

REFERENCE:	TSB: 08-048-23 GROUP 08 - Electrical	Date:	February 10, 2023	REVISION:	08-054-22 REV. B
VEHICLES AFFECTED:	2021 (JL) Jeep Wrangler This bulletin applies to vehicles built on or before **August 08, 2022 (MDH 0808XX)** equipped with the 2.0L I4 DOHC DI Turbo PHEV Engine (Sales Code ECX).			MARKET APPLICABILITY: <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/> IAP <input checked="" type="checkbox"/> EE <input checked="" type="checkbox"/> MEA <input type="checkbox"/> SA <input checked="" type="checkbox"/> CH	
CUSTOMER SYMPTOM:	Customers may experience a false Malfunction Indicator Lamp (MIL) illumination related to PHEV battery: <ul style="list-style-type: none"> • 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. • P1C00-00 - Hybrid/EV Battery Voltage Sense 1 Out Of Range Low. • P1C01-00 - Hybrid/EV Battery Voltage Sense 1 Out Of Range High. • P1A9B-00 - Hybrid/EV Battery Temperature Sensor 1 Out Of Range High. • P0BBD-00 - Hybrid Battery Pack Voltage Variation Exceeded Limit. • P167B-00 - Controlled System Shutdown. • U1885-00 - Battery Energy Control Module Lost Communication With HCP. • P0EDD-00 - Hybrid/EV Battery Pack B Deterioration. • U0111 - Lost Communication With Hybrid Battery Pack Sensor Module. • P0CA7-00 - Hybrid/EV Battery Discharging Current High. • P1A0C-00 - Battery Energy Control Module System Voltage Low. 				
CAUSE:	BPCM software				

This bulletin supersedes Technical Service Bulletin (TSB) 08-054-22 REV B, date of issue June 29, 2022, which should be removed from your files. All revisions are highlighted with ****asterisks**** and include updating Rapid Service Update (RSU) number, steps and LOP.

This Technical Service Bulletin (TSB) has also been released as a Rapid Service Update (RSU) ****23-037**, date of issue February 10, 2023******. All applicable Sold and UnSold RSU VINs have been loaded. To verify this RSU service action is applicable to the vehicle, use VIP or perform a VIN search in DealerCONNECT/Service Library. All repairs are reimbursable within the provisions of warranty. This RSU will expire 18 months after the date of issue.

REPAIR SUMMARY:

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

NOTE: Additional module flashes are required for this update to be effective, the following modules are all to be updated along with this BPCM update:

- **Powertrain Control Module (PCM).**
- **Integrated Dual Charging Module (IDCM).**
- **Transmission Control Module (TCM).**
- **Battery Pack Control Module (BPCM).**
- **Hybrid Control Processor (HCP), Auxiliary Hybrid Control Processor (AHCP) also known as the Power Inverter Module (PIM).**

CLAIMS DATA:

Labor Operation No:	Labor Description	Skill Category	Labor Time
** 18-19-87-9V	Battery Pack Control Module (BPCM), Inspect (0 - Introduction)	6 - Electrical and Body Systems	0.2 Hrs.
18-19-87-9W	Battery Pack Control Module (BPCM), Inspect and Reprogram (0 - Introduction)	6 - Electrical and Body Systems	0.3 Hrs.**
Failure code	RF	Required Flash	
	CC	Customer Concern	

The dealer must choose which failure code to use depending on if this is a Rapid Service Update (RSU) or Technical Service Bulletin.

- The “RF” failure code is required for essential module flash/reprogramming and can only be used after confirmation that the VIN is included on the RSU.
- The failure code “RF” (Required Flash) can no longer be used on Technical Service Bulletin flashes. The “RF” failure code must be used on an RSU.
- 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 must be supplied.

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 a customer’s VIN is listed in VIP or your RSU VIN list, perform the repair. If any vehicle not on the VIN list exhibits the DTCs, perform the repair.

SPECIAL TOOLS/EQUIPMENT:

Description	Ref. No.	Notes
wiTECH or Equivalent	–	–

REPAIR PROCEDURE:

NOTE: The IDCM, PCM, HCP / AHCP and TCM must be updated to the latest available software at the conclusion of this repair procedure. Refer to all applicable published technical service bulletins for detailed repair procedures and labor times regarding updating the IDCM, PCM, HCP / AHCP and TCM software.

WARNING! Failure to update the IDCM, PCM, HCP / AHCP and TCM module following an BPCM software update may result in vehicle malfunctions.

CAUTION!

- 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).

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.

1. ****Is the vehicle on the RSU VIN list?**
 - YES >>> Proceed to [Step 2](#).
 - NO >>> Proceed to [Step 3](#).
2. Does the BPCM have the latest software already installed?
 - YES >>> This bulletin has been completed, use inspect LOP (18-90-16-9V) to close the active RSU.
 - NO >>> Update the BPCM software. Proceed to [Step 3](#).
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 "HELP" tab.
4. Verify the IDCM, PCM, HCP / AHCP and TCM are also programmed with the latest available software. Refer to all applicable published service bulletins for detailed repair procedures and labor times regarding updating the IDCM, PCM, HCP / AHCP and TCM software.
5. 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.**

POLICY:

Reimbursable within the provisions of the warranty.

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