# TECHNICAL

**Subject:**   **Dead Battery Resulting from Communication Gateway Module Activity**

| Brand: | Model: | Model Year: | | VIN: | | Engine: | Transmission: |
|---|---|---|---|---|---|---|---|
| | | **from** | **to** | **from** | **to** | | |
| Cadillac | LYRIQ | 2023 | 2024 | — | — | — | — |

| | |
|---|---|
| **Involved Region or Country** | North America |
| **Additional Options (RPOs)** | Equipped with RPO BEV |
| **Condition** | Some customers may comment on a dead 12V battery, no start, or passive key fob functions not functioning, and a parasitic draw may be observed. <br><br> **Note:** The 12V battery and High Voltage systems will often remain active for a period of time after vehicle shutdown. Refer to the diagnostic aid below to verify if there is a parasitic draw on the battery. <br><br> **Vehicle OFF 12V Battery Support** <br><br> The high voltage contactors may remain closed with the Vehicle Power Mode State OFF to support the 12V battery and electrical loads. Opening the high voltage service lockout (HVSL) and forcing the high voltage contactors open when they are closed and under load is not recommended. <br><br> • Pre-sleep occurs every time the Vehicle Power Mode State is transition to the Power Mode OFF State a 10-minute timer starts, the high voltage contactors will remain closed supporting the 12V battery and any other electrical loads until the 10 minutes have elapsed. <br><br> • Vehicle Power Mode State is OFF, Enhanced Battery Support Mode (EBSM) monitoring occurs once every 11 hours or sooner if the BCM is woke up by any internal or external input signal. EBSM will observe the 12V battery state of charge (SOC) and if the SOC is too low the high voltage contactors will be requested closed. Once 12V battery support has begun, the EBSM mode has a 2-hour timer followed with 15-minute rest period. The battery charging may continuously function between 2 hours/15-minute rest period provided the 12V battery SOC remains too low and the BCM does not return to its sleep state. EBSM monitoring could be terminated before the 2-hour time limit, provided the desired 12V battery SOC value is met. <br><br> You can determine if the high voltage contactors are closed and under load while Vehicle Power Mode State is OFF by measuring the voltage at the 12V battery. |
| **Cause** | The cause of the condition may be a software anomaly and/or a communication error that may result in the Serial Data Gateway Module causing a draw, resulting in a discharged or dead 12V battery. |
| **Correction** | Charge and test the battery. After the charge/replacement has been completed, leave the battery cables removed for 30 minutes. Reattach the battery cables and confirm the Serial Data Gateway Module has the latest available software. Reprogram the module if the software is not the latest released. After programming, confirm that there is no longer a draw on the battery. |

## Service Procedure

**Important:** **Service agents must comply with all International, Federal, State, Provincial, and/or Local laws applicable to the activities it performs under this bulletin, including but not limited to handling, deploying, preparing, classifying, packaging, marking, labeling, and shipping dangerous goods. In the event of a conflict between the procedures set forth in this bulletin and the laws that apply to your dealership, you must follow those applicable laws.**

**Important:** **This technical service bulletin (TSB) can only be completed by certified repair facilities who have met all specific training, tool and equipment requirements pertaining to the vehicle Brand and Model serviced. Repairs must be performed by a technician who has successfully completed the required training.**

**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.

- 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 12V jumper or booster pack disconnected from the AC voltage supply. DO NOT connect a battery charger.
- Follow the on-screen prompts regarding ignition power mode, but ensure that anything that drains excessive power (exterior lights, HVAC blower motor, etc) is off.
- Clear DTCs after programming is complete. Clearing powertrain DTCs will set the Inspection/ Maintenance (I/M) system status indicators to NO.

**Important:** The service technician always needs to verify that the VIN displayed in the TLC left side drop down menu and the top center window match the VIN plate of the vehicle to be programmed prior to using Service Programming System 2 (SPS2) for programming or reprogramming a module.
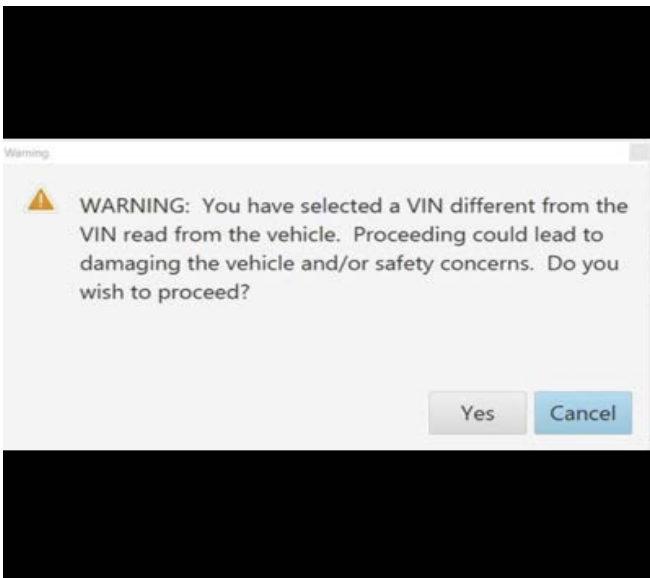
- For the TLC application, service technicians need to always ensure that the power mode (ignition) is "ON" before reading the VIN from the vehicle's VIN master module and that they do not select a VIN that is already in the TLC application memory from a previous vehicle.
- If the VIN that shows up in the TLC top center window after correctly reading the VIN from the vehicle does not match the VIN plate of the vehicle, manually type in the VIN characters from the vehicle VIN plate into the TLC top center window and use these for programming or reprogramming the subject module with the correct vehicle VIN and software and/or calibrations.
- The Engine Control Module (ECM) is the master module (for VIP vehicles) that TLC reads to determine the VIN of the vehicle. If the VIN read from the vehicle by TLC does not match the VIN plate of the vehicle, the ECM also needs to be reprogrammed with the correct VIN, software and calibrations that match the vehicle's VIN plate.
- The Body Control Module (BCM) is the master module (for GEM vehicles) that TLC reads to determine the VIN of the vehicle. If the VIN read from the vehicle by TLC does not match the VIN plate of the vehicle, the BCM also needs to be reprogrammed with the correct VIN, software and calibrations that match the vehicle's VIN plate.

**Caution:** Be sure the VIN selected in the drop down menu (1) is the same as the vehicle connected (2) before beginning programming.



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**Important:** If the vehicle VIN DOES NOT match, the message below will be shown.



WARNING: You have selected a VIN different from the VIN read from the vehicle. Proceeding could lead to damaging the vehicle and/or safety concerns. Do you wish to proceed?

Yes    Cancel

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**Important:** Techline Connect screen shown above.

**Important:** If the same calibration/software warning is noted on the TLC 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. Document the WCC on the job card. No further action is required. Refer to the Warranty Information section of this bulletin.

1. Reprogram the Serial Data Gateway Module. Refer to *K56 Serial Data Gateway Module: Programming and Setup* in the Service Manual.

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**Note:** The screenshot above is 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.

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

## Warranty Information

For vehicles repaired under warranty, use:

| Labor Operation | Description | Labor Time |
|---|---|---|
| 4041512 | Battery Charging and Testing | Use Published Labor Operation Time |
| 2810275* | Serial Data Gateway Module Reprogramming with SPS | Use Published Labor Operation Time |

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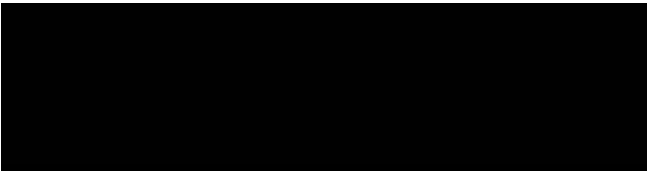


Labour Time [Top]

Labour Operation Code:

Additional labour op code information:

SPS Warranty Claim Code:
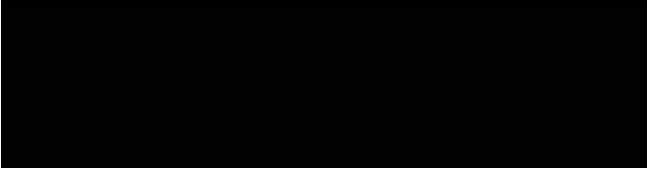
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- The Warranty Claim Code must be accurately entered in the "Warranty Claim Code" field of the transaction.
- When more than one Warranty Claim Code is generated for a programming event, it is required to document all Warranty Claim Codes in the "Correction" 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 SPS2.

**Warranty Claim Code Information Retrieval**
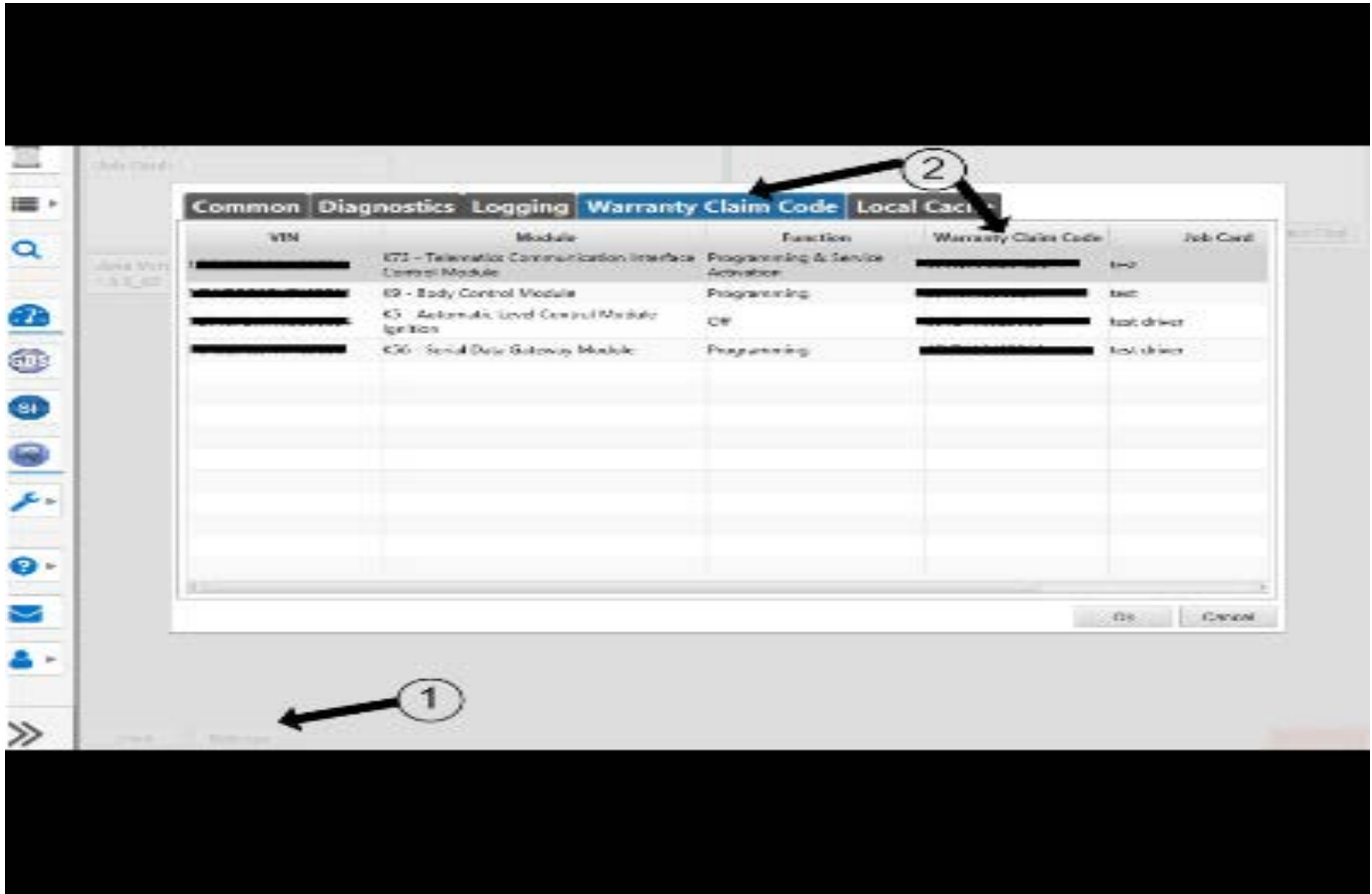


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If the Warranty Claim Code was not recorded on the Job Card, the code can be retrieved in the SPS2 system as follows:

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

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.

| Version | 2 |
|---|---|
| **Modified** | Released July 12, 2023 |
| | Revised August 07, 2023 – Added the 2024 Model Year and updated the Cause, Correction, and Warranty Information sections. |