

Classification:

AT12-002b

Reference:

ITB12-021b

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Date:

November 14, 2012

2011 – 2012 M37/M56; SHIFT RESPONSIVENESS ISSUES

This bulletin has been amended to add an addition vehicle into the APPLIED VEHICLES, change the first line of the IF YOU CONFIRM statement and add additional part numbers to TABLE A. Discard any previous versions.

APPLIED VEHICLES AND VINS: 2011 – 2012 M56 (Y51) All
2011 M37 (Y51) All
2012 M37 (Y51) 2WD models: built before JN1BY1AP(*)CM 332915
2012 M37 (Y51) AWD models: built before JN1BY1AR(*)CM 393415

APPLIED DATES: 2012 M37 (Y51) 2WD models: built before August 1, 2011
2012 M37 (Y51) AWD models: built before July 31, 2011

IF YOU CONFIRM

That the customer has experienced or is experiencing:

- Harsher than expected down shifts when coasting to a stop.
- Hesitation/lag when accelerating after coasting.
- Hesitation/lag or harsher than expected down shifts when coming to a stop and accelerating again (rolling stop).
- Engine rev matching during moderate to heavy braking.

NOTE: Engine rev matching is normal operation of the ASC (Adaptive Shift Control) in normal drive mode and sport mode. The ECM and TCM reprogramming in this bulletin will remove engine rev matching from ASC in normal drive mode, but it will remain as part of the ASC in sport mode.

ACTION

1. Refer to step 6 in the SERVICE PROCEDURE to confirm this bulletin applies to the vehicle you are working on.
2. If this bulletin applies, reprogram the **ECM and TCM**.

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 dealer to determine if this applies to your vehicle.

CLAIMS INFORMATION

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Reprogram ECM & TCM	(1)	DX32AA	HD	32	0.8 hrs

- (1) Refer to the electronic parts catalog (FAST or equivalent) and use the appropriate Transmission Control Valve assembly part number as the Primary Failed Part (PFP).

SERVICE PROCEDURE

- This procedure will require reprogramming of the **ECM and TCM**; which means most steps in this procedure will need to be done twice.
- Most instructions for reprogramming with CONSULT-III plus (C-III plus) are displayed on the CONSULT PC screen.
- If you are not familiar with the reprogramming procedure, **click here**. This will link you to the "CONSULT- III plus (C-III plus) Reprogramming" general procedure.

Preparation for Reprogramming

- Take the vehicle for a 10 minute drive in order to meet the following Idle Air Volume Learn (IAVL) conditions:
 - Engine coolant temperature: 70 -100°C (158 - 212°F)
 - Battery voltage: More than 12.9V (At idle)
 - Transmission: Warmed up



Figure A

NOTE:

- After ECM reprogramming is complete, you will be required to perform Throttle Valve Closed Position, Idle Air Volume Learn (IAVL), and Accelerator Closed Position.
- The above conditions are required for the IAVL to complete.

CAUTION:

- Connect a battery charger to the vehicle battery. The vehicle battery voltage must stay between 12.0V and 15.5V during reprogramming, or the ECM/TCM may be damaged.
- Be sure to turn OFF all vehicle electrical loads. If a vehicle electrical load remains ON, the ECM/TCM 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 ECM/TCM may be damaged.
- Turn off all external Bluetooth® devices (e.g., cell phones, printers, etc.) within range of the CONSULT PC and the VI. If Bluetooth® signal waves are within range of the CONSULT PC during reprogramming, reprogramming may be interrupted and the ECM/TCM may be damaged.

1. Connect the CONSULT PC to the vehicle to begin the reprogramming procedure.
2. Open ASIST on the CONSULT PC and start C-III plus.
3. Wait for the plus VI to be recognized / connected.
 - Serial number will display when the plus VI is recognized / connected.
4. Select **Re/programming, Configuration**.

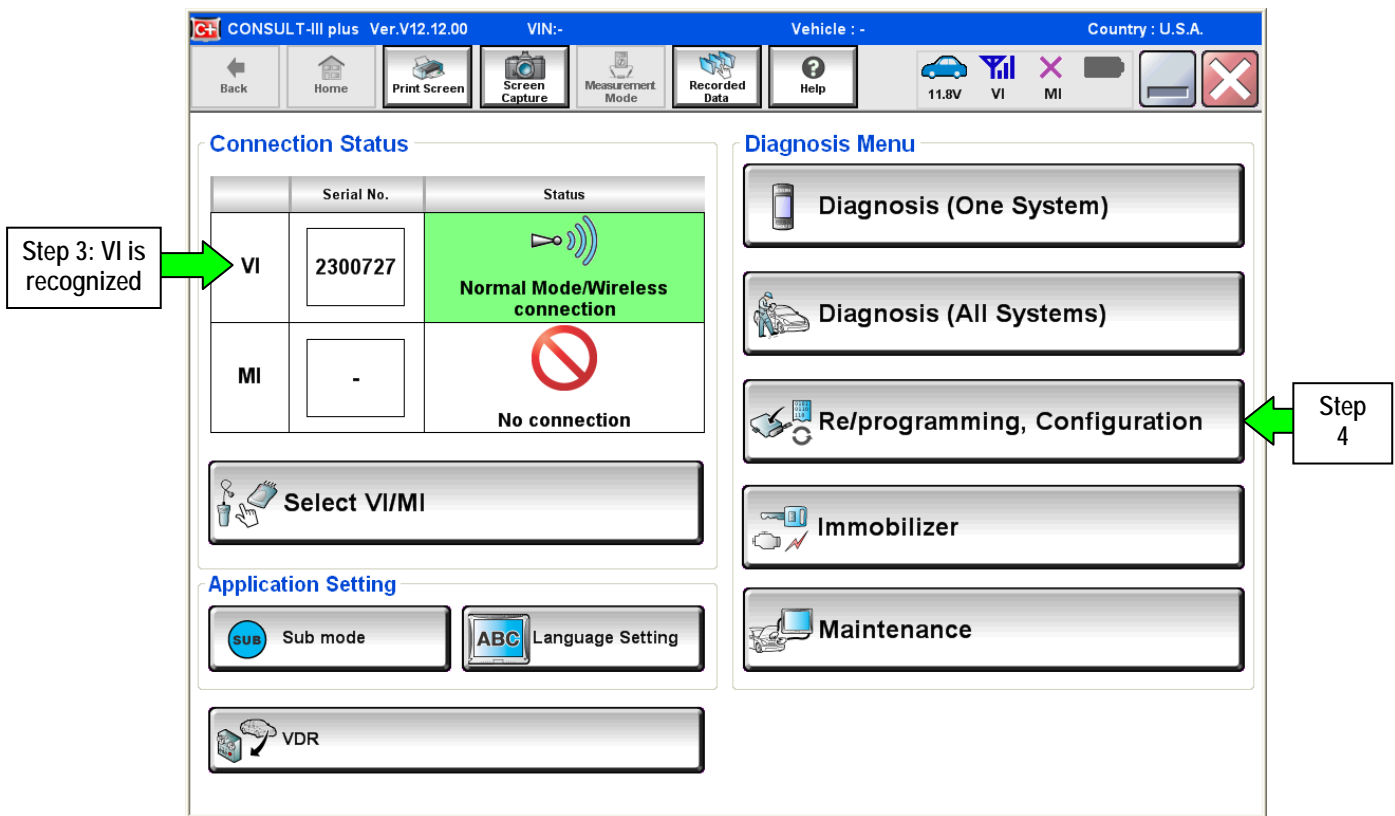


Figure 1

5. Follow the on-screen instructions and navigate the C-III plus to the screen shown in Figure 2 on the next page.

6. When you get to the screen shown in Figure 2, confirm this bulletin applies as follows:

A. Find the ECM or TCM **Part Number** and write it on the repair order.

NOTE: This is the current ECM or TCM Part Number (P/N).

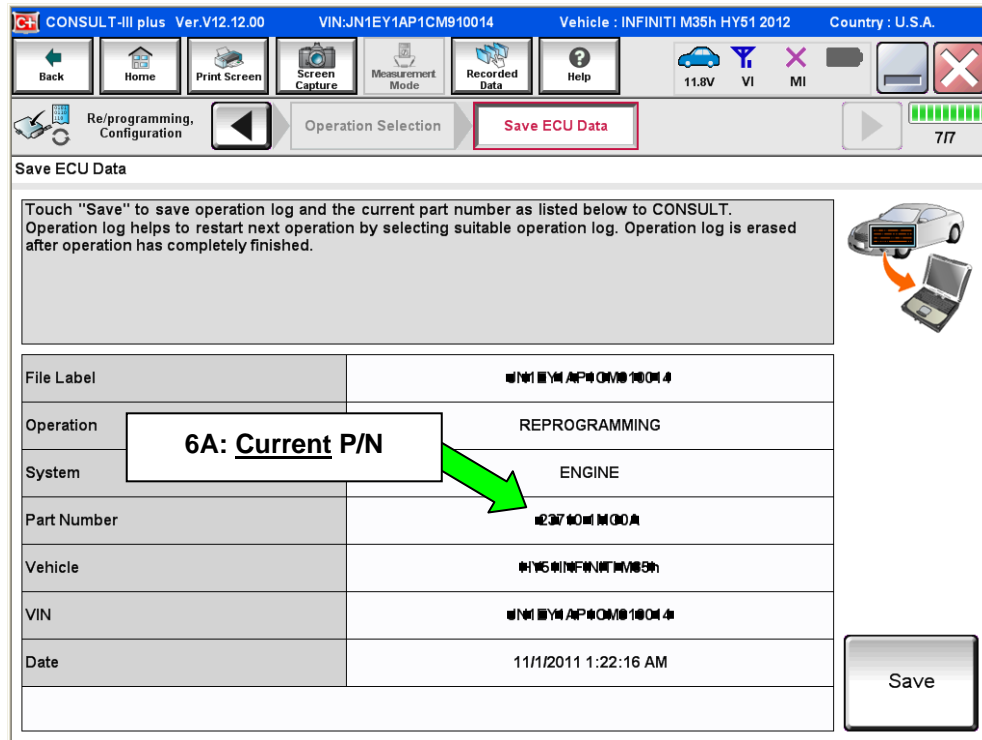


Figure 2

B. Compare the P/N you wrote down to the numbers in the **Current ECM or TCM Part Number** column in **Table A** below.

- If there is a match, this bulletin applies. Continue with the reprogramming procedure.
- If there is not a match, reprogramming does not apply. Make sure to check both ECM and TCM for a match.

Table A

ECM

MODEL	CURRENT ECM PART NUMBER: 23710-
2011 M37	1MA0D, 1MA0C, 1MA0B, 1MA0A
	1MA1E, 1MA1D, 1MA1C, 1MA1B, 1MA1A
	1MA2E, 1MA2D, 1MA2C, 1MA2B, 1MA2A
	1MA3E, 1MA3D, 1MA3C, 1MA3B, 1MA3A
	1MA4E, 1MA4D, 1MA4C, 1MA4B, 1MA4A
	1MA5E, 1MA5D, 1MA5C, 1MA5B, 1MA5A
	1MA9A, 1MA8A, 1MA7A, 1MA6A
	1MB9A, 1MB8A, 1MB7A
2011 M56	1MX0E, 1MX0D, 1MX0C, 1MX0B, 1MX0A
	1MX1E, 1MX1D, 1MX1C, 1MX1B, 1MX1A
	1MX2E, 1MX2D, 1MX2C, 1MX2B, 1MX2A
	1MX3E, 1MX3D, 1MX3C, 1MX3B, 1MX3A
	1MP4C, 1MP4B, 1MP4A
	1MX4E, 1MX4D, 1MX4C, 1MX4B, 1MX4A
	1MP5C, 1MP5B, 1MP5A
	1MX5E, 1MX5D, 1MX5C, 1MX5B, 1MX5A
	1MP6C, 1MP6B, 1MP6A
	1MP7C, 1MP7B, 1MP7A
	1MP8C, 1MP8B, 1MP8A
	1MP9C, 1MP9B, 1MP9A
2012 M37	1MV0A, 1MV0B
	1MV1A, 1MV1B
	1MV2A, 1MV2B
	1MV3A, 1MV3B
	1MV4A, 1MV4B
	1MV5A, 1MV5B
2012 M56	1MK5A, 1MK4A, 1MK3A, 1MK2A, 1MK1A, 1MK0A
	1MU0E, 1MU0D, 1MU0C, 1MU0B, 1MU0A
	1MU1E, 1MU1D, 1MU1C, 1MU1B, 1MU1A
	1MU2E, 1MU2D, 1MU2C, 1MU2B, 1MU2A
	1MU3E, 1MU3D, 1MU3C, 1MU3B, 1MU3A
	1MU4E, 1MU4D, 1MU4C, 1MU4B, 1MU4A
	1MU5E, 1MU5D, 1MU5C, 1MU5B, 1MU5A

Table A continued on next page.

Table A

TCM

MODEL	CURRENT <u>TCM</u> PART NUMBER: 31039-
Early 2011 M37	X212E, X212D
	X355E, X355D
	X455D X455C
	1XJ6E
	1XJ7A
Late 2011-2012 M37	X217A, X216E
	X452D, X452C
	X456A, X455E

TCM

MODEL	CURRENT <u>TCM</u> PART NUMBER: 31705-
2011-2012 M56	X213B, X213A
	X354C, X354B
	X358E X358D
	X384C, X384B
	X430C, X430B
	X431C, X431B
	X451E, X451C, X451B
	X452A

7. Follow the on-screen instructions to navigate C-III plus and reprogram the ECM or TCM.

NOTE:

- In some cases, more than one new P/N for reprogramming is available.
 - In this case, the screen in Figure 3 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.

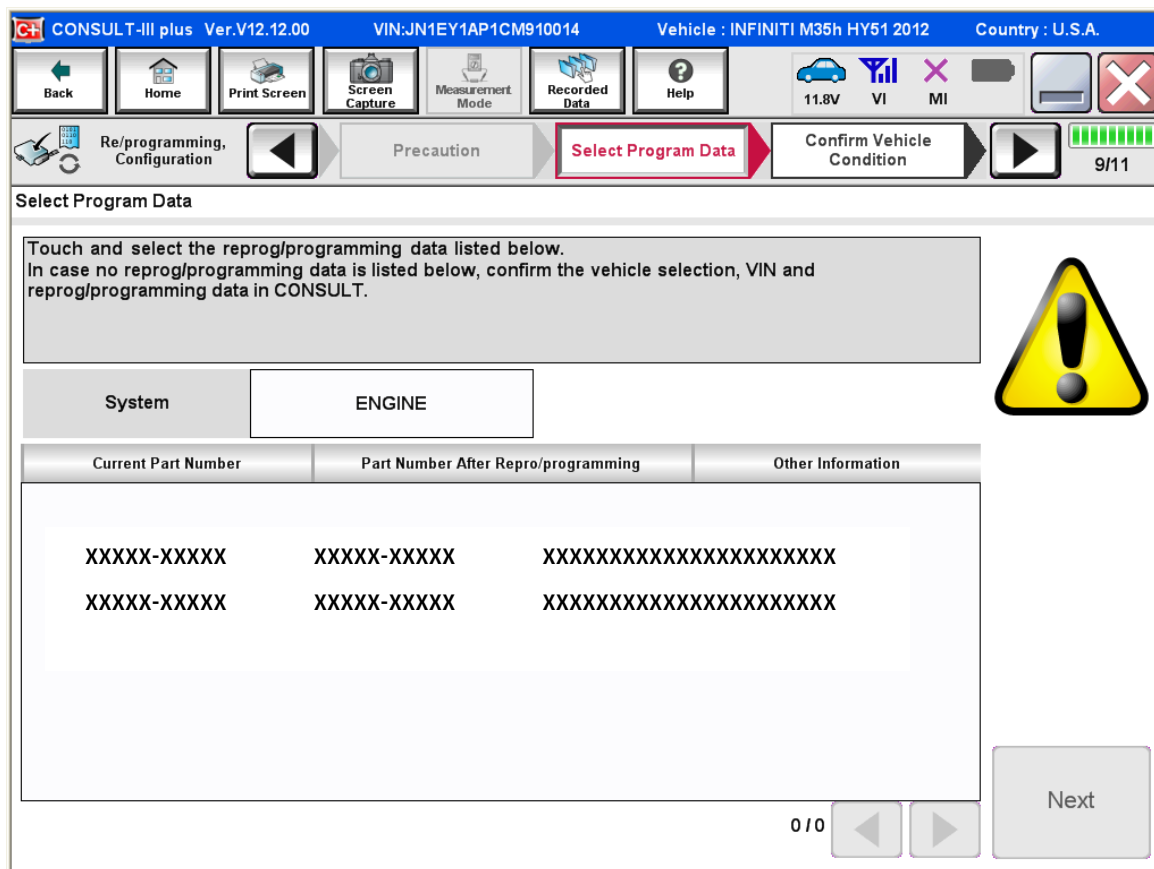


Figure 3

8. When the screen in Figure 4 displays, reprogramming is complete.

NOTE: If the screen in Figure 4 does not display (reprogramming does not complete), refer to the information on the next page.

9. Disconnect the battery charger from the vehicle.

10. Select **Next**.

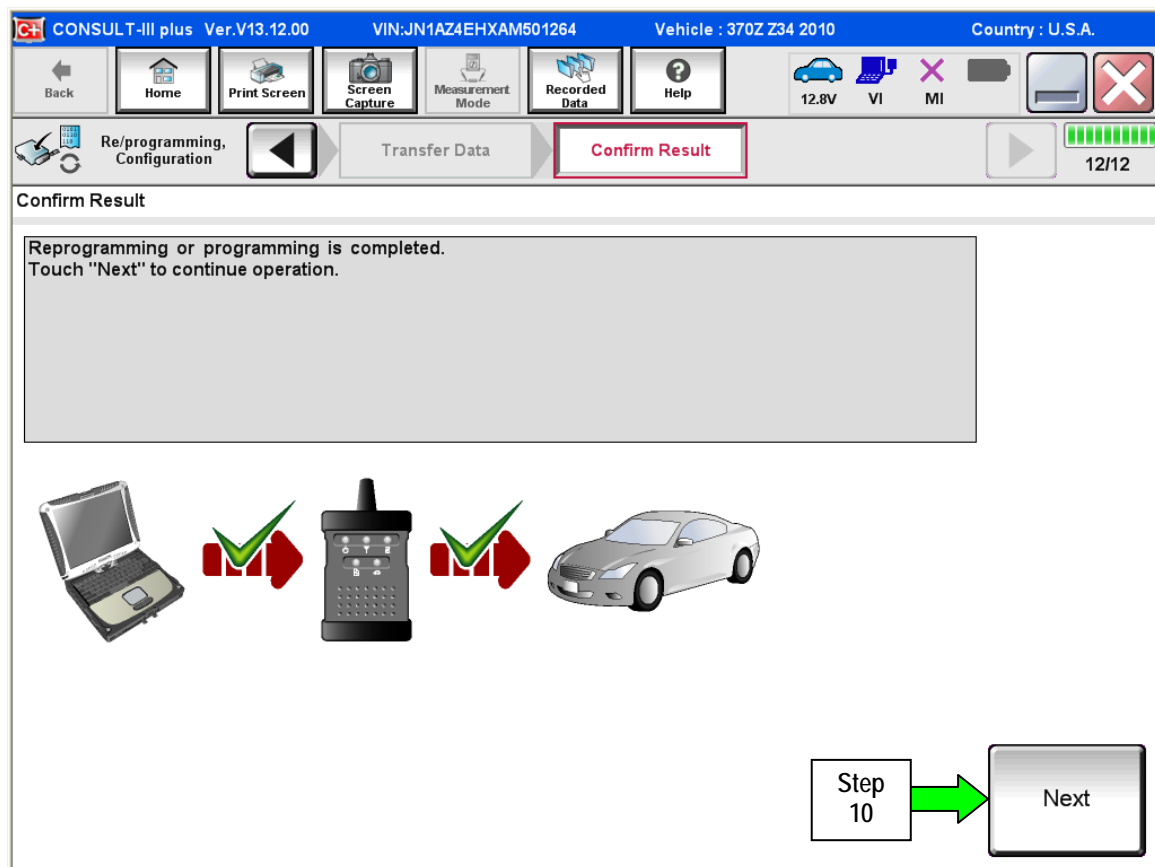


Figure 4

NOTE:

- In the next steps (page 11):
 - For ECM reprogramming you will perform Throttle Valve Closed Position, Idle Air Volume Learn, Accelerator Closed Position, and DTC erase.
 - For TCM reprogramming, only DTC erase is needed.
- These operations are required before C-III plus will provide the final reprogramming confirmation report.

If reprogramming does not complete and the “!?” symbol displays as shown in Figure 5:

- Check battery voltage (12.0 – 15.5V).
- Ignition is ON, engine not running.
- External Bluetooth® devices are OFF.
- All electrical loads are OFF.
- **Select Retry and follow the on screen instructions.**

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

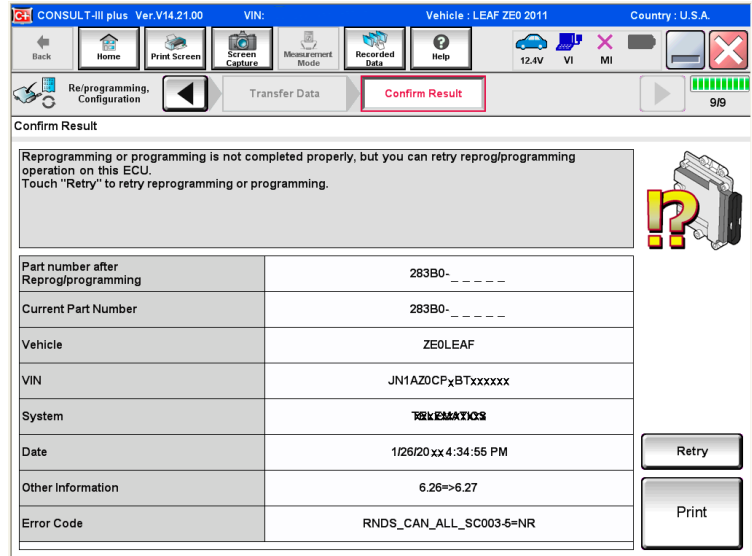


Figure 5

If reprogramming does not complete and the “X” symbol displays as shown in Figure 6:

- Do not disconnect the VI or shut down C-III plus if reprogramming does not complete.
- Check battery voltage (12.0 – 15.5V).
- CONSULT A/C adapter is plugged in.
- Ignition is ON, engine not running.
- 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.**

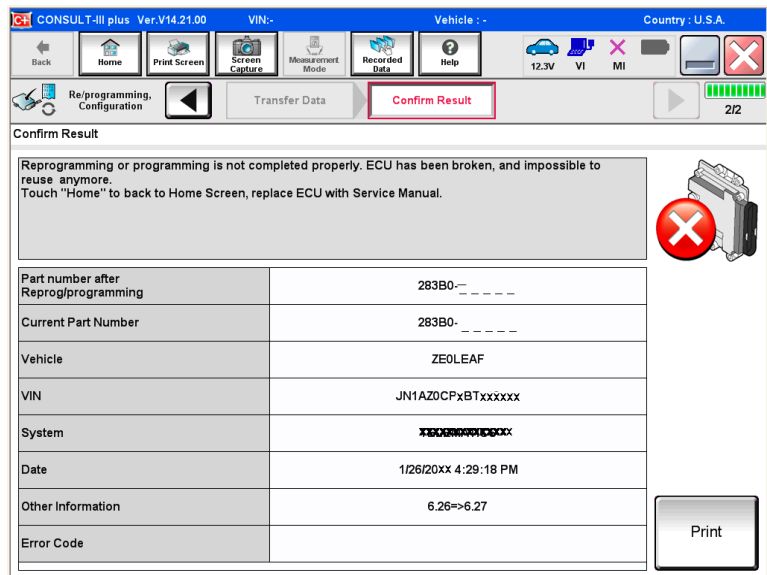


Figure 6

11. Follow the on-screen instructions to perform the following:

- **Throttle Valve Closed Position**

- **Idle Air Volume Learn (IAVL)**

NOTE:

- Listed below are the conditions required for IAVL to complete.
- If IAVL does not complete within a few minutes, a condition may be out of range.
 - Engine coolant temperature: 70 -105° C (158 - 221°F)
 - Battery voltage: More than 12.9V (At idle)
 - Selector lever: P or N
 - Electric load switch: OFF (Air conditioner, headlamp, rear window defogger)
 - Steering wheel: Neutral (Straight-ahead position)
 - Vehicle speed: Stopped
 - Transmission: Warmed up (ATF TEMP SE less than 0.9V)

- **Accelerator Pedal Close Position Learning**

- **Erase DTCs**

Continue to the next page.

12. When the entire reprogramming process is complete, the screen in Figure 7 will display.
13. Verify the before and after part numbers are different.
14. Print a copy of this screen (Figure 7) and attach it to the repair order for warranty documentation.
15. Select **Confirm**.

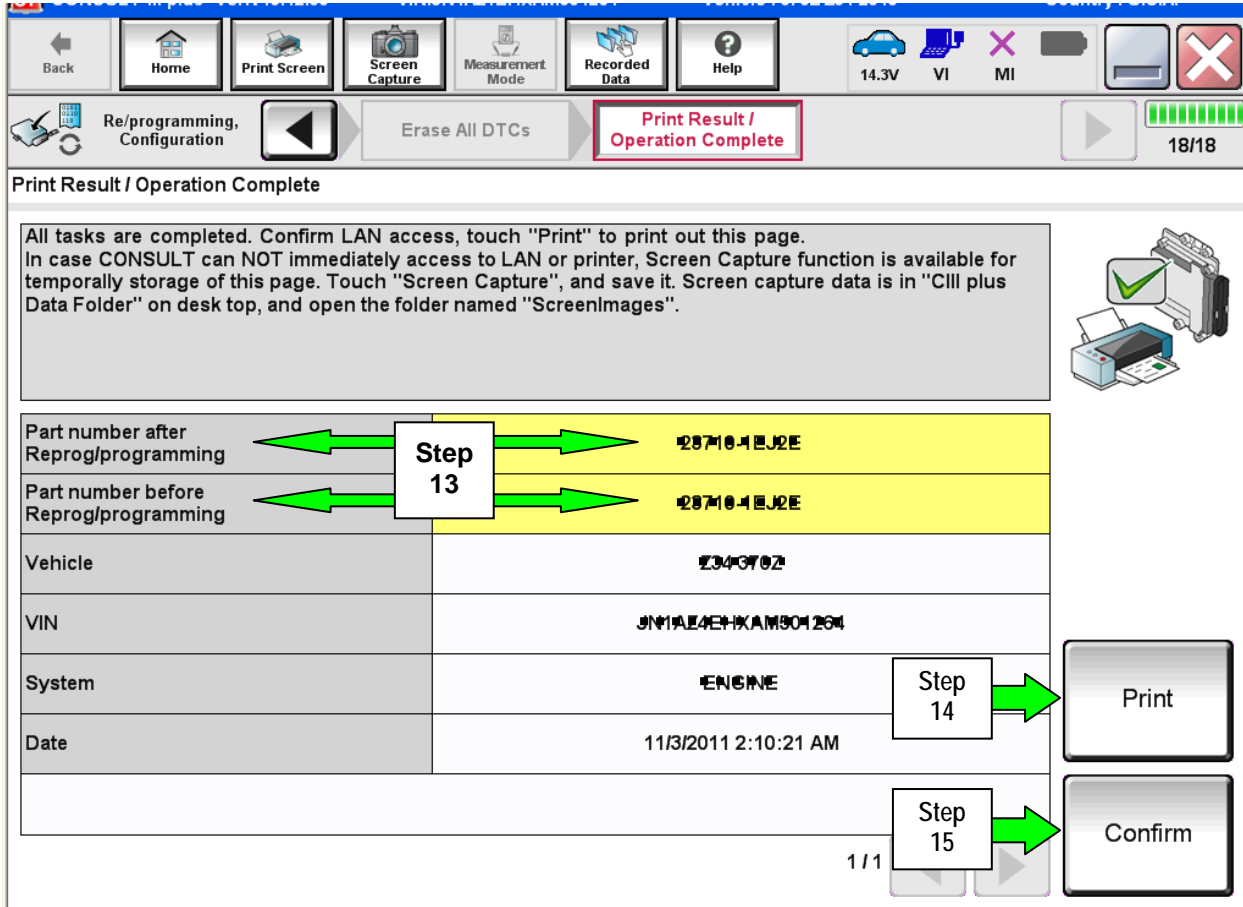


Figure 7

16. Make sure you have performed both ECM and TCM reprogramming.
17. Close C-III plus.
18. Turn the ignition OFF.
19. Disconnect the plus VI from the vehicle.
20. Test drive the vehicle and make sure it operates correctly and the MIL is OFF.
 - If the MIL comes ON, go back to ASIST for further diagnostic information.
 - Diagnosis and repairs beyond ECM or TCM reprogramming are not covered by this bulletin.