



# Service Bulletin

Bulletin No.: 23-NA-151

Date: January, 2024

## INFORMATION

**Subject: Hybrid/EV Battery, High Priority DTC's , Potential Loss of Isolation, Vehicle Handling and RESS Shipping Requirements**

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
BrightDrop	Zevo 600	2022	2024	-	-	All	All
	Zevo 400	2024	2024				
Cadillac	LYRIQ	2023	2024				
Chevrolet	Blazer EV	2024	2024				
	Silverado EV						
GMC	HUMMER EV	2022	2024				
	HUMMER EV SUV	2024	2024				

Involved Region or Country	North America
Information	<p>This bulletin and criteria within are to determine the internal state of the High Voltage Battery and core return shipping method.</p> <p>If a vehicle arrives with any of the DTCs on the list, additional checks need to occur to give proper direction on vehicle storage and repair instructions and must be documented in a TAC Case.</p> <p>In the event a High Voltage Battery needs replaced, perform the service instructions below if any of the following DTCs listed are set as current before starting a TAC case for High Voltage Battery order authorization.</p> <p>DTCs: P0AA6, P0AA7, U359E, U2220, U2221, U2222, U2223, U2224, U2225, U2226, U2227, U2228, U2229, U222A, U222B, U222C, U222D, U222E, U222F, U2230, U2231, U2232, U2233, U2234, U2235, U2236, U2237, U1666, U1667, U2426, U2427, U2BFC, P1C34, U35B5.</p>

### Service Procedure

**Danger: Failure to use the proper Personal Protective Equipment and failure to carefully follow these procedures may result in serious injury or death.**

**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.

- Verify any of the following conditions: DTCs U2BFC or P1C34 are set as current or history, the customer heard abnormal noises, or if the vehicle experienced a loss of propulsion while driving? If yes, report results to TAC as additional review will be necessary to help determine stability.  
Notes:
- Provide a clear and thorough description of the concern from the customer. Was the vehicle towed because of a no start concern or loss of propulsion?  
Notes:
- Verify any of the following DTCs are set as current; P0AA6, P0AA7, U359E, U2220, U2221, U2222, U2223, U2224, U2225, U2226, U2227, U2228, U2229, U222A, U222B, U222C, U222D, U222E,

U222F, U2230, U2231, U2232, U2233, U2234, U2235, U2236, U2237, U1666, U1667, U2426, U2427, or U35B5 set as current or history.

Notes:

4. Visually inspect and document the coolant level in the high-voltage battery surge tank (Fig1) and document via photo.

Notes:

**Danger: DO NOT add coolant without first confirming the Lithium-Ion Hybrid/EV Battery Pack internal coolant passage can maintain proper vacuum and pressure. Adding coolant to the coolant system with an internal lithium-ion Hybrid/EV Battery Pack coolant leak may result in Fire, which could result in vehicle or component damage, and cause severe body injury or death.**

5. Observe and record the Battery Energy Control Module parameter(s); K16 – Battery Energy Control Module -> Data Display -> High Voltage Isolation Data -> Most Recent Isolation Resistance – Pack & (Pack 2 if equipped).

Notes:

6. Observe and record the Battery Energy Control Module parameter(s); K16 – Battery Energy Control Module -> Data Display -> Hybrid/Electric Vehicle Battery Pack Temperature Data -> Hybrid/Electric Vehicle Battery Pack Thermal Event Gas Sensor and Hybrid/Electric Vehicle Battery Pack Thermal Event Gas Sensor 2 in PPM (Parts Per Million).

Notes:

7. Observe and record the Battery Energy Control Module parameter(s); K16 – Battery Energy Control Module -> Data Display -> Hybrid/Electric Vehicle Battery Module Temperature Data -> Hybrid/Electric Vehicle Battery Interface Control Module 1 thru Module 24 (if equipped).

Notes:

**Note:** Record Top 3 Maximum Value or if all Similar provide average temperature.

8. Start a TAC case and upload session log per Document ID: 6385557 / PIP4902 and reference this bulletin. Additionally, provide any previous diagnosis work performed based on the DTC(s) set or inability to collect the data.

Notes:

9. Move Vehicle to stable location to store vehicle while waiting direction to repair. Document via photo and upload to the TAC case.

**Danger: Damage to a Lithium-Ion hybrid/EV battery pack could result in fire, loss of electrical isolation or exposure to high voltage. Until the high voltage system inspection has been completed, store the vehicle with hybrid/EV battery pack installed outside in a secure area away from buildings and other vehicles and protected from rain, snow and other moisture.**

**Note:** Additional information or steps may be requested based on the information provided from steps 1-9 listed above. If instructed by TAC, perform the following steps at time of High Voltage Battery replacement. Do NOT submit a core pickup request unless given approval by TAC.

10. Follow SI Procedure for RESS removal – Hybrid/Electric Vehicle Battery Pack Removal and Installation.
11. Inspect the High Voltage Connectors at the High Voltage Battery for Corrosion, Moisture, and/or soot. (Fig2) Take Photos of HV Connectors and attach to TAC Case. Refer to the SI Procedure for High Voltage System Inspection.

Notes:

**Note:** If corrosion or moisture is observed, stop all work and call TAC.

12. After RESS is removed from vehicle. Inspect High Voltage Battery Pressure Equalizer Vent Deflector or Battery drain plug for any moisture or coolant (Fig3). If no moisture or coolant present, complete swab test on the HV Battery inspection port or drain plug depending on Make/Model and take photo(s) and attach to TAC Case. Refer to the SI Procedure for High Voltage System Inspection.

Notes:

**Note:** If fluid is observed, stop all work and call TAC.

13. Remove excessive coolant from the RESS pack. Refer to the SI Procedure for Hybrid/Electric Vehicle Battery Pack Replacement and Shipping Preparation.

Notes:

**Note:** If unable to remove coolant from the RESS pack, stop all work, and call TAC.

14. Vacuum test the High Voltage Battery coolant circuit. See Hybrid Battery Pack Coolant Passage Leak Test.

Notes:

**Note:** If the High Voltage Battery coolant circuit does not hold vacuum, stop all work, and call TAC.

15. Pressure test the High Voltage Battery coolant circuit (Only complete if passes vacuum test). See Hybrid Battery Pack Coolant Passage Leak Test .

Notes:

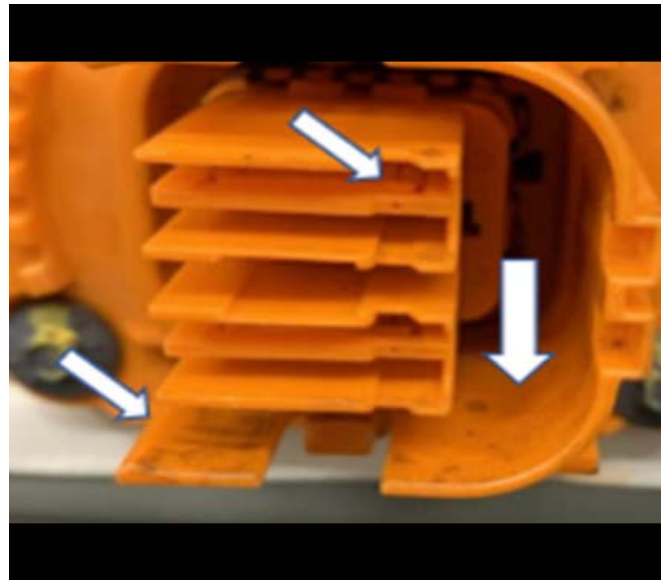
**Note:** If the High Voltage Battery coolant circuit does not hold pressure, stop all work, and call TAC.

16. Report results to TAC and await further instruction.

Figure 1

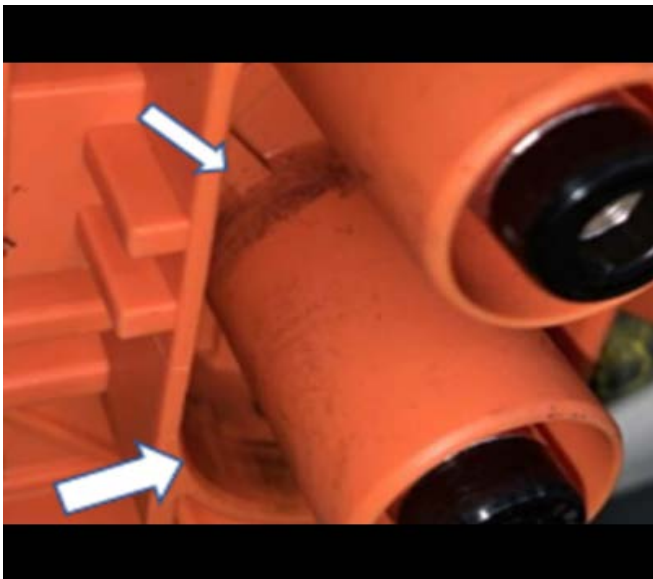


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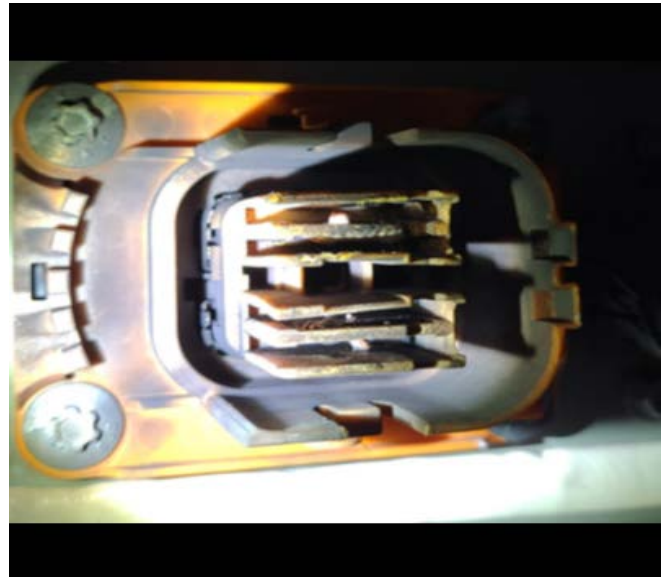
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Soot Examples (Fig 2)

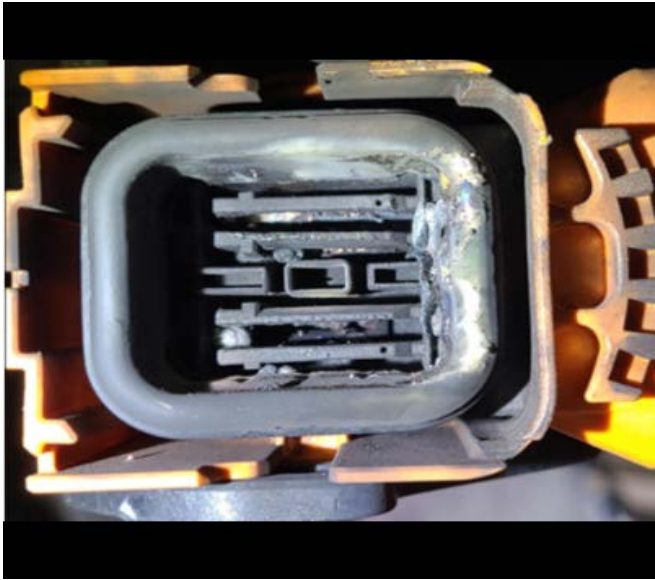


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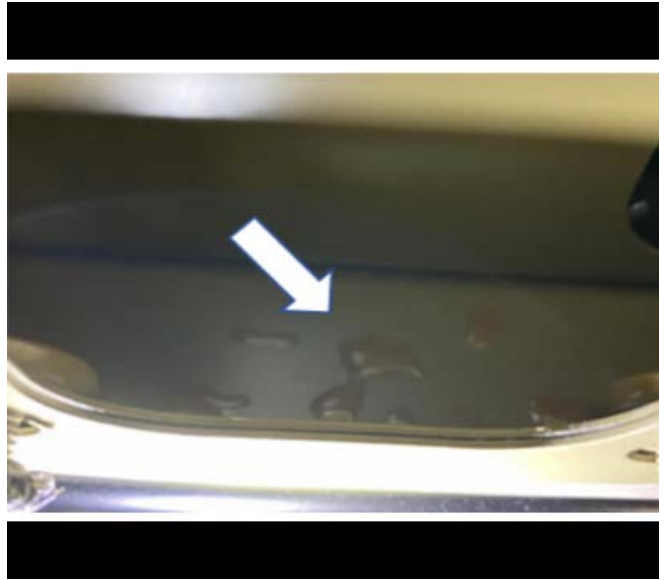
Additional Soot Examples (Fig 2)



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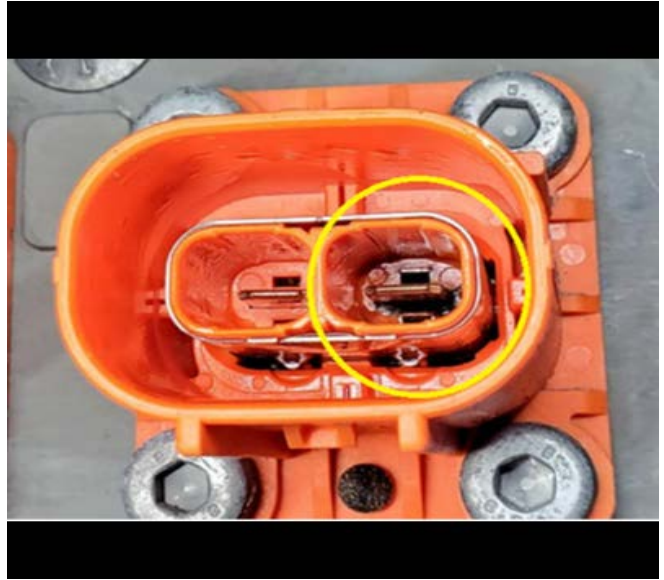
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**Liquid and Moisture Examples (Fig 3)**



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**Other Examples**



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## Warranty Information

For vehicles repaired under the Bumper-to-Bumper coverage (Canada Base Warranty coverage), use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Labor Operation	Description	Labor Time
5080398*	Hybrid/EV Battery Inspection & Transportability Assessment	1.0 hr
*This is a unique Labor Operation for Bulletin use only.		

Version	3
Modified	Released September 05, 2023 Revised October 17, 2023 – Updated Model Years, Added Steps 8-12 and added Warranty Information. Revised January 16, 2024 – Added Illustrations, Updated Steps, 2022 Model Year Zevo 600 and 2024 Zevo 400.

