

Product Safety Recall

N202311731 High Voltage Battery May Melt or Burn



Release Date: April 2021

Revision: 00

Attention: It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

Vehicles involved in this recall had an interim repair made available under N202311730 on November 16, 2020. A final remedy has been developed for the 2019 model year. (The remedy for 2017-2018 model year vehicles is still under development, and will be released after validation.)

This is a phased launch.

ONLY EV Certified dealers can complete this repair.

All involved vehicles that are in dealer inventory must be held and not delivered to customers, dealer traded, or used for demonstration purposes until the repair in this bulletin is completed.

Make	Model	Model Year		RPO	Description
		From	To		
Chevrolet	Bolt EV	2019	2019		

Involved vehicles are marked "open" on the Investigate Vehicle History screen in GM Global Warranty Management system. This site should always be checked to confirm vehicle involvement prior to beginning any required inspections and/or repairs.

Condition	General Motors has decided that a defect which relates to motor vehicle safety exists in select 2019 model year Chevrolet Bolt EV vehicles. A select number of these vehicles were built with high voltage batteries produced at LG Chem's Ochang, Korea facility that may pose a risk of fire when charged to full, or very close to full, capacity.
Correction	Dealers will inspect, and if necessary, repair or replace defective battery packs, install diagnostic software, and remove state of charge restrictions, allowing vehicles to be charged to 100% capacity.

Parts

NOTE: Use the vehicle identification number (VIN) and the GM Electronic Parts Catalog (EPC) to determine which battery section or pack to order. Lithium Ion material is on part exchange in the US and Canada. For ordering instructions, use bulletin #18-NA-236 for modules and #19-NA-194 for packs as directed by TAC. For markets outside of US and Canada; the local TAC organization should be contacted for direction.

Product Safety Recall

N202311731 High Voltage Battery May Melt or Burn



Warranty Information

Labor Operation	Description	Labor Time	Trans. Type	Net Item
9105420*	EV Battery Parameter inspection, BCM Programming and HPCM 2 Programming ADD: Test, Recharge 12 Volt Battery ADD: Test and Replace 12 Volt Battery	1.1 .2 .3	ZFAT	**
9105421*	Cell Battery Module Replacement (Includes EV Battery Parameter inspection, BCM Programming, HPCM 2 Programming and Smoke Test) Row 1 Row 2 Row 3 Row 4 Row 5 ADD: Test, Recharge 12 Volt Battery ADD: Test and Replace 12 Volt Battery	6.4 6.2 6.9 7.3 6.6 .2 .3		
9105422*	Drive Motor Battery Replacement and Shipping Preparation (Includes EV Battery Parameter inspection, BCM Programming and HPCM 2 Programming) ADD: Test, Recharge 12 Volt Battery ADD: Test and Replace 12 Volt Battery	4.3 .2 .3		
9105704	Working Capital Assistance Program Reimbursement – USED INVENTORY ONLY	N/A		

IMPORTANT: * GM will provide reimbursement to the dealership for providing the service of picking up and returning a customer's vehicle while the repair for this safety recall is completed. It must be noted on the job card that this service was provided. Reimbursement is limited to \$7.50 each way (\$15 maximum per job card), and is to be submitted in the Net/Shuttle field of the Field Action transaction.

IMPORTANT: Stable 12 Volt vehicle power is required for this inspection/evaluation. If the vehicle required a jump start to get it into the shop or is displaying weak 12 Volt performance, refer to TSB #20-NA-132 for battery testing and warranty replacement requirements.

NOTE: Most vehicles involved will only require a programming update but there is a slight chance that a high voltage battery pack repair/replacement will be required. Advise waiting customers prior to starting that the time required will likely be about an hour but could require longer if parts replacement is required.

NOTE: It is recommended dealers assure their EV Battery Depowering Tool (EL-50332) has the most recent software update. Software updates are available from Special Tools and Software Updates accessed through GlobalConnect.

IMPORTANT: ** To avoid warranty transaction rejections, carefully read and follow the instructions below:

- The Warranty Claim Code must be accurately entered in the "Warranty Claim Code" field of the transaction.
- When more than one Warranty Claim Code is generated for a programming event, it is required to document all Warranty Claim Codes in the "Correction" field on the job card. Dealers must also enter one of the codes in the "Warranty Claim Code field of the transaction, otherwise the transaction will reject. It is best practice to enter the FINAL code provided by SPS/SPS2.

Warranty Claim Code Information Retrieval

If the Warranty Claim Code was not recorded on the Job Card, the code can be retrieved in the SPS system as follows:

1. Open TLC/TIS on the computer used to program the vehicle.
2. Select and start SPS/SPS2.
3. Select Settings.
4. Select the Warranty Claim Code tab.

The VIN, Warranty Claim Code and Date/Time will be listed on a roster of recent programming events. If the code is retrievable, dealers should resubmit the transaction making sure to include the code in the SPS Warranty Claim Code field.

Working Capital Assistance Program (WCAP) Reimbursement – USED INVENTORY ONLY

Product Safety Recall

N202311731 High Voltage Battery May Melt or Burn



NOTE: USA & Canada Only - To avoid having to "H" route the WCAP transaction for approval, it must be submitted prior to the repair transaction.

IMPORTANT: The WCAP ZSET transaction labor code, 9800059, provided in the dealer message sent on November 27, 2020, must have been submitted prior to the submittal of the ZFAT transaction labor code or the claim will reject.

*** **USA & Canada Dealers Only** - For vehicles eligible under the Working Capital Assistance Program, the amount should be submitted in Net Item/Miscellaneous. This amount has been calculated to a daily value for the days that the vehicle was in used dealer inventory and not available for sale. This reimbursement is limited to the number of days from the date of the stop sale/stop delivery order November 13, 2020 to the date the inspection or repair closed the recall bulletin. (not to exceed 169 days).

Vehicle	Working Capital Assistance Reimbursement Amount	
	USA	Canada
2019 Chevrolet Bolt EV	\$8.60	\$13.92

Product Safety Recall

N202311731 High Voltage Battery May Melt or Burn



Service Procedure

- Do not plug-in charge the vehicle or perform aggressive acceleration and/or braking maneuvers just prior to performing the GDS2 parameter inspection procedure.
- Do not clear DTC Information before GDS2 parameter inspection procedure.
- Do not program any control module until instructed to do so.

Procedure 1 GDS2 Parameter Inspection

Parameter Name	Value	Unit	Control Module
Hybrid/EV Battery Voltage Sensors Average	3.94	V	Hybrid/EV Powertrain Control Module 2
Minimum Hybrid/EV Battery Module Voltage	3.94	V	Hybrid/EV Powertrain Control Module 2
Hybrid/EV Battery Voltage Sensor with Minimum Value	65		Hybrid/EV Powertrain Control Module 2
Hybrid/EV Battery Pack State Of Charge	76	%	Hybrid/EV Powertrain Control Module 2

Parameter Name	Value	Unit	Control Module
High Voltage System Interlock Circuit	Energized		Hybrid/EV Powertrain Control Module 2
High Voltage System Interlock Circuit Status	Closed Circuit		Hybrid/EV Powertrain Control Module 2
Battery Charging System High Voltage Interlock Circuit	Energized		Hybrid/EV Powertrain Control Module 2
Battery Charging System High Voltage Interlock Circuit Status	Passed		Hybrid/EV Powertrain Control Module 2
Hybrid/EV Battery Pack Voltage	380.12	V	Hybrid/EV Powertrain Control Module 2
Hybrid/EV Battery Cell State of Charge Variation	1	%	Hybrid/EV Powertrain Control Module 2
Maximum Hybrid/EV Battery Module Voltage	3.99	V	Hybrid/EV Powertrain Control Module 2
Hybrid/EV Battery Voltage Sensor with Maximum Value	10		Hybrid/EV Powertrain Control Module 2
Hybrid/EV Battery Pack Maximum Voltage	402.48	V	Hybrid/EV Powertrain Control Module 2

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1. The vehicle must have a properly charged 12V battery before continuing. If the vehicle has been dormant and/or required a 12V jump start, perform a 12V battery inspection and charge or replace the 12V battery before continuing. Refer to *Battery Inspection/Test* in SI.
2. Perform a vehicle diagnostic system check prior to using this diagnostic procedure. Refer to *Diagnostic System Check – Vehicle* in SI.
 - If any Powertrain DTCs (Pxxxx) are set, store any Freeze Frame/Failure Records and go to *Diagnostic Trouble Code (DTC) List – Vehicle* in Si. Return to this procedure after DTC repair.
 - If no DTCs are set, go to Step 3.
3. Vehicle ON, use GDS2 to view the following data screens while connected to the vehicle:
 - From Module Diagnostics, select Hybrid Powertrain Control Module 2.
 - Data Display Folder
 - Data Display Icon
 - Voltage Data

Product Safety Recall

N202311731 High Voltage Battery May Melt or Burn



- Observe and record the parameters

Hybrid/EV Battery Voltage Sensors Average and Minimum Hybrid/EV Battery Module Voltage.

Hybrid/EV Battery Voltage Sensors Average (Value A) : _____

Minimum Hybrid/EV Battery Module Voltage (Value B) : _____

4. Subtract the minimum voltage from the average voltage.

Value A – Value B : _____

- If the voltage difference is less than or equal to 0.08V, proceed directly to **Procedure 3: Software Flashing Procedure**.
- If the voltage difference is greater than 0.08V, Observe and record the value of parameter **Hybrid/EV Battery Voltage Sensor with Minimum Voltage** and **Hybrid/EV Battery Pack State of Charge** and proceed to Step 5.

Hybrid/EV Battery Voltage Sensor with Minimum Voltage (Value C): _____

Hybrid/EV Battery Pack State of Charge (Value D): _____

5. Observe the battery pack state of charge parameter (Value D), is the SOC 30% or greater?

- If the battery pack SOC is less than 30%:
 1. Plug in Charge the battery pack to between 30 to 50% (do NOT charge the battery pack to full at this time).
 2. Remove the charge cord and allow the battery to rest (vehicle OFF) for 30 minutes.
 3. Return to step 1 of **Procedure 1: GDS2 Parameter Inspection Procedure**.
- If the battery pack SOC is greater than 30%, proceed to step 6.

6. **FOR MARKETS WITH CELL MODULE REPLACEMENT CAPABILITIES (Including US, Canada, and South Korea):** There is at least one battery cell module row that requires replacement. Advise the customer and coordinate rental vehicle, transportation home, etc. as required. Most vehicles will only require a single cell battery module section/row. To determine if an additional cell battery module section/row or if the entire battery pack assembly requires replacement proceed to **Procedure 2: Multiple Cell Group Identification Procedure**.

7. **FOR MARKETS WITHOUT CELL MODULE REPLACEMENT CAPABILITIES: Advise the customer that an entire replacement battery pack will need to be ordered to service their vehicle. Do not update the HPCM2 with the latest calibration until the pack is replaced.** Provide the customer with a courtesy loaner vehicle until the repair can be performed. While the vehicle is at the dealership awaiting repair: If the vehicle does not already contain interim remedy and has failed the inspection, it should not be driven or charged. The interim remedy is no longer available to apply to the vehicle.

Procedure 2 Multiple Cell Group Identification Procedure

1. Vehicle ON, use GDS2 to view the following data screens while connected to the vehicle:
 - From Module Diagnostics, select K16 Battery Energy Control Module
 - Data Display Icon
 - Voltage Data 1, Voltage Data 2, and then Voltage Data 3
 - From Identification Information Folder, select the Identification Information Icon.

NOTE: For emailing GDS2 session logs in the US, contact TACsnapshot@GM.Com, In Canada, contact TACsnapshotcanada@GM.Com. All other regions must use their established local technical support center.

2. Start a GM TAC case for the vehicle. Email the GDS2 session log from the vehicle to GM TAC. Refer to the latest version of PIP4902 for assistance in creating and emailing a session log.

Product Safety Recall

N202311731 High Voltage Battery May Melt or Burn



3. TAC will compare the data from the session log and advise which battery section(s) to replace. In some cases, TAC may advise that the entire pack should be replaced due to multiple cells with low voltage.
4. Replace the identified cell battery module. Refer to *Cell Battery Module Replacement* (Row 1-5) in SI.
5. After repair proceed to *Procedure 3: Software Flashing Procedure*.

NOTE: While waiting for a replacement battery cell module row to arrive, do not charge the vehicle or drive more than a half mile. Follow bulletin #18-NA-236 for module ordering instructions.

IMPORTANT: Do not flash any software before repairs are completed. Keep state of charge at or below 90%.

Procedure 3 Software Flashing Procedure

This update will perform the following:

- Hybrid/EV Powertrain Control Module 2
 - Revise existing Hybrid/EV Battery Circuit Performance DTCs P0B3C, P0B41, etc.
 - Implement new DTCs P0BBD.
 - Implement new GDS2 parameters to support DTCs P0BBD.
 - Restore maximum battery pack charging to 100% capability.
- Body Control Module
- Coordinated change to implement thermal propagation warning feature.

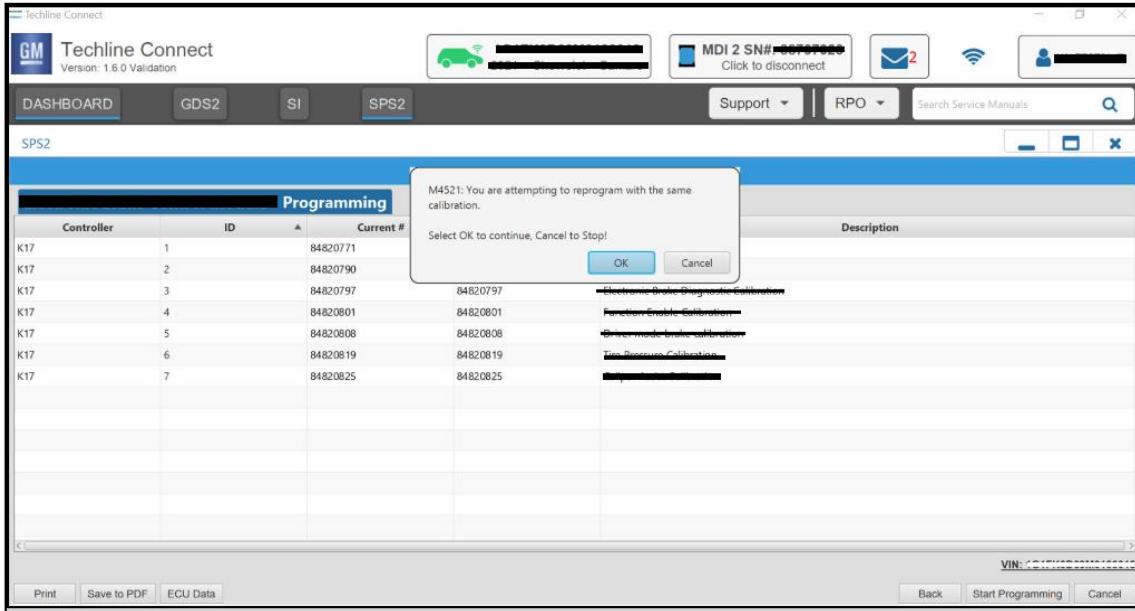
Caution: Before downloading the update files, be sure the computer is connected to the internet through a network cable (hardwired). DO NOT DOWNLOAD or install the files wirelessly. If there is an interruption during programming, programming failure or control module damage may occur.

Note: Carefully read and follow the instructions below.

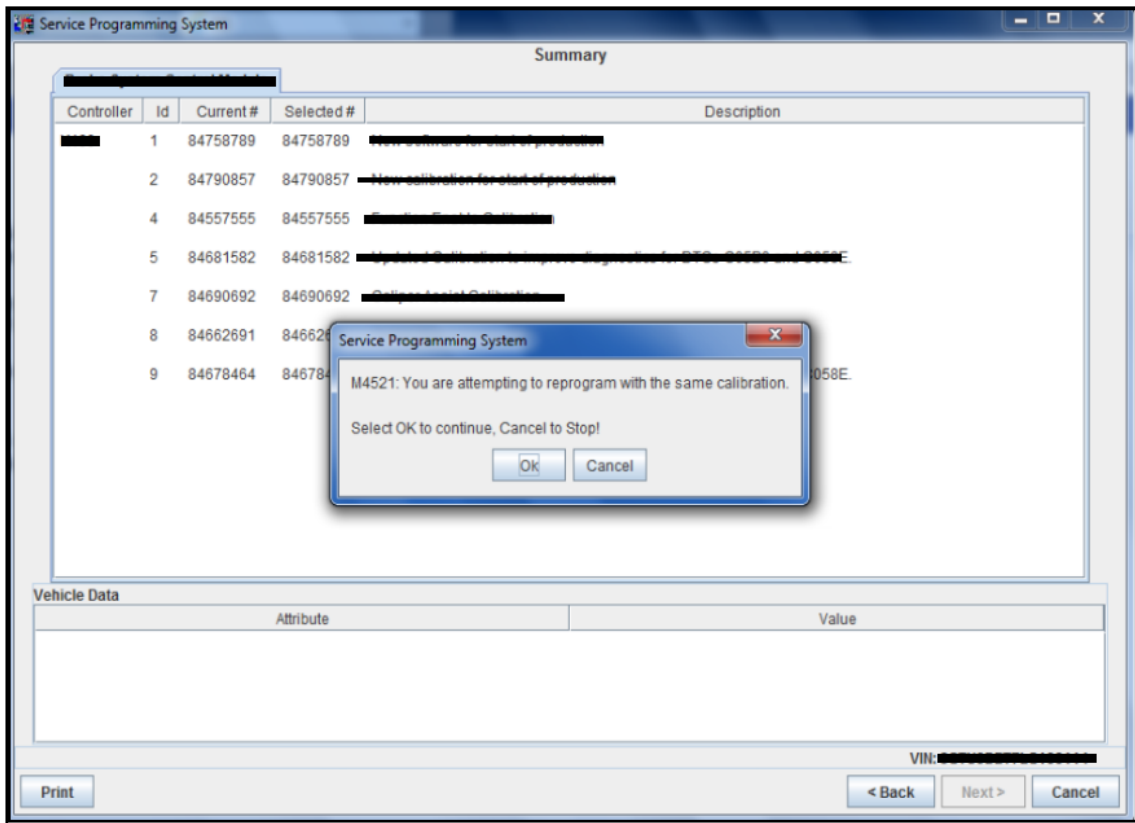
- Ensure the programming tool is equipped with the latest software and is securely connected to the data link connector. If there is an interruption during programming, programming failure or control module damage may occur.
- Stable battery voltage is critical during programming. Any fluctuation, spiking, over voltage or loss of voltage will interrupt programming. Install a GM Authorized Programming Support Tool to maintain system voltage. Refer to www.gmdesolutions.com for further information. If not available, connect a fully charged 12 V jumper or booster pack disconnected from the AC voltage supply. DO NOT connect a battery charger.
- Turn OFF or disable systems that may put a load on the vehicle battery such as: interior lights, exterior lights (including daytime running lights) HVAC etc.
- Clear DTCs after programming is complete. Clearing powertrain DTCs will set the Inspection/Maintenance (I/M) system status indicators to NO.

Product Safety Recall

N202311731 High Voltage Battery May Melt or Burn



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Important: Techline Connect and TIS2WEB screens shown above.

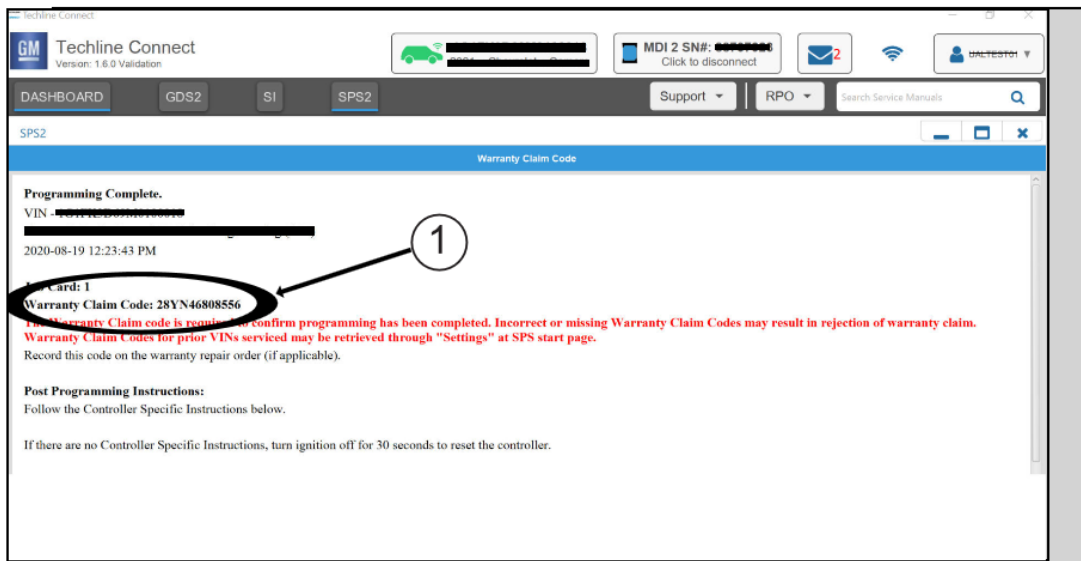
Important: If the same calibration/software warning is noted on the TLC or SPS Summary screen, select OK and follow screen instructions. After a successful programming event, the WCC is located in the Service Programming System dialogue box of the SPS Summary screen. No further action is required. Refer to the Warranty section of the bulletin.

1. Reprogram the K114B Hybrid/EV Powertrain Control Module 2. Refer to *K114B Hybrid/EV Powertrain Control Module 2: Programming and Setup* in SI.

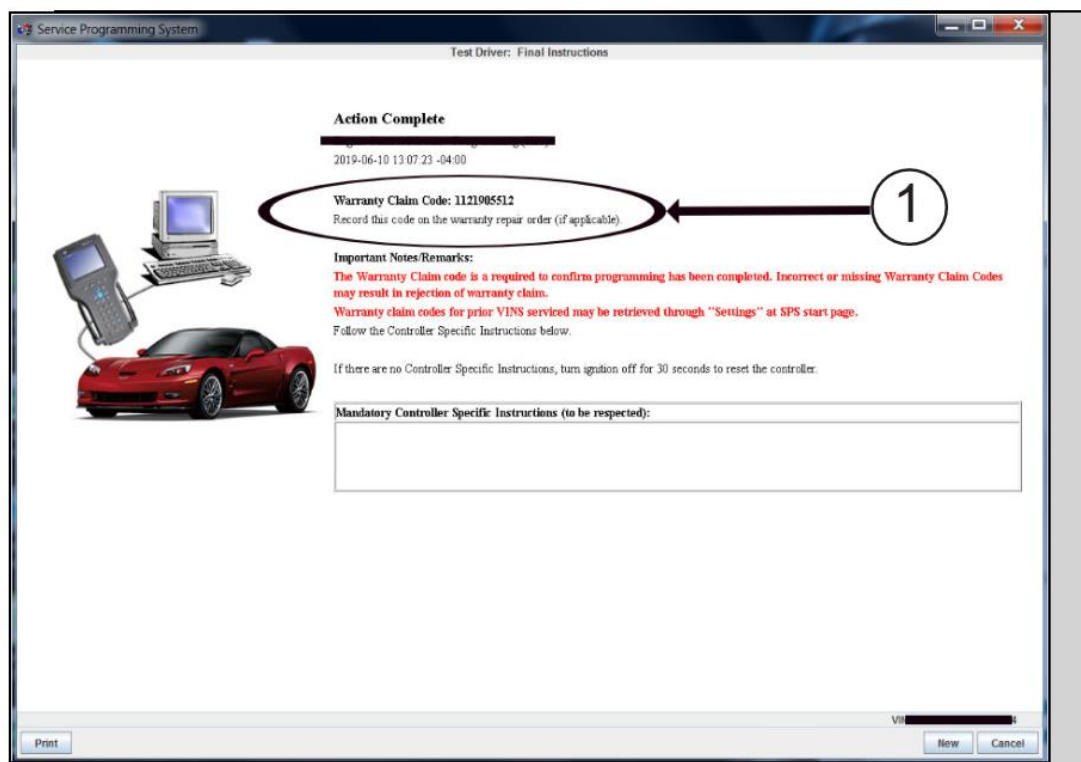
Product Safety Recall N202311731 High Voltage Battery May Melt or Burn



2. Reprogram the K9 Body Control Module. Refer to *K9 Body Control Module Programming and Setup* in SI.



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Note: The screenshots above are an example of module programming and may not be indicative of the specific module that is being programmed. Module selection and VIN information have been blacked out.

Important: To avoid warranty transaction rejections, you **MUST** record the warranty claim code provided on the Warranty Claim Code (WCC) screen shown above on the job card. Refer to callout 1 above for the location of the WCC on the screen.

3. Record SPS Warranty Claim Code on job card for warranty transaction submission.

Prior to returning the vehicle to the customer:

1. Vehicle ON, perform the Diagnostic System Check – Vehicle.

Product Safety Recall

N202311731 High Voltage Battery May Melt or Burn



- If any DTCs are set, store any Freeze Frame/Failure Records and go to Diagnostic Trouble Code (DTC) List – Vehicle in Si. Return to this procedure after DTC repair.
 - If no DTCs are set, go to Step 2.
2. Vehicle ON, use GDS2 to view Specific DTC status:
- From Module Diagnostics, select Hybrid Powertrain Control Module 2.
 - Select Diagnostic Trouble Codes folder
 - Select Specific DTC
 - Ensure the following DTCs have Ran and Passed this ignition: DTC P0BBB.
 - If the DTCs have ran and passed proceed to Step 3
 - If the DTCs have failed go to Diagnostic Trouble Code (DTC) List – Vehicle
 - If DTC P0BBB is not supported an error has occurred during programming, repeat Procedure 3: Software Flashing Procedure.



3. If the customer is not waiting, plug-in charge the vehicle and ensure battery pack state of charge is 80% or greater. 80% state of charge is represented when 3 bars remain unlit on the vehicle instrument panel gauge display. You may use Level 1, Level 2 or DC fast charging (note: After programming, the vehicle must be driven at vehicle speeds greater than 3 km/h (2 mph) to enable DC fast charging).

Dealer Responsibility – For USA & Export (USA States, Territories, and Possessions)

It is a violation of Federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied.

The US National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the US National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

Dealer Responsibility – All

All new, used, GM Certified Used, courtesy transportation vehicles, dealer shuttle vehicles, etc. in dealers' possession and subject to this recall must be held and inspected/repaired per the service procedure of this bulletin before customers take possession of these vehicles. Involved vehicles must be held and not delivered to customers, dealer-traded, released to auction, used for demonstration, or any other purpose.

All GM Certified Used vehicles currently in the dealers' inventory within the Certified Pre-Owned Inventory System (CPOIS) will be de-certified and must be held and remedied per the service procedure in this bulletin. Upon submitting

Product Safety Recall

N202311731 High Voltage Battery May Melt or Burn



an accepted/paid warranty transaction in the Global Warranty Management (GWM) system, the vehicle can be re-certified for sale within the CPOIS system, or once again be used in the CTP program.

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

Customers who have recently purchased vehicles sold from your vehicle inventory, and for which there is no customer information indicated on the dealer listing, are to be contacted by the dealer. Arrangements are to be made to make the required correction according to the instructions contained in this bulletin. A copy of the customer letter is provided in this bulletin for your use in contacting customers. Recall follow-up cards should not be used for this purpose, since the customer may not as yet have received the notification letter.

In summary, whenever a vehicle subject to this field action enters your vehicle inventory you must take the steps necessary to ensure the program correction has been made before selling the vehicle. In addition, for vehicles entering your facility for service, you are required to ensure the customer is aware of the open field action and make every reasonable effort to implement the program correction as set forth in this bulletin prior to releasing the vehicle.

Dealer Reports

For dealers with involved vehicles, a listing has been prepared and will be available through GM GlobalConnect Maxis Field Action Reports or sent directly to export dealers. The Inventory tab of the dealer reports will contain VINs that apply to this recall. This information is intended to assist dealers with the **PROMPT COMPLETION** of these vehicles. The Customer In-Service tab will contain customer names and addresses from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any purpose other than follow-up necessary to complete this recall may be a violation of law in several states.

Courtesy Transportation – For USA & Canada

Courtesy transportation is available for customers whose vehicles are involved in this safety recall.

Customer Notification

USA & Canada - General Motors will notify customers of this recall on their vehicle (see copy of customer letter included with this bulletin).

Export - Letters will be sent to known owners of record located within areas covered by the US National Traffic and Motor Vehicle Safety Act. For owners outside these areas, dealers should notify customers using the attached sample letter.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the tools, equipment, safety instructions, and know-how to do a job properly and safely. If a condition is described, **DO NOT** assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your dealer for information on whether your vehicle may benefit from the information.



**We Support
Voluntary Technician
Certification**



IMPORTANT SAFETY RECALL

May 2021

This notice applies to your vehicle, VIN: _____

Dear General Motors Customer:

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act.

Previously, you were notified that your 2019 model year Chevrolet Bolt EV was involved in GM recall N202311730. This letter is to inform you that the final remedy service procedure is now available to repair your vehicle under N202311731.

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 2017-2019 model year Chevrolet Bolt EV vehicles. As a result, GM is conducting a safety recall. We apologize for this inconvenience. However, we are concerned about your safety and continued satisfaction with our products.

IMPORTANT

- Your vehicle is involved in GM safety recall N202311731.
- Schedule an appointment with your GM dealer.
- This service will be performed for you at **no charge**.

Why is your vehicle being recalled?

A certain number of these vehicles were built with high voltage cells produced at LG Chem's Ochang, Korea facility that may pose a risk of fire when charged to full, or very close to full, capacity.

What will we do?

Your GM dealer will perform diagnostic procedures on your vehicle and, if necessary, replace battery module assemblies that fail the diagnostics. Your dealer will also install advanced onboard diagnostic software that, among other things, has the ability to detect potential issues related to changes in battery module performance before problems can develop.

This service will be performed for you at **no charge**. In most cases, the inspection and service will take approximately one hour. If the replacement of a battery module assembly is required, your dealer will provide you with a courtesy loaner vehicle while your vehicle is being repaired, which could take several days, depending on parts availability.

What should you do?

You should contact your GM dealer to arrange a service appointment as soon as possible.

When scheduling your appointment, confirm with the dealer that they are an EV certified dealer.

Do you have questions?

If you have questions or concerns that your dealer is unable to resolve, please contact the Bolt EV Concierge team at 833-EVCHEVY (833-382-4389). Hours of operation are Monday through Friday, 8:00 AM to 7:00 PM ET.

If after contacting your dealer and the Customer Assistance Center, you are still not satisfied we have done our best to remedy this condition without charge and within a reasonable time, you may wish to write the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590, or call the toll-free Vehicle Safety Hotline at 1.888.327.4236 (TTY 1.800.424.9153), or go to <http://www.safercar.gov>. The National Highway Traffic Safety Administration Campaign ID Number for this recall is 20V701.

Federal regulation requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Maryann L. Combs
Vice President
Global Vehicle Safety