

Classification:

DA20-032B

Reference:

ITB20-025B

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Date:

July 13, 2021

DTC B2724-23 AND/OR C1B56-04 STORED, AND/OR RAB ERROR MESSAGE OR WARNING

This bulletin has been amended. See AMENDMENT HISTORY on the last page.
Please discard previous versions of this bulletin.

APPLIED VEHICLES: 2020-2021 QX50 (J55)

APPLIED SYSTEM: Rear Automatic Braking

IF YOU CONFIRM

One or both of the following DTCs are stored:

- B2724-23 (SONAR CONTROL UNIT - SONAR ECU INTERNAL FAILURE [UNDER VOLTAGE])
- C1B56-04 (SONAR CIRCUIT - SYSTEM INTERNAL MALFUNCTION)

NOTE: A RAB warning may appear in the vehicle information display.

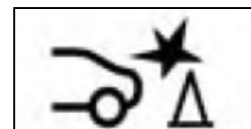


Figure 1

ACTION

Reprogram the Sonar Control Unit, if applicable.

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.

Infiniti Bulletins are intended for use by qualified technicians, not 'do-it-yourselfers'. Qualified technicians are properly trained individuals who have the equipment, tools, safety instruction, and know-how to do a job properly and safely. NOTE: If you believe that a described condition may apply to a particular vehicle, DO NOT assume that it does. See your Infiniti retailer to determine if this applies to your vehicle.

SERVICE PROCEDURE

Sonar Control Unit Reprogramming

IMPORTANT: Before starting, make sure:

- ASSIST 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 via a cable or Wi-Fi.
 - Later in the procedure you will be required to enter your username and password.
 - If you do not know your username and password, contact your service manager.
- A screen print for warranty documentation can be done from the CONSULT PC during this service procedure while still connected to the vehicle.
- No diagnostic trouble codes (DTCs) are stored.
 - Use C-III plus to perform Self Diagnosis for all systems.
 - If there are any DTCs, other than B2724-23 and/or C1B56-04, diagnose, perform repairs, and erase DTCs before continuing.

1. Connect the Vehicle Interface (VI) to the vehicle.

- Make sure to use the correct VI for C-III plus.

NOTICE

Make sure the VI is securely connected. If the VI connection is loose during reprogramming, the process will be interrupted and the control unit may be damaged.

2. Connect the AC Adapter to the CONSULT PC.

NOTICE

Be sure to connect the AC Adapter. If the CONSULT PC battery voltage drops during reprogramming, the process will be interrupted and the control unit may be damaged.

3. Connect a battery maintainer or smart charger set to reflash mode or a similar setting.

NOTICE

To avoid damage to the control unit, ensure a battery maintainer or smart charger is connected. The battery voltage must be between 12.0V and 15.5V during reprogramming.

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

NOTICE

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 control unit may be damaged.

5. Turn the ignition ON with the engine OFF.

NOTICE

To avoid damage to the control unit, the engine must not start or run during the reprogramming procedure.

6. Turn OFF all vehicle electrical loads such as exterior lights, interior lights, HVAC, blower, rear defogger, audio, NAVI, seat heater, steering wheel heater, etc.
7. Turn ON the hazard warning lamps.
8. Turn ON the CONSULT PC.
9. Start C-III plus.
 - The serial number will display when the VI is recognized.

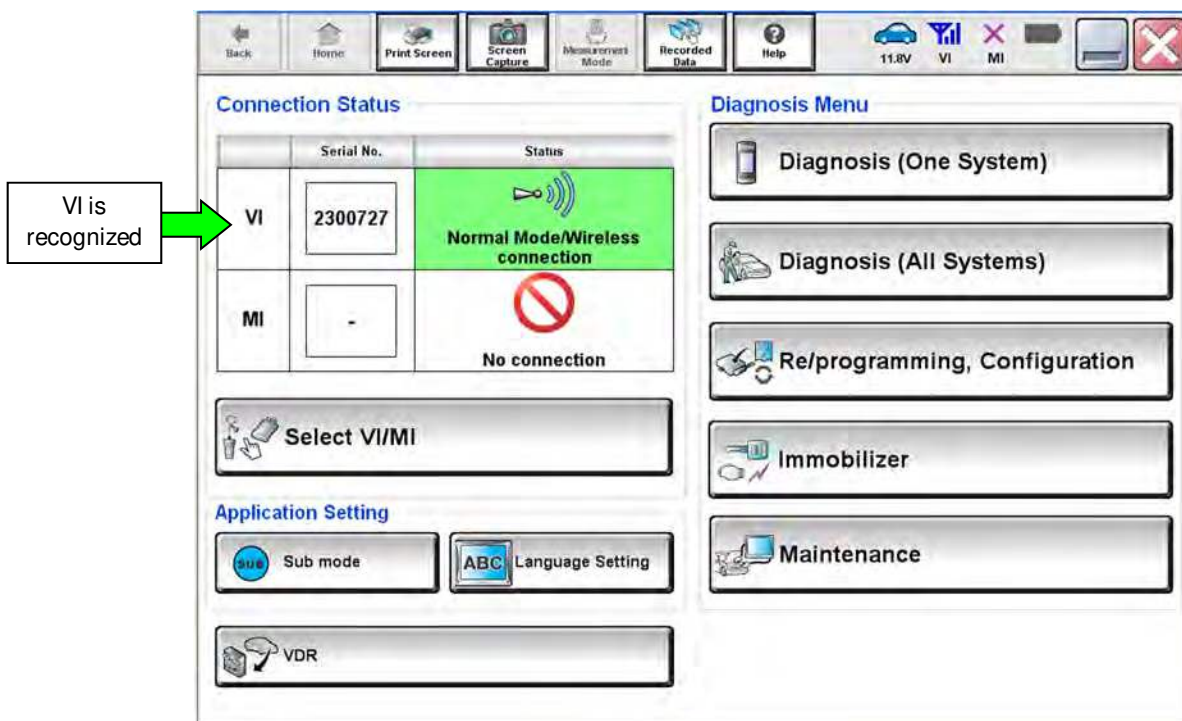


Figure 2

10. Select Diagnosis (One System).

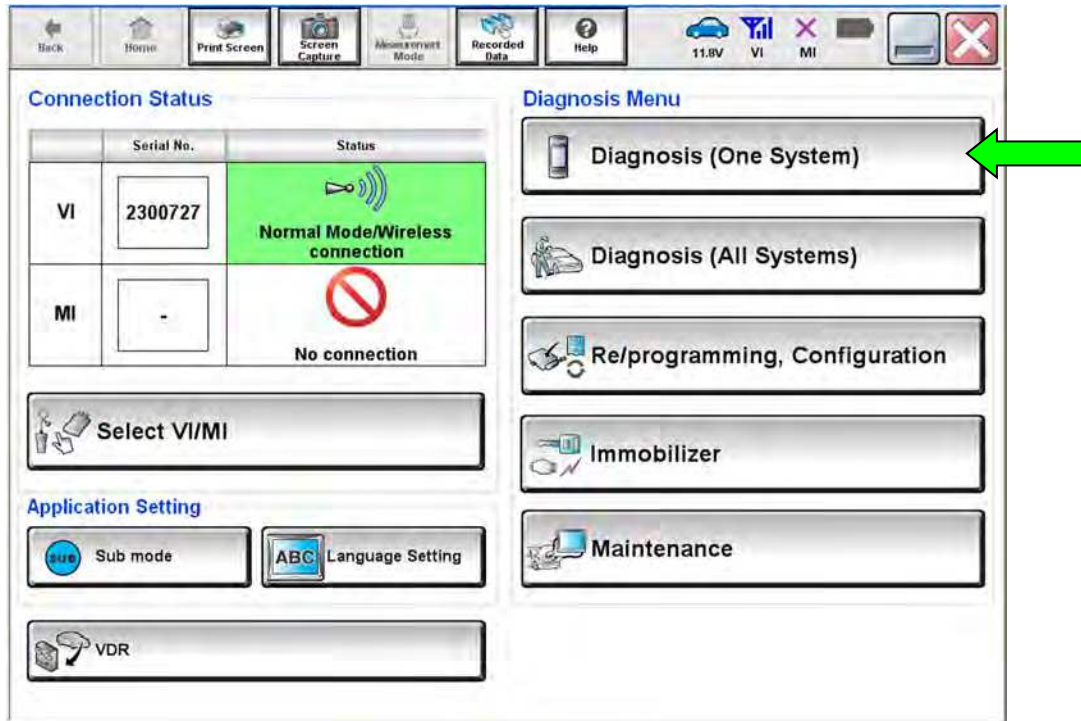


Figure 3

11. Select SONAR.

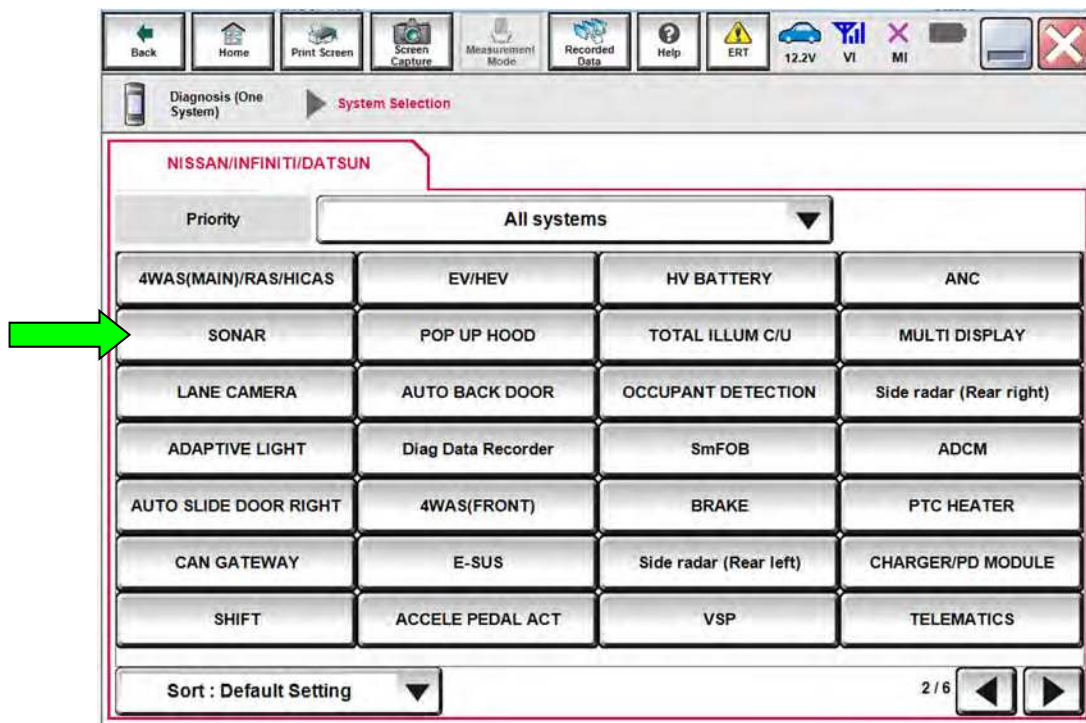


Figure 4

12. Select ECU Identification.
13. Confirm the SOFTWARE #. See Figure 5.
 - If the SOFTWARE # is A136, this bulletin does not apply. See the Electronic Service Manual (ESM) for further diagnostic information.
 - If the SOFTWARE # is not A136, proceed to step 14.

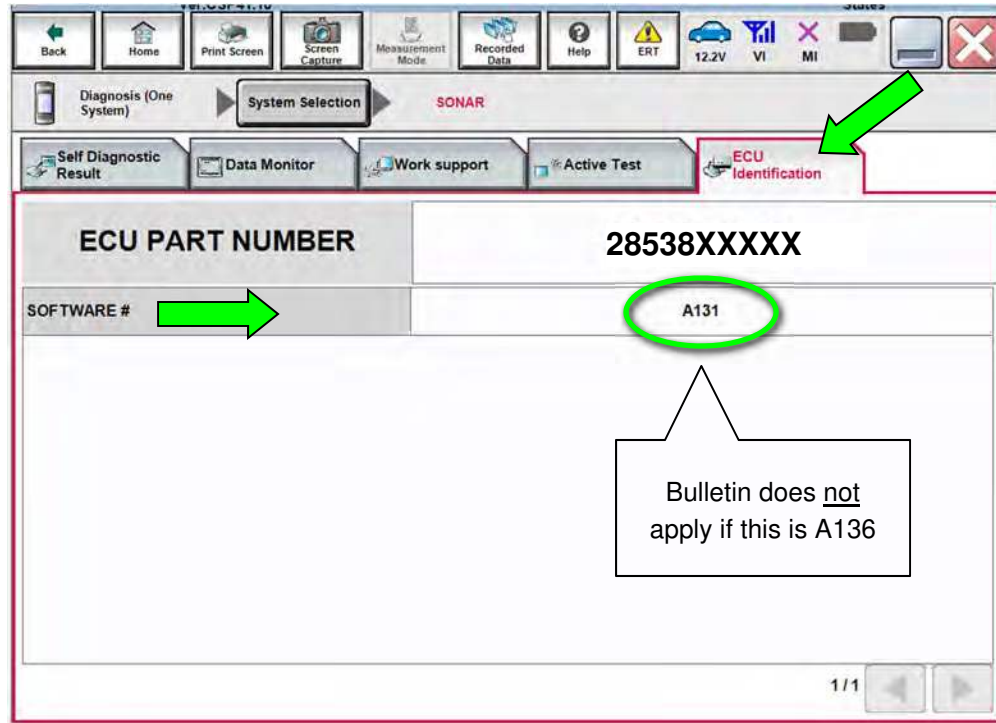


Figure 5

14. Select Home.

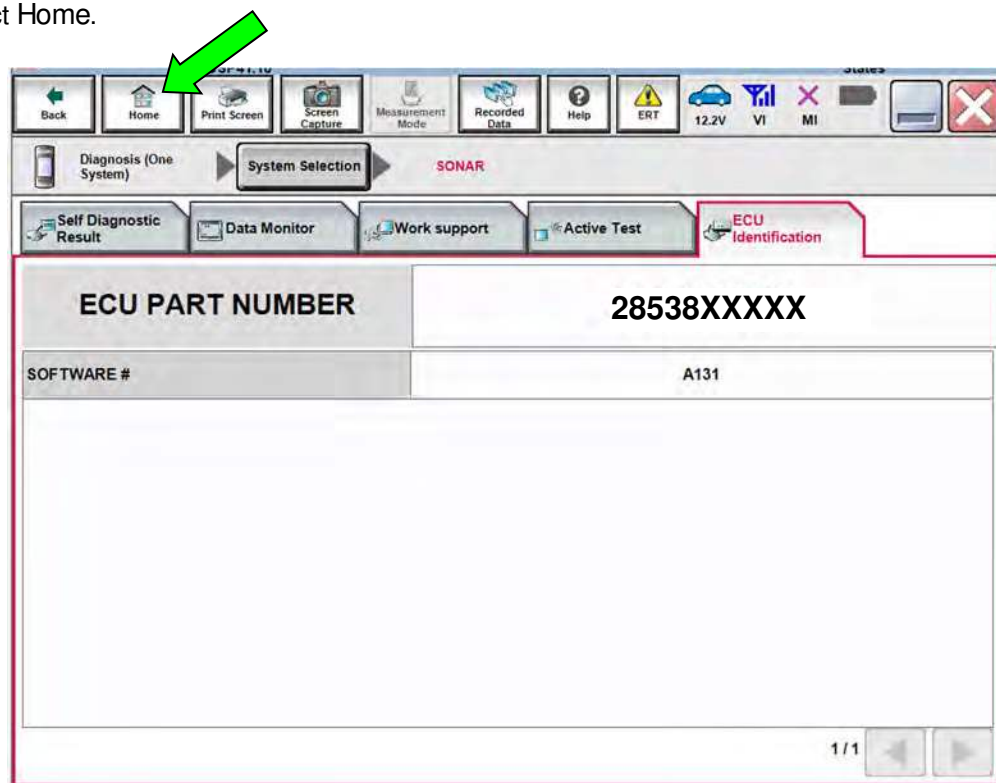


Figure 6

15. Select Re/programming, Configuration.

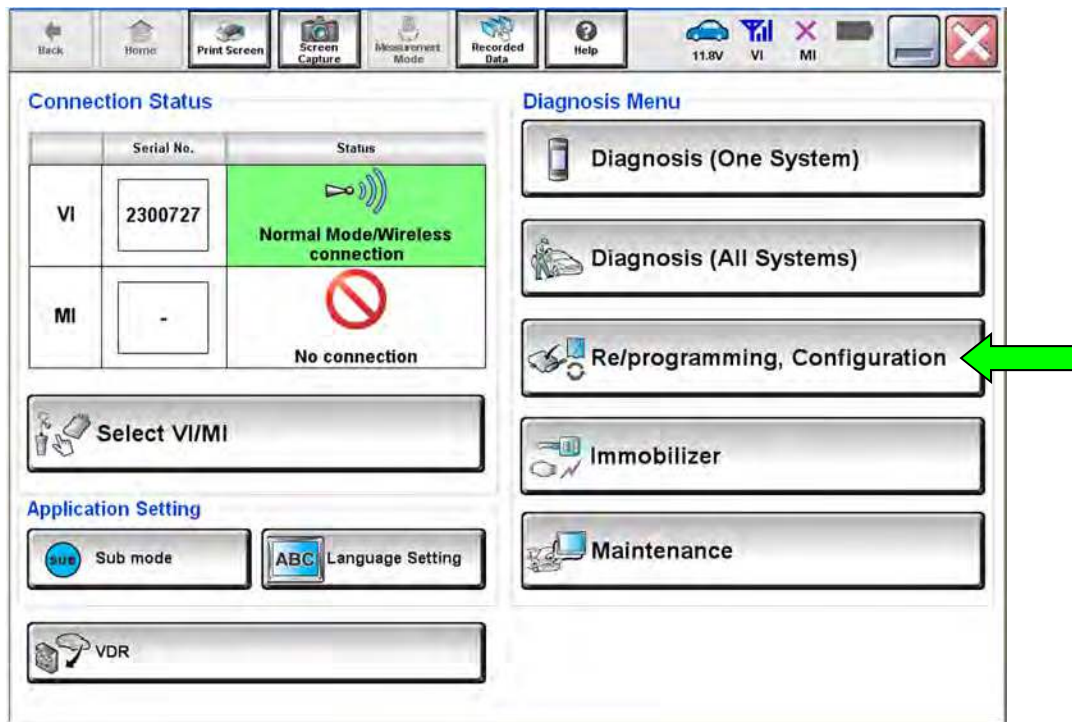


Figure 7

16. Use the arrows (if needed) to view and read all precautions.
17. Check the box confirming the precautions have been read.
18. Select Next.

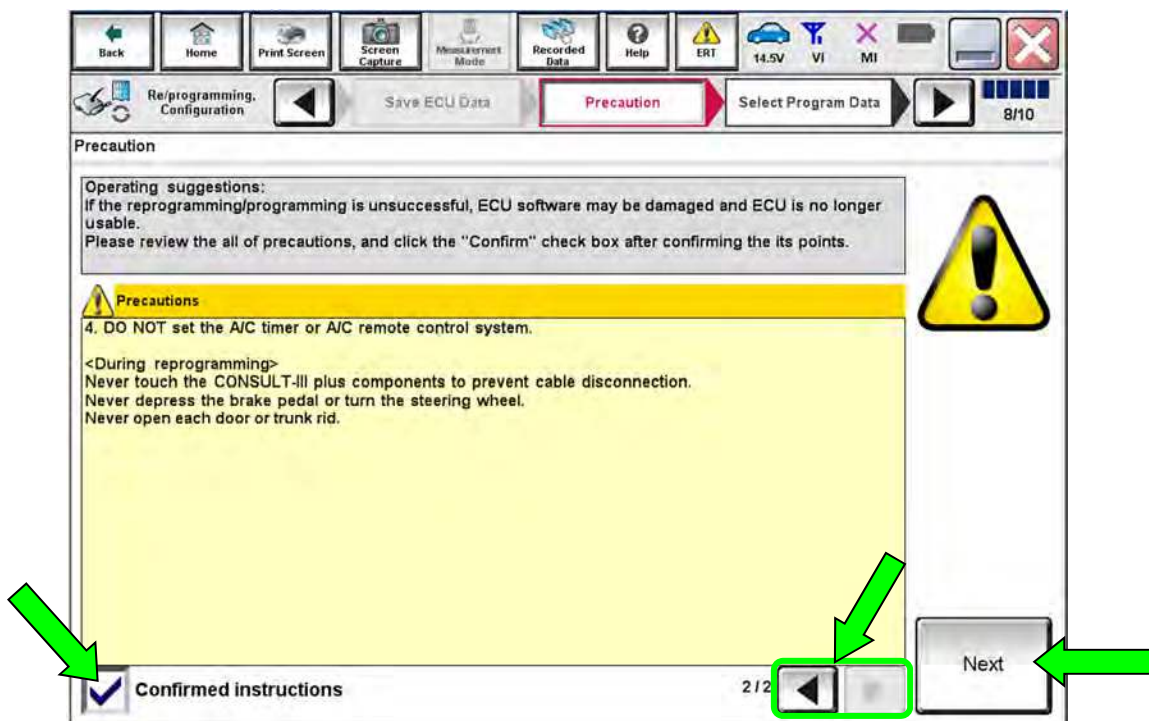


Figure 8

19. Select Automatic Selection(VIN).

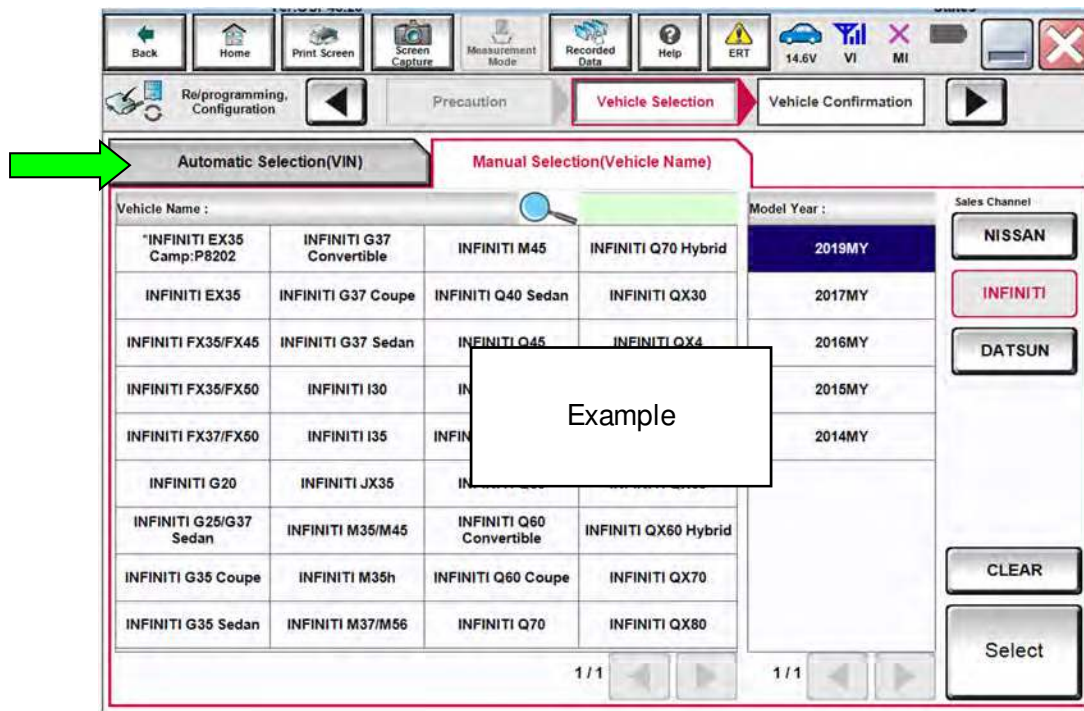


Figure 9

20. Confirm the VIN or Chassis # matches the vehicle's VIN.

21. Select Confirm.

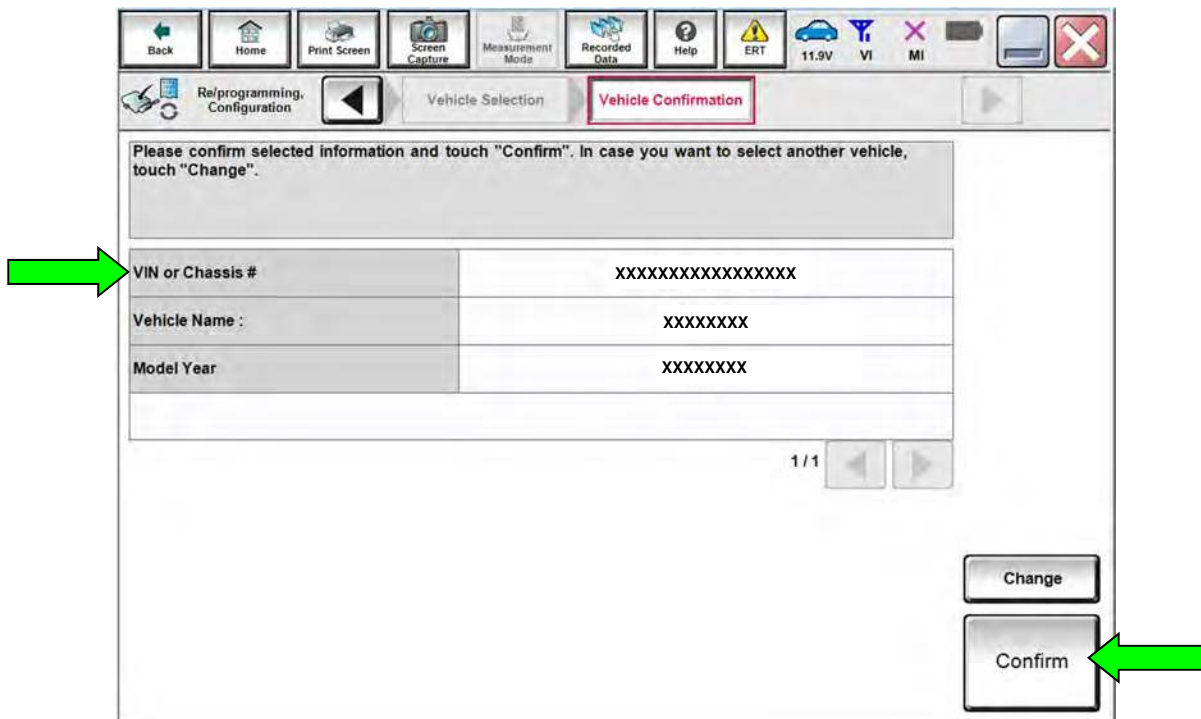


Figure 10

22. Select Confirm.

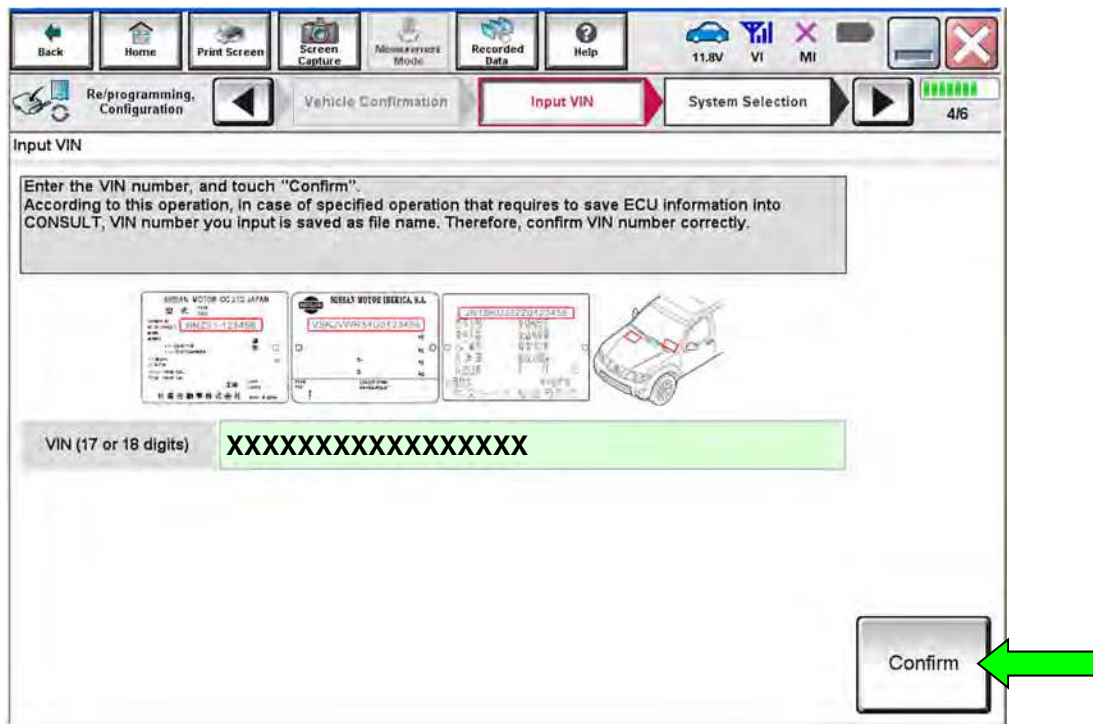


Figure 11

23. Select SONAR.

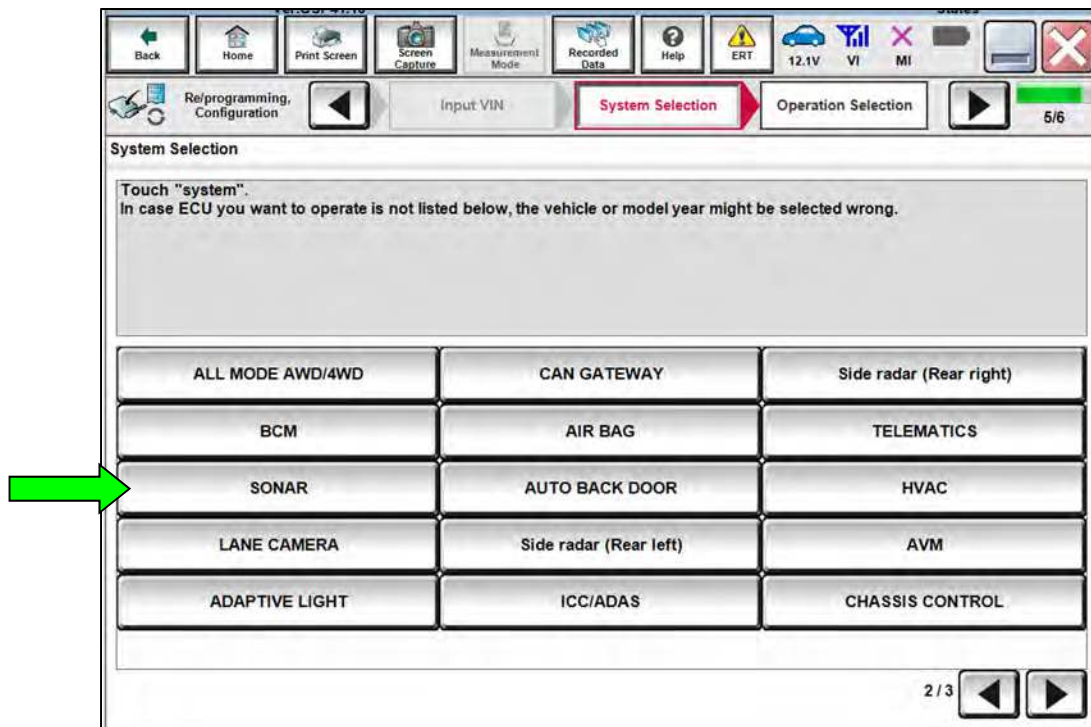


Figure 12

24. Select Reprogramming.

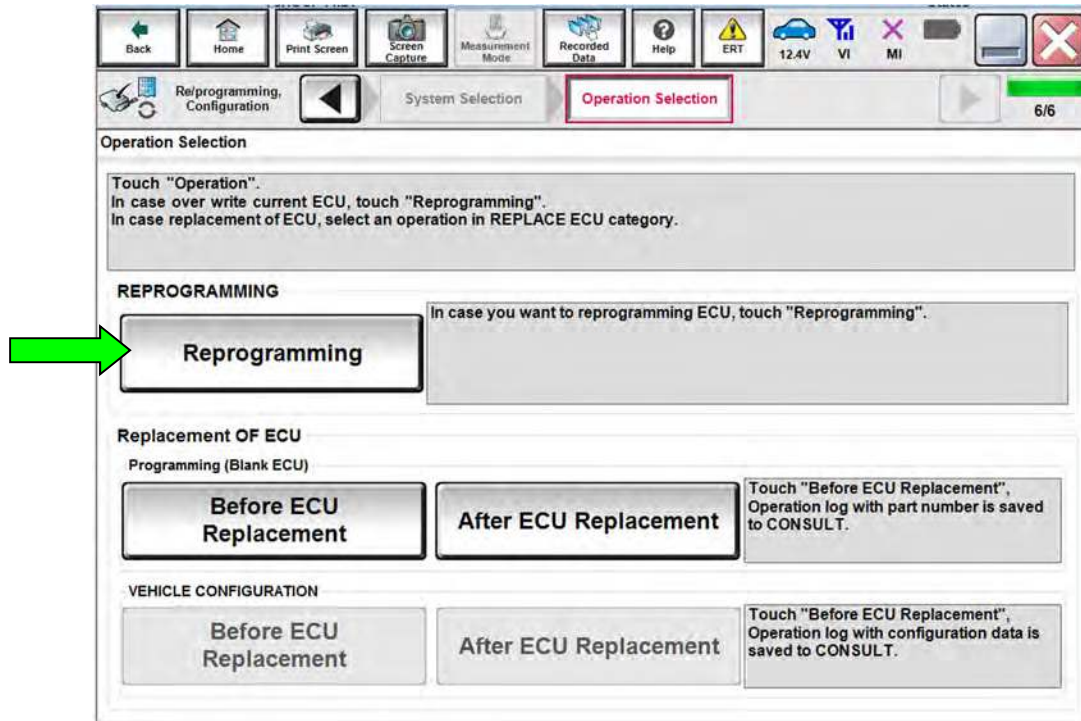


Figure 13

25. When you get to the screen shown in Figure 14, confirm that a reprogram is available as follows.

- A. Find the Sonar Control Unit Part Number and write it on the repair order.

NOTE: This is the current part number (P/N).

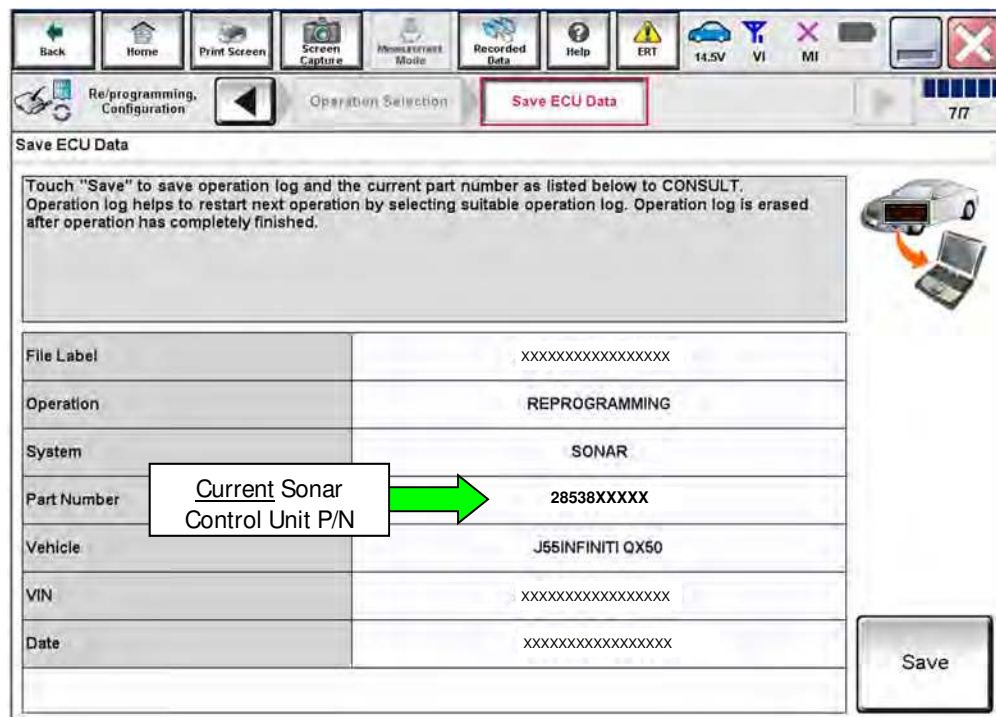


Figure 14

B. Compare the part number you wrote down to the part numbers in Table A.

- If there is a match, continue with the reprogramming procedure.
- If there is not a match in Table A, this bulletin does not apply. See the ESM for further diagnostic information.

Table A

CURRENT SONAR CONTROL UNIT PART NUMBER: 28538-	
5NY0A, 5NY0B	
5NY1A, 5NY1B	

26. Follow the on-screen instructions to navigate C-III plus and reprogram the Sonar Control Unit.

27. Select Save.

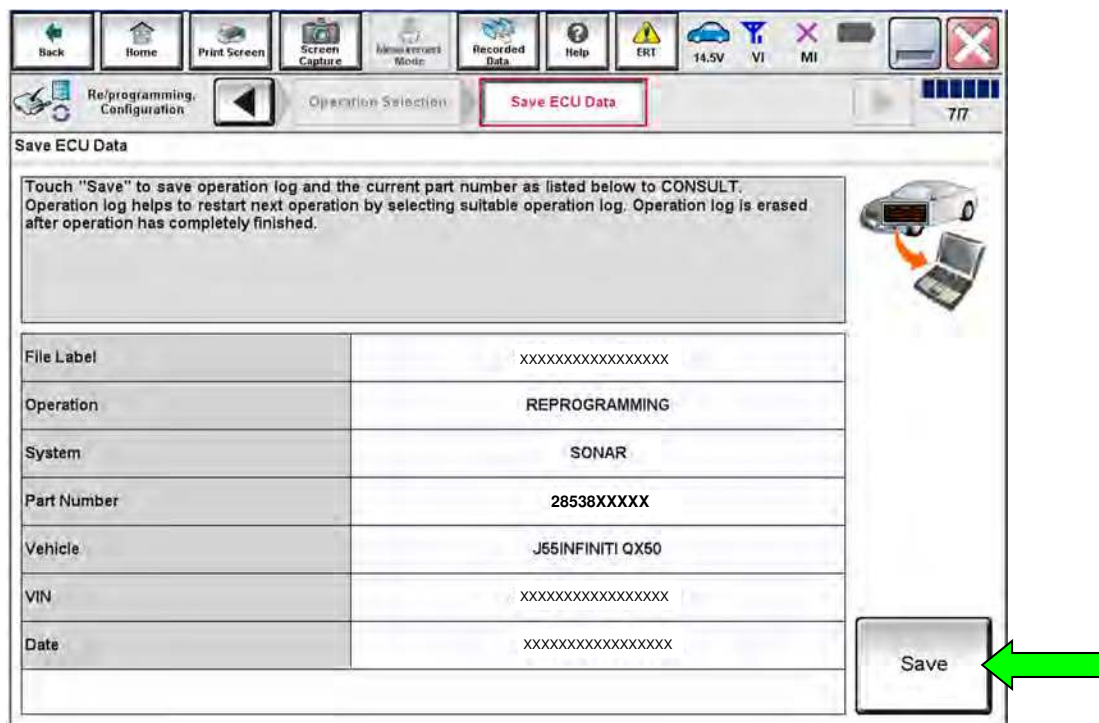


Figure 15

28. Read the precautions on the C-III plus screen, check the box for Confirmed Instructions, then select Next. (Screens not shown.)

29. Select Next.

Re/programming Configuration | Precaution | **Select Program Data** | Confirm Vehicle Condition | 9/10

Confirm the detail listed below, and touch "Next" if OK.
 -In case the screen to select reprog/programming data is NOT displayed, only one data is available for this vehicle.
 -In case the part number after reprogramming is wrong, touch "Re-select", and confirm the vehicle selection, VIN and reprog/programming data in CONSULT.

Part Number After Repro/programming	28538-XXXXX
Current Part Number	28538-XXXXX
Vehicle	INFINITI QX50 J55
VIN	XXXXXXXXXXXXXXXXXX
System	SONAR
Other Information	SONAR ECU
Expected time to finish re/programming	10min

Re-select

Next ←

Figure 16

HINT:

- In some cases, more than one new part number for reprogramming is available.
 - If more than one new part number is available, the screen in Figure 17 displays.
 - Select and use the reprogramming option that does not have the message "Caution! Use ONLY with ITBXX-XXX".
- If you get this screen and it is blank (no reprogramming listed), it means there is no reprogramming available for this vehicle. Close C-III plus and refer back to the ESM for further diagnosis.

Re/programming Configuration | Precaution | **Select Program Data** | Confirm Vehicle Condition | 9/11

Touch and select the reprog/programming data listed below.
 In case no reprog/programming data is listed below, confirm the vehicle selection, VIN and reprog/programming data in CONSULT.

System: SONAR

Current Part Number	Part Number After Repro/programming	Other Information
XXXXXX-XXXXXX	XXXXXX-XXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXX-XXXXXX	XXXXXX-XXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXX

0/0

Next

Figure 17

30. Make sure OK is highlighted **green** (battery voltage must be between 12.0 and 15.5 Volts).

NOTICE

To avoid damage to the control unit, ensure a battery maintainer or smart charger is connected. The battery voltage must be between 12.0V and 15.5V during reprogramming.

31. Select Next.

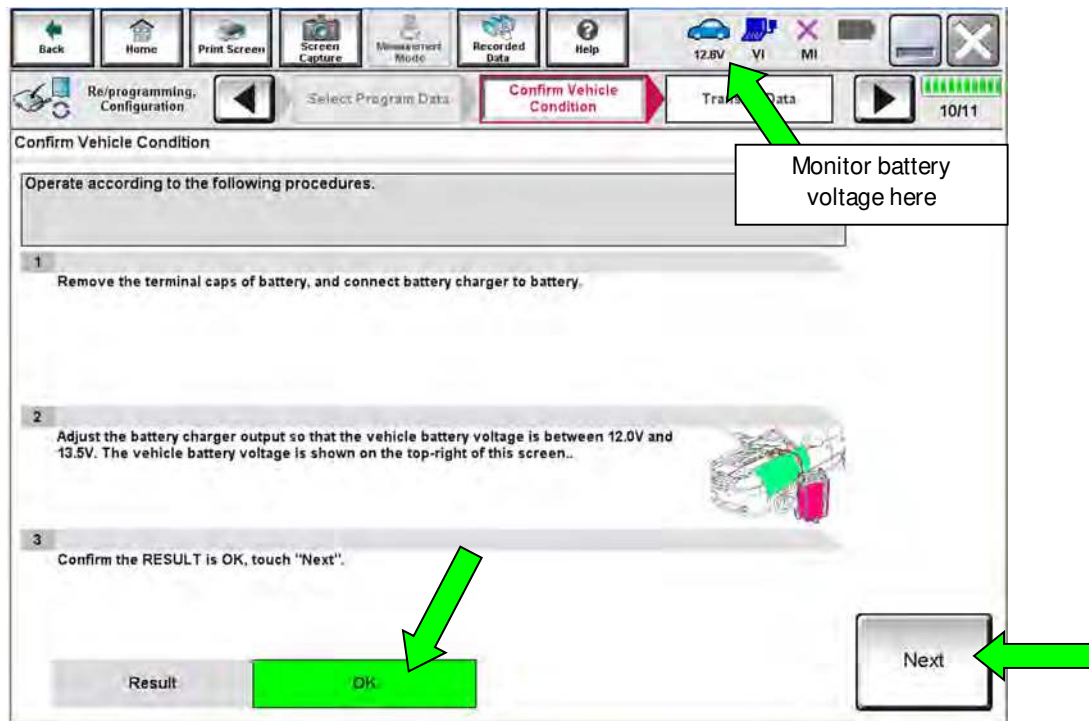


Figure 18

32. Confirm all Judgment items are OK, then select Start.

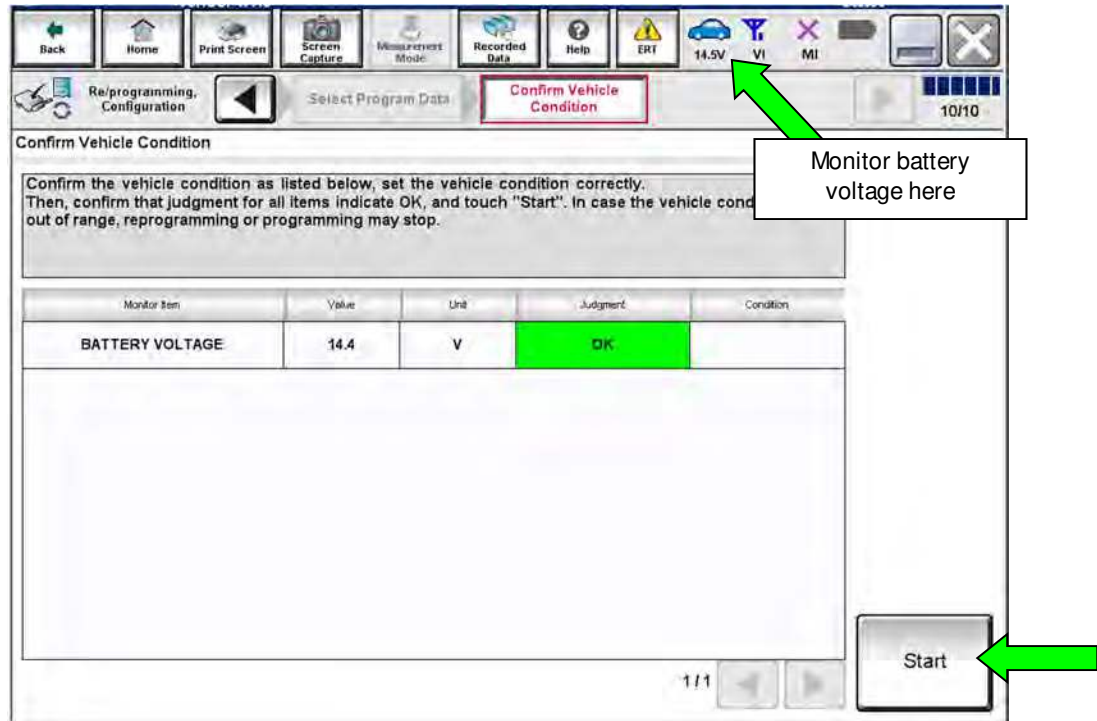


Figure 19

33. Select USA/CANADA Dealers.

34. Select OK.

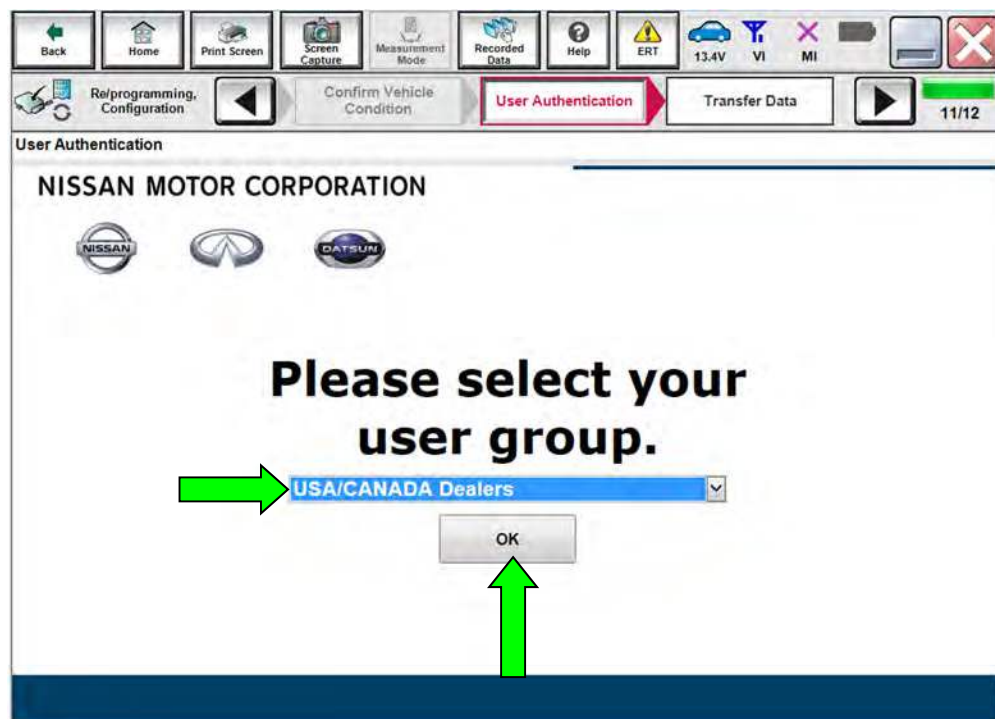


Figure 20

HINT:

- The screen in Figure 20 on page 13 may not display if the CONSULT PC has remained ON since the last reprogramming.
- If the CONSULT PC is not connected to the internet, the screen in Figure 21 will display.

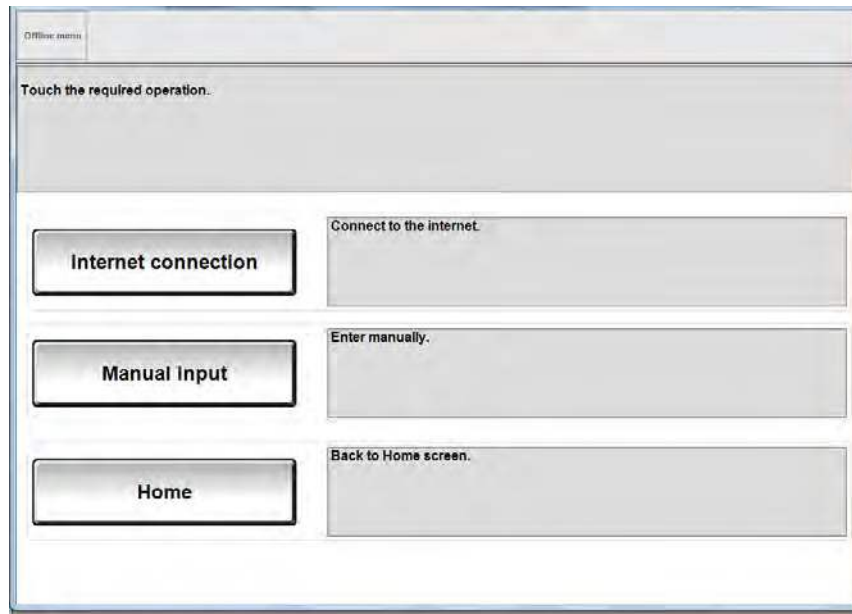


Figure 21

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

35. 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 username and password, contact your service manager.

36. Select Submit.

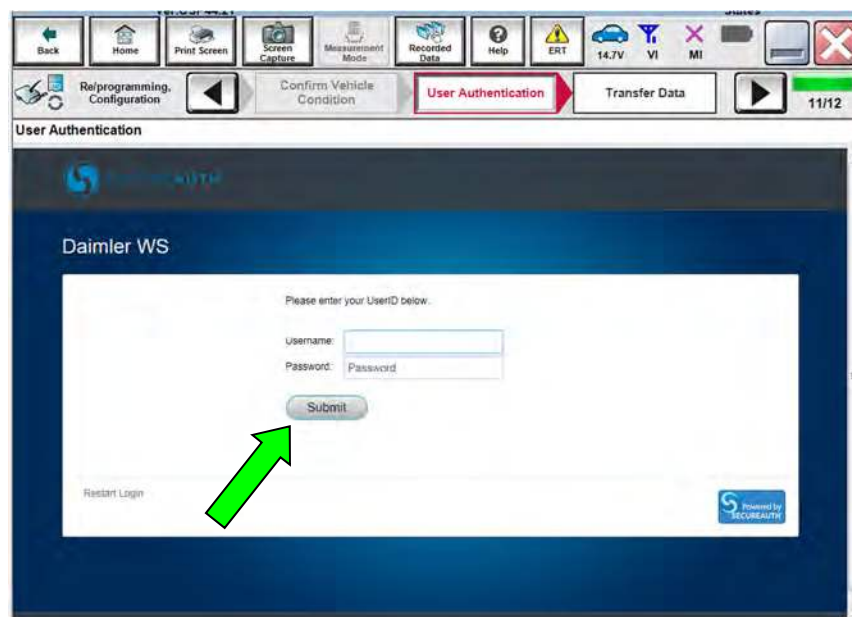


Figure 22

37. Wait for both progress bars to complete.

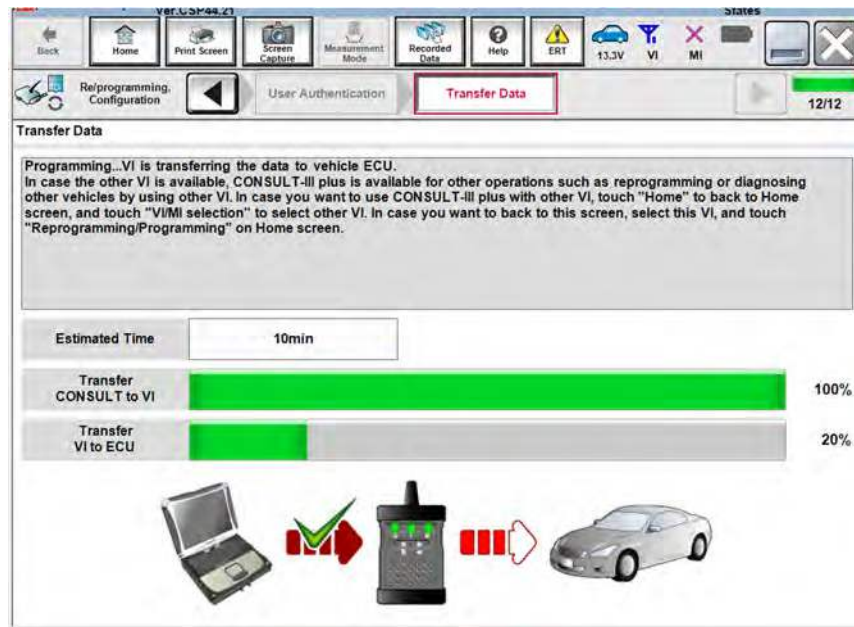


Figure 23

- When the screen in Figure 24 displays, the reprogramming is complete.
- If the screen in Figure 24 does not display (indicating that reprogramming did not complete), refer to Sonar Control Unit Recovery on the next page.

38. Disconnect the battery maintainer or smart charger from the vehicle.

39. Select Next.

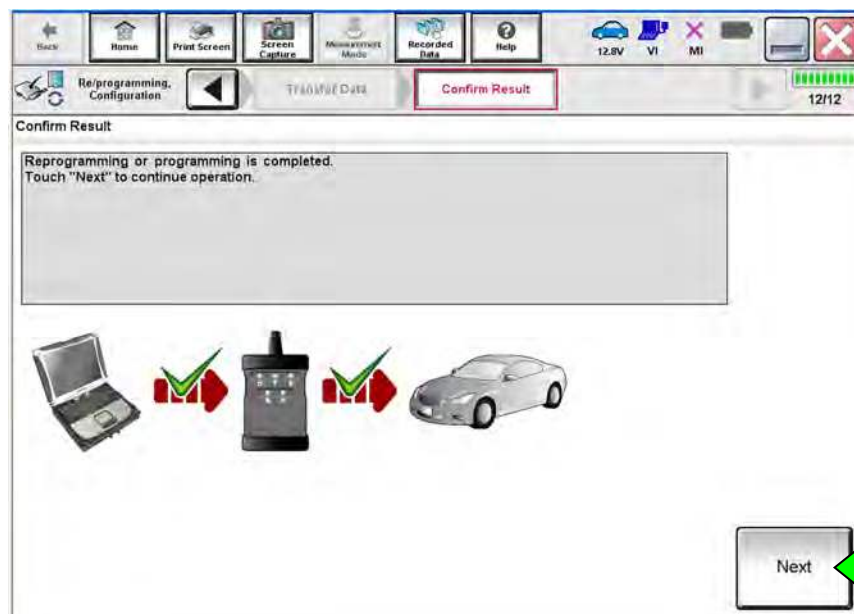


Figure 24

HINT: Additional steps/operations are required before C-III plus will provide the final reprogramming confirmation report. Continue with the reprogramming procedure on page 17.

Sonar Control Unit Recovery

Do not disconnect the 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 25:

- Check battery voltage (12.0 - 15.5 V).
- Ignition is ON, engine 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.

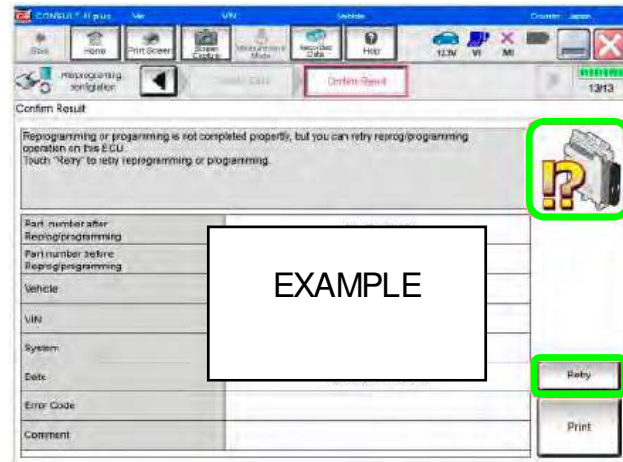


Figure 25

If reprogramming does not complete and the “X” icon displays as shown in Figure 26:

- Check battery voltage (12.0 - 15.5 V).
- CONSULT A/C adapter is plugged in.
- Ignition is ON, engine 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.

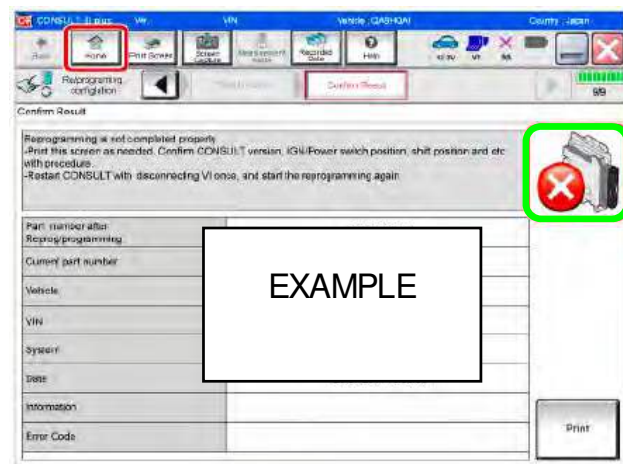


Figure 26

40. Erase all DTCs as follows:

- a. Turn the ignition OFF.
- b. Turn the ignition ON.

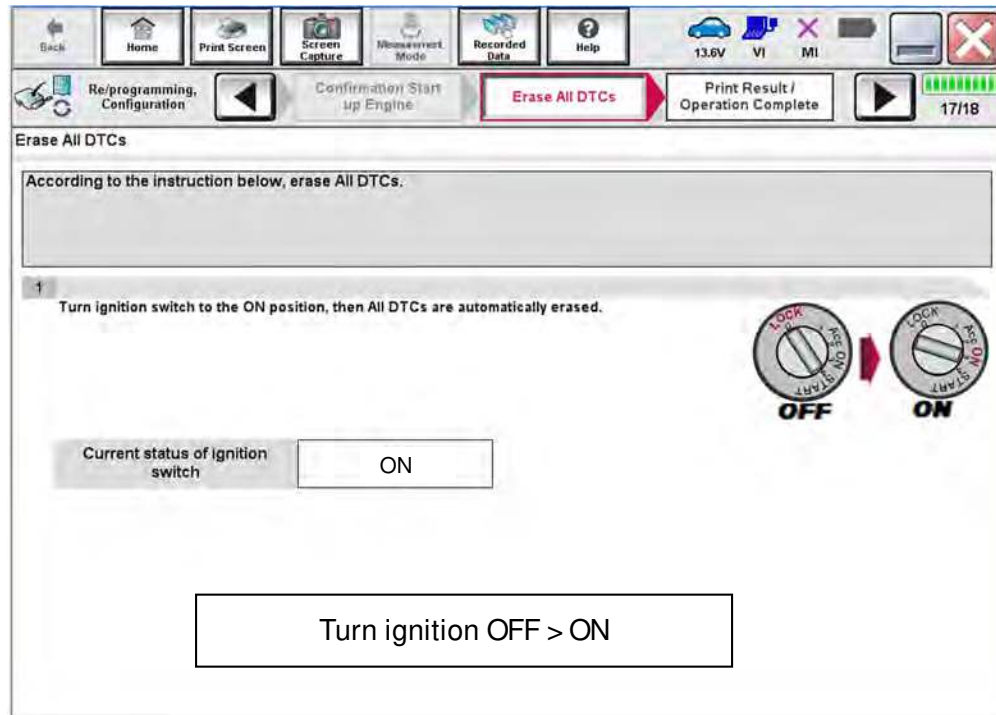


Figure 27

HINT: When the entire reprogramming process is complete, the screen in Figure 28 will display.

41. Verify the before and after part numbers are the same.

NOTE: For this reprogram, the before and after reprogramming part numbers should be the same. This is not an error.

42. Print a copy of the screen below (Figure 28) and attach it to the repair order for warranty documentation.

HINT: If you cannot print the screen:

- Select Screen Capture.
 - Name the file.
 - Save the file in My Documents.
- A copy of the screen is now saved in the CONSULT PC. It can be retrieved and printed at a later time.

43. Select Confirm.

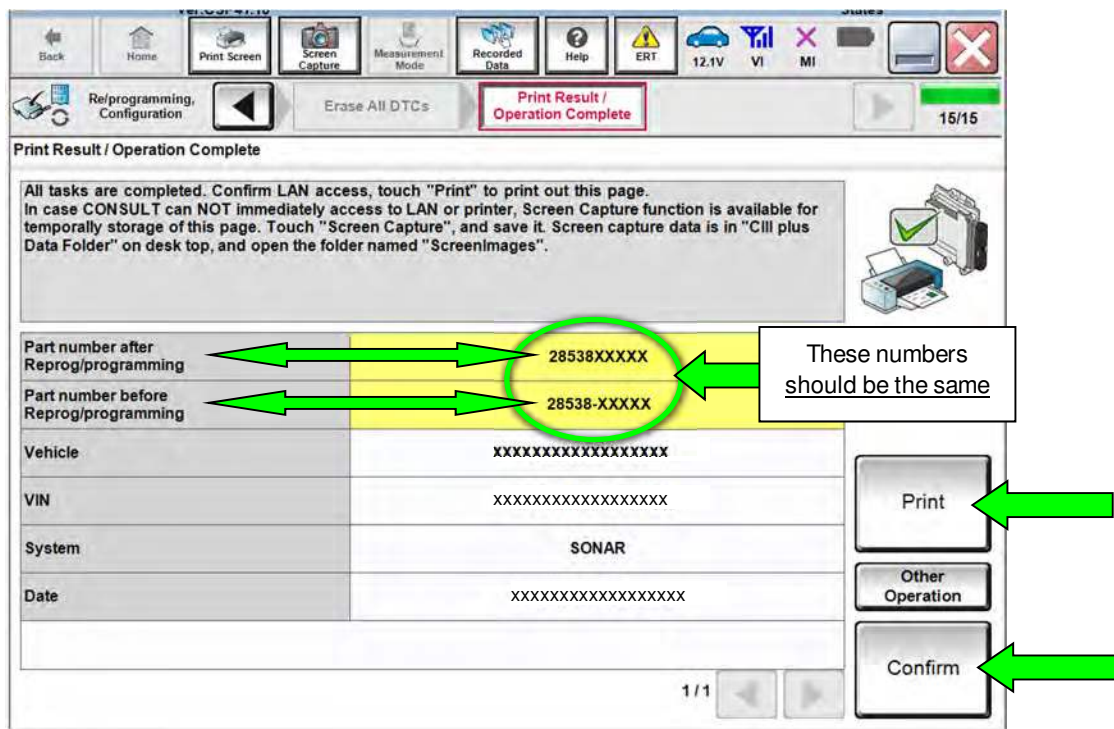


Figure 28

44. Select Home (screen not shown).

45. Select Re/programming, Configuration.

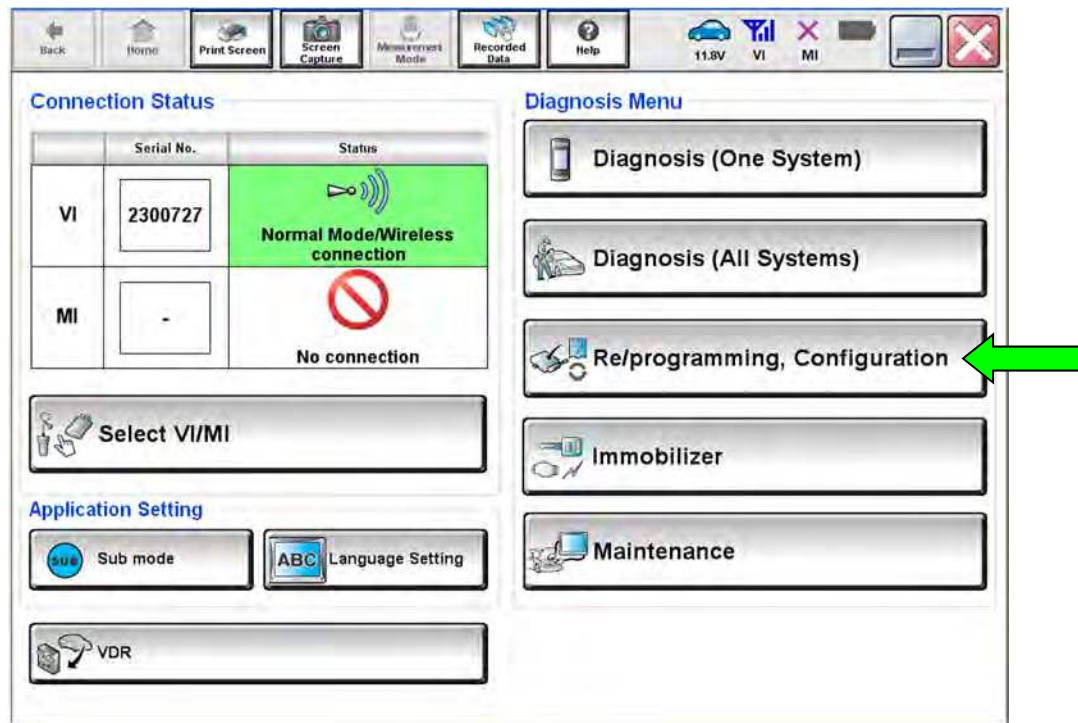


Figure 29

NOTE: C-III plus screens for steps 46-49 are not shown.

46. Read the precautions on the C-III plus screen, check the box for Confirmed Instructions, then select Next.
47. Select Automatic Selection(VIN).
48. Select Confirm.
49. Select Confirm.

50. Select SONAR.

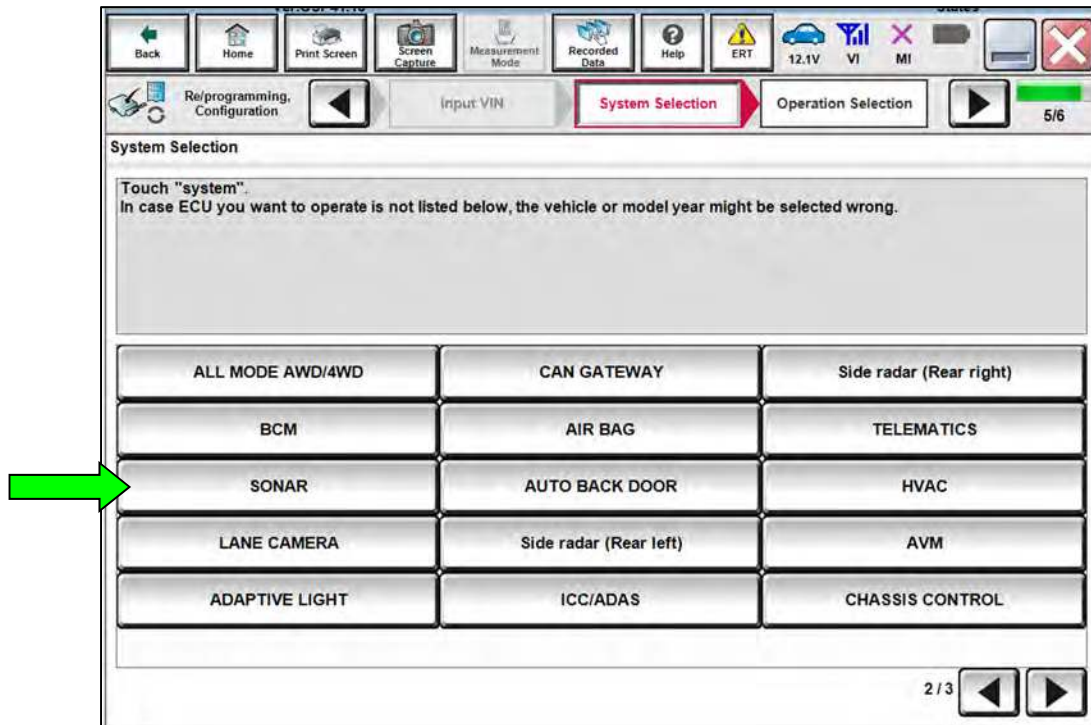


Figure 30

51. Select After ECU Replacement under VEHICLE CONFIGURATION.

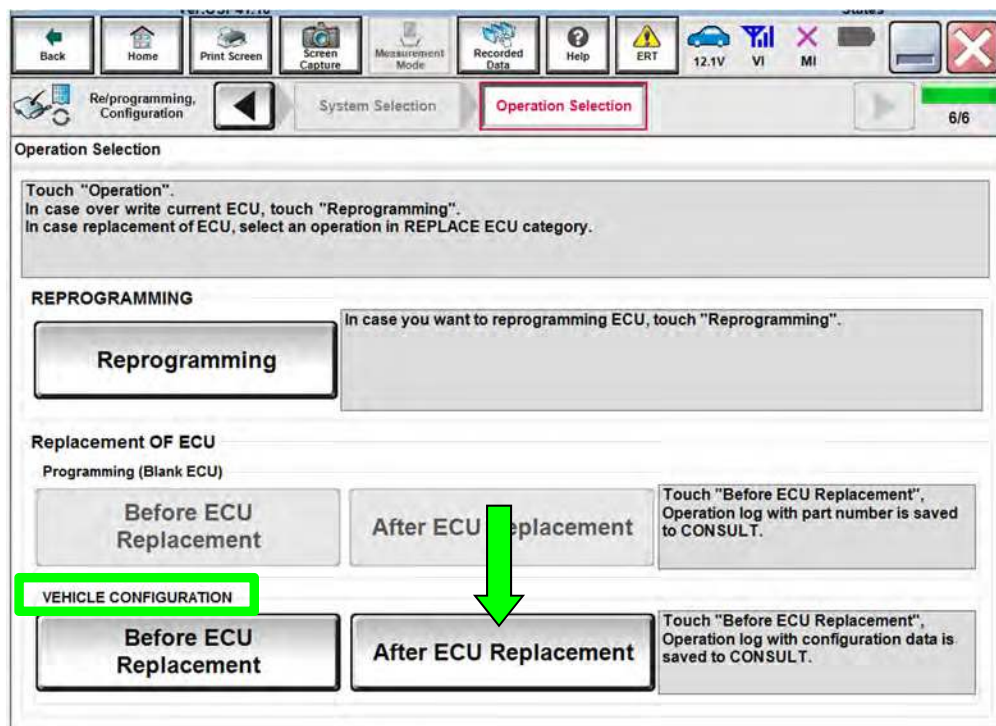


Figure 31

52. Select Manual selection.

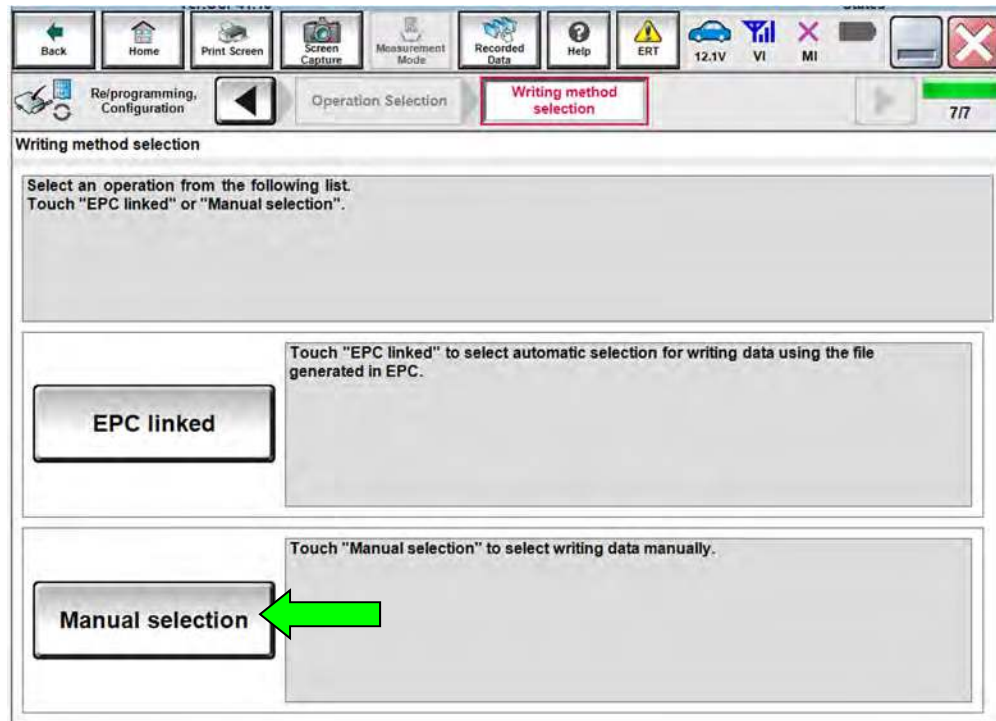


Figure 32

53. Select the applicable Type ID.

- Refer to the EPC to determine the applicable Type ID.

54. Select Next.

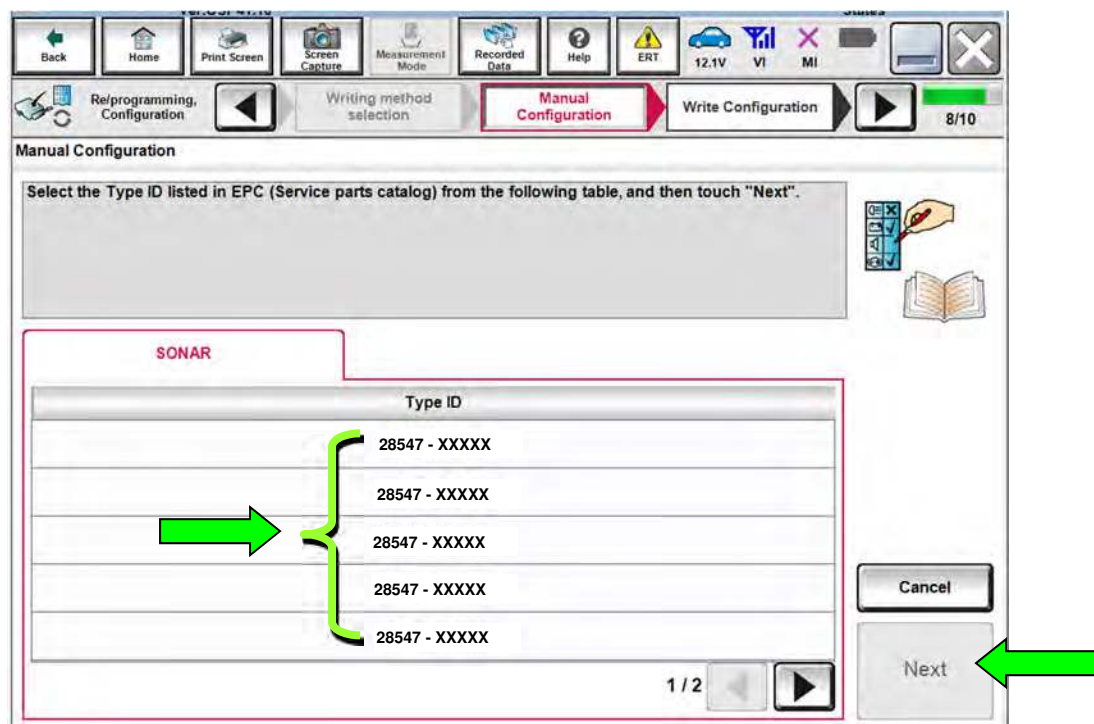


Figure 33

55. Select OK.

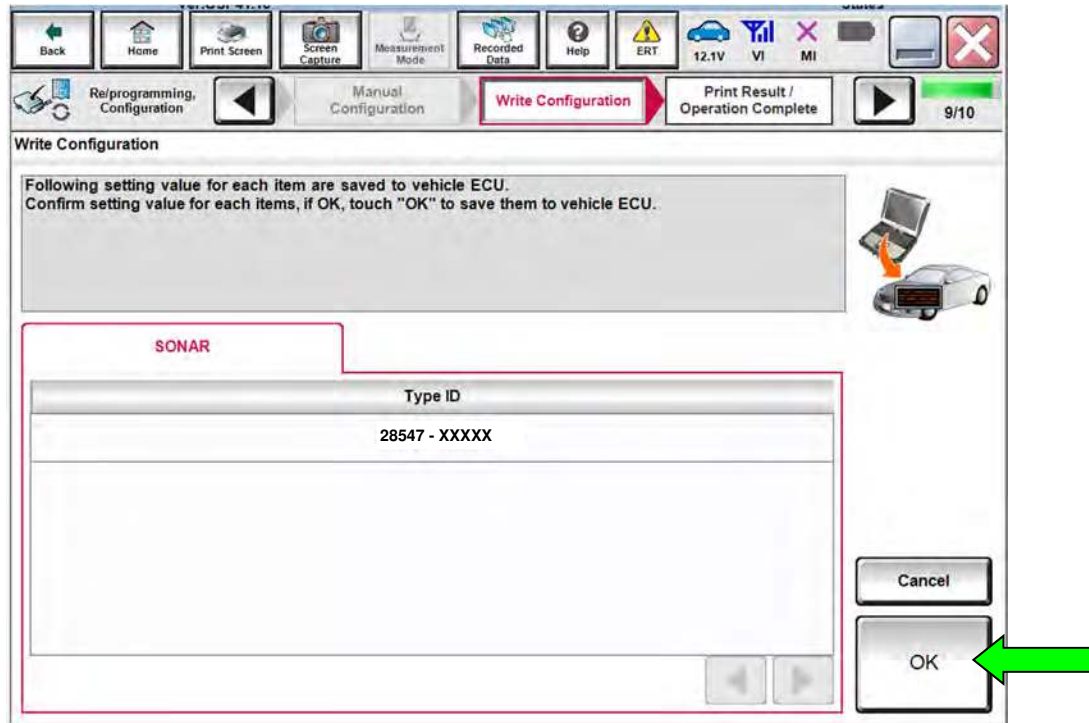


Figure 34

56. Select End.

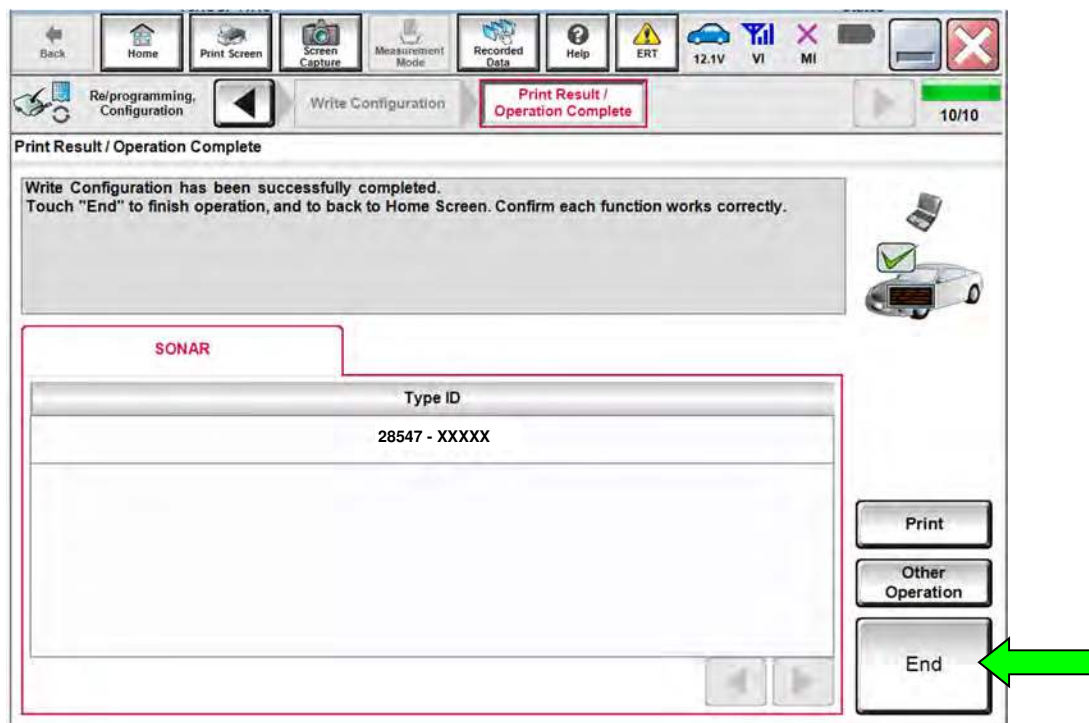


Figure 35

57. Select Home (screen not shown).

58. Select Diagnosis (One System).

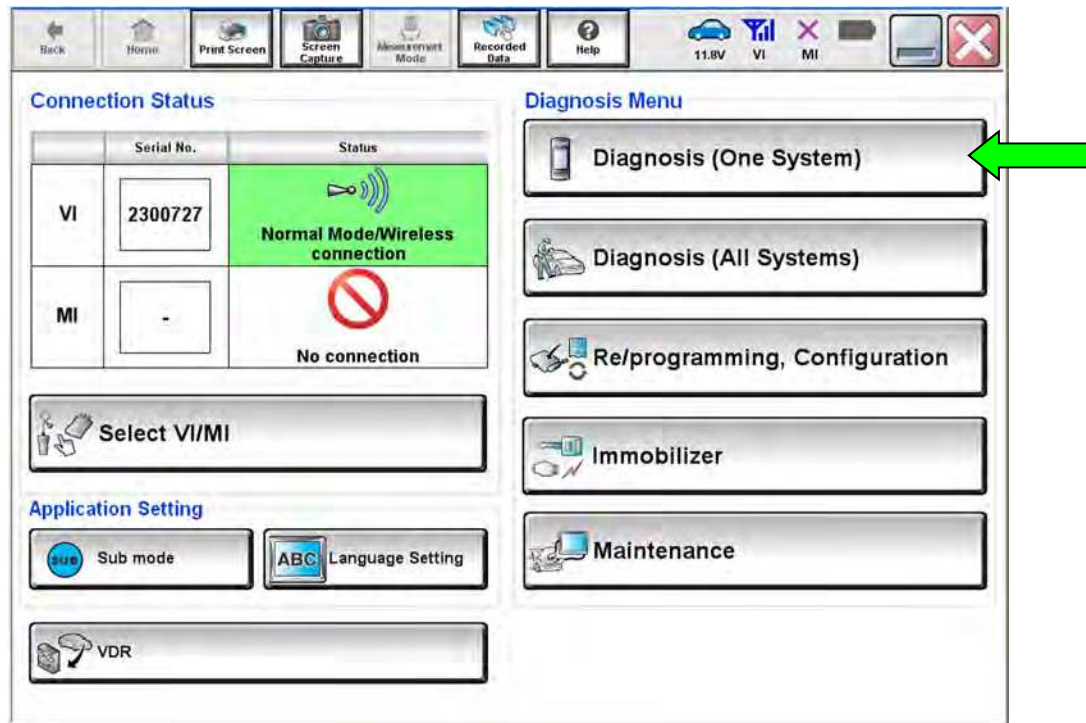


Figure 36

59. Select SONAR.

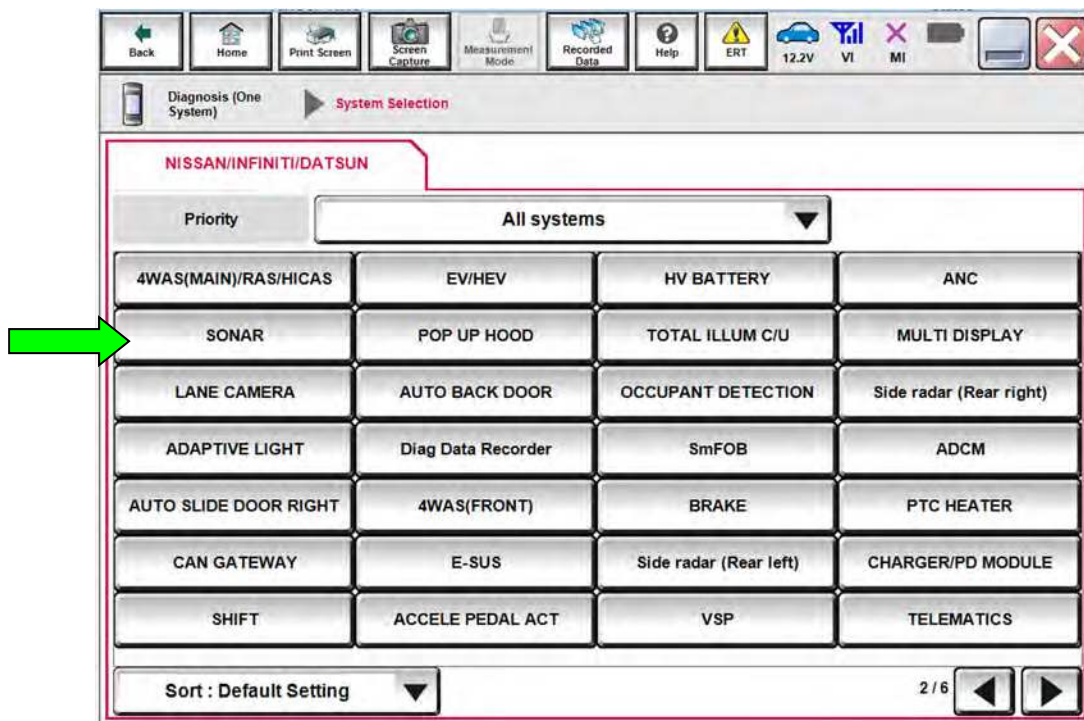


Figure 37

60. Select ERASE.

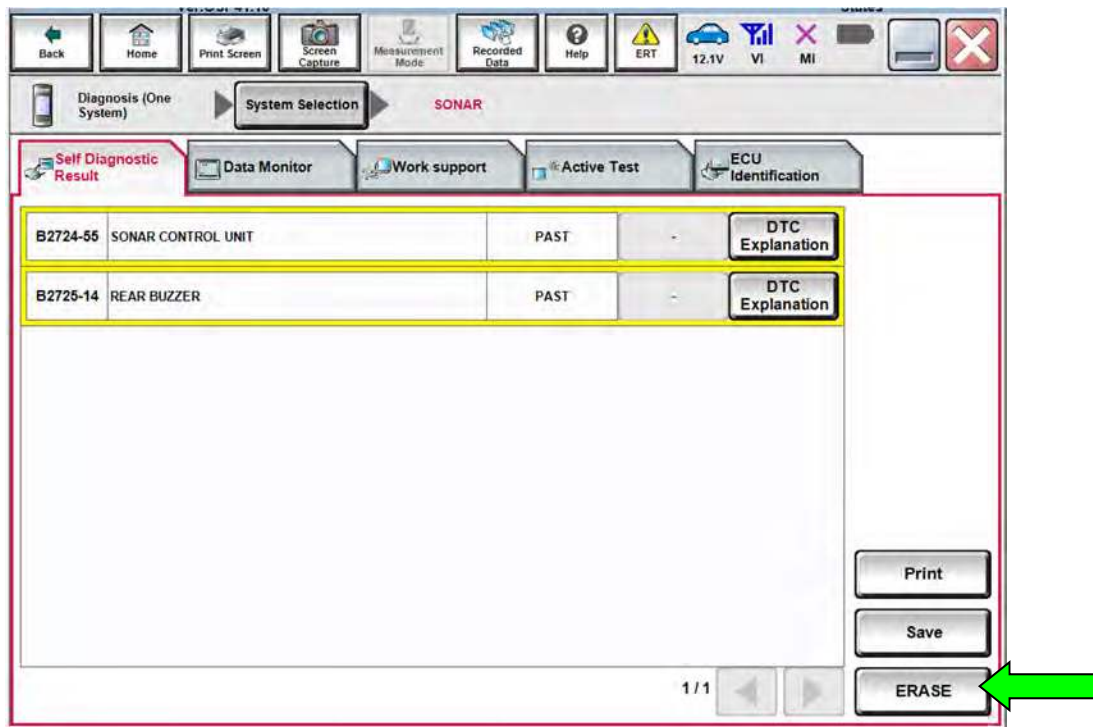


Figure 38

61. Select ECU Identification.

62. Confirm the SOFTWARE #. See Figure 39.

- If the SOFTWARE # is A136, proceed to step 63.
- If the SOFTWARE # is not A136, reprogramming did not successfully complete. Go back to step 15 on page 6 and perform the procedure again.

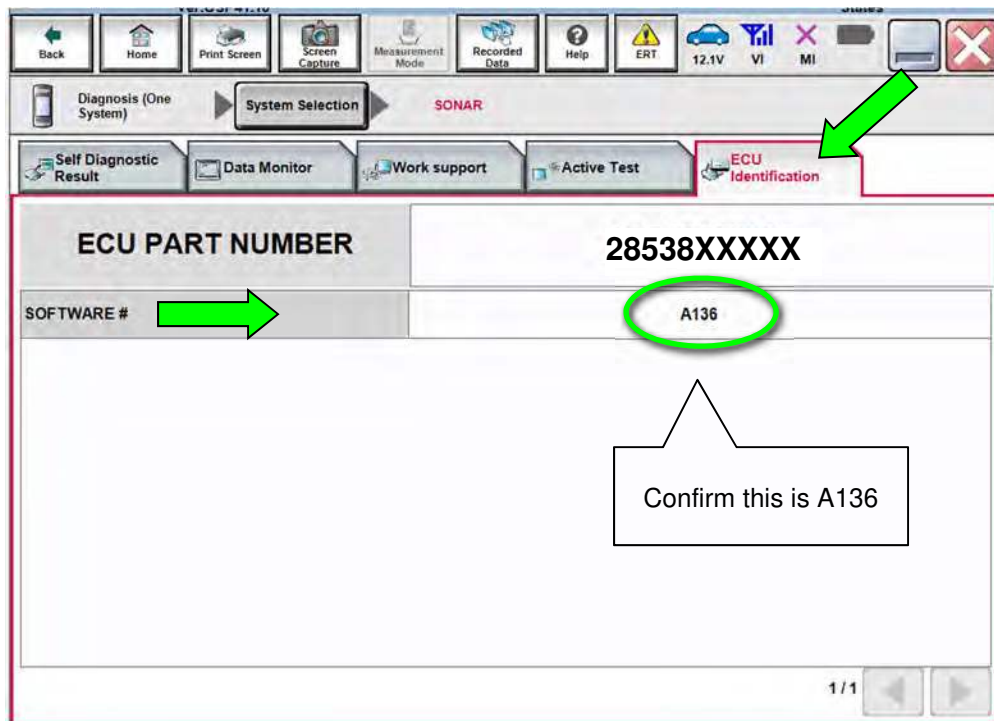


Figure 39

63. Select Home.

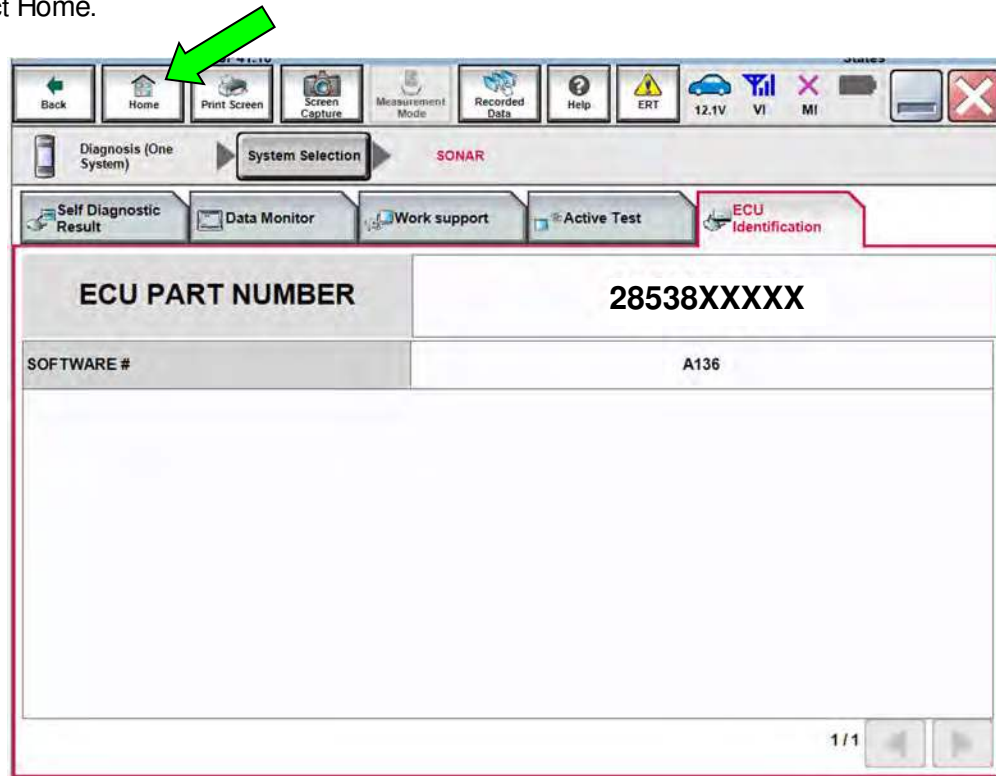


Figure 40

64. Select Diagnosis (All Systems).

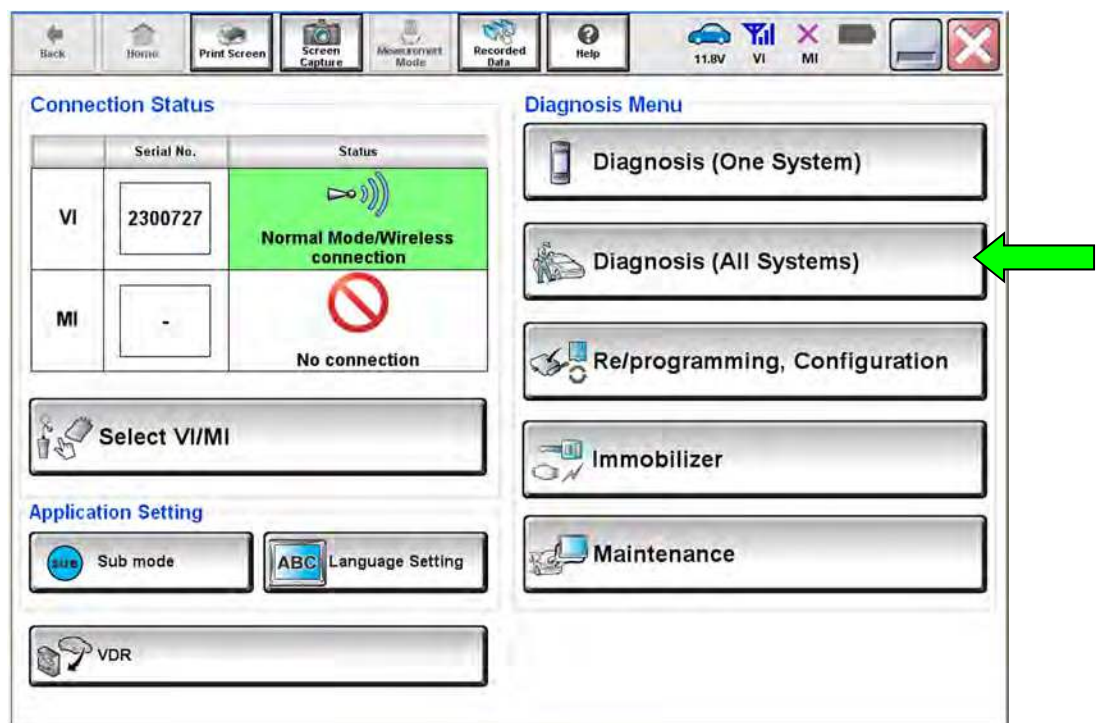


Figure 41

NOTE: C-III plus screens for steps 65-67 are not shown.

65. Select Automatic Selection(VIN).
66. Select Confirm.
67. Select Confirm.
68. Turn the ignition OFF, then turn the ignition ON.
69. Confirm DTC C1B56-04 is displayed as PAST (not CRNT). See Figure 42.
70. Select ERASE.

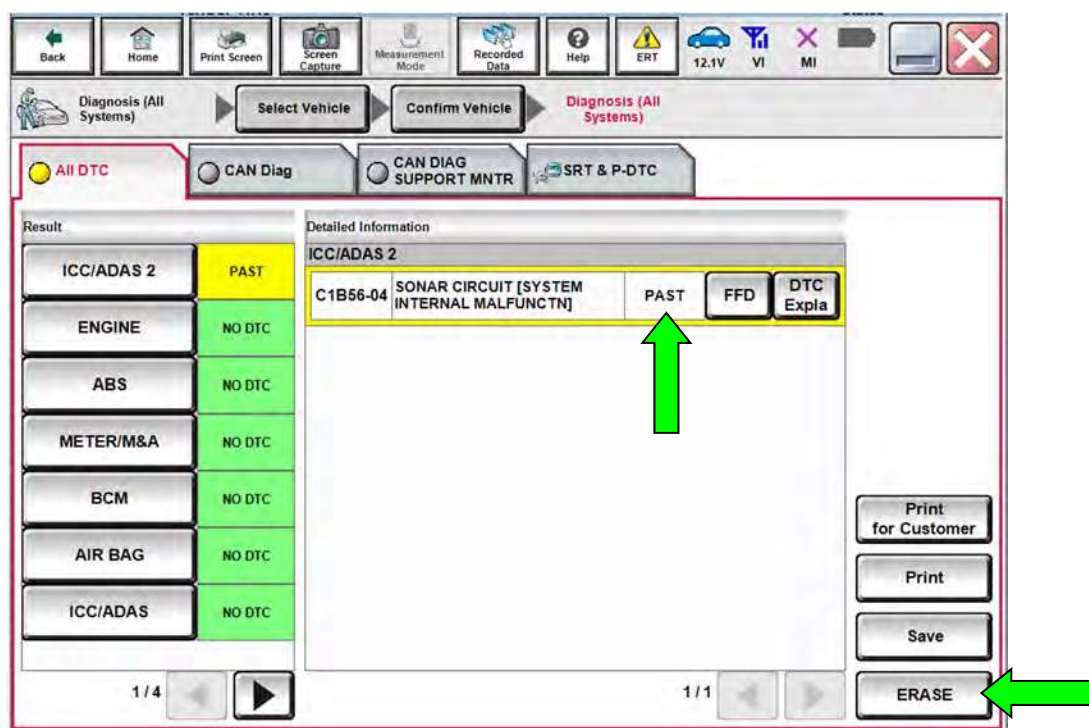


Figure 42

71. Close C-III plus.
72. Turn the ignition OFF.
73. Disconnect the VI from the vehicle.
74. Start the engine.
75. Check that the RAB system setting can be enabled/disabled on the combination meter.
76. Test drive the vehicle and make sure it operates correctly and the MIL is OFF.
 - If the MIL comes ON, go back to the ESM for further diagnostic information.
 - Diagnosis and repairs beyond Sonar Control Unit reprogramming are not covered by this bulletin.

CLAIMS INFORMATION

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Reprogram Sonar Control Unit	(1)	RX9QAA	ZE	32	0.8

(1) Reference the electronic parts catalog and use the Sonar Control Unit (28532-*****) as the Primary Failed Part (PFP).

NOTE: FRT allows adequate time to access DTC codes. No other diagnostic procedures subsequently required. Do NOT claim any Diagnostic Op Codes with this claim.

AMENDMENT HISTORY

PUBLISHED DATE	REFERENCE	DESCRIPTION
November 10, 2020	ITB20-025	Original bulletin published
January 28, 2021	ITB20-025A	Classification number updated
July 13, 2021	ITB20-025B	Part number added to Table A on page 10