



**NUMBER:** 08-146-22

**GROUP:** 08 - Electrical

**DATE:** August 3, 2022

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**SUBJECT:**

Flash: Battery Pack Control Module (BPCM) Diagnostic and System Updates

**OVERVIEW:**

This bulletin involves updating the BPCM with the latest available software.

**MODELS:**

2022 (JL) Jeep Wrangler

**NOTE:** This bulletin applies to vehicles within the following markets/countries: North America, APAC and EMEA.

**NOTE:** This bulletin applies to vehicles built on or before June 10, 2022 (MDH 0610XX) equipped with the 2.0L I4 DOHC DI Turbo PHEV Engine (Sales Code ECX).

**SYMPTOM/CONDITION:**

Customers may experience a false Malfunction Indicator Lamp (MIL) illumination related to PHEV battery:

- P1A21-00 - HV Battery Contactor Control Sequence Incorrect.
- P0B3E-00 - Hybrid/EV Battery Voltage Sense 1 Circuit High.
- P0607-00 - ECU Internal Performance.
- P1E1B-00 - Hybrid/EV Battery Side Voltage System Isolation.
- P0AA4-00 - Hybrid Battery Negative Contactor Circuit Stuck Closed.

**DIAGNOSIS:**

Using a Scan Tool (wiTECH) with the appropriate Diagnostic Procedures available in DealerCONNECT/Service Library, verify all related systems are functioning as designed. If Diagnostic Trouble Codes (DTCs) or symptom conditions, other than the ones listed above are present, record the issues on the repair order and repair as necessary before proceeding further with this bulletin.

If the customer describes the symptom/condition listed above or if the technician finds the DTC, perform the Repair Procedure.

**REPAIR PROCEDURE:**

**NOTE:** Install a battery charger to maintain a 12 volt system voltage.

**NOTE:** If this flash process is interrupted/aborted, the flash should be restarted.

**WARNING!**

- Before performing the software reprogramming, it is necessary to make the vehicle safe.
- When performing repairs that directly involve or imply possible contact with live high voltage components/systems, the technician must ensure that the power supply of the high-voltage system is disconnected throughout the operation.

- Only specifically trained technicians qualified to perform repairs on vehicles with high voltage systems under current national laws/regulations are authorized to work on the vehicle.
  - Before performing any diagnostic repair work on the vehicle, carefully read and comply with the general instructions for working safely on hybrid/electric vehicles and use suitable general equipment and Personal Protective Equipment (PPE).
1. Perform the vehicle “High-Voltage Power Down” procedure. Refer to the detailed service procedures available in DealerCONNECT/Service Library under: Service Info> 08 –Electrical/Standard Procedure/High-Voltage Power Down.
  2. Reconnect the 12 volt battery.
  3. Reprogram the BPCM with the latest software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the application’s “HELP” tab.
  4. Clear all DTCs that may have been set in any module due to reprogramming. The wiTECH application will automatically present all DTCs after the flash and allow them to be cleared.
  5. Perform the vehicle “High-Voltage Power Up” procedure. Refer to the detailed service procedures available in DealerCONNECT/Service Library under: Service Info>08 - Electrical /Standard Procedure> 08 – Electrical/Standard Procedure/High-Voltage Power Up.

**POLICY:**

Reimbursable within the provisions of the warranty.

**TIME ALLOWANCE:**

Labor Operation No:	Description	Skill Category	Amount
18-19-87-9R	Battery Pack Control Module (BPCM), Reprogram (0 - Introduction)	6 - Electrical and Body Systems	0.3 Hrs.

**NOTE:** The expected completion time for the flash download portion of this procedure is approximately 6 minutes. Actual flash download times may be affected by vehicle connection and network capabilities.

**RELATED TIME ALLOWANCE:**

Labor Operation No:	Description	Skill Category	Amount
08-08-11-50	High Voltage Power Down and UP Procedures (0 - Introduction)	6 - Electrical and Body Systems	0.7 Hrs.

**NOTE:** The related LOP for high voltage power down and up can only be claimed one time per updating this an any associated modules within the same work order or dealer visit:

***FAILURE CODE:***

**The dealer must use failure code CC with this Technical Service Bulletin.**

- If the customer's concern matches the SYMPTOM/CONDITION identified in the Technical Service Bulletin, failure code CC is to be used.
- When utilizing this failure code, the 3C's (customer's concern, cause and correction) must be provided for processing Technical Service Bulletin flash/reprogramming conditions.

CC	Customer Concern
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