

Classification:
EC19-003a

Reference:
ITB19-003a

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Date:
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2019 QX50; SPARK KNOCK

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

APPLIED VEHICLE: 2019 QX50 (J55)

IF YOU CONFIRM:

A spark knock or knocking type noise is coming from the engine under a low RPM/high load driving pattern (alternatively, "at low speeds")

AND

There are no DTCs stored in the ECM or TCM.

ACTION

1. Reprogram the ECM and/or TCM, if applicable.
2. Inform the customer that premium gasoline, with an octane rating of at least 91 AKI (Anti-Knock Index) number, is recommended

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

IMPORTANT: Before starting the reprogramming procedure, make sure:

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

Reprogram the ECM

1. Using CONSULT- III plus (C-III plus), confirm the current ECM part number and write it on the repair order.
 - If it matches one of the part numbers in **Table A** on the next page, reprogram the ECM.
 - If it does not match any of the part numbers in **Table A**, skip to step **Error! Reference source not found.** to see if the TCM requires reprogramming.

NOTE:

- 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.
- 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
- After reprogramming is complete, it is required to perform Throttle Valve Closed Position, Idle Air Volume Learn, Accelerator Closed Position, and DTC Erase.



Figure 1

CAUTION:

- Connect a battery maintainer or smart charger set to reflash mode or a similar setting. If the vehicle battery voltage drops below 12.0V or above 15.5V during reprogramming, the ECM may be damaged.
- Be sure to turn OFF all vehicle electrical loads. If a vehicle electrical load remains ON, the ECM 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 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 the plus VI during reprogramming, reprogramming may be interrupted and the ECM may be damaged.

Table A

MODEL	CURRENT ECM PART NUMBER: 23710-
2019 QX50	5NC0D, 5NC1D, 5NC2D, 5NC3D, 5NC4D, 5NC5D, 5NC6D, 5NC7D, 5NC8D
	5NC0E, 5NC1E, 5NC2E, 5NC3E, 5NC4E, 5NC5E, 5NC6E, 5NC7E, 5NC8E
	5NE0A, 5NE1A, 5NE2A, 5NE3A, 5NE4A, 5NE5A, 5NE6A, 5NE7A, 5NE8A
	5NE0B, 5NE1B, 5NE2B, 5NE3B, 5NE4B, 5NE5B, 5NE6B, 5NE7B, 5NE8B
	5NE0C, 5NE1C, 5NE2C, 5NE3C, 5NE4C, 5NE5C, 5NE6C, 5NE7C, 5NE8C
	5NE0D, 5NE1D, 5NE2D, 5NE3D, 5NE4D, 5NE5D, 5NE6D, 5NE7D, 5NE8D
	5NE0E, 5NE1E, 5NE2E, 5NE3E, 5NE4E, 5NE5E, 5NE6E, 5NE7E, 5NE8E
	5NF0B, 5NF1B, 5NF2B, 5NF3B, 5NF4B, 5NF5B, 5NF6B, 5NF7B, 5NF8B
	5NF0C, 5NF1C, 5NF2C, 5NF3C, 5NF4C, 5NF5C, 5NF6C, 5NF7C, 5NF8C
	5NLOA, 5NL1A, 5NL2A, 5NL3A, 5NL4A, 5NL5A, 5NL6A, 5NL7A, 5NL8A
	5NLOB, 5NL1B, 5NL2B, 5NL3B, 5NL4B, 5NL5B, 5NL6B, 5NL7B, 5NL8B
	5NLOC, 5NL1C, 5NL2C, 5NL3C, 5NL4C, 5NL5C, 5NL6C, 5NL7C, 5NL8C
	5NLOD, 5NL1D, 5NL2D, 5NL3D, 5NL4D, 5NL5D, 5NL6D, 5NL7D, 5NL8D
	5NLOE, 5NL1E, 5NL2E, 5NL3E, 5NL4E, 5NL5E, 5NL6E, 5NL7E, 5NL8E

2. After completing reprogramming and Erase ALL DTCs, print a copy of the C-III plus screen showing the before and after part numbers of the control unit and attach it to the repair order.

TCM Reprogramming

3. Start C-III plus.
4. Wait for the plus VI to be recognized.
 - The serial number will display when the plus VI is recognized.
5. Select **Re/programming, Configuration**.

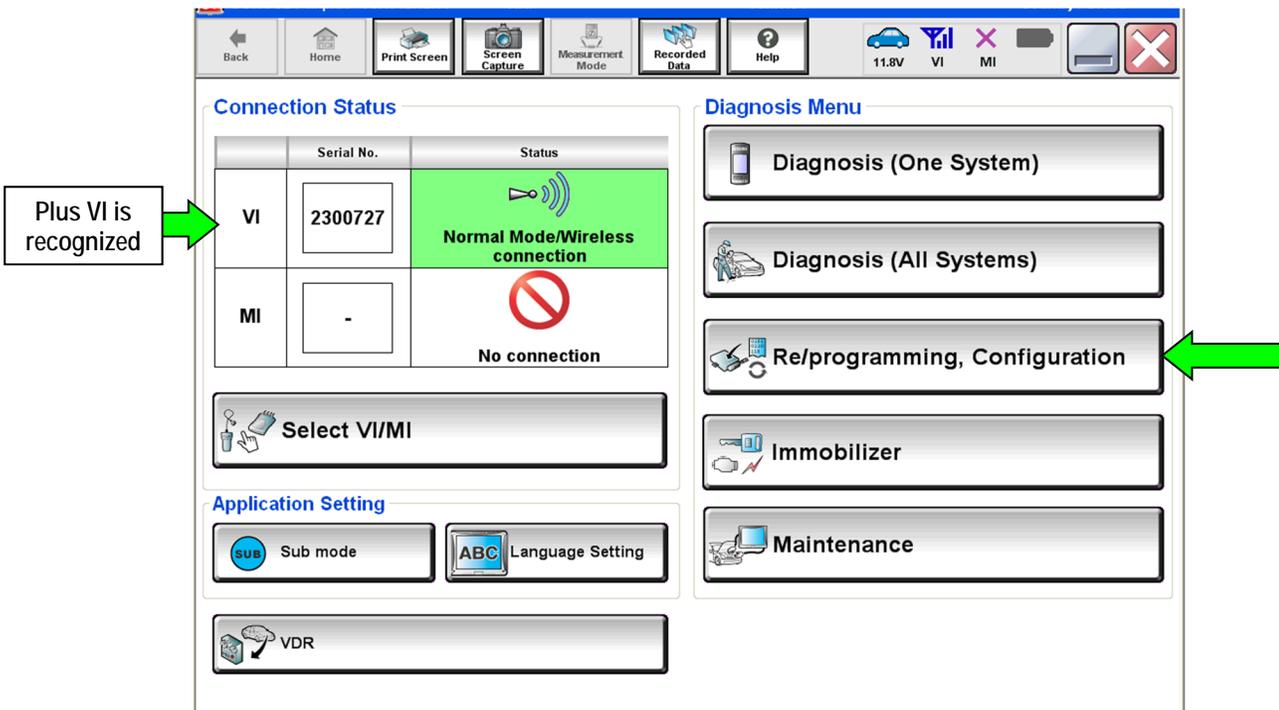


Figure 2

6. Follow the on-screen instructions and navigate C-III plus to the screen shown in Figure 3 on the next page.

7. When you get to the screen shown in Figure 3, confirm reprogramming applies as follows:
- A. Find the TCM **Part Number** and write it on the repair order.
- NOTE:** This is the current TCM Part Number (P/N).

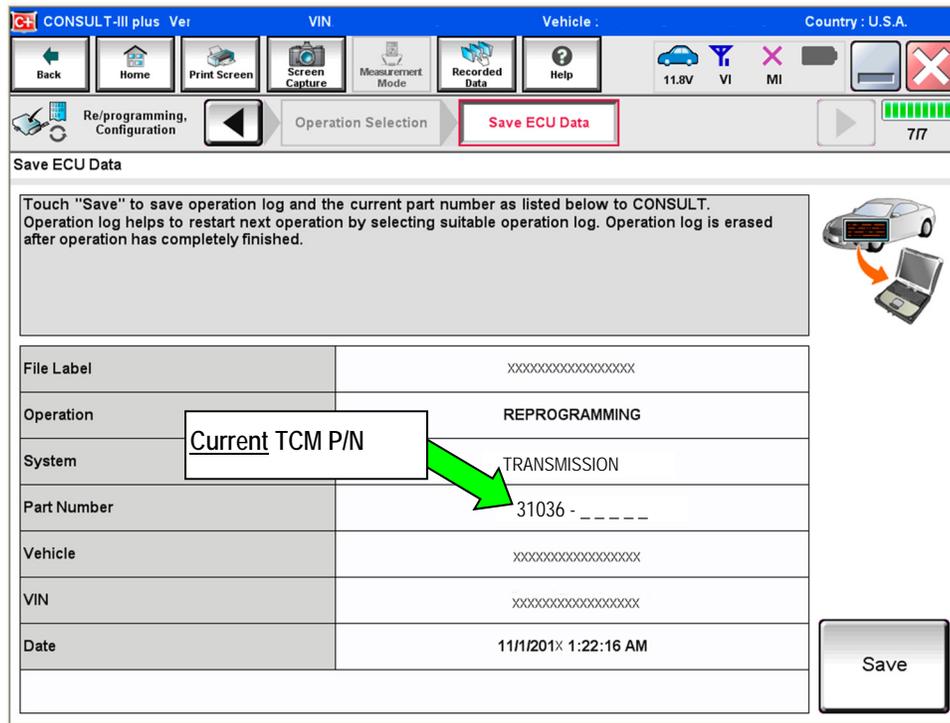


Figure 3

- B. Compare the P/N you wrote down to the numbers in the Current TCM Part Number column in Table B
- If there is a match, continue to step 8 on the next page.
 - If there is not a match, reprogramming is not needed, go back to ASIST for further diagnostic and repair information.

Table B

Model	Current TCM Part Number Before Reprogramming: 31036 -
2019 QX50	5NA0A, 5NA0B, 5NA0C, 5NA0D

8. Follow the on-screen instructions to navigate C-III plus and reprogram the TCM.

NOTE:

- In some cases, more than one new P/N for reprogramming is available.
 - If more than one new P/N is available, the screen in Figure 4 displays.
 - 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 there is no reprogramming available for this vehicle.

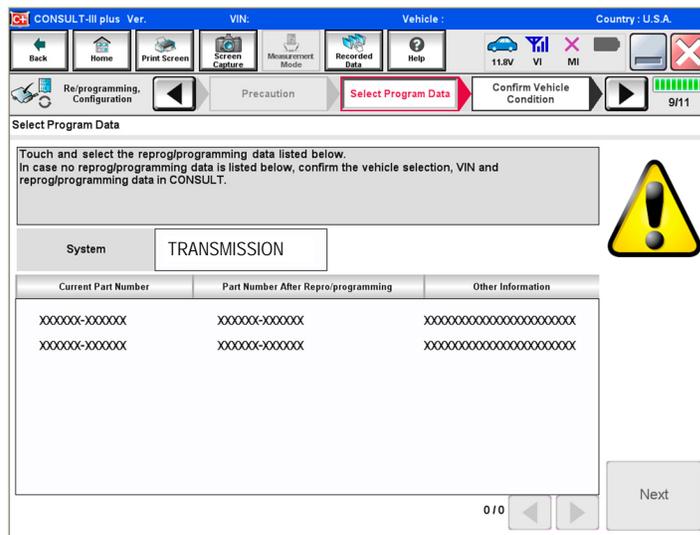


Figure 4

- Before reprogramming will start, you will be required to enter your User Name and Password.
 - The CONSULT PC must be connected to the Internet (Wi-Fi or cable).
 - If you do not know your User Name and Password, contact your Service Manager.

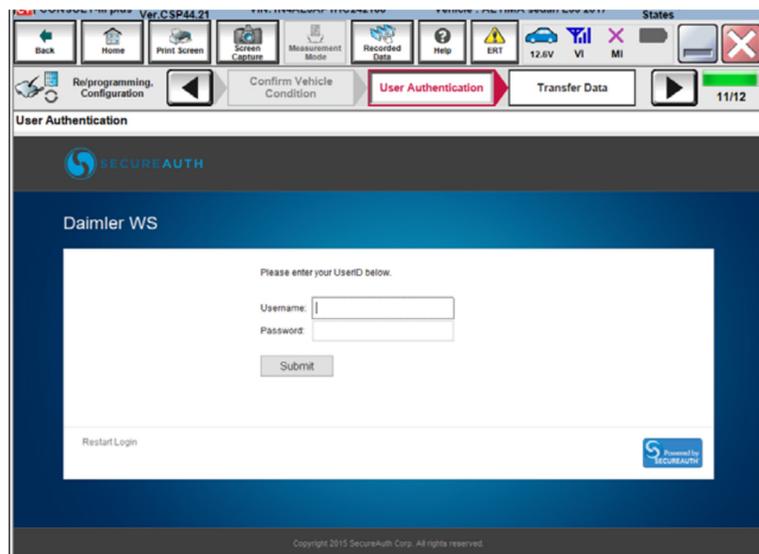


Figure 5

9. When the screen in Figure 6 displays, reprogramming is complete.

NOTE: If the screen in Figure 6 does not display (indicating that reprogramming did not complete), refer to **TCM Recovery** on the next page.

10. Disconnect the battery maintainer/smart charger from the vehicle.

11. Select **Next**.

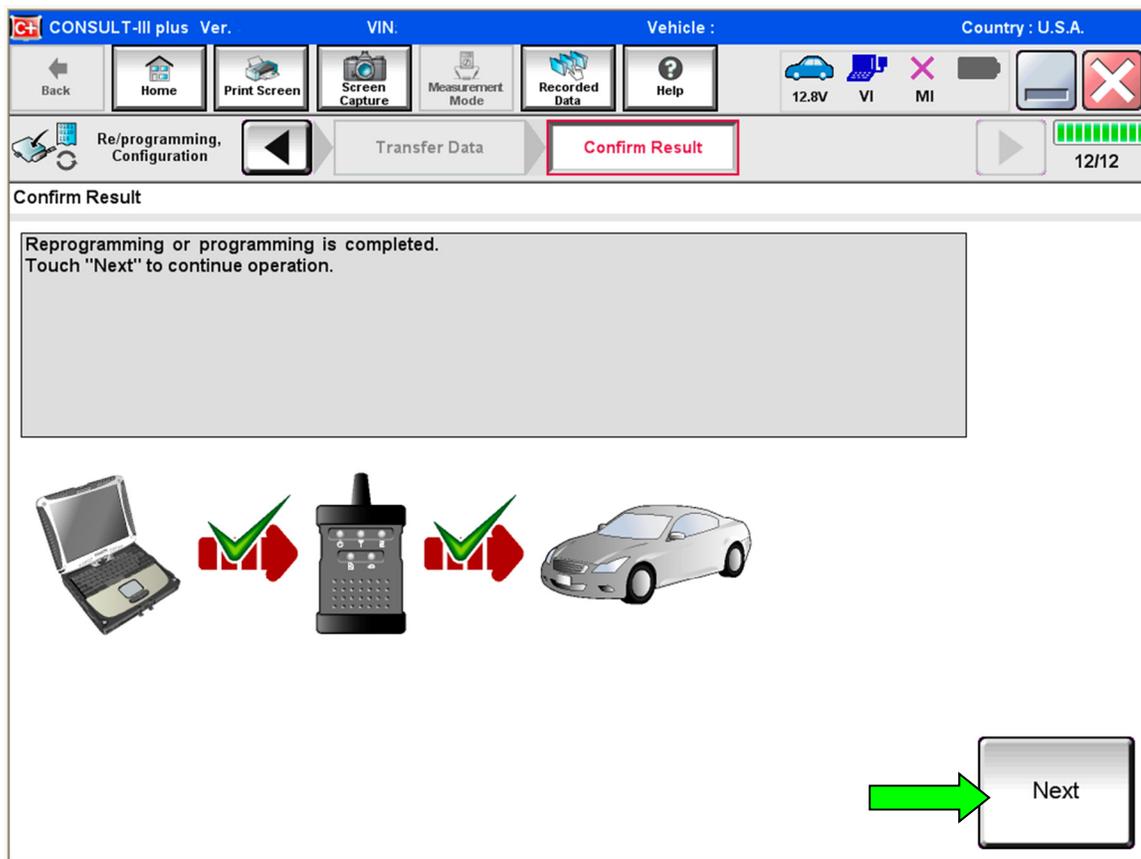


Figure 6

NOTE:

- In the next step (page 9) you will perform **Erase All DTCs**.
- DTC erase is required before C-III plus will provide the final reprogramming confirmation report.

TCM 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 7:

- 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.

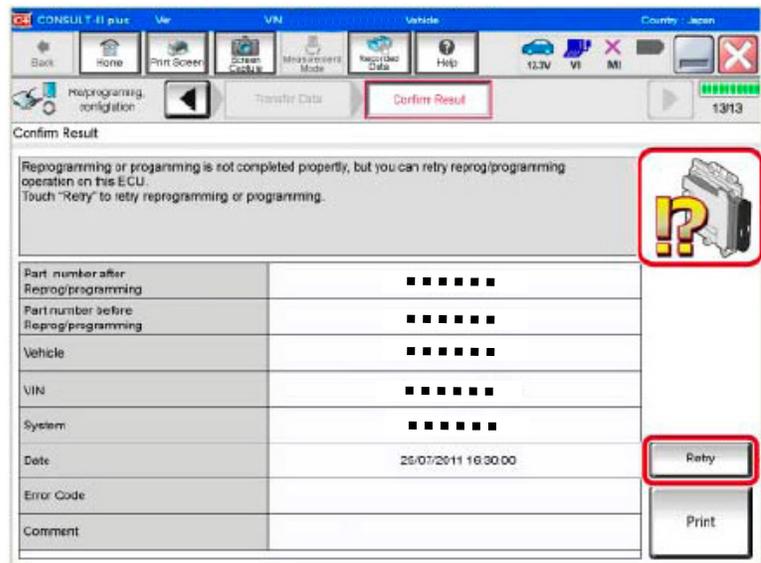


Figure 7

If reprogramming does not complete and the “X” icon displays as shown in Figure 8:

- 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.

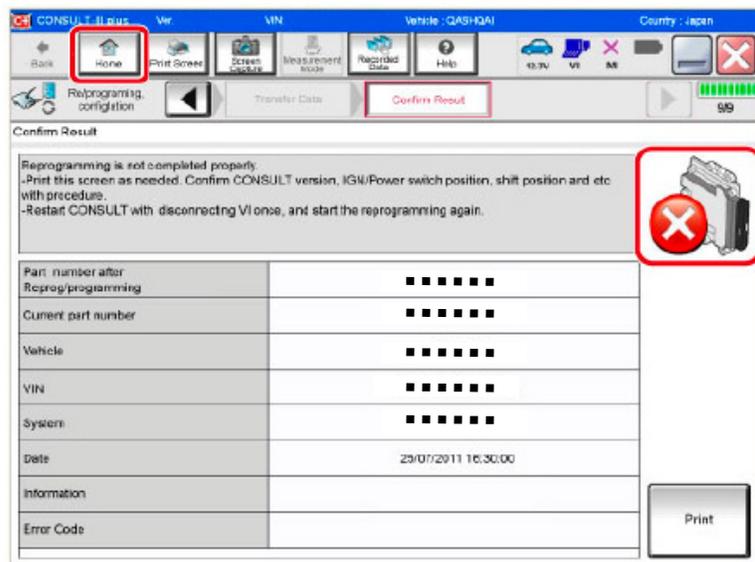


Figure 8

12. Follow the on-screen instructions to **Erase All DTCs**.
13. When the entire reprogramming process is complete, the screen in Figure 9 will display.
14. Verify the before and after part numbers are different.
15. Print a copy of this screen (Figure 9) and attach it to the repair order for warranty documentation.
16. Select **Confirm**.

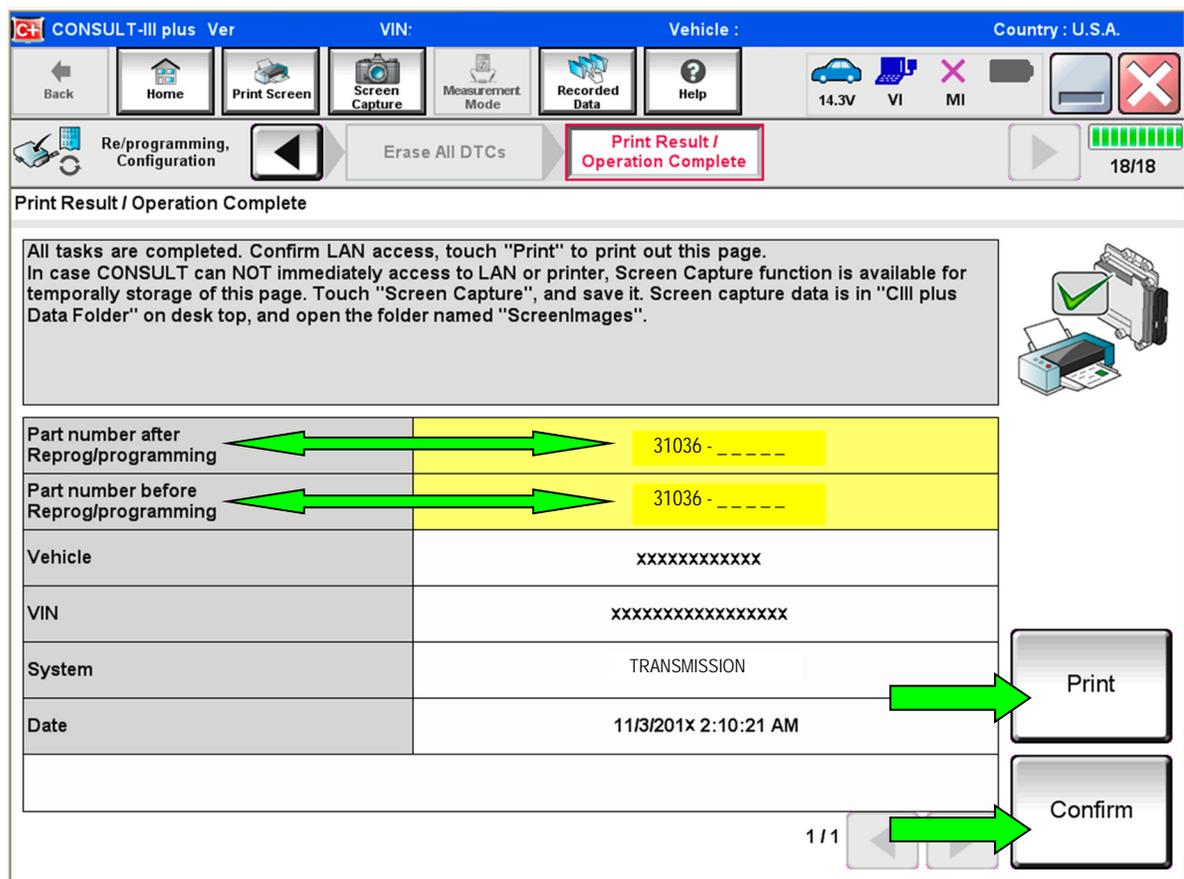


Figure 9

17. Inform the customer that unleaded premium gasoline with an octane rating of at least 91 Anti Knock Index (AKI) is recommended. Refer to the owner's manual for additional fuel recommendations and cautions.

CLAIMS INFORMATION

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Reprogram ECM	(1)	DE97AA	ZE	32	(2)
Reprogram TCM	(3)	JE99AA	ZE	32	(4)

- (1) Reference the electronic parts catalog, and use the Electronic Control Module (23703-*****) as the Primary Failed Part (PFP).
- (2) Reference the current Infiniti Warranty Flat Rate Manual and use the indicated Flat Rate Time (FRT).
- (3) Refer to the Electronic Parts Catalog (EPS) or equivalent and use the TCM part number (31036 - *****) as the PFP.
- (4) Reference the current Infiniti Warranty Flat Rate Manual and use the indicated Flat Rate Time.
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
February 22, 2019	ITB19-003	Original bulletin published
August 22, 2019	ITB19-003a	Updated Table A and added the TCM reprogramming procedure.