



# SERVICE BULLETIN

Classification: EL13-055c	Reference: NTB14-001c	Date: March 11, 2015
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## 2013 - 2014 LEAF; INSUFFICIENT HEATER OUTPUT

This bulletin has been amended in the APPLIED VEHICLES section. The “complete HVAC and case assembly” is no longer to be replaced, only the PTC heater. The PTC heater is no longer on parts restriction. The remainder of this bulletin reflects these and other changes.  
Discard all previous versions of this bulletin.

**APPLIED VEHICLES:** 2013 - 2014 LEAF (ZE0)

**APPLIED VIN and**

**DATE:** Vehicles built before 1N4AZ0CP(\*)EC 334340 and February 17, 2014

### IF YOU CONFIRM

The vehicle does not meet "PTC Heater Specifications" on Page 2.

And

The vehicle's current EV/HEV software version for the “Vehicle Control Module” (VCM) is in “Table A” on page 8.

- Refer to step 14 on page 8 in the **SERVICE PROCEDURE** to check current EV/HEV software version.

**NOTE:** One or more of the following DTC's below may be present:

- B2773 PTC Heater Circuit 1
- B2774 PTC Heater Circuit 2

### ACTION

1. Reprogram the VCM with CONSULT-III plus (C-III plus).
2. Replace the PTC heater.

**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.

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

## PTC Heater Specifications

Under the following conditions:

- With external vehicle ambient air temp at 60°F or more (with vehicle inside an enclosed shop, or outside if conditions permit)
- Ignition in Ready Mode
- The vehicle's heater temperature at 90°

After two (2) minutes the temperature coming from the center vents should be at least 130°F measured with a non-contact infrared thermometer.

- SL and SV models with heat pump may have reduced heat, or may have no heat if the heat pump has also shut down due to DTC's.
- S models without heat pump will have no heat.

## SERVICE PROCEDURE:

### Reprogram the Vehicle Control Module (VCM)

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” VI’s 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.

- Do not connect the battery tester/charger at this time. The battery tester/charger will be set up later in this bulletin.

**CAUTION:** 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 them off and make sure to turn them back on after reprogramming.

3. Once all ASIST and CONSULT related updates have been verified/performed, attach the CONSULT PC to vehicle.

- Connect the plus VI to the vehicle.
- Connect the AC adapter to the CONSULT PC.

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

5. Press 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 **Re/programming Configuration**.

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

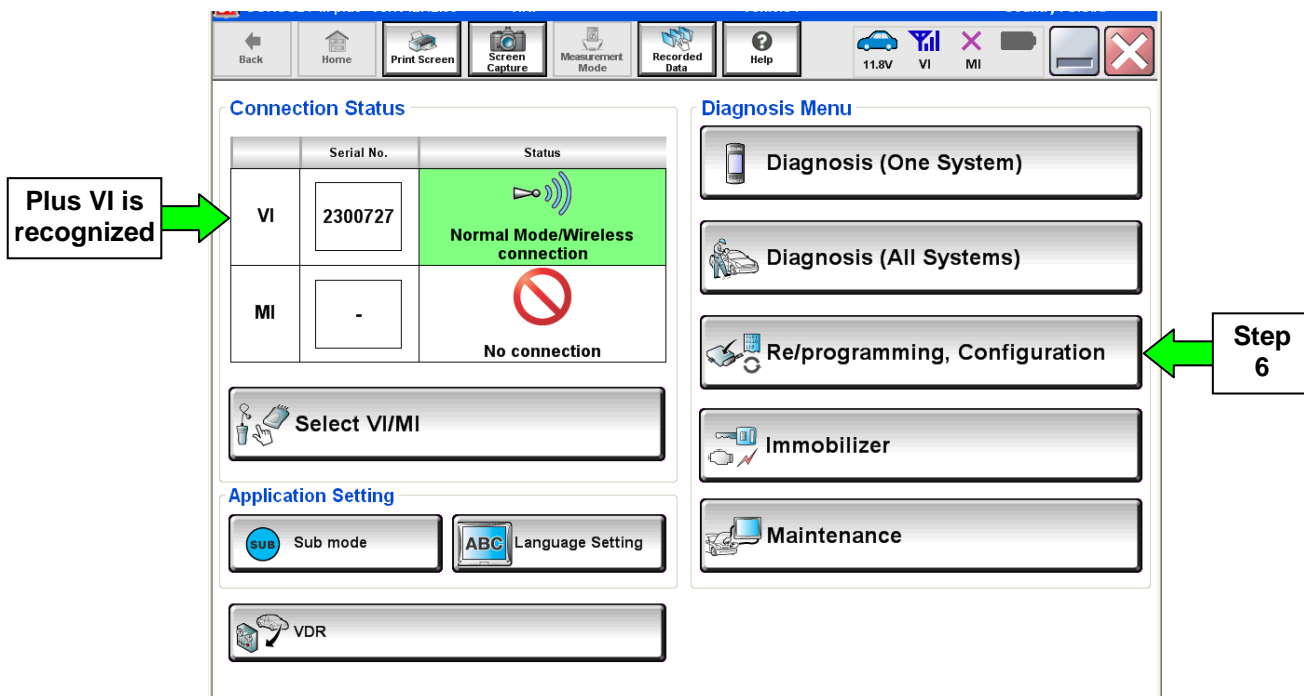


Figure 1

7. Check **Confirmed Instructions** and then select **Next**.

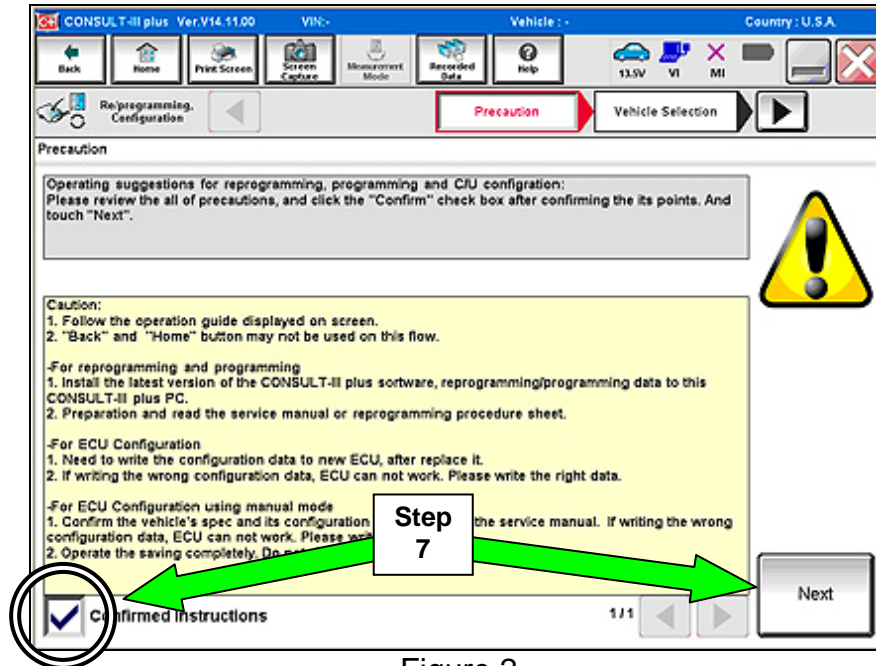


Figure 2

8. Select **LEAF** and **2013/2014** or **Automatic Selection (VIN)**.

Or

- If **Automatic Selection (VIN)** is selected, wait for the **Reading VIN** screen to complete (picture not shown), then go to step 11.

9. Select **Select**.

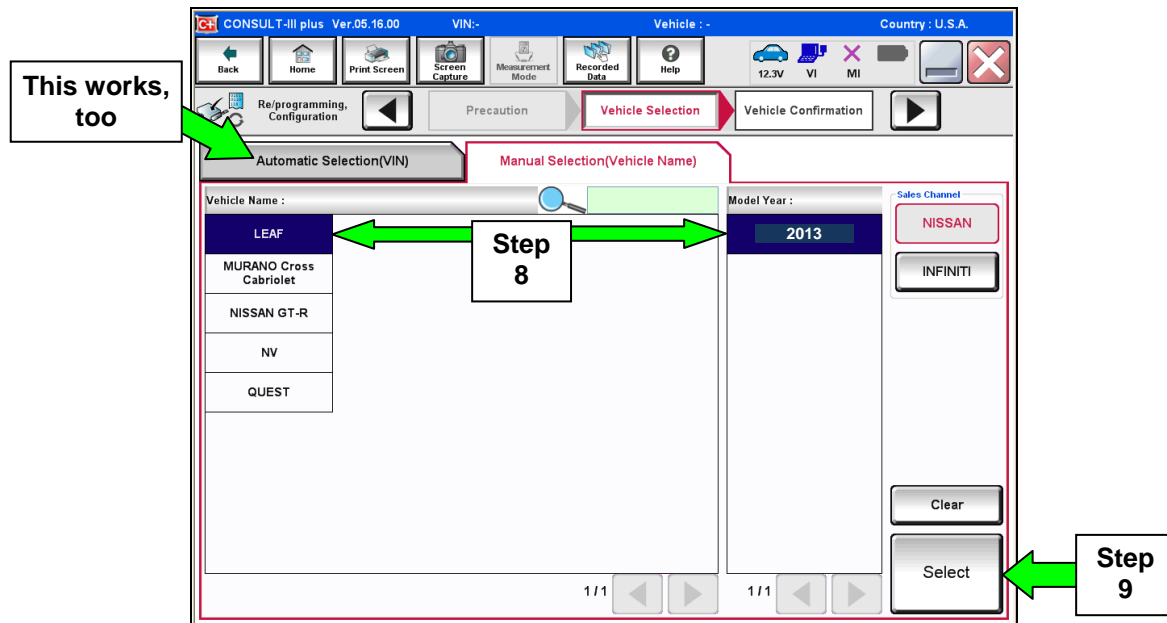


Figure 3

10. Verify the VIN in **VIN or Chassis #** matches that of the vehicle's.

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

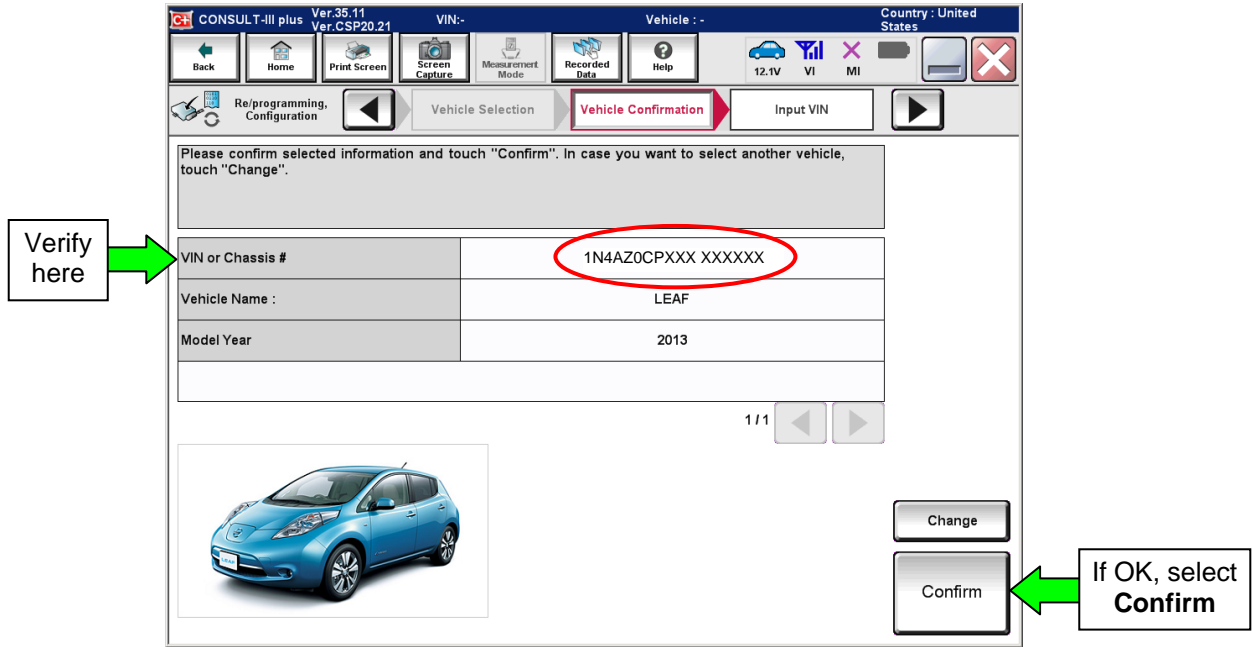


Figure 4

11. Select **Confirm**.

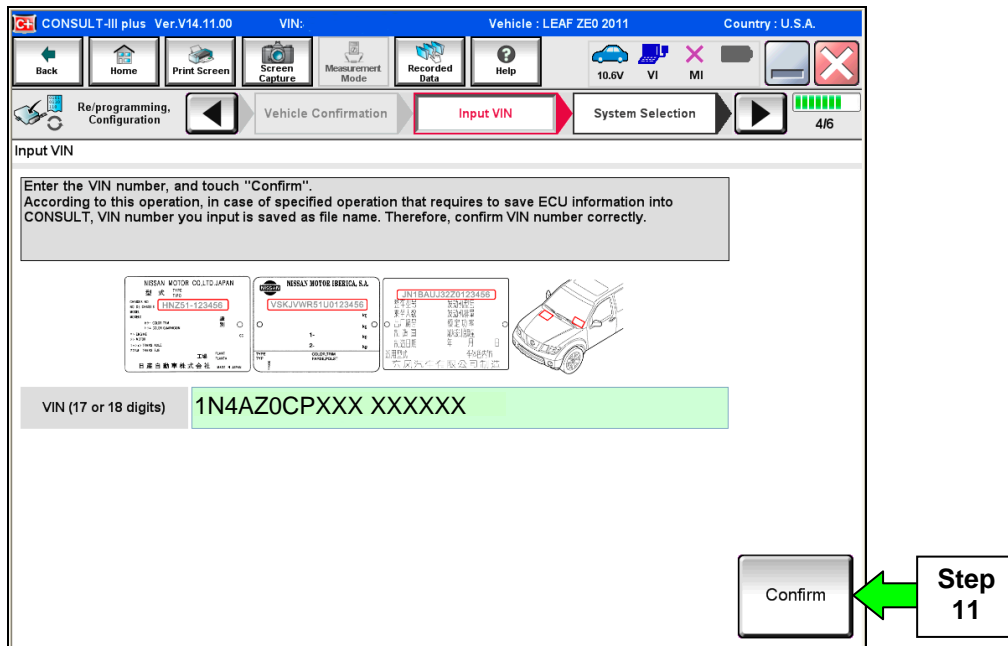


Figure 5

## 12. Select EV/HEV.

- Wait for system call to complete.

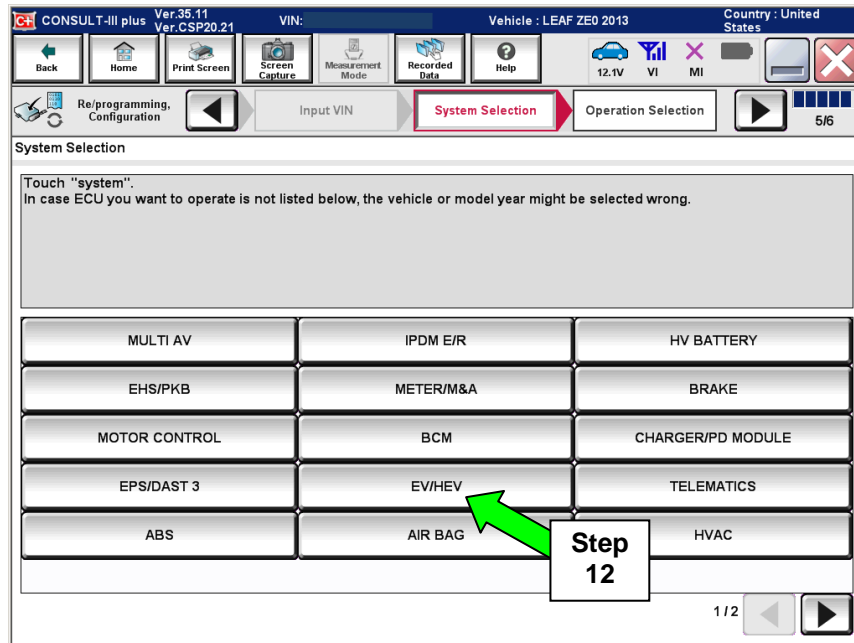


Figure 6

## 13. Select Reprogramming.

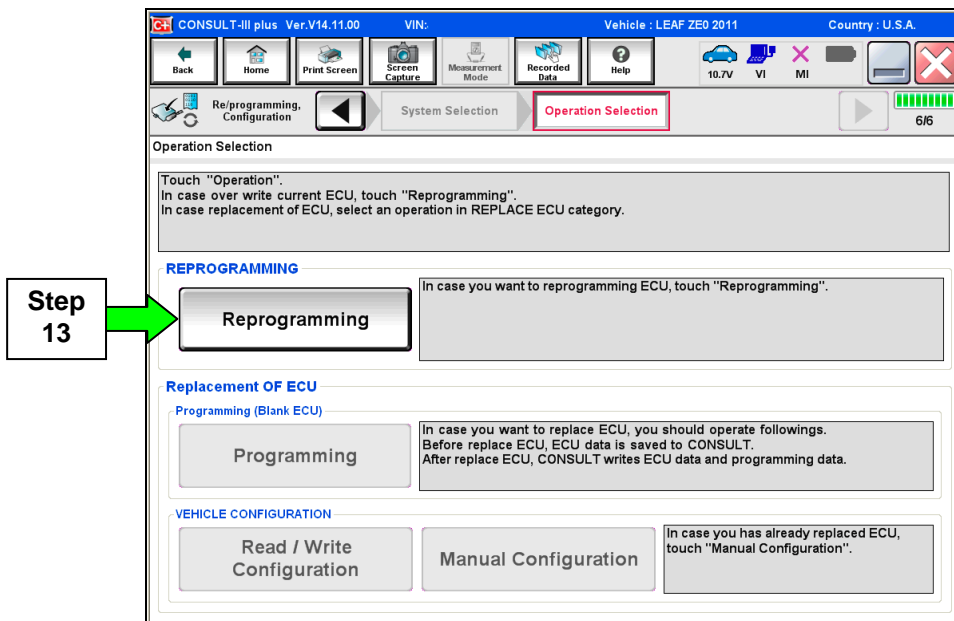


Figure 7

14. Write down the **Part Number** on the vehicle's repair order (see Figure 8).

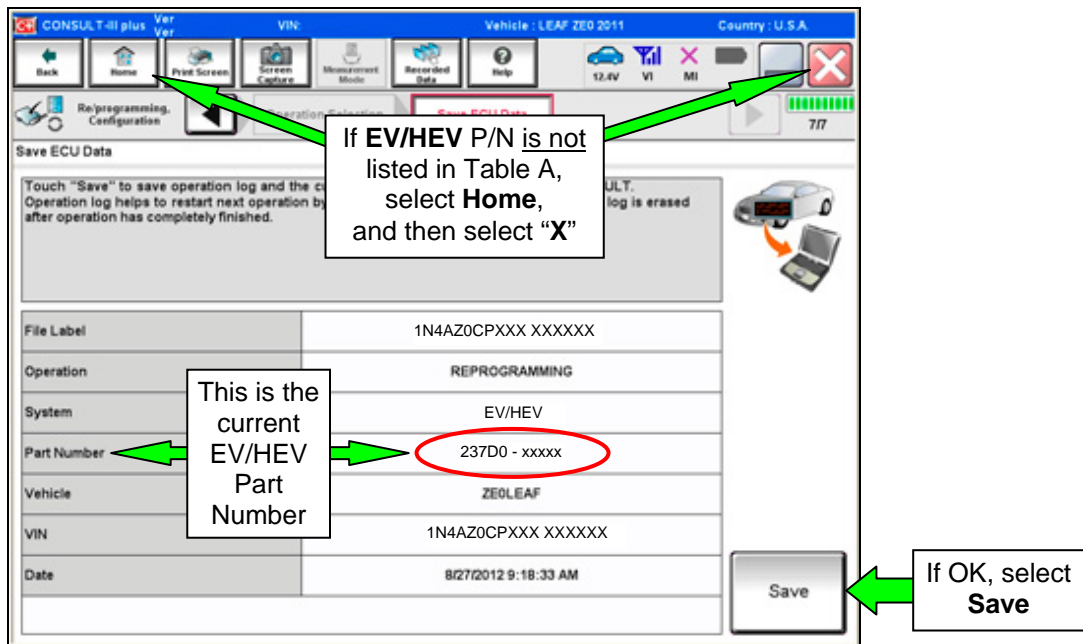


Figure 8

- If the **EV/HEV** part number is in Table A below, continue with the VCM reprogramming and PTC heater replacement.
  - Select **Save**, and then go to Step 15.
- If the **EV/HEV** part number is not in Table A below, this bulletin does not apply.
  - Close C-III plus (select **Home**, and then the **“X”**), disconnect from the vehicle.
  - If the timer for either charging or climate control were turned off, turn them back.
  - Refer to ASIST or the applicable Electronic Service Manual (ESM) for further diagnostic assistance.

Table A

Model	Current EV/HEV Part Number: 237D0 -
2013 LEAF	3NF0A, 3NF0B, 3NF0C 3NF1A, 3NF1B, 3NF1C
2014 LEAF	4ND0A, 4ND1A, 4ND2A



15. Select **Next**.

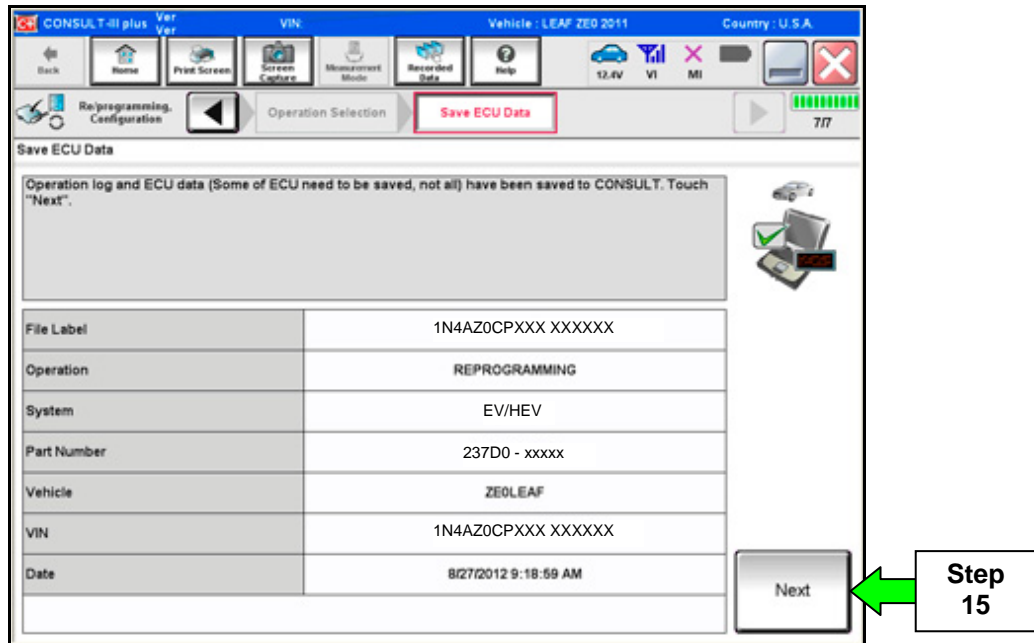


Figure 9

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**.

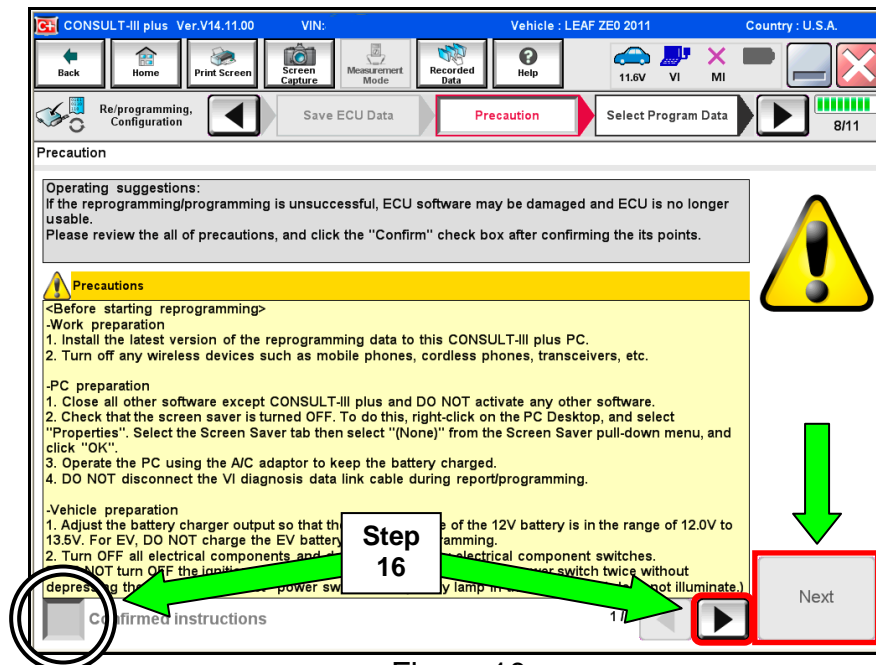


Figure 10

**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 blank (no reprogramming listed), it means that there is no reprogramming available for this vehicle.
- Refer to ASIST or the applicable ESM for further diagnostic assistance

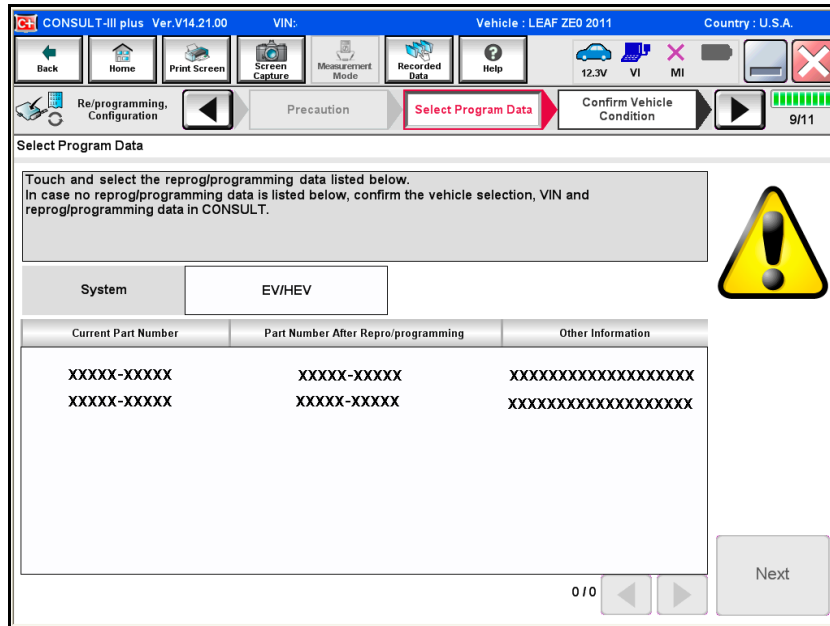


Figure 11

17. Verify “Current” and “After Reprogramming” part numbers are listed, then select **Next**.

- They should be different.

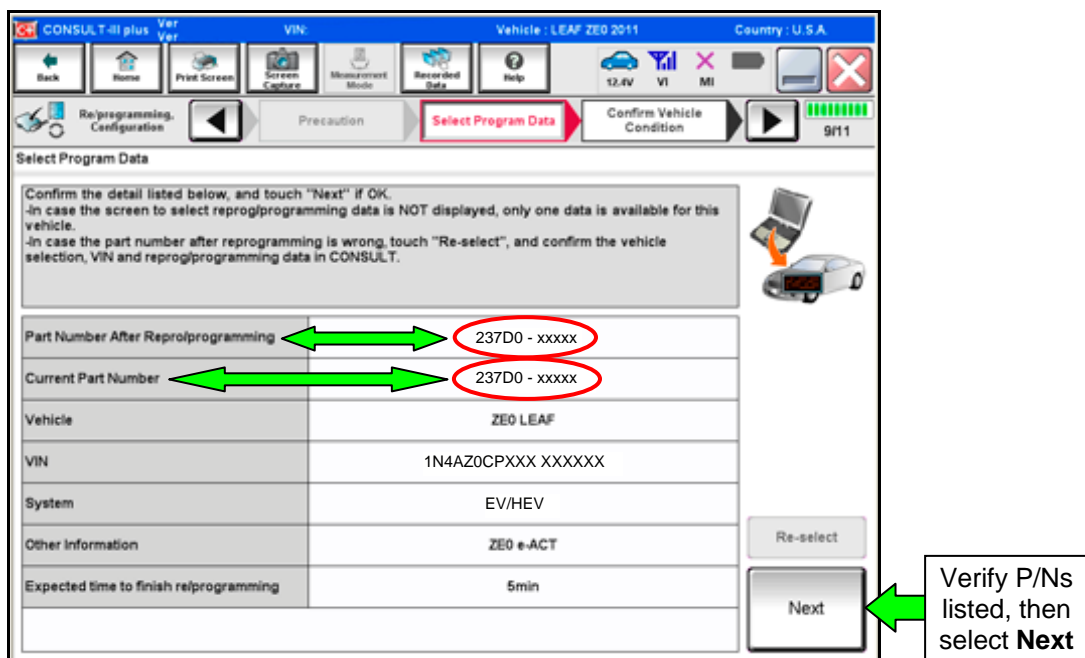


Figure 12

18. Open the hood, and then set up the GR8 Multitasking Battery Diagnostic Station (battery tester/charger) for the 12V battery.

- Set GR8 to ECM Power Supply Mode.

**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.

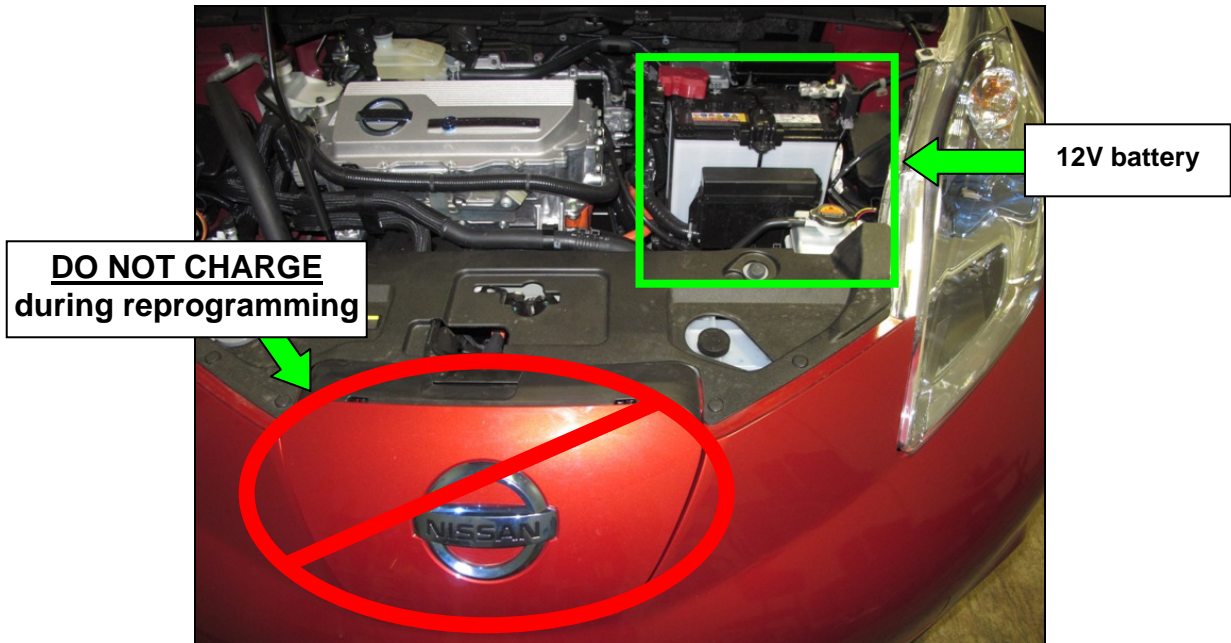


Figure 13

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

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

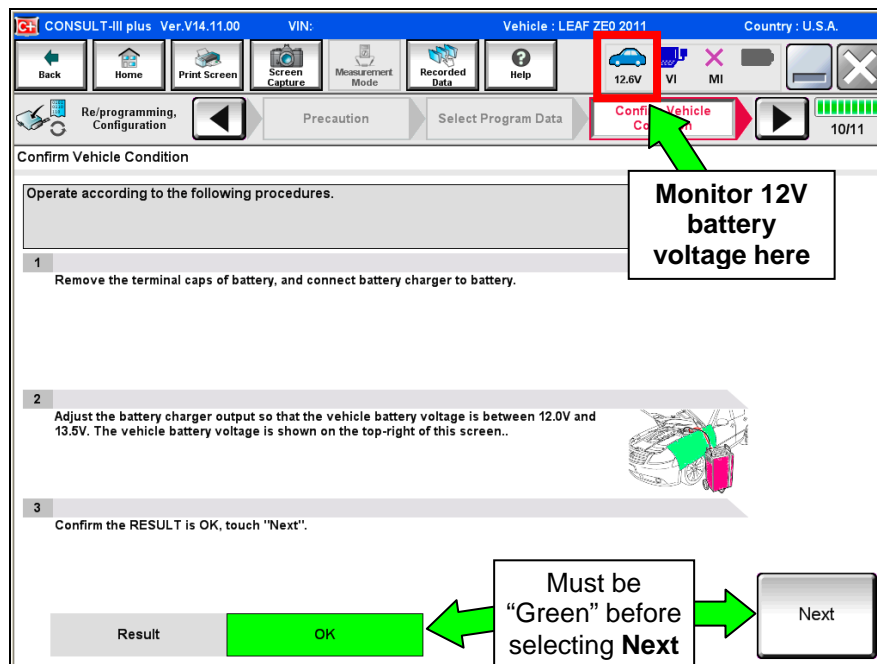


Figure 14

20. On the next screen, select **Start**.

- The reprogramming process begins when **Start** has been selected.
- A warning message “Stop Vehicle” will display on the meter and a continual tone will sound while the reprogram is occurring.

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

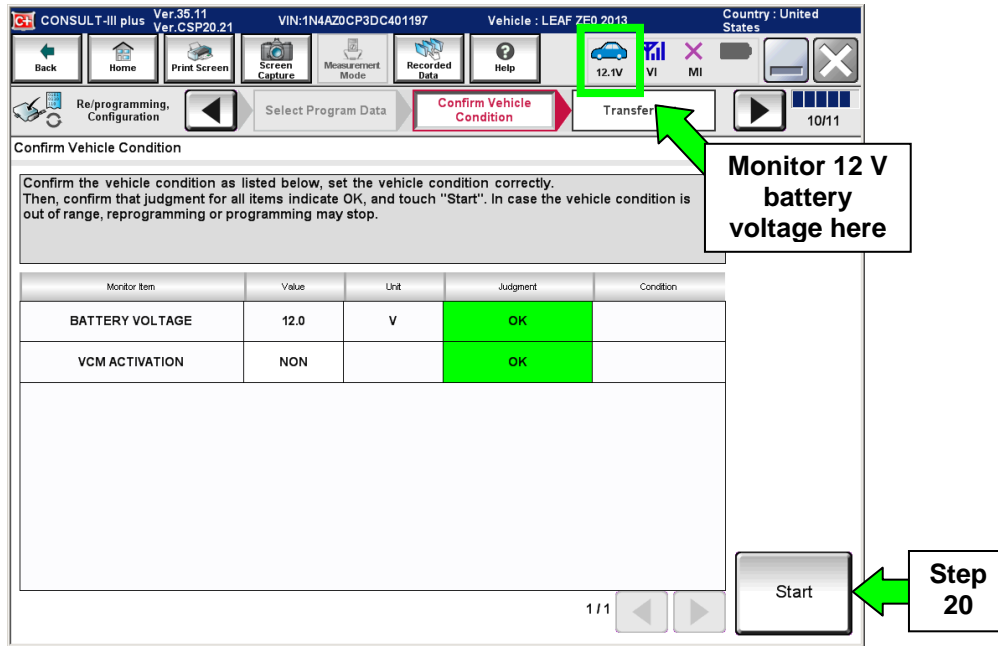


Figure 15

21. Wait for both bar graphs to complete.

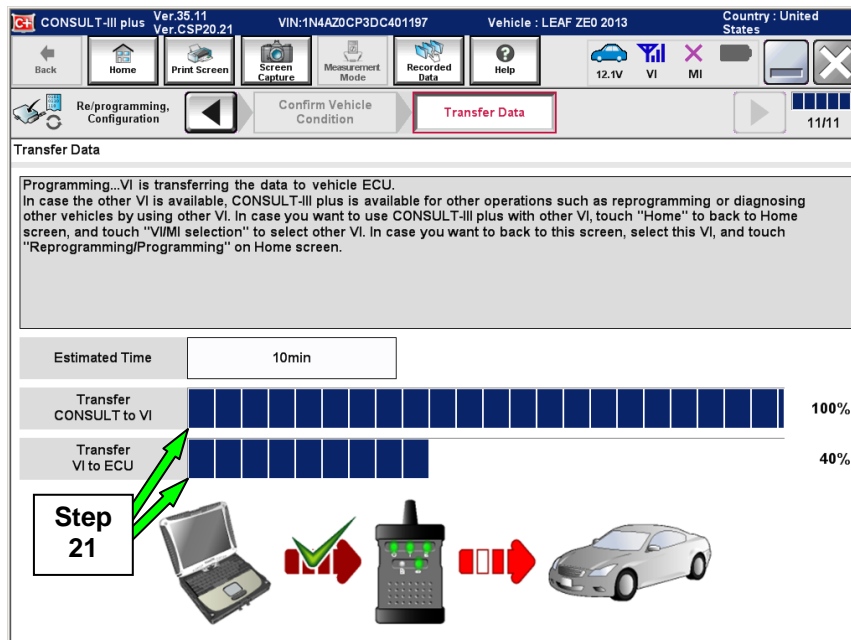


Figure 16

22. When the screen in Figure 17 appears, reprogramming is complete.

**NOTE:** If the screen in Figure 17 does not display (reprogramming is not complete), refer to the information on page 14

- a. Select **Next**.
- b. Wait for System Call to complete.

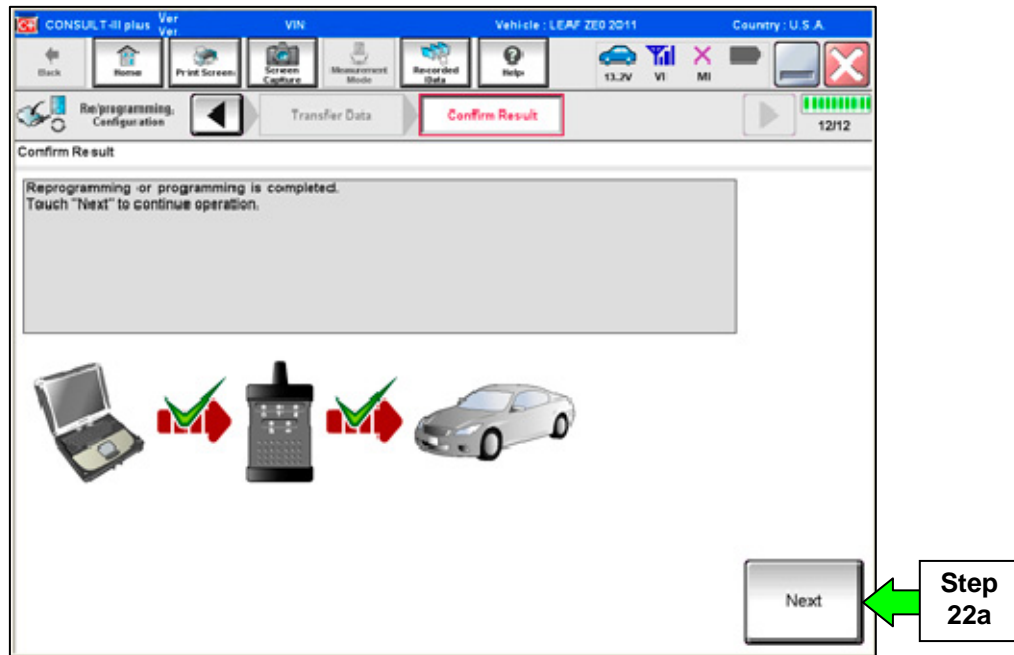


Figure 17

23. 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 once.

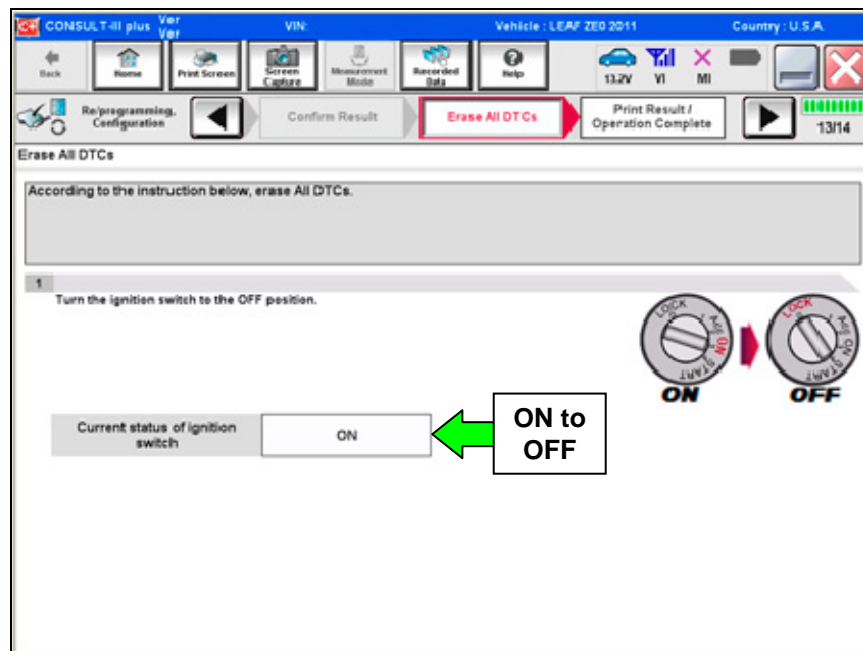


Figure 18

## ECM recovery:

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

**If reprogramming does not complete and the “!” icon displays as shown in Figure 19:**

- Check battery voltage (12.0 – 15.5 V).
- 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.

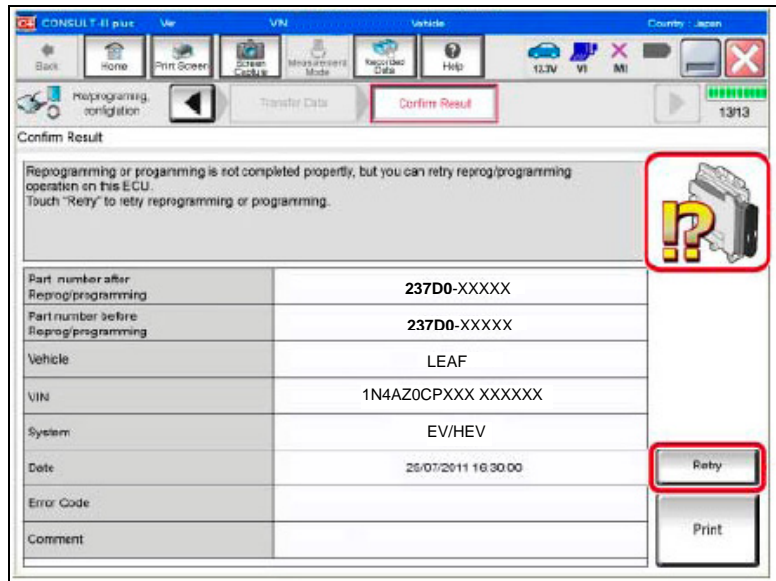


Figure 19

**If reprogramming does not complete and the “X” icon displays as shown in Figure 20:**

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

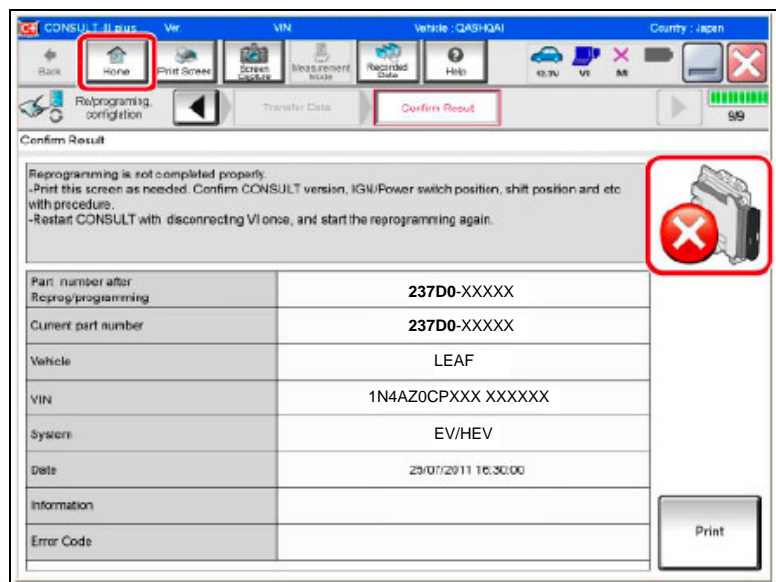


Figure 20



- b. 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 21 will read **ON** after pressing the power switch twice.
- c. Wait for the bar graph in the **ERASE** window to complete 100%.

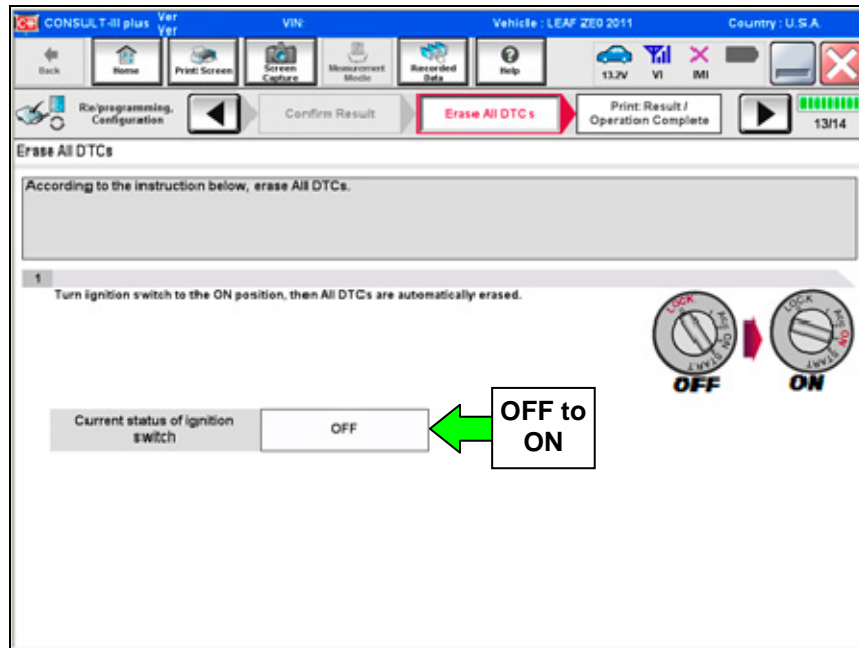


Figure 21

- 24. 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**.

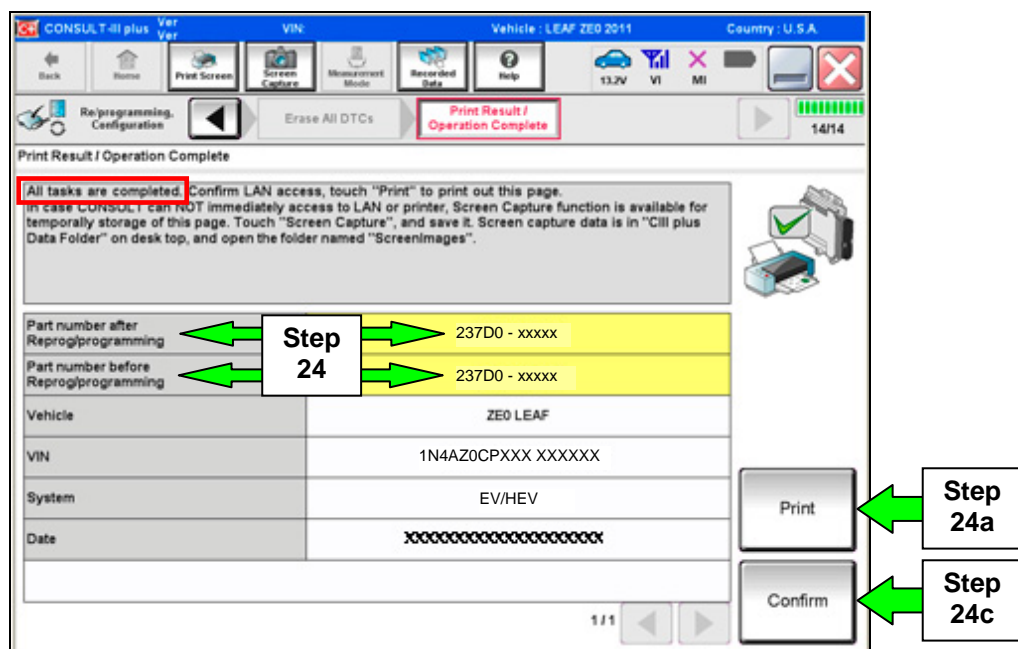


Figure 22

25. Once reprogramming has completed:

- a. Select **Home**.
- b. Turn “ignition” off (depress power switch once).
  - Do not close C-III plus at this time.
- c. Disconnect the battery tester/charger from the 12 V battery.

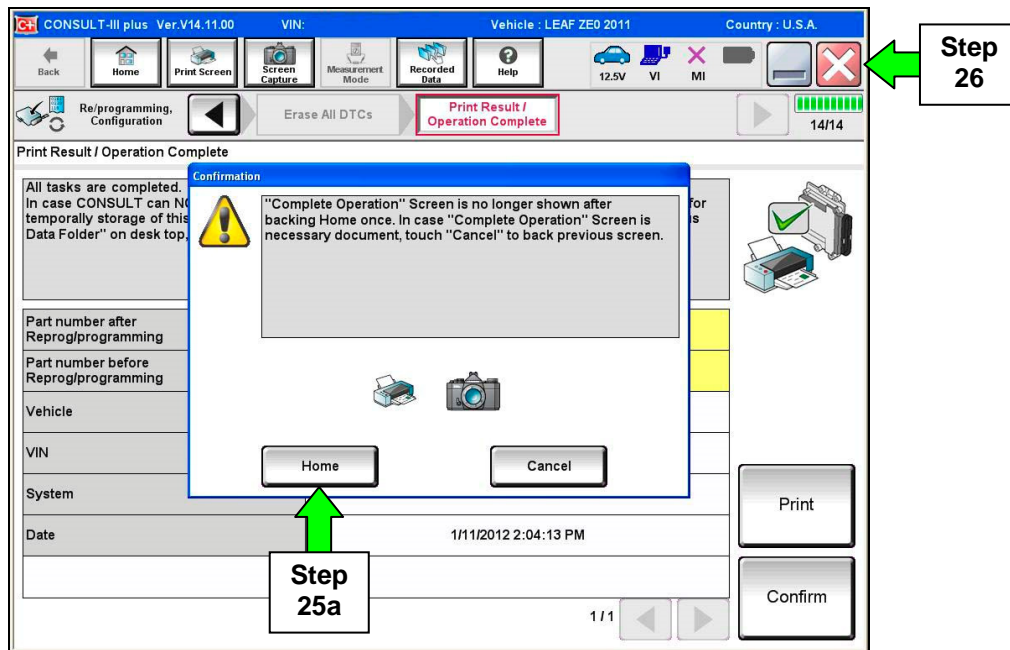


Figure 23

26. Close C-III plus (Figure 23).

- Do not turn off the CONSULT PC.

27. Place the vehicle in “READY to drive” mode:

- Apply the parking brake.
- Depress the brake pedal.
- Press the power switch once.
- The meter and gauges will illuminate.



28. Open C-III plus.

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

30. Confirm that there are no DTCs present.

- Erase any DTCs that are present.

31. 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).

32. 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.

**Proceed to the next page.**

## PTC Heater Replacement

**WARNING:** This procedure involves high voltage and should only be performed by a certified LEAF technician.

**NOTE:** Confirm if the timer for either charging or climate control are on. If on, turn them off and make sure to turn them back on after the PTC has been replaced and reprogramming completed.

1. Remove the HVAC case from the vehicle.

**NOTE:** Refer to the ESM section **VENTILATION, HEATER & AIR CONDITIONING / HA-Heater & Air Conditioning System / REMOVAL AND INSTALLATION / HEATING AND COOLING UNIT ASSEMBLY** for the procedure to remove and replace the Heating and Cooling Unit Assembly (HVAC case) from the vehicle.

With the HVAC case removed from the vehicle and on a work bench:

2. Remove the three T20 Torx screws that attach the ducting (shown in Figure 24).

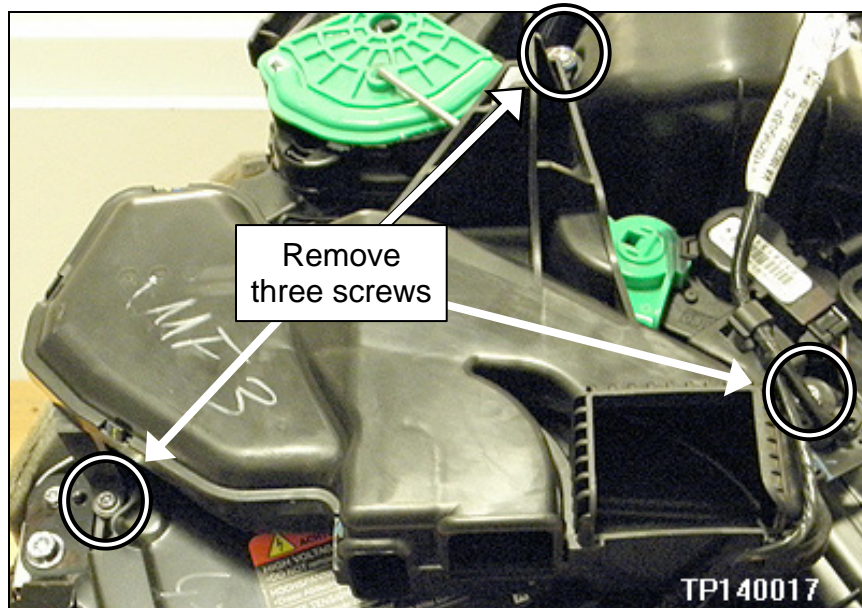


Figure 24

3. Leave the harness, shown in Figure 25, attached to the duct and gently fold the duct away from the PTC heater.

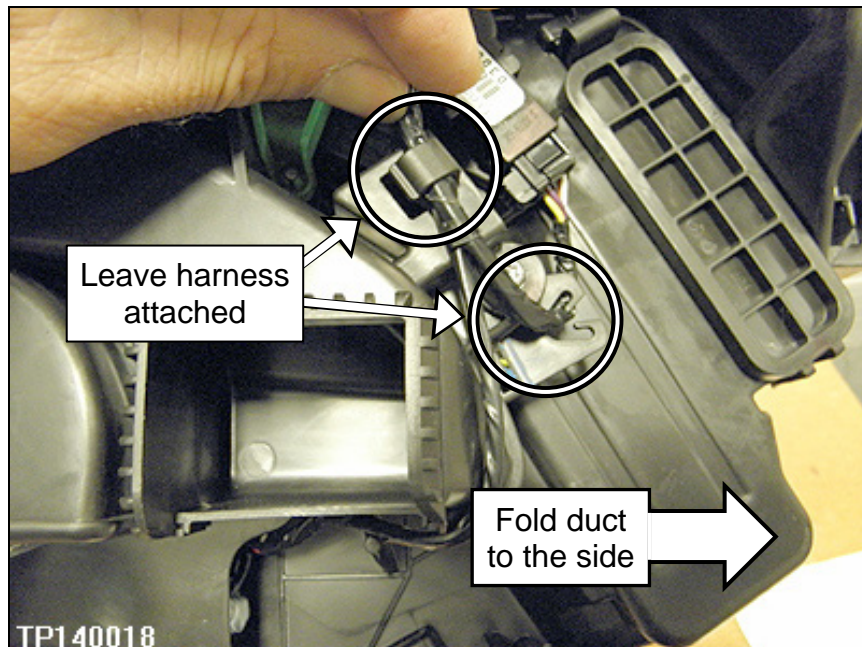


Figure 25

4. Remove two T20 Torx screws and four tamper proof T30 Torx bolts securing the PTC heater shield (shown in Figure 26).
- Removed shield shown in Figure 27.

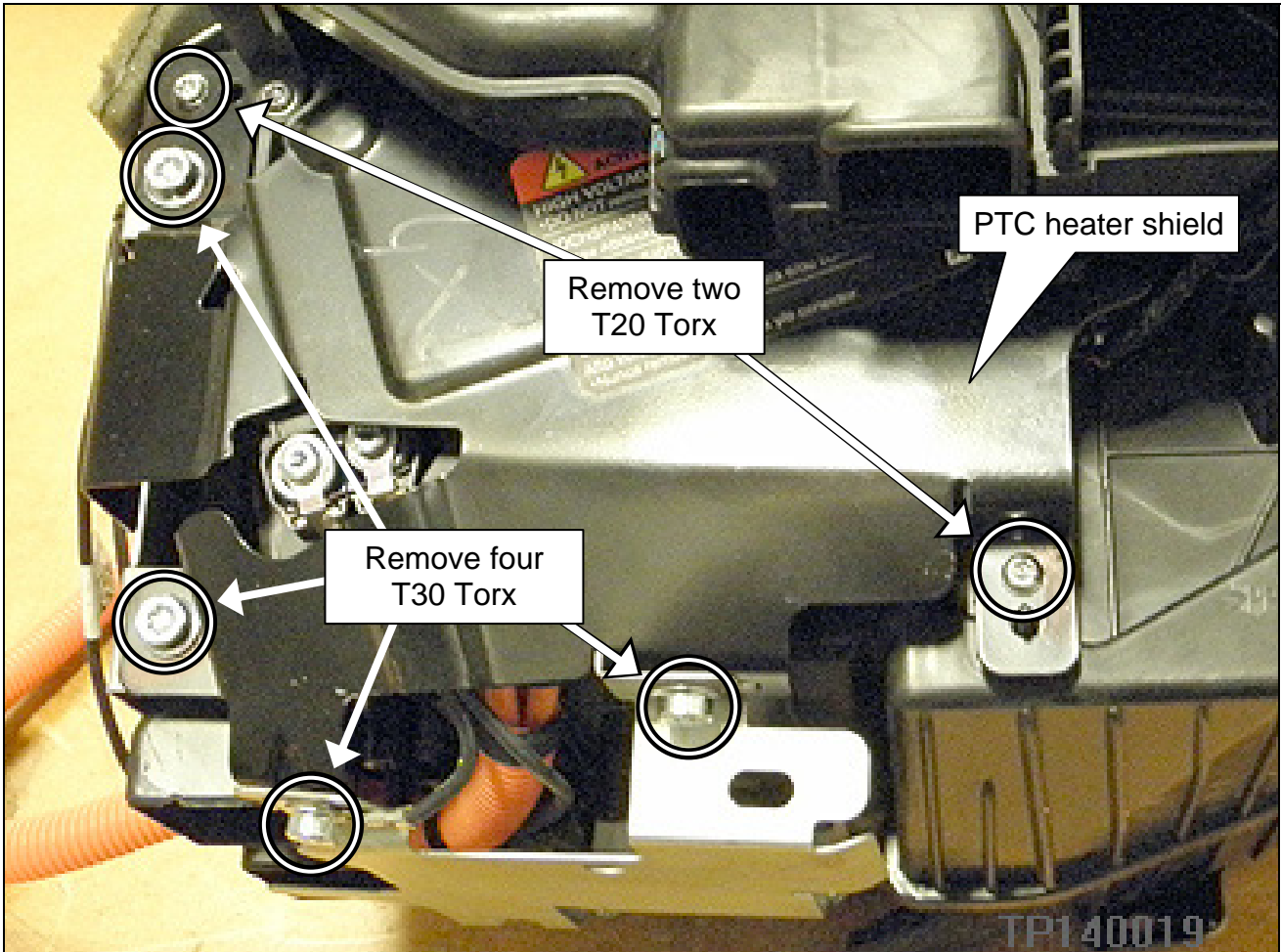


Figure 26



Figure 27



5. Disconnect PTC heater harness from the HVAC case (shown in Figure 28 and Figure 29).

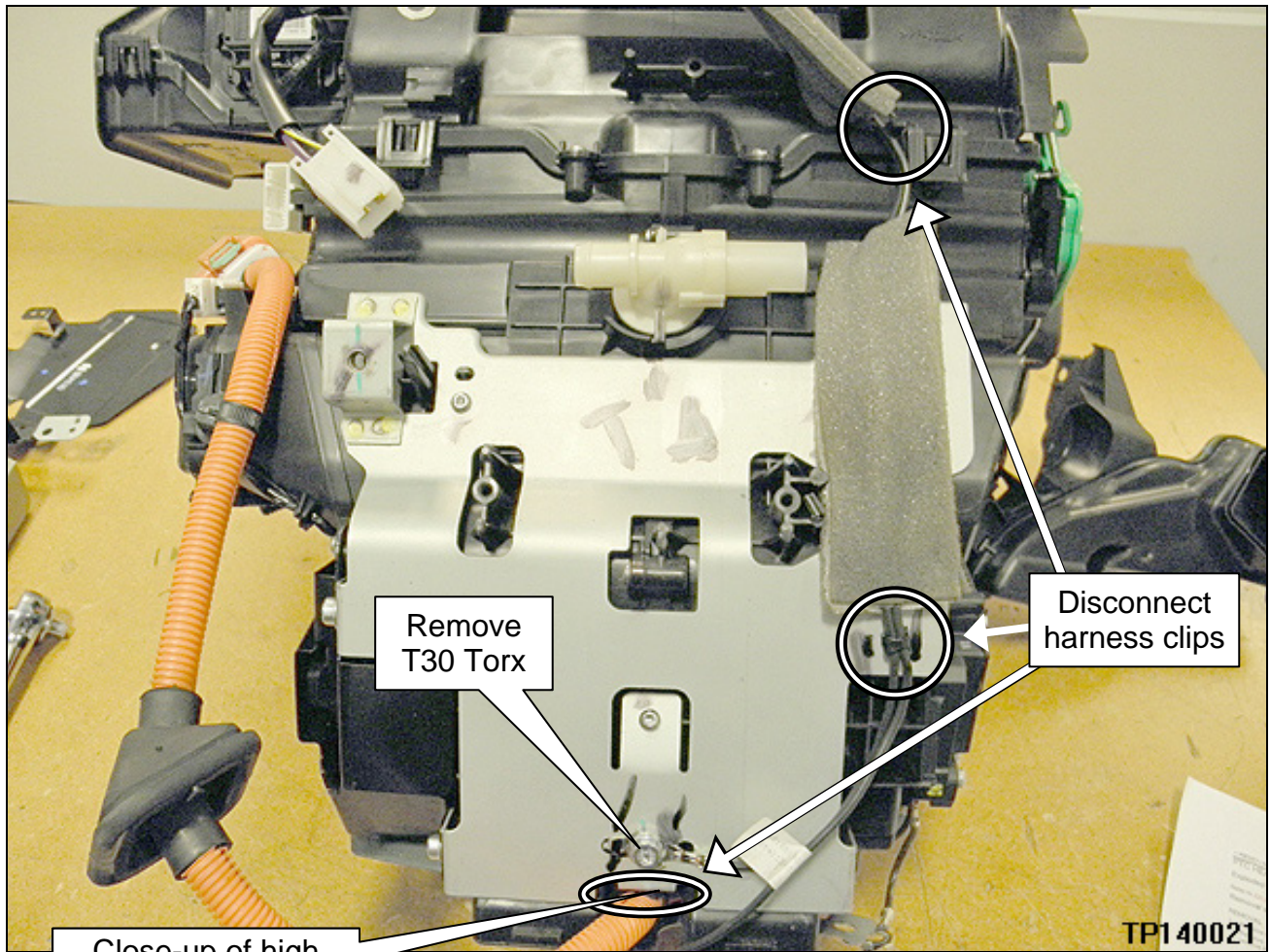


Figure 28

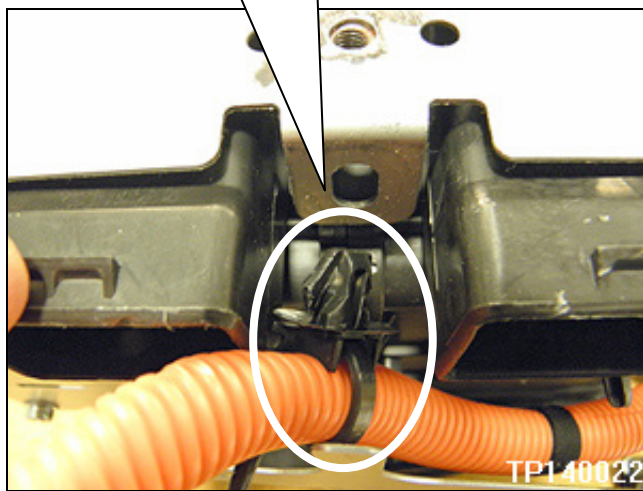


Figure 29

6. Remove high voltage harness (shown in orange) from under the lower shield (Figure 30).

**WARNING:** This harness must be returned to this position under this shield on reassembly.

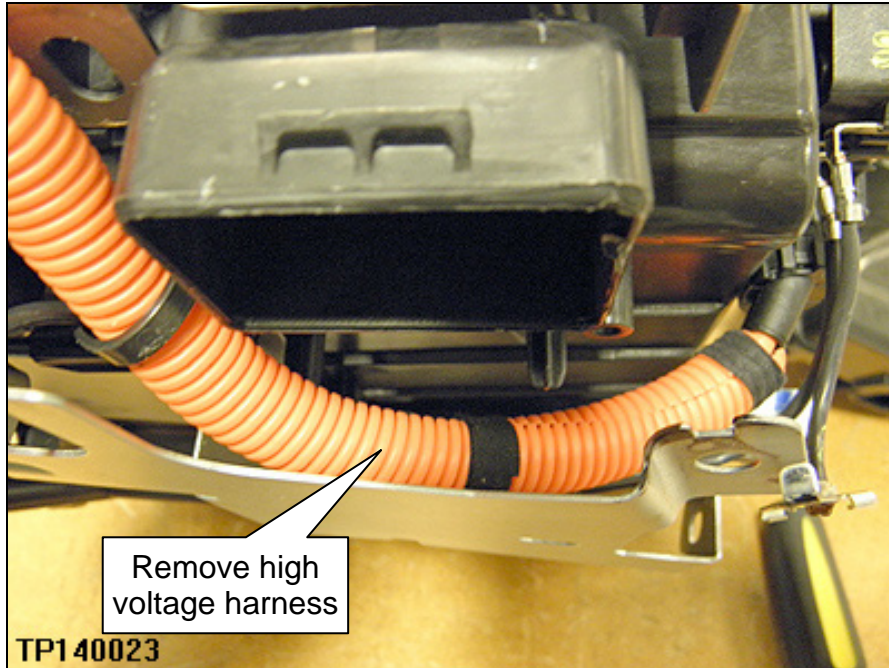


Figure 30

7. Remove the two T20 Torx screws that secure the PTC heater to the HVAC case and disconnect harness connector (shown in Figure 31).

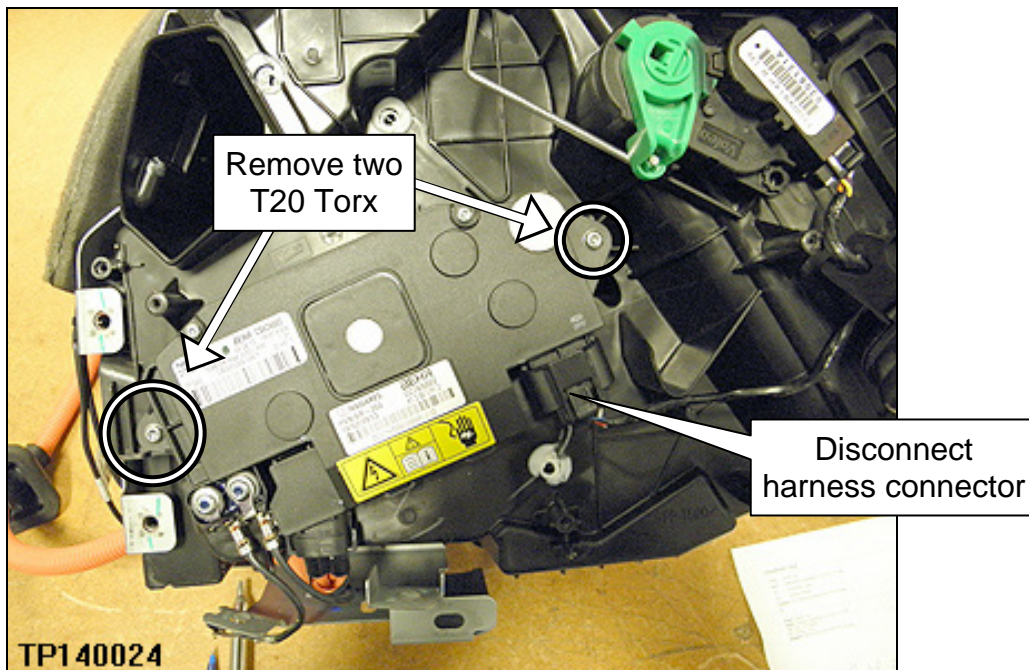


Figure 31



8. Slide the PTC heater gently out of the HVAC case (Figure 32).
9. Install the new PTC heater into the HVAC case.

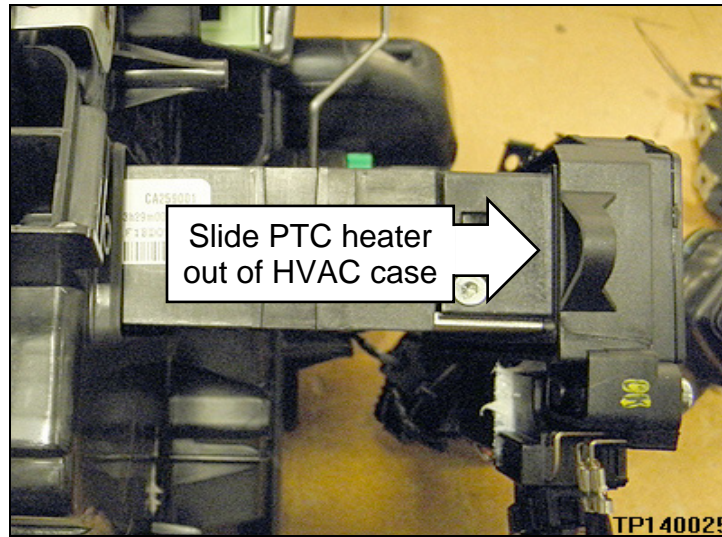


Figure 32

10. Reinstall the harnesses and shields in the reverse order.

**WARNING:**

- The high voltage harness must be routed as shown in Figure 33, and it must be under the lower shield. NOTE: Figure 33 has the lower shield removed for reference only. Figure 30 on page 22 shows the harness under the lower shield.
- Confirm that the high voltage harness clip is securely attached to the PTC heater shield as shown in Figure 33.

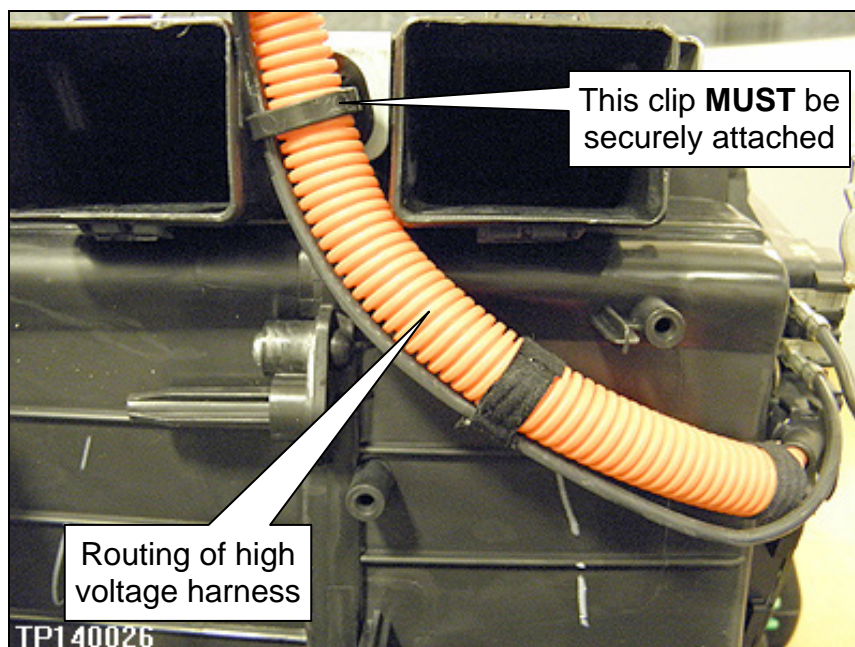


Figure 33

11. Verify that the ground harness connectors are correctly aligned (shown in Figure 34 and Figure 35).

- If not as shown, loosen bolts and realign then retighten.

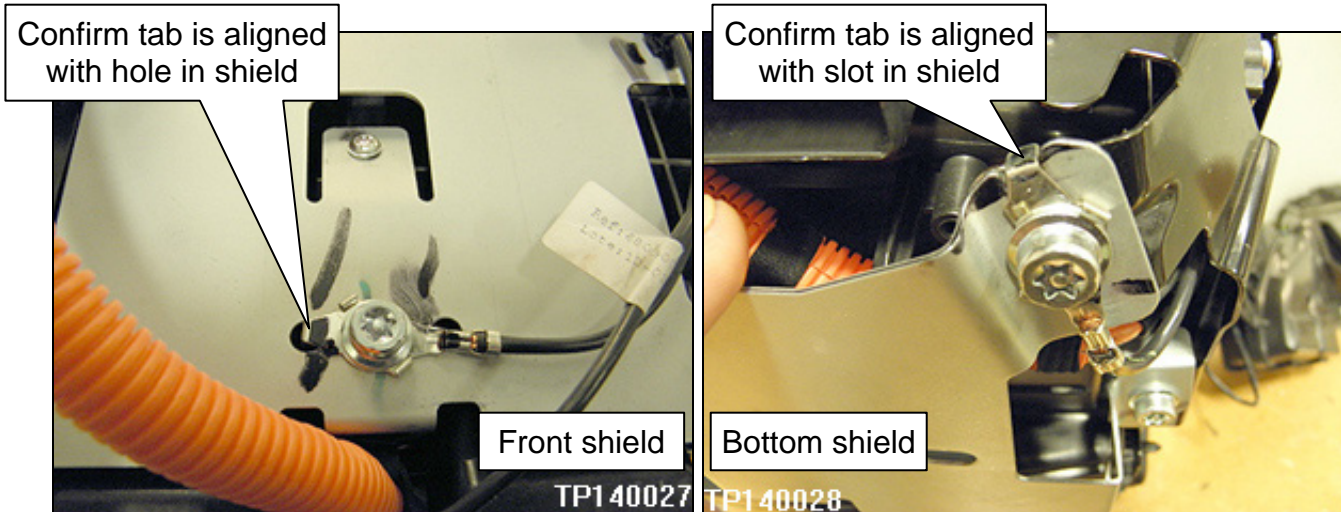


Figure 34

Figure 35

12. Reinstall the HVAC case into the vehicle in the reverse order.

- Refer to the ESM section **VENTILATION, HEATER & AIR CONDITIONING / HA-Heater & Air Conditioning System / REMOVAL AND INSTALLATION / HEATING AND COOLING UNIT ASSEMBLY** for the procedure to remove the HVAC case from the vehicle.



**PARTS INFORMATION**

<b>DESCRIPTION</b>	<b>PART #</b>	<b>QUANTITY</b>
PTC Heater	27143-3NF1A	1

**CLAIMS INFORMATION**

<b>OPERATION</b>	<b>OP CODE</b>	<b>PFP</b>	<b>SYM</b>	<b>DIAG</b>	<b>FRT</b>
Replace PTC Heater	TB32AA	27143-3NF1A	GA	32	(1)
Evacuate/Recharge - R134A Systems Only	TB777A				
Reprogram VCM	JQ99AA				

(1) Reference the current Nissan Warranty Flat Rate Manual and use the indicated flat rate time.

<b>EXPENSE CODE</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
010	R134A Refrigerant	(1)

(1) The refrigerant should have been recovered prior to removing the PTC heater. Only bill if the system required additional refrigerant as needed.

