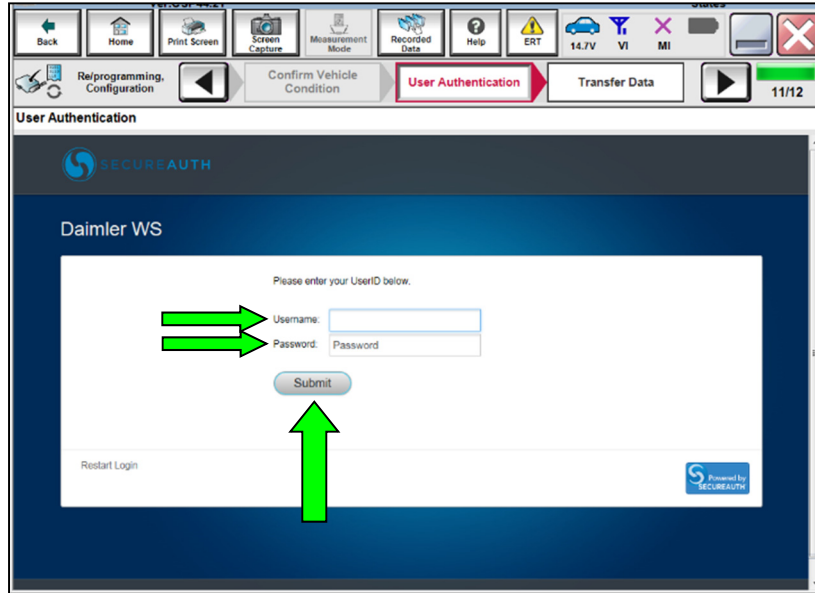
30. Select **Submit**.

Figure 18

31. Wait for both bar graphs to complete.

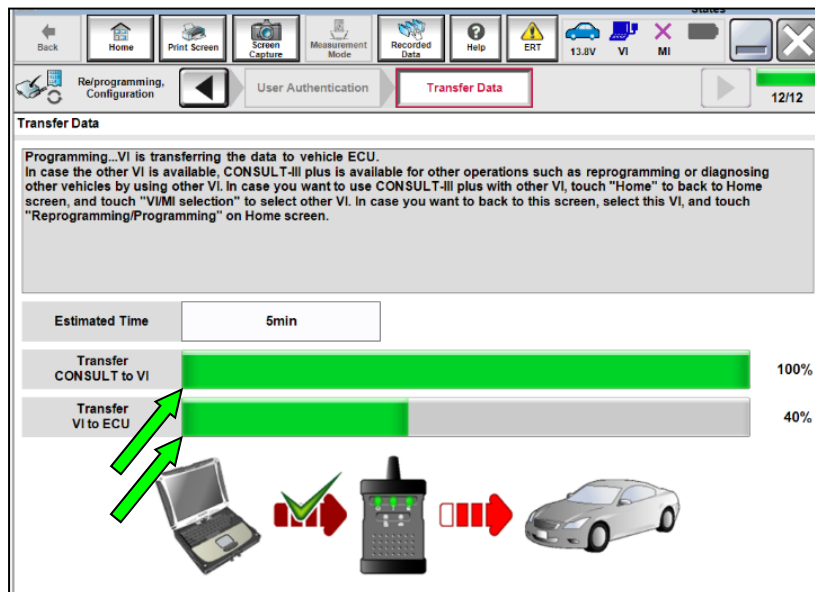   **NOTE:** If the message "You may disconnect CONSULT and VI" is displayed, **DO NOT** disconnect the USB cable.

Figure 19

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32. When the screen in Figure 20 appears, reprogramming is complete.

   a. Select **Next** and wait for System Call to complete.
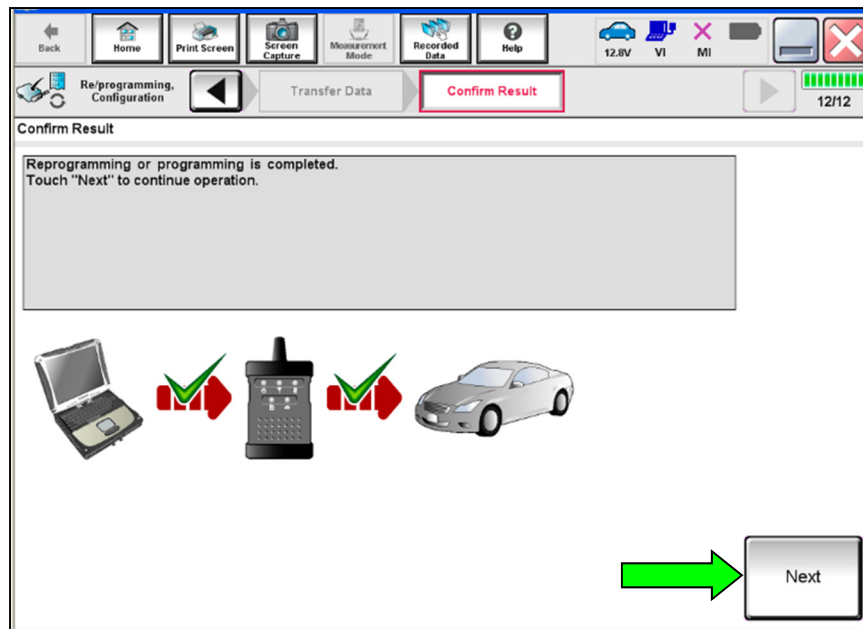
   b. Proceed to step 33 on page 15 to erase DTCs.

Figure 20

NOTE: If the reprogram will not complete, refer the next page to **RETRY** the reprogram update.

LBC recovery

CAUTION: If reprogramming does not complete and the **!?** displays as shown in Figure 21:

- 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.**
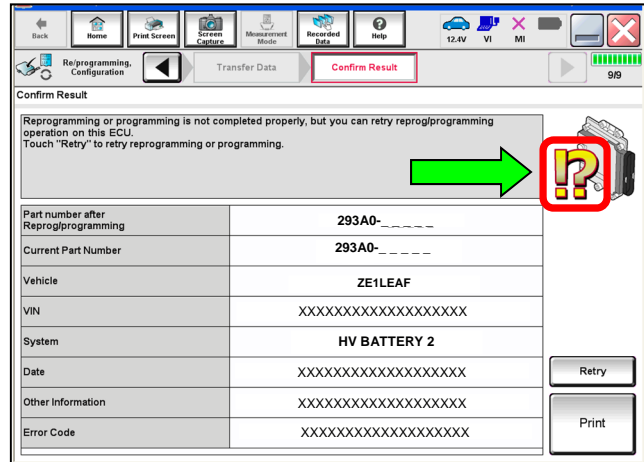- Retry may not go through on first attempt and can be selected more than once.

Figure 21

OR: If reprogramming does not complete and the **X** displays as shown in Figure 22:

- 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.**
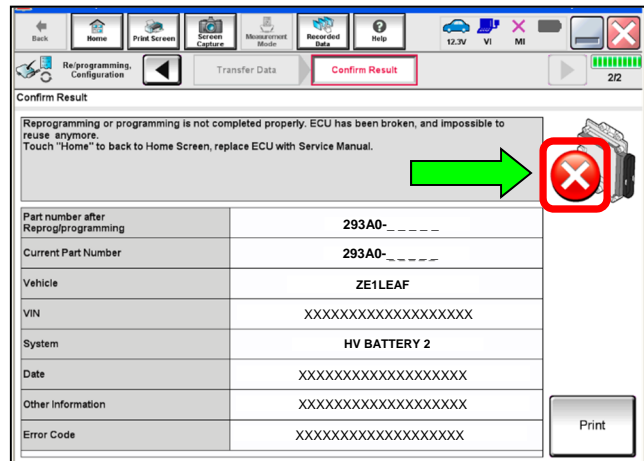- Retry may not go through on first attempt and can be selected more than once.

Figure 22

33. Erase all DTCs:

    a. Turn "ignition" OFF by depressing the power switch once.

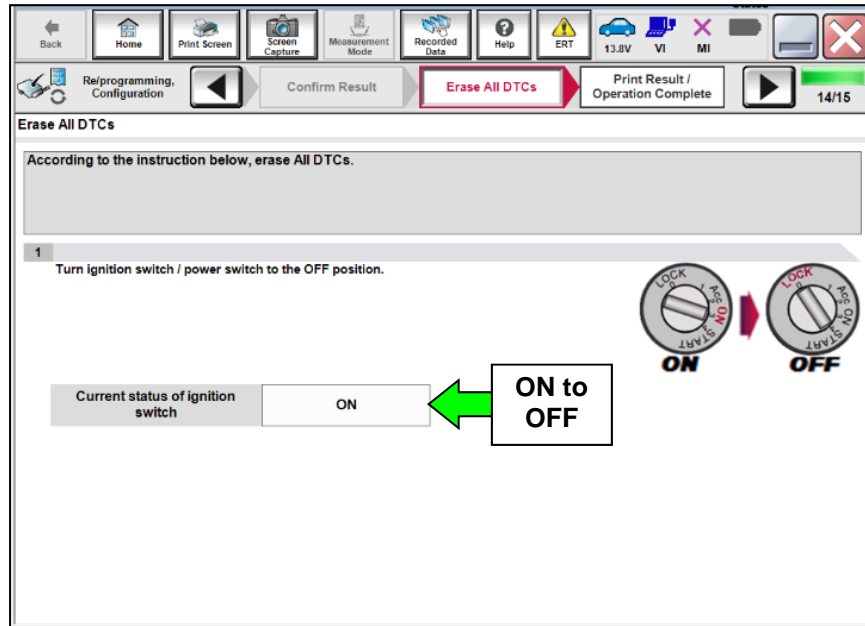   • The screen in Figure 23 will read **OFF** after pressing the power switch <u>once</u>.

Figure 23

    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 24 will read **ON** after pressing the power switch <u>twice</u>.

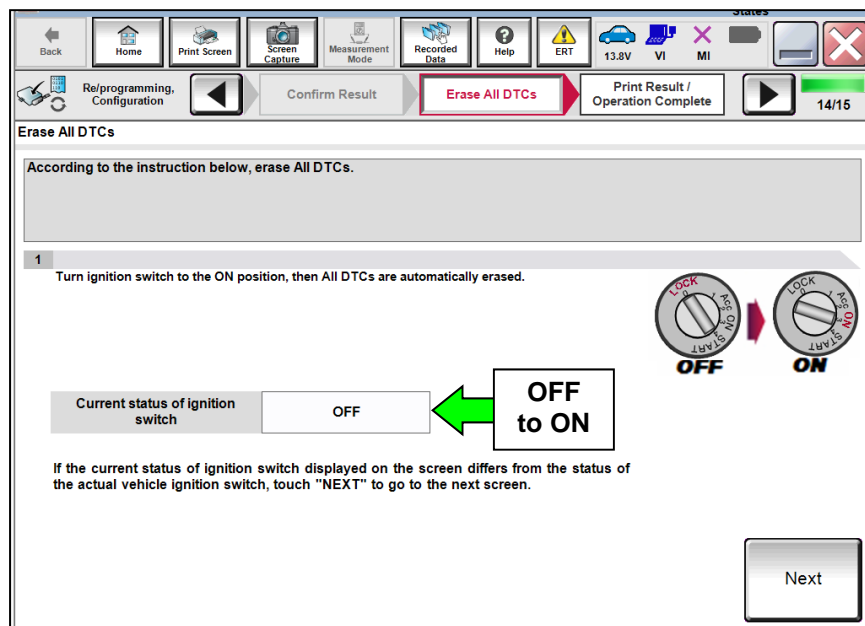**NOTE:** Do not be confused by any screen messages. At this point, simply turn the "ignition" ON.

Figure 24

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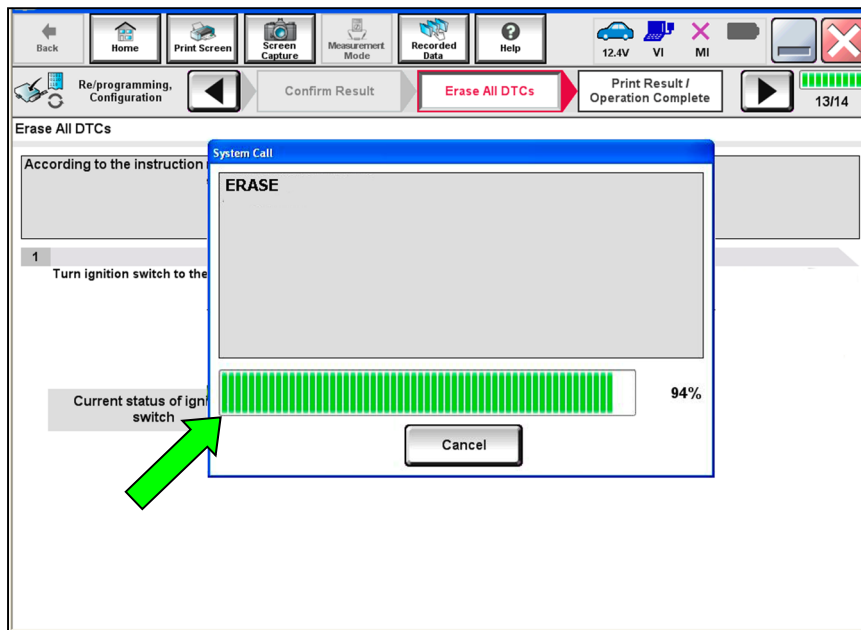d. Wait for the bar graph in the **ERASE** window to complete 100%.

Figure 25

34. Verify the part number has changed.

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

b. Attach the copy to the repair order.
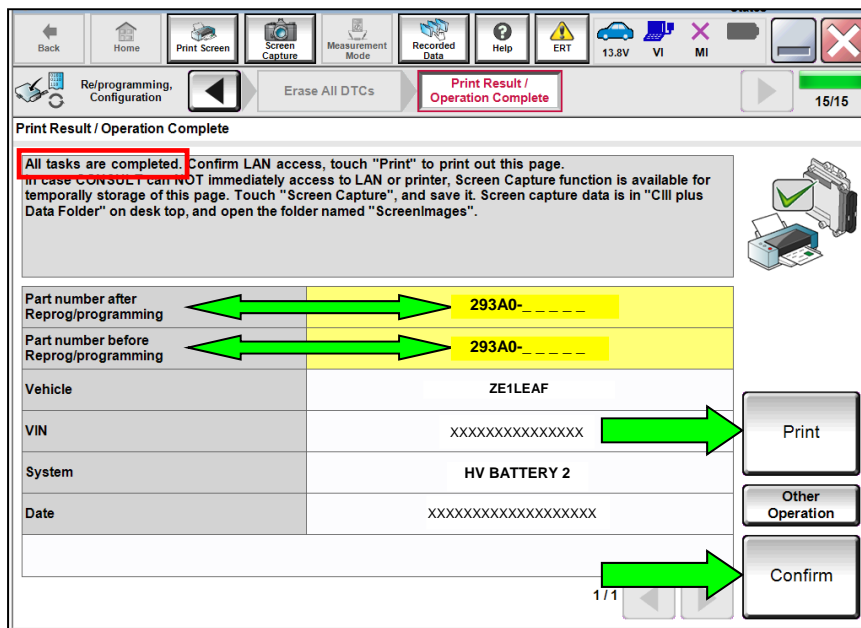
c. Once a copy has been printed, select **Confirm**.

Figure 26

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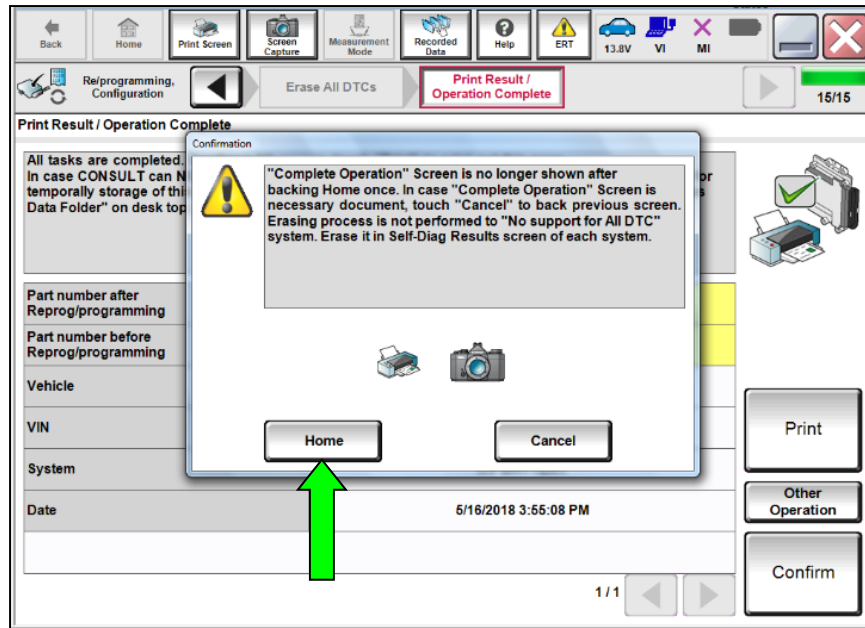35. After Confirmation has completed, select **Home**.

Figure 27

36. With LBC reprogramming completed for **HV BATTERY 2**, reprogram the LBC for **HV BATTERY** starting at step 9 on page 3.

- When performing step 18 on page 6, use the arrow keys as needed to select **HV BATTERY** (Figure 28).

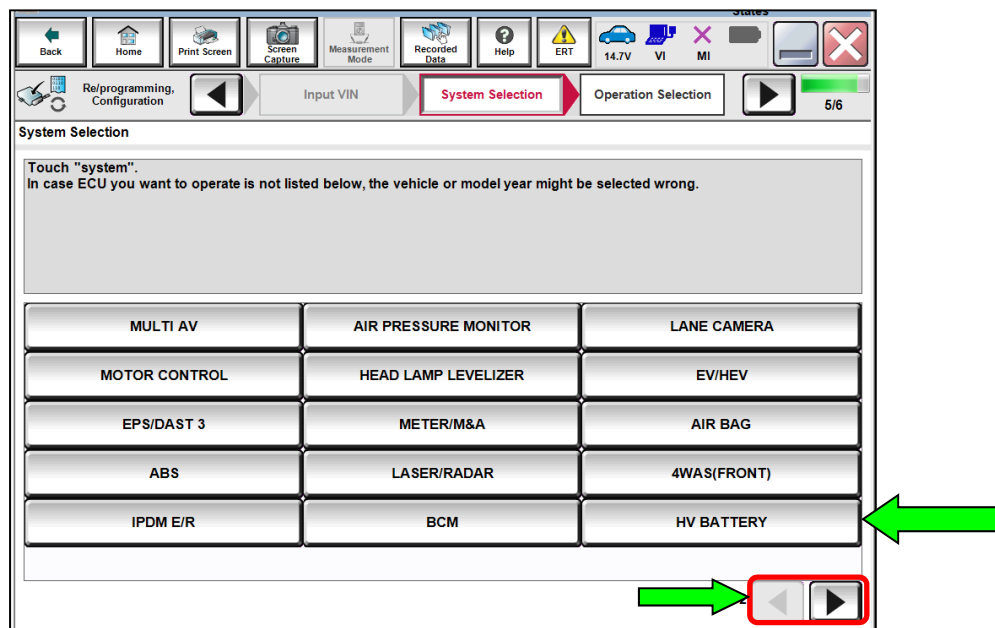- After selecting **HV BATTERY**, continue to step 19 on page 6.

Figure 28

37.   Close C-III plus by selecting 🟥X.

38.   Turn OFF the CONSULT PC.

39.   Disconnect the CONSULT PC and plus VI from the vehicle.

40.   Disconnect the battery maintainer/smart charger from the 12 volt battery.

41.   Verify the repair is complete:

   a. Place the vehicle in the "READY to drive" mode (press the power switch while stepping on the brake pedal).

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

CLAIMS INFORMATION

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Reprogram HV Battery Control Unit	(1)	JX59AA	ZE	32	0.7

(1)   Reference **Table A** on page 7 and use the matching Battery Control Assy (293A0-*****) as the Primary Failed Part (PFP).

AMENDMENT HISTORY

PUBLISHED DATE	REFERENCE	DESCRIPTION
July 18, 2019	NTB19-056	Original bulletin published
February 4, 2020	NTB19-056a	Added Applied VIN and Applied Date on page 1, changes to step 18, and steps 36-40.