Updated May 11, 2011.

CONSULT-III (C-III) ECM REPROGRAMMING

A symptom based TSB is required before using this procedure.

IMPORTANT: Before starting, make sure:

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

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

- C-III PCMCIA Card Adapter is installed.
- C-III Security Card is installed.

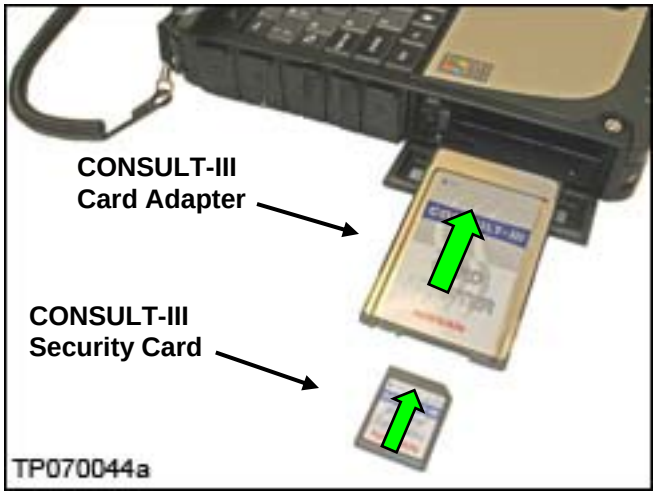

Figure A

- A screen print for Warranty documentation can be done from C-III during this process while still cable-connected to the vehicle.

1. **Use the USB cable** to connect the Vehicle Interface (VI) to the CONSULT PC and then connect the VI to the vehicle.

> **CAUTION:** For ECM reprogramming, be sure to have the CONSULT PC connected to the VI with the USB cable. If the C-III computer is not connected to the VI with the USB cable, the **ECM 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 recovery, the process will be interrupted and the **ECM will be damaged.**

3. **Connect a battery charger to the vehicle battery:**

For Conventional Vehicles

- Set the battery charger at a low charge rate.

  NOTE: The GR-8 (Battery and Electrical Diagnostic Station) set to “Power Supply” mode is recommended.

> **CAUTION:** Be sure the battery charger is connected securely to the battery. Make sure the battery voltage stays above 12 V during reprogramming. If the battery voltage drops during reprogramming, the **ECM may be damaged**. **NOTE:** ECM recovery data may be available. **Click here** to link to the ECM REPROGRAM INTERRUPTION RECOVERY General Procedure.

For Hybrid Vehicles

- Use the GR-8 – Battery and Electrical Diagnostic Station.
- If needed, refer to Hybrid Service TSBs for connecting the GR-8 to the Hybrid 12V battery.

> **CAUTION** : DO NOT use a standard battery charger for Hybrid vehicles. Make sure to connect the GR-8 securely to the Hybrid 12V battery. Make sure the battery voltage stays above 12 V during reprogramming. If the battery voltage drops during reprogramming, the **ECM may be damaged**. **NOTE:** ECM recovery data may be available. **Click here** to link to the ECM REPROGRAM INTERRUPTION RECOVERY General Procedure.

4. Turn the ignition ON with the engine OFF.

   - The engine must be OFF (not running) during the reprogramming procedure.

   - For Hybrid vehicles, Make sure the dash warning lights are ON and the "READY" light is OFF.

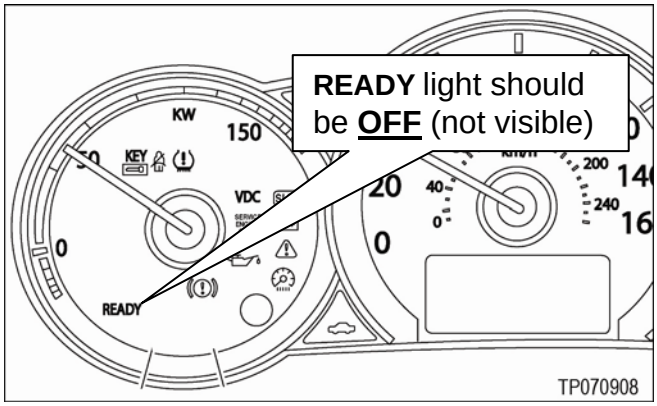

Figure B

   - 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. If the vehicle battery voltage drops below 12 V before reprogramming starts, reprogramming will not complete. After the "Transfer To VI" is complete, the reprogramming will stop, and "Transfer To ECU" will not start.

   - 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 **ECM may be damaged**.

5. Make sure the engine cooling fan(s) are **not** running.

   If the cooling fans are runnning:

   a. Turn the ignition OFF.
   b. Wait for the engine to cool.
   c. Turn the ignition ON (with engine OFF).
   d. Make sure the engine cooling fans are not running.

6. Open / start ASIST on the CONSULT PC.

7. Select CONSULT Utilities, CONSULT-III, and Wait for the "Detecting VI/MI in progress" message to clear.

8. Select the detected VI from the list. (See Figure 1.)

9. Select **Connect**. (See Figure 1.)

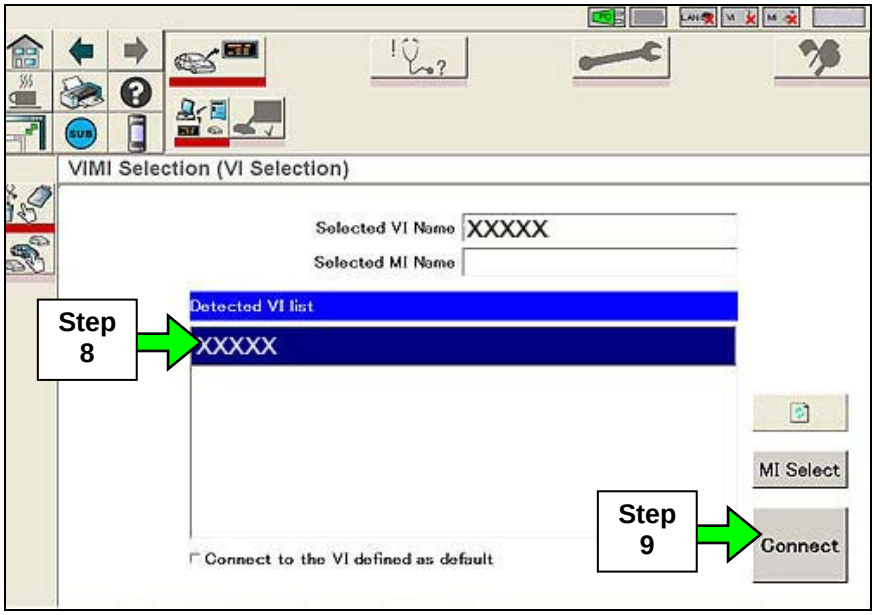

Figure 1

10. Wait for the “Checking the firmware version” message to clear (picture not shown).

11. Select **ECM reprogramming / Programming** (see Figure 2).

12. Select **Select** (see Figure 2).

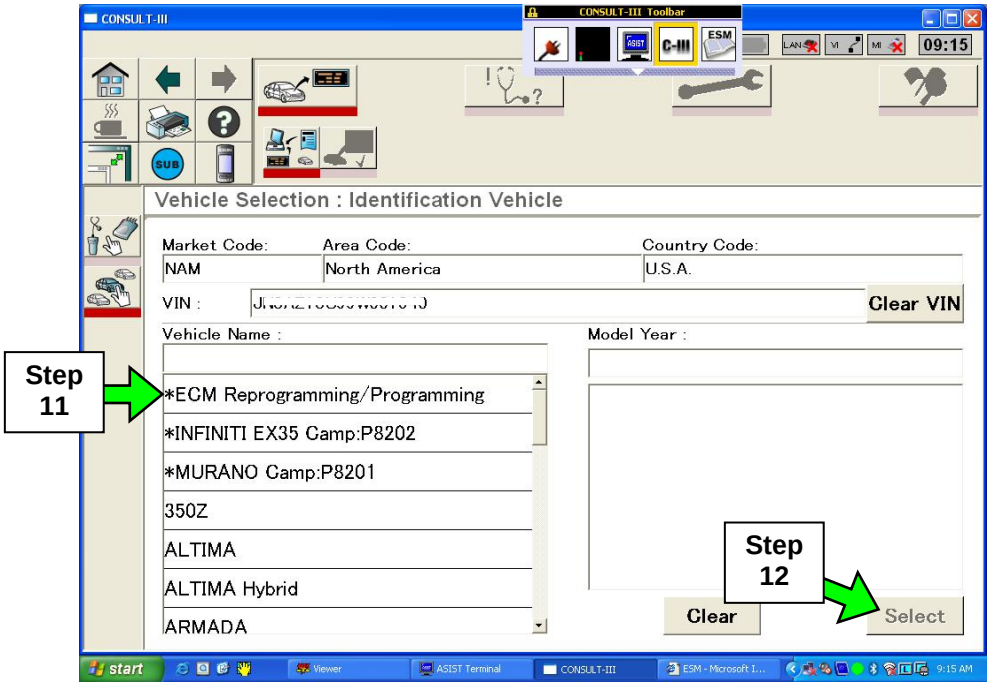

Figure 2

13. Select **Confirm** (see Figure 3).

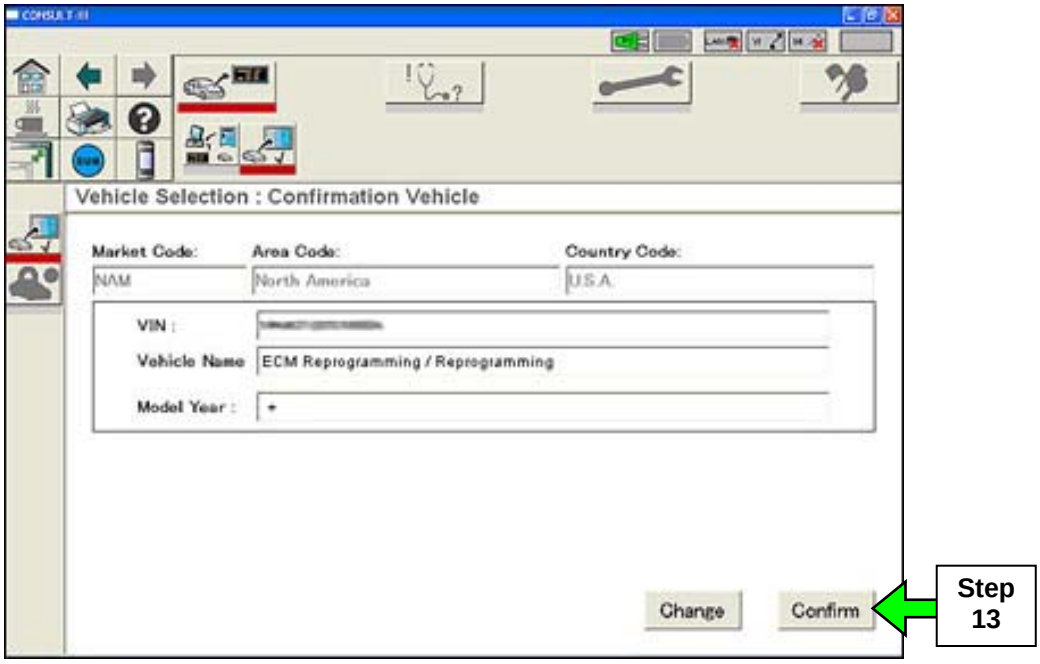

Figure 3

14. Select **Diagnosis** (see Figure 4).

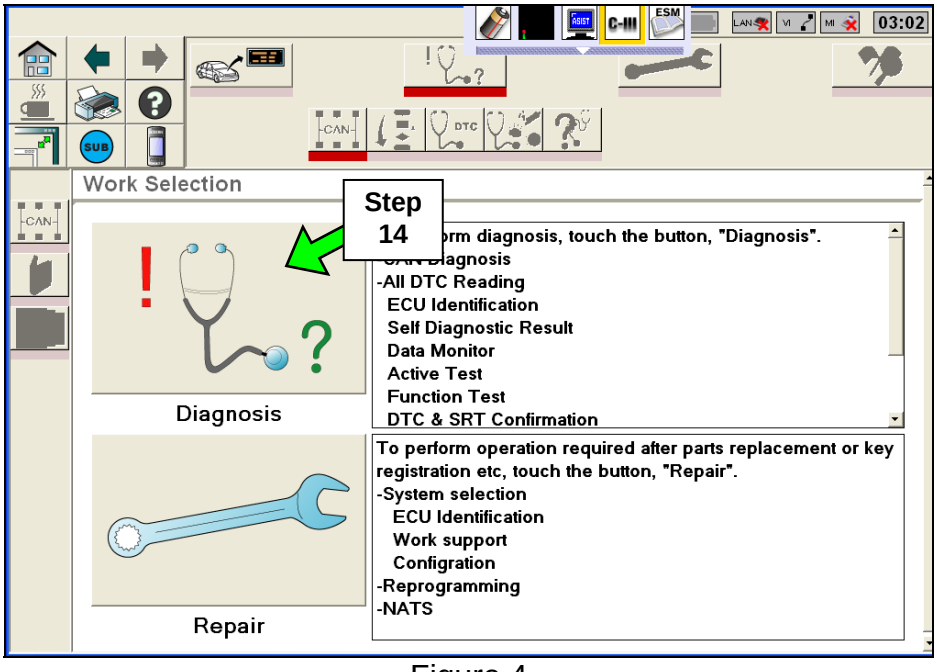

Figure 4

15. Wait for ECM Diagnosis to complete.

16. If there are no DTCs, select the "Repair" icon (see Figure 5).

- If there are any DTCs other than those listed in the accompanying Symptom based TSB, diagnose, perform repairs, and erase DTCs **before** continuing.

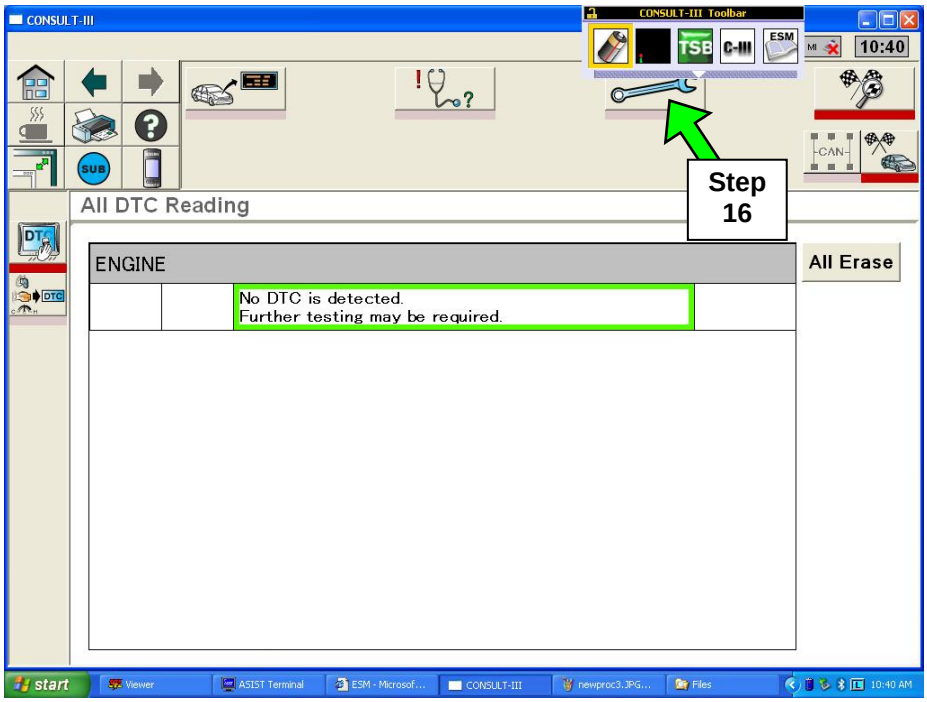

Figure 5

17. Select the "ECM Reprogram" icon (see Figure 6).

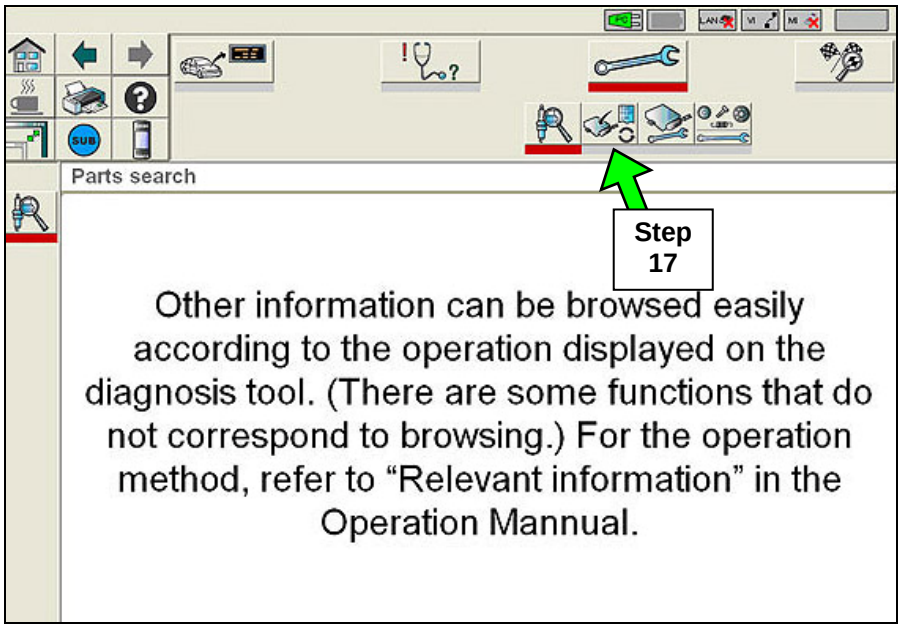

Figure 6

18. At this point, refer to the symptom based TSB that directed you to reprogram the ECM.
    - **The symptom based TSB is required in order to determine which reprogramming part number to use.**

19. Select **Next** (see Figure 7).

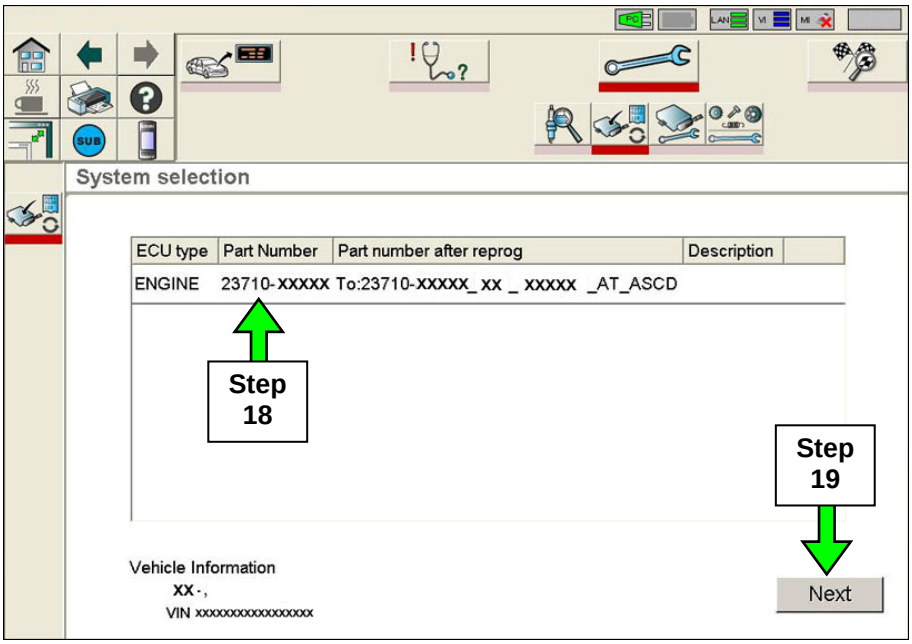

Figure 7

NOTE: If the screen in Figure 8 appears, there is data stored in the VI. Select "**Yes**" to proceed with Reprogramming.

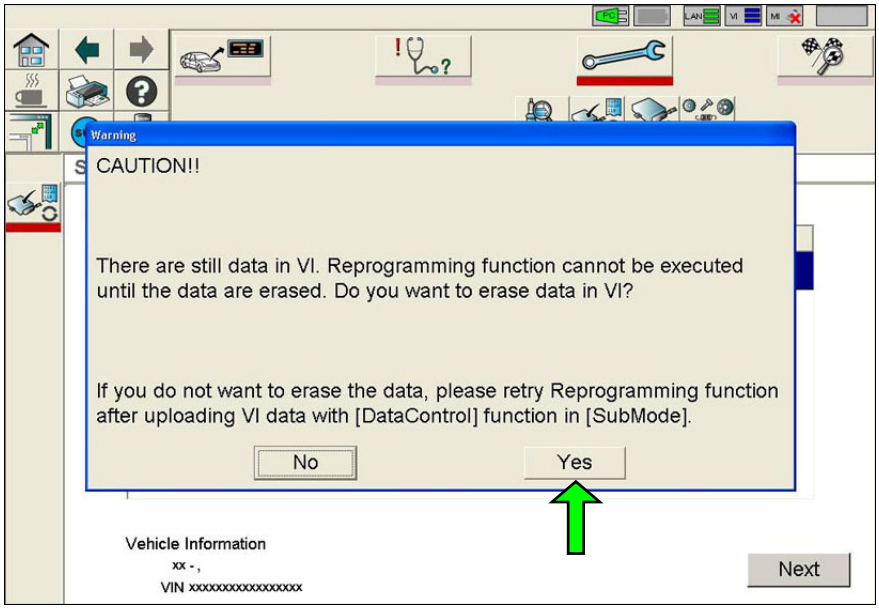

Figure 8

20. The screen in Figure 9 is displayed during data transfer.

CAUTION: During data transfer**:**

- **DO NOT** disturb the VI, DDL, or USB connections.
- **DO NOT** try to start the engine or turn the ignition OFF.
- The engine fans may turn on. This is normal.

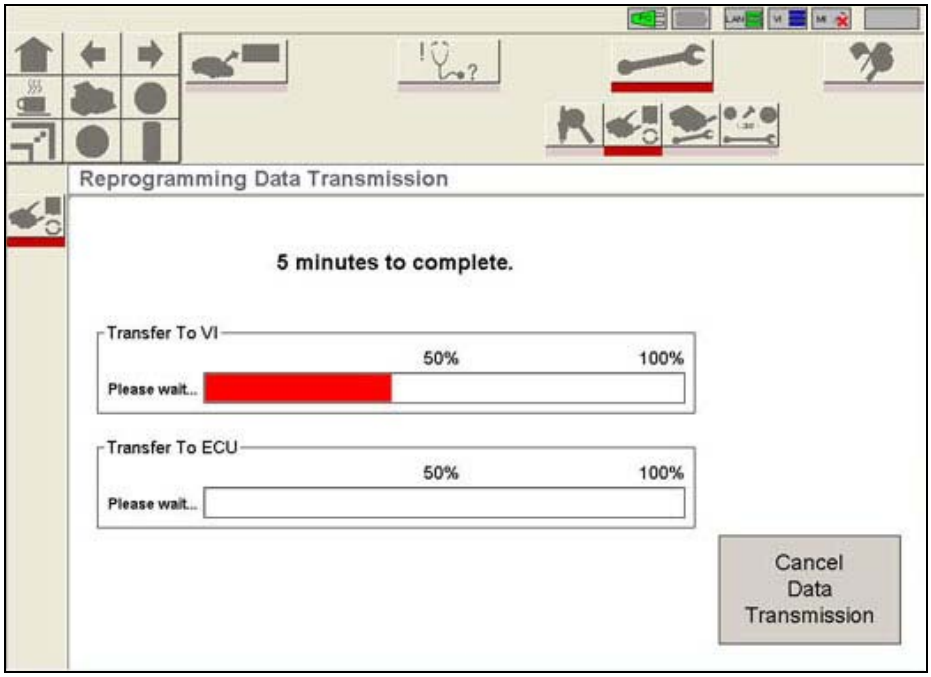

Figure 9

NOTE:

- If "Transfer To VI" reaches 100%, and "Transfer To ECU" does not start, or
- The Error in Figure 9A displays.

a. DO NOT replace the ECM. The ECM is not damaged.

b. Check / make sure the battery voltage is above 12 V and all vehicle electrical loads are turned OFF (see Page 2, Step 3 and Page 3, Step 4).

c. Select **Cancel Data Transmission**, then click on the “Home” icon (upper left corner of C-III screen) and re-start from the beginning (go to Page 2, Step 1).

Figure 9A

21. When the screen in Figure 10 appears, ECM reprogramming is complete.

- **Print this screen and attach it to the Repair Order for Warranty documentation.**

  NOTE: If the screen in Figure 10 does not display (reprogramming does not complete), click here to link to the ECM REPROGRAM INTERRUPTION RECOVERY General Procedure.

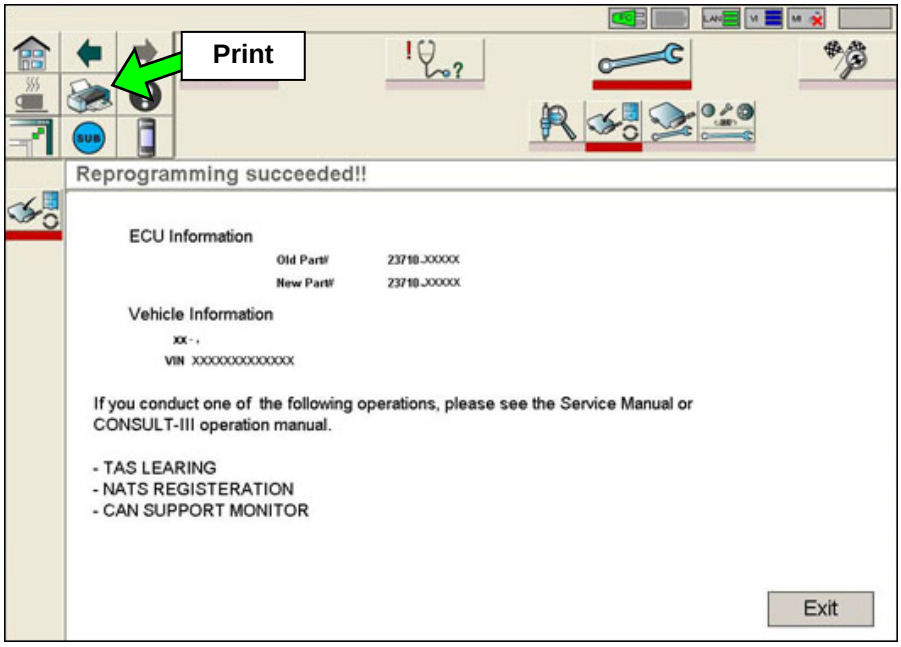

Figure 10

NOTE: If you can't print the above screen:

a. Select the **Print** icon.
b. Select **Save**.
c. Select **OK**.

A copy of the screen is now saved in the CONSULT PC.

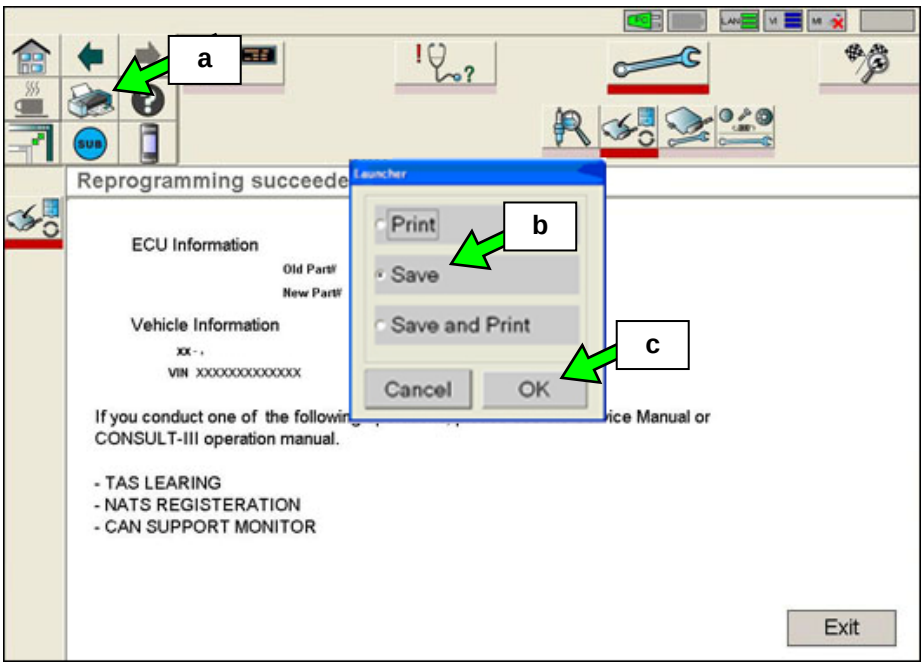

Figure 11

NOTE: If you saved a copy of the screen in Figure 10 and need to print it at a later date, you can find it in the following file location:

At the bottom left corner of the CONSULT PC screen click on **Start**.

In the Administrator window select **My Computer**.

In the My Computer screen select **Local Disc (C)**.

In the Local Disc (C) screen select **Consult III** folder.

In the Consult III screen/folder select **ApplicationData** folder.

In the ApplicationData screen/folder select **PrintImages** folder.

When the file was saved, it was automatically given a file name using the current date and time. Select and print the file/screen image that you want.

NOTE: During reprogramming, DTCs will set in several systems. DTCs must be erased from all systems.

Erase DTCs from all systems

22. Click on the "Home" icon (top left corner of the C-III screen).

23. Wait for the "Detecting VI/MI in progress" message to clear (picture not shown).

24. Select the detected VI from the list (see Figure 12).

25. Select **Connect** (see Figure 12).

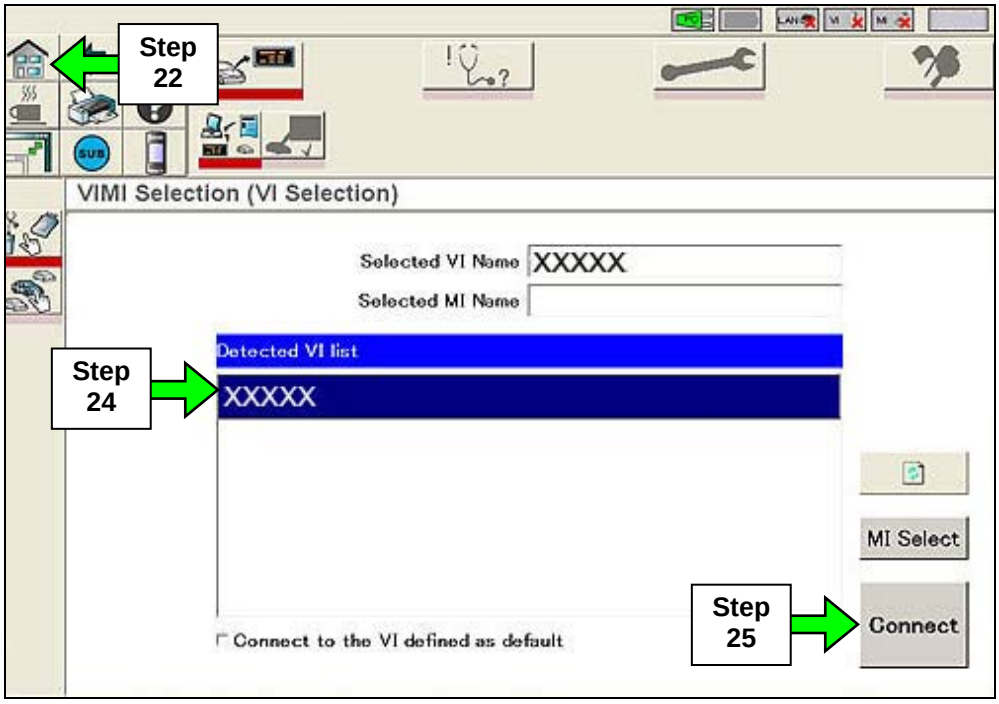

Figure 12

26. Wait for the “Checking the firmware version” message to clear (picture not shown).

27. Select the correct **Vehicle Name** and **Model Year** from the list (see Figure 13 for example).

28. Select **Select** (see Figure 13).

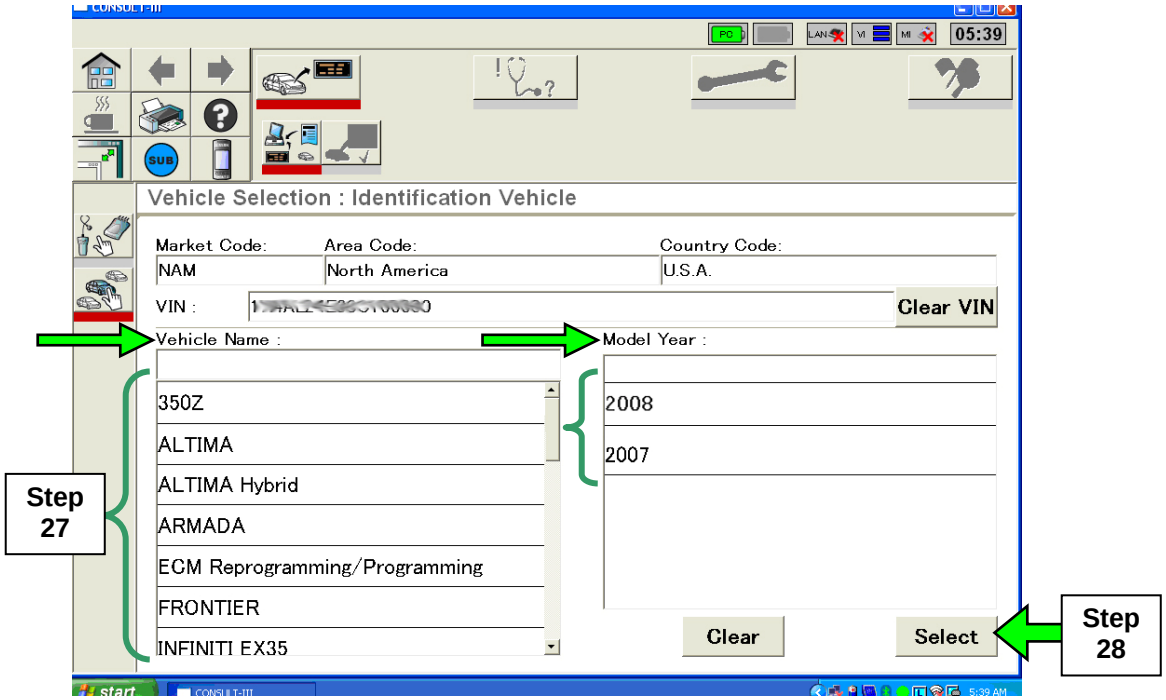

Figure 13

29 Make sure the correct vehicle is displayed (see Figure 14 for example).

30. Select **Confirm** (see Figure 14).

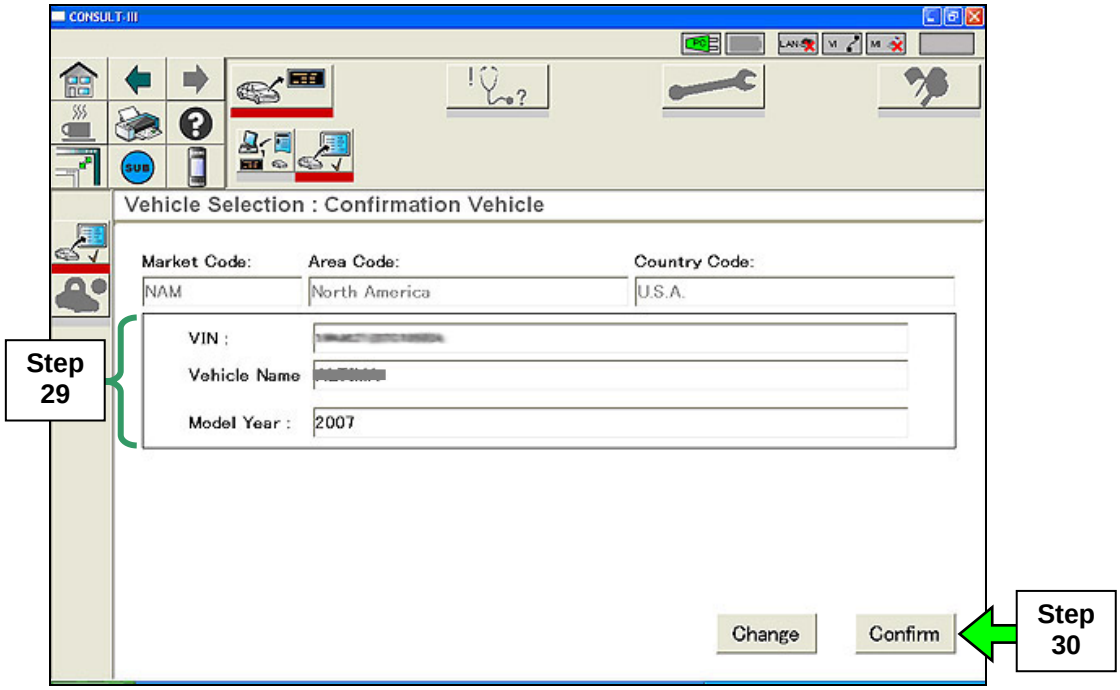

Figure 14

31. Select **Diagnosis** (see Figure 14).

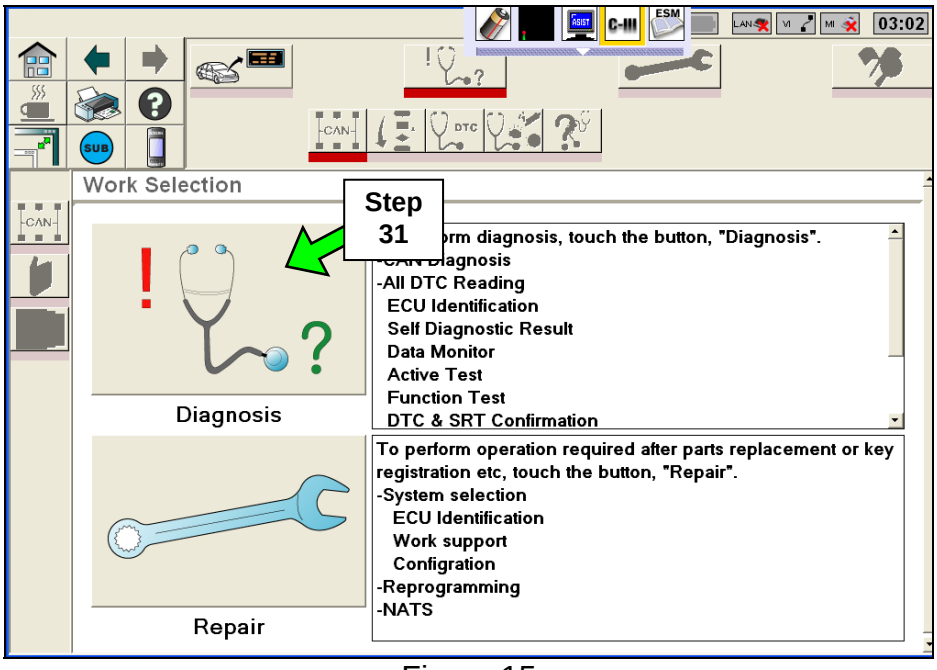

Figure 15

32. Wait for System Call to complete and CAN Diagnosis to reach 51% (see Figure 16 for example).

When the CAN diagnosis reaches 51%, the process icons in the Process Guide Area at the top of the screen will light (become enabled).

33. When the icons light, click on the “Final Check” icon.

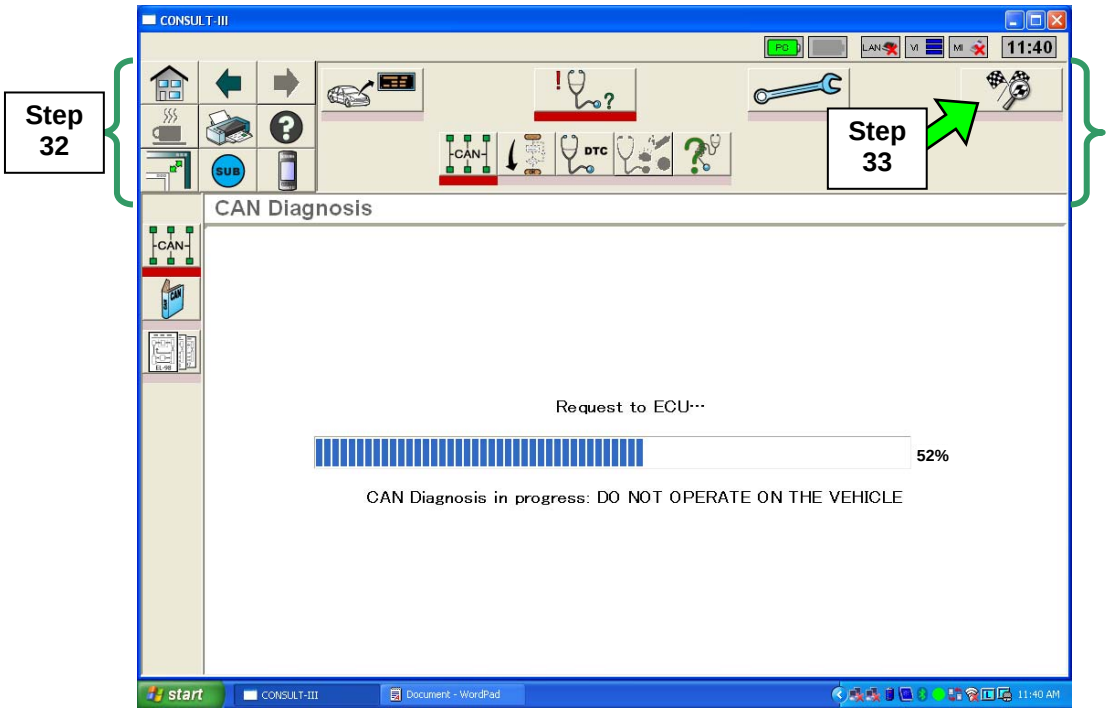

Figure 16

34. CAN diagnosis will run again. When it reaches 51% and the icons light, click on the “Duplication Test” icon.

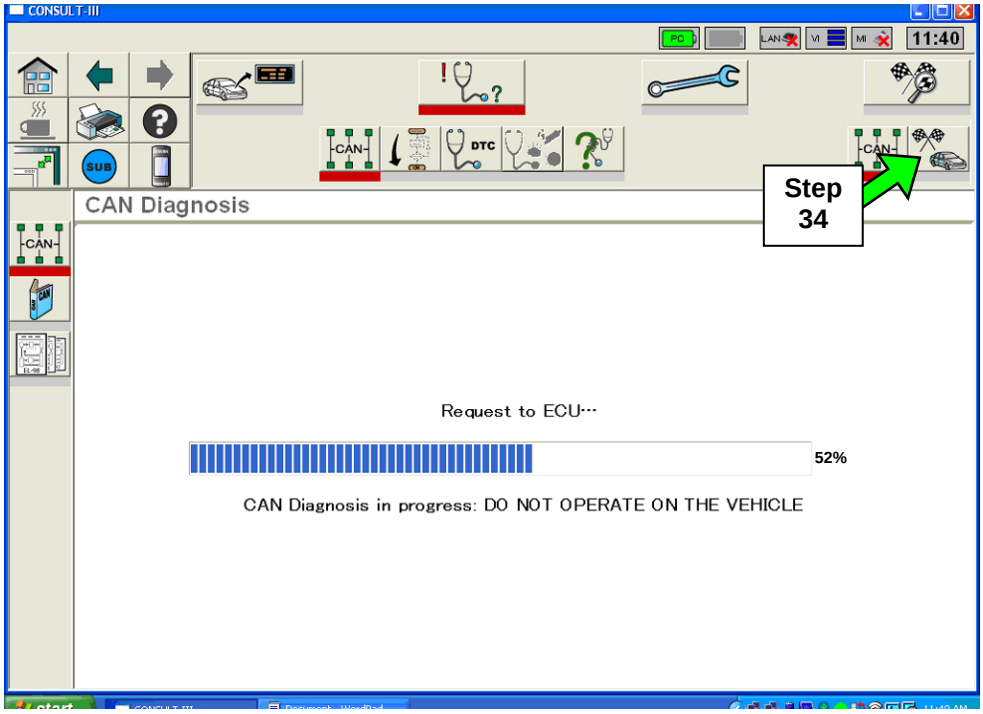

Figure 17

35. When the screen in Figure 18 appears, click on **All Erase**.

36. Click on **Yes** (see Figure 18).

37. Use the scroll bar to scroll down the page and make sure all DTCs are erased (see Figure 18).

- For any DTCs that do not erase: diagnose, perform repairs, and erase DTCs.
- Refer to the Service Manual as needed.

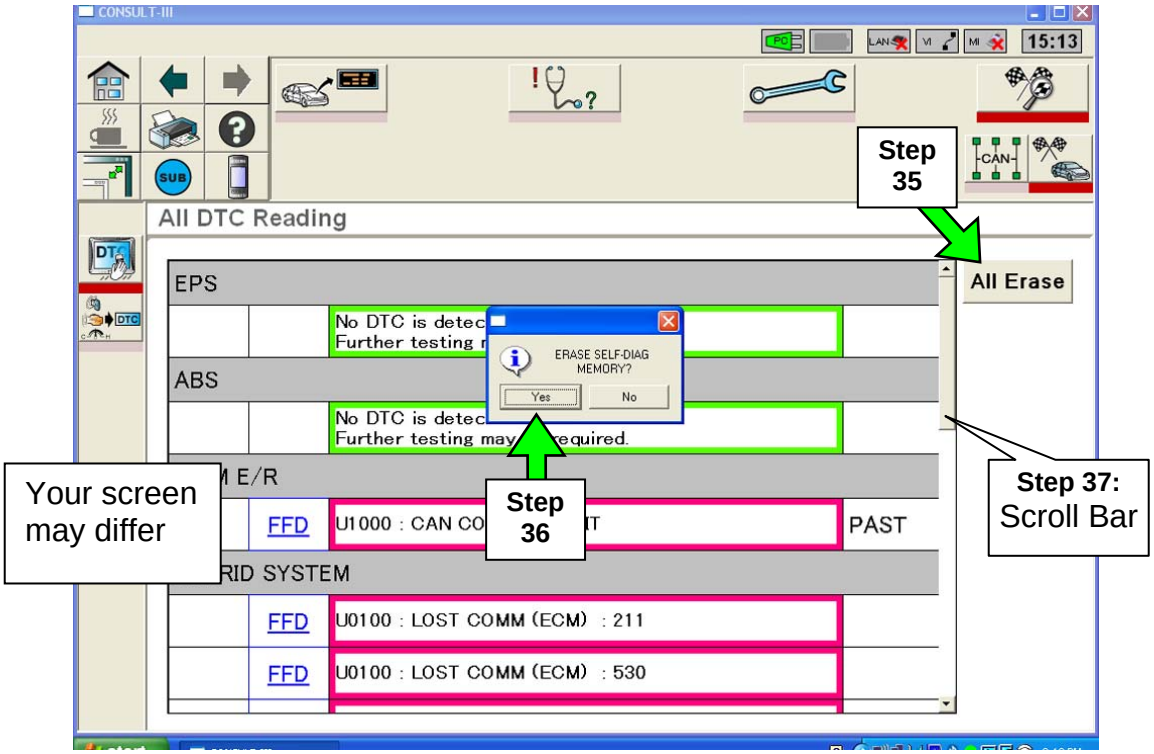

Figure 18

Reprogramming is finished. Continue with the Procedure on the next page.

38. Close C-III, and then turn the ignition OFF.

39. Make sure the throttle is released and your foot is **NOT** pressing either the brake or clutch (M/T) pedal.

40. Operate the ignition as shown in Figure 19.

NOTE: For Hybrid vehicles, ignition ON = dash warning lights ON and the “READY” light OFF.

OFF 10 seconds > ON 2 seconds > OFF 10 seconds > ON 2 Seconds > OFF 10 seconds

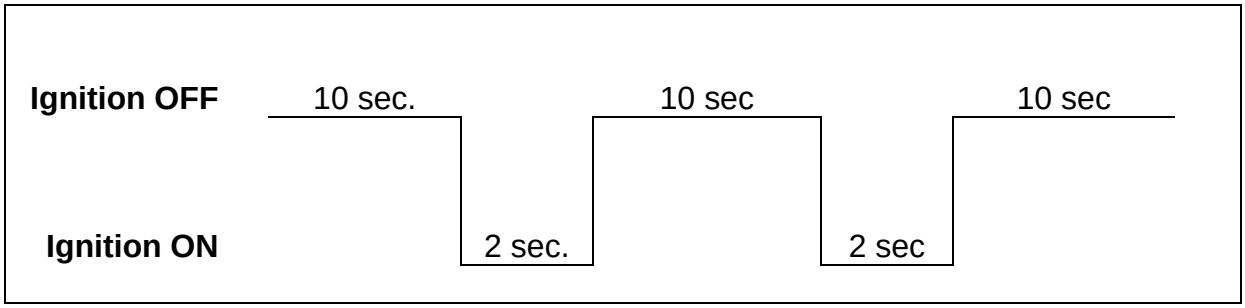

Figure 19

- The above ignition cycle will reset ECM self learned Data.

41a. For Hybrid vehicles, skip to step 42.

41b. Start the engine and check the idle speed.

- If idle speed is too low, perform Idle Air Volume Learning (IAVL). See the appropriate Service Manual (ESM) for this procedure.

NOTE: If the engine will not idle, hold the engine RPM at about 2000, then slowly bring it down to an idle. IAVL can now be performed.

42. Test drive the vehicle; make sure it is operating correctly and the Check Engine light is OFF.

- If the Check Engine light comes ON; diagnose, repair, and erase DTCs.