



EL19-018a

SERVICE BULLETIN
Classification:
Reference:

Date:

February 4, 2020

# 2018-2019 LEAF;

## LITHIUM-ION BATTERY WILL NOT QUICK CHARGE

NTB19-056a

This bulletin has been amended. See Amendment History on the last page. Discard all previous versions of this bulletin.

APPLIED VEHICLE:2018-2019 LEAF (ZE1)APPLIED VIN:Vehicles built before 1N4AZ1(\*)(\*)(\*)KC308034APPLIED DATE:Vehicles built before January 24, 2019APPLIED SYSTEM:Vehicles equipped with a 40 kWh lithium-ion battery

#### **IF YOU CONFIRM**

The customer states their vehicle will not charge with a quick charge setting after many back-to-back quick charges

Or

It takes too long to charge with a quick charge setting.

#### NOTE:

- DTC U1009-96 (Quick charger comm [Quick charger communication]) may be stored.
- This issue applies to vehicles equipped with a 40 kWh lithium-ion battery only.

#### ACTION

Refer to step 20 on page 7 under **SERVICE PROCEDURE** to confirm this bulletin applies to the vehicle being worked on.

• If this bulletin applies, reprogram the lithium battery controllers (LBC) for HV BATTERY 2 and HV BATTERY.

**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.

#### LBC (for HV BATTERY 2 and HV BATTERY) Reprogramming

#### IMPORTANT: Before continuing, make sure:

- ASIST 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 (Wi-Fi or cable).

**CAUTION:** Disconnect the Electric Vehicle Service Equipment (EVSE). 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 it OFF and make sure to turn it back on after reprogramming.

#### **CAUTION:**

- Connect a battery maintainer or smart charger set to reflash mode or a similar setting. If the vehicle's battery voltage <u>drops below 12.0V or rises above 15.5V</u> during reprogramming, <u>the LBC may be damaged</u>.
- Be sure to turn OFF all vehicle electrical loads. If a vehicle electrical load remains ON, the LBC 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 <u>the LBC may be</u> <u>damaged</u>.
- Turn OFF all external Bluetooth<sup>®</sup> devices (e.g., cell phones, printers, etc.) within
  range of the CONSULT PC and the plus VI. If Bluetooth<sup>®</sup> signal waves are within
  range of the CONSULT PC and/or the plus VI during reprogramming,
  reprogramming may be interrupted and <u>the LBC may be damaged</u>.



Figure 1

- 1. Connect the plus VI to the vehicle.
- 2. Connect the plus VI to the CONSULT PC with the USB cable.
- 3. Connect the AC adapter to the CONSULT PC.
- 4. Turn ON the CONSULT PC, and then open C-III plus.
  - Turn OFF any screen savers that are on the CONSULT PC.
- 5. Set the parking brake.
- 6. Depress the power ("ignition") switch twice <u>without</u> depressing the brake pedal.
  - The meter and gauges will illuminate.

**CAUTION:** Do <u>NOT</u> set the vehicle in "READY to drive" mode.

NOTE: Make sure all accessories are turned OFF.

- 7. After the plus VI is recognized, select **Diagnosis (All Systems)**, and then **Confirm**.
- 8. After System Call has completed, erase all DTCs.
  - Make the necessary repairs for any DTCs that cannot be erased prior to performing the reprogram.

**NOTE:** DTC diagnosis and repair is not covered under this bulletin.

- 9. Select the **Home** button.
- 10. Select **YES** to return to the screen shown in Figure 2.
- 11. Select Re/programming, Configuration.

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

	Back	Home Print	Screen Capture Mode	
	Conne	ction Status -		Diagnosis Menu
		Serial No.	Status	Diagnosis (One System)
Plus VI is recognized	VI	2300182	Normal Mode/USB connection	Diagnosis (All Systems)
	мі	-	No connection	Re/programming, Configuration
	800	Select VI/M	l	Immobilizer
	Applicat	tion Setting Sub mode	ABC Language Setting	Maintenance
	<b>P</b>	VDR		

Figure 2

- 12. Read the **Precaution** and **Caution**.
- 13. After the **Precaution** and **Caution** have been read, check mark the box for **Confirmed Instructions** by selecting it, and then select **Next**.

L	Image: Back         Image: Back	3.5V VI MI
Ś	Configuration Vel	hicle Selection
Pre	caution	
Op Pli to	verating suggestions for reprogramming, programming and C/U configration: ease review the all of precautions, and click the "Confirm" check box after confirming the uch "Next".	e its points. And
Ca 1. 2.	aution: Follow the operation guide displayed on screen. "Back" and "Home" button may not be used on this flow.	
-F 1. C( 2.	or reprogramming and programming Install the latest version of the CONSULT-III plus sortware, reprogramming/programming DNSULT-III plus PC. Preparation and read the service manual or reprogramming procedure sheet.	data to this
-F 1. 2.	or ECU Configuration Need to write the configuration data to new ECU, after replace it. If writing the wrong configuration data, ECU can not work. Please write the right data.	
-F 1. co 2.	or ECU Configuration using manual mode Confirm the vehicle's spec and its configuration spec, following the service manual. If w »nfiguration data, ECU can not work. Please write the right data. Operate the saving completely. Do not abort without saving data.	riting the wrong
		Next

Figure 3

- 14. Select LEAF and the correct Model Year, or the Automatic Selection(VIN) tab.
  - If Automatic Selection(VIN) is selected, wait for the Reading VIN screen to complete (picture not shown).
  - If the screen in Figure 4 does not display, skip to step 16 on page 5.
- 15. Select Select.



Figure 4

16. Verify the vehicle identification number (VIN) in VIN or Chassis # matches that of the vehicle, and then select Confirm.

Back Home Print Screen Screen Capture	Measurement Recorded Detail Help ERT 41.7V VI MI	
Please confirm selected information and to to touch "Change".	uch "Confirm". In case you want to select another vehicle,	
VIN or Chassis #		
Model Year	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
	1/1	
		Change
		Confirm

Figure 5

17. Select **Confirm**.

Back Re/programming,	Screen Screen Measurement Mode Data Err 14.7V VI		
Input VIN		F	4/4
Enter the VIN number, and According to this operation CONSULT, VIN number yo	touch "Confirm". , in case of specified operation that requires to save ECU information into u input is saved as file name. Therefore, confirm VIN number correctly.		
MIGEN MOTOR	1103.00% 22355 5 6 8 8 8 8 8 8 8 8 8 8 8 8 8		
VIN (17 or 18 digits)	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		
			Confirm

Figure 6

- 18. Use the arrow keys as needed to select **HV BATTERY 2.** 
  - Wait for System Call to complete.

Re/programming, Configuration Input VIN System Selection Operation Selection	/6							
System Selection								
Touch "system". In case ECU you want to operate is not listed below, the vehicle or model year might be selected wrong.								
MULTI AV EHS/PKB AIR PRESSURE MONITOR								
3ch CAN GATEWAY MOTOR CONTROL HEAD LAMP LEVELIZER								
6ch CAN GATEWAY EPS/DAST 3 METER/M&A								
HV BATTERY 2 ABS LASER/RADAR								
IVC IPDM E/R INTELLIGENT KEY								

Figure 7

19. Select Reprogramming.

Back Home Print Screen Capitur	Messurement Recorded Data	
Re/programming, Configuration	stem Selection Operation Selection	6/6
Operation Selection		
Touch "Operation". In case over write current ECU, touch "R In case replacement of ECU, select an ope	teprogramming". ration in REPLACE ECU category.	
REPROGRAMMING		
Reprogramming	In case you want to reprogramming ECU,	touch "Reprogramming".
Replacement OF ECU		
Programming (Blank ECU)		
Before ECU Replacement	After ECU Replacement	Touch "Before ECU Replacement", Operation log with part number is saved to CONSULT.
VEHICLE CONFIGURATION		
Before ECU Replacement	After ECU Replacement	Touch "Before ECU Replacement", Operation log with configuration data is saved to CONSULT.

Figure 8

- 20. Find the **Part Number** (see Figure 9) and write it on the vehicle's repair order.
- 21. Compare the **Part Number** written down to those listed in **Table A** below.

Back Re/programming, Configuration Opera	Measurement Recorded Help ERT 4.7V VI MI	
Touch "Save" to save operation log and th Operation log helps to restart next operatio after operation has completely finished.	e current part number as listed below to CONSULT. n by selecting suitable operation log. Operation log is erased	
File Label	*****	
Operation	REPROGRAMMING	
System	HV BATTERY 2	
Part Number Verify here	293A0	If P/N match,
Vehicle	ZE1LEAF	select Save
VIN	*****	
Date	*****	Save

Figure 9

- If there is a match, select **Save**, and then continue to Step 22.
- If there is <u>not a match</u>, this bulletin <u>not</u> apply. Go to ASIST and the Electronic Service Manual (ESM) for further diagnosis.

#### Table A

MODEL	CURRENT LBC PART NUMBER: 293A0-			
2018-2019 LEAF	5SA2A, 5SA3A			

22. Read the **Precaution** on page 1, and then select page 2 (Figure 10) with the arrows. After reading page 2, select **Confirmed instructions**, and then select **Next**.

Back	Home	Print Screen	Screen Capture	Measurement Mode	Recorded Data	<b>P</b> Help	A RT	14.7V	VI	M	
<b>\$</b> 0	Re/programmin Configuration	<sup>yg,</sup>	Save	ECU Data	P	recaution		Select P	rogram [	Data	
Precautio	on										
Operati If the re usable.	ng suggestic programming	ns: /programming	is unsucc	essful, ECU	software n	nay be dam	naged and	d ECU i	s no lor	nger	
Please	review the all	of precaution:	s, and click	the "Confir	m" check l	oox after co	onfirming	the its	points.		
											<u>(                                    </u>
4. DO N	IOT set the A	/C timer or A/C	C remote c	ontrol syste	m.						
Never t	ouch the CO lepress the b	NSULT-III plus rake pedal or	compone turn the st	nts to preve eering whee	nt cable di I.	sconnectio	on.				
Nevero	pen each doo	or or trunk rid.									
									₹	7	
<b>۱</b>								6			Next
	Confirmed i	nstructions						2/2			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 <u>does not</u> have the message "Caution! Use ONLY with NTBXX-XXX".
- If you get this screen and it is <u>blank</u> (no reprogramming listed), it may mean that there is no reprogramming available for this vehicle, this <u>bulletin does not apply</u> or it has already been done.

Back Bome Print	Screen Screen Mode	Reip ata Select Program Data	12.3V VI MI Confirm Vehicle Condition	10/12
Select Program Data Touch and select the repr In case no reprog/program reprog/programming data in	og/programming data listed below. ming data is listed below, confirm th n CONSULT.	e vehicle selection, VIN	l and	
System Current Part Number	Part Number After Repro/pro	gramming	Other Information	
XXXXX-XXXXX XXXXX-XXXXX	XXXXX-XXXXX XXXXX-XXXXX	XXXXXX XXXXXX	****	
			0/0	Next

Figure 11

23. Verify the **Current Part Number** matches the Part Number written down in step 20 on page 7, and then select **Next**.

Re/programming. Configuration         Print Screen         Print Screen           Select Program Data         P           Confirm the detail listed below, and touch ' -In case the screen to select reprog/program vehicle. -In case the part number after reprogramming data	Image: Construction       Image: Construction       Image: Construction         Image: Construction       Select Program Data       Confirm Vehicle Condition         Image: Construction       Select Program Data       Confirm Vehicle Condition	9/10
Part Number After Repro/programming Current Part Number	293A0 293A0	
Vehicle VIN System	LEAF ZE1           XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
Other Information	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	Re-select
Expected time to finish re/programming	Verify P/N match, then select <b>Next</b>	Next

Figure 12

- 24. If the screen in Figure 13 appears, first select **Delete**, select **Confirm**, and then select **Other Operation**.
  - This will erase the **Saved Data List** and restart the reprogram from step 18 on page 6.
  - If no **Saved Data List** is stored, Figure 14 will be displayed. Proceed to step 25 on page 10.

Back Bone Print Screen	Screen Apture Messarement Vehicle Confirmation	Help 2.3V VI MI		
Operation Log Selection CONSULT has the saved data relate In case you want to write the save da data list (left side), and confirm the d want to do other operation, touch "Ot	d re/programming and config ta from CONSULT to vehicle E etail (right side). If the detail is ner Operation".	uration. :CU, touch and select the data in Save OK, and touch "Confirm". In case you		
Saved Data List	Saved Data Detail			
*****	Operation	REPROGRAMMING		
	System	HV BATTERY 2		
	Part Number	293A0		
	Vehicle	LEAF	Delete	h
	VIN	****	Other	
	Saved Date	*****	Operation	┝╺──
1/1		1/1	Confirm	

Figure 13

25. Confirm the battery voltage is within the specified range, and then select **Next**.

**NOTE:** The battery voltage must stay within the specified range to make the **Result** turn **GREEN**.



26. With the **BATTERY VOLTAGE** showing **GREEN**, select **Start**.

**NOTE:** For reprogramming to continue, the vehicle's 12V battery must stay between 12 volts and 15.5 volts.



Figure 15

- 27. Select USA/CANADA Dealers.
- 28. Select OK.

NOTE:

• Figure 16 may not display if the CONSULT PC has remained ON since the last reprogramming.

Back     Print Screen     Screen     Masurement Mode     Recorded Data     Print Screen     Screen     Screen     Screen     Print Screen     Pri
User Authentication
NISSAN MOTOR CORPORATION
Please select your
user group.
USA/CANADA Dealers
ок
Figure 16

• If the CONSULT PC is not connected to the Internet, the screen in Figure 17 will display.

Offline menu	
Touch the required operation.	
Internet connection	Connect to the internet.
Manual input	Enter manually.
Home	Back to Home screen.

Figure 17

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

- 29. 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 User Name and Password, contact your service manager.

#### 30. Select Submit.

Back Home Print Screen	Screen Capture Mossurement Recorded Mode	
Configuration	Confirm Vehicle Condition	Transfer Data
User Authentication		
SECUREAUTH		
Daimler WS		
	Please enter your UserID below.	
	Username:	
	Password Password	E
Restart Login		
Treasure Longert		SecureAuth
	Figure 18	

31. Wait for both bar graphs to complete.

**NOTE:** If the message "You may disconnect CONSULT and VI" is displayed, **DO NOT** disconnect the USB cable.

	Janes Janes	
Back Home Prin	Screen Screen Mossurement Mesorada Peor No. VI MI	$\mathbf{X}$
Re/programming, Configuration	User Authentication	12/12
Transfer Data		
ProgrammingVI is trans In case the other VI is ava other vehicles by using of screen, and touch "VI/MI s "Reprogramming/Program	erring the data to vehicle ECU. Ilable, CONSULT-III plus is available for other operations such as reprogramming or diagnosing her VI. In case you want to use CONSULT-III plus with other VI, touch "Home" to back to Home ielection" to select other VI. In case you want to back to this screen, select this VI, and touch ming" on Home screen.	I
Estimated Time	5min	
Transfer CONSULT to VI		100%
Transfer VI to ECU		40%

Figure 19

- 32. When the screen in Figure 20 appears, reprogramming is complete.
  - a. Select **Next** and wait for System Call to complete.
  - b. Proceed to step 33 on page 15 to erase DTCs.



Figure 20

**NOTE:** If the reprogram will not complete, refer the next page to **RETRY** the reprogram update.

**CAUTION:** If reprogramming does <u>not</u> complete and the **!?** displays as shown in Figure 21:

- Check battery voltage (12.0-15.5V).
- Ignition is ON, Ready Mode is OFF.
- External Bluetooth<sup>®</sup> devices are OFF.
- All electrical loads are OFF.
- Select <u>Retry</u> and follow the on screen instructions.
- <u>Retry may not go through on first</u> <u>attempt and can be selected more</u> <u>than once</u>.

Horne Print Screen Capture	Messarariyet Mode Mode			
Configuration	ansfer Data	9/9		
Confirm Result				
Reprogramming or programming is not cor operation on this ECU. Touch "Retry" to retry reprogramming or pr	mpleted properly, but you can retry reprog/programming ogramming.	R		
Part number after Reprog/programming	293A0			
Current Part Number	293A0			
Vehicle	ZE1LEAF			
VIN	*****	1		
System	HV BATTERY 2	1		
Date	*****	Retry		
Other Information	*****			
Error Code	*****	Print		

Figure 21

**OR:** If reprogramming does <u>not</u> complete and the X displays as shown in Figure 22:

- Check battery voltage (12.0-15.5V).
- Ignition is ON, Ready Mode is OFF.
- External Bluetooth<sup>®</sup> devices are OFF.
- All electrical loads are OFF.
- Select <u>Retry</u> and follow the on screen instructions.
- <u>Retry may not go through on first</u> <u>attempt and can be selected more</u> <u>than once</u>.

Back Borne Print Screen Screen Capture	Monsurernert Mode	-
Configuration	insfer Data Confirm Result	2/2
Confirm Result		
Reprogramming or programming is not con reuse anymore. Touch "Home" to back to Home Screen, rep	pleted properly. ECU has been broken, and impossible to lace ECU with Service Manual.	
Part number after Reprog/programming	293A0	
Current Part Number	293A0	
Vehicle	ZE1LEAF	
VIN	*****	
System	HV BATTERY 2	
Date	*****	
Other Information	*****	
Error Code	*****	Print
	,	

Figure 22

#### 33. Erase all DTCs:

- a. Turn "ignition" OFF by depressing the power switch once.
  - The screen in Figure 23 will read **OFF** after pressing the power switch <u>once</u>.

Ba	kck Re/programming, Configuration	Screen Capture	Recorded Data	ERT 13.8V	VI MI	14/15
Eras	e All DTCs					
Acc	cording to the instruction below, e	rase All DTCs.				
1	Turn Ignition switch / power switch	to the OFF position.	- 1 0	Nto	C N	OFF
	Current status of ignition switch	ON		DFF		
		Fiç	gure 23			

### b. Wait 1 minute with the ignition OFF.

- c. 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 24 will read **ON** after pressing the power switch twice.

**NOTE:** Do not be confused by any screen messages. At this point, simply turn the "ignition" ON.

		Jiates
Back Back Print Screen	Screen Capture Mode Recorded Help ERT 13.8V	D 🚚 💥 🖿 🔚 🔀
Re/programming, Configuration	Confirm Result Erase All DTCs Print Operat	nt Result / ion Complete 14/15
Erase All DTCs		
According to the instruction below, e	erase All DTCs.	
1 Turn ignition switch to the ON pos	ition, then All DTCs are automatically erased	
run gnuon senten o tre on pos		OFF ON
Current status of ignition switch		
If the current status of ignition the actual vehicle ignition switc	switch displayed on the screen differs from the status of h, touch "NEXT" to go to the next screen.	Next

Figure 24

d. Wait for the bar graph in the **ERASE** window to complete 100%.



- 34. 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**.

Back Rome Print Screen	Screen Measurement Mode Mode Mode	× • 📄 🔛 🔀				
Re/programming, Configuration	Erase All DTCs Print Result / Operation Complete	15/15				
Print Result / Operation Complete						
All tasks are completed, confirm LAN access, touch "Print" to print out this page. In case CONSULT can not immediately access to LAN or printer, Screen Capture function is available for temporally storage of this page. Touch "Screen Capture", and save it. Screen capture data is in "Cill plus Data Folder" on desk top, and open the folder named "ScreenImages".						
Part number after Reprog/programming	293A0					
Part number before Reprog/programming	293A0					
Vehicle	ZE1LEAF					
VIN	******	Print				
System	HV BATTERY 2					
Date	*****	Other Operation				
	1/1	Confirm				

Figure 26

35. After Confirmation has completed, select Home.

Back Home Pr	int Screen	Screen Capture	Recorded Data	ERT	13.8V VI	M	🔀
Re/programming, Configuration		Erase All DTCs	Print Resu Operation Cor	t / nplete			15/15
Print Result / Operation Co	mplete					_	
	Confirmation						
All tasks are completed. In case CONSULT can N temporally storage of thi Data Folder" on desk top		"Complete Operation backing Home once. necessary documen Erasing process is n system. Erase it in So	" Screen is no lon In case "Complete It, touch "Cancel" ot performed to "N elf-Diag Results sc	ger shown Operation to back pr o support f reen of eac	after "Screen is evious screen. for All DTC" :h system.	or 3	
Part number after Reprog/programming							
Part number before Reprog/programming		8	e 👘				
Vehicle		÷					
VIN		Home		Cancel			Print
System							
Date			5/16/2018	3:55:08 PN	1	-	Other Operation
					1/1		Confirm
*		Fi	igure 27				

- 36. With LBC reprogramming completed for **HV BATTERY 2**, reprogram the LBC for **HV BATTERY** starting at step 9 on page 3.
  - When performing step 18 on page 6, use the arrow keys as needed to select **HV BATTERY** (Figure 28).
  - After selecting **HV BATTERY**, continue to step 19 on page 6.

Back I from Print Screen Cepture Print Screen Cepture Re/programming. System Selection Touch "system". In case ECU you want to operate is not liss	Measurement Recorded Details	Operation Selection	
MULTI AV	AIR PRESSURE MONITOR		
MOTOR CONTROL	HEAD LAMP LEVELIZER	EV/HEV	
EPS/DAST 3	METER/M&A	AIR BAG	
ABS	LASER/RADAR	4WAS(FRONT)	
IPDM E/R	ВСМ	HV BATTERY	

Figure 28

- 37. Close C-III plus by selecting X.
- 38. Turn OFF the CONSULT PC.
- 39. Disconnect the CONSULT PC and plus VI from the vehicle.
- 40. Disconnect the battery maintainer/smart charger from the 12 volt battery.
- 41. Verify the repair is complete:
  - a. Place the vehicle in the "READY to drive" mode (press the power switch while stepping on the brake pedal).
  - b. Verify no error messages are displayed in the meter and gauges or the center multi-function control panel.

#### **CLAIMS INFORMATION**

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Reprogram HV Battery Control Unit	(1)	JX59AA	ZE	32	0.7

(1) Reference **Table A** on page 7 and use the matching Battery Control Assy (293A0-\*\*\*\*\*) as the Primary Failed Part (PFP).

#### AMENDMENT HISTORY

PUBLISHED DATE	REFERENCE	DESCRIPTION
July 18, 2019	NTB19-056	Original bulletin published
February 4, 2020	NTB19-056a	Added Applied VIN and Applied Date on page 1, changes to step 18, and steps 36-40.