

|                           |   |              |                   |  |           |
|---------------------------|---|--------------|-------------------|--|-----------|
| <b>REFERENCE:</b>         | <b>TSB:</b> 08-049-23<br><b>GROUP</b> 08 - Electrical   | <b>Date:</b> | February 10, 2023 | <b>REVISION:</b>   | 08-137-22 |
| <b>VEHICLES AFFECTED:</b> | 2022 (JL) Jeep Wrangler<br>This bulletin applies to vehicles equipped with 2.0L I4 DOHC DI Turbo PHEV Engine (Sales Codes ECX).   |              |                   | <b>MARKET APPLICABILITY:</b><br><input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/> IAP<br><input checked="" type="checkbox"/> EE <input checked="" type="checkbox"/> MEA<br><input type="checkbox"/> SA <input checked="" type="checkbox"/> CH |           |
| <b>CUSTOMER SYMPTOM:</b>  | <p>Customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find the following Diagnostic Trouble Code (DTC) have been set:</p> <ul style="list-style-type: none"> <li>• B22A9-64 - ECU Internal Performance-Signal Plausibility Failure.</li> <li>• B22A9-16 - ECU Internal Performance-Circuit Voltage Below Threshold.</li> <li>• B22A9-17 - ECU Internal Performance-Circuit Voltage Above Threshold.</li> <li>• B22A9-19 - ECU Internal Performance-Overcurrent.</li> </ul> <p>Customer may also experience the following:</p> <ul style="list-style-type: none"> <li>• Vehicle will not charge.</li> </ul> |              |                   |  |           |
| <b>CAUSE:</b>             | IDCM software   |              |                   |  |           |

This bulletin supersedes Technical Service Bulletin (TSB) 08-137-22 REV B, date of issue June 29, 2022, which should be removed from your files. All revisions are highlighted with **\*\*asterisks\*\*** and include converting to an Rapid Service Update (RSU), steps and LOP.

This Technical Service Bulletin (TSB) has also been released as a Rapid Service Update (RSU) 23-038, 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 reprogramming the IDCM with the latest software available.

**NOTE: Additional module flashes are required for this update to be effective, the following modules are all to be updated along with this IDCM 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 |
|---------------------|--|---------------------------------|------------|
| **18-90-16-97       | Module, Integrated Dual Charging (IDCM) - Inspect (0 - Introduction)               | 6 - Electrical and Body Systems | 0.2 Hrs.   |
| 18-90-16-98         | Module, Integrated Dual Charging (IDCM) - Inspect and Reprogram (0 - Introduction) | 6 - Electrical and Body Systems | 0.4 Hrs.** |

| Labor Operation No: | Labor Description | Skill Category   | Labor Time |
|---------------------|-------------------|------------------|------------|
| 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 symptom/condition or DTC, perform the repair.

#### SPECIAL TOOLS/EQUIPMENT:

| Description          | Ref. No. | Notes |
|----------------------|----------|-------|
| wiTECH or Equivalent | –        | –     |

#### REPAIR PROCEDURE:

**NOTE:** The BPCM, 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 BPCM, PCM, HCP / AHCP and TCM software.

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

#### 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).

**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 IDCM have the latest software already installed?
  - YES >>> This bulletin has been completed, use inspect LOP (18-90-16-97) to close the active RSU, Proceed to [Step 6](#).
  - NO >>> Proceed to [Step 3](#).
3. Verify the BPCM is programmed with the latest available software first. Refer to all applicable published service bulletins for detailed repair procedures and labor times regarding updating the BPCM software.\*\*
4. Reprogram the IDCM with the latest software. Detailed instructions for flashing control modules using the wiTECH Diagnostic Application are available by selecting the application "HELP" tab.
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.
6. Verify the BPCM, 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 BPCM, PCM, HCP / AHCP and TCM software.
7. Verify the vehicle will charge.
8. Does the vehicle charge properly after the software flash?
  - YES >>> This bulletin has been completed, Use LOP (18-90-16-98). no further action is required.
  - NO >>> The IDCM will need to be replaced under normal warranty. Refer to the detailed service procedures available in DealerCONNECT> Service Library under: Service Info>08 - Electrical / 8E - Electronic Control Modules / Module, Integrated Dual Charging (IDCM) / Removal and Installation.

**NOTE: The new IDCM will not have to be programmed, it will already have the latest software installed.\*\***

**POLICY:**

Reimbursable within the provisions of the warranty.

*This bulletin is supplied as technical information only and is not an authorization for repair. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without written permission of FCA US LLC.*