

**Technical Service Bulletin (TSB)**  
**Motor Generator Unit (MGU) Replacement**

|                           |  |              |              |  |  |
|---------------------------|--|--------------|--------------|--|--|
| <b>REFERENCE:</b>         | <b>TSB:</b> 08-178-25<br><b>GROUP:</b> 08 - Electrical   | <b>Date:</b> | May 30, 2025 | <b>REVISION:</b>                       | 08-144-24                                  |
| <b>VEHICLES AFFECTED:</b> | <b>2023 - 2024 (JL) Jeep Wrangler</b><br><b>2023 - 2024 (WL) Jeep Grand Cherokee / Grand Cherokee L</b><br>This bulletin applies to vehicles equipped with a 2.0L I4 DOHC DI Turbo PHEV Engine (Sales Code ECX).   |              |              | <b>MARKET APPLICABILITY:</b>           |  |
|                           |  |              |              | <input checked="" type="checkbox"/> NA | <input type="checkbox"/> MEA               |
|                           |  |              |              | <input type="checkbox"/> SA            | <input type="checkbox"/> IAP               |
|                           |  |              |              | <input type="checkbox"/> EE            | <input checked="" type="checkbox"/> **CH** |
| <b>CUSTOMER SYMPTOM:</b>  | Customers <b>**must**</b> experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician <b>**must**</b> find the following Diagnostic Trouble Code (DTC) has been set: <ul style="list-style-type: none"> <li>• P1B0F-00 - Drive Motor A Position Sensor Offset Incorrect.</li> </ul> Customers may also experience one or more of the following: <ul style="list-style-type: none"> <li>• Vehicle goes into limp home mode.</li> <li>• Vehicle does not start.</li> </ul> |              |              |  |  |
| <b>CAUSE:</b>             | Manufacturing issue  |              |              |  |  |

This bulletin supersedes Technical Service Bulletin (TSB) 08-144-24, date of issue June 22, 2024, which should be removed from your files. All revisions are highlighted with **\*\*asterisks\*\*** and include an updated Customer Symptom statement and an additional market added to Market Applicability.

**REPAIR SUMMARY:**

This bulletin involves inspecting the MGU serial number and possibly replacing the MGU as needed.

**CLAIMS DATA:**

| Labor Operation No: | Labor Description  | Skill Category                    | Labor Time |
|---------------------|--|-----------------------------------|------------|
| 08-52-02-94         | Motor Generator Unit (MGU) - Replace <b>(JL)</b><br>(3 - Highly Skilled) | 1 - Engine Repair And Performance | 2.0 Hrs.   |
| 08-52-02-95         | Motor Generator Unit (MGU) - Replace <b>(WL)</b><br>(3 - Highly Skilled) | 1 - Engine Repair And Performance | 2.8 Hrs.   |
| Failure Code        | ZZ   | Service Action                    |            |

**SPARE PARTS:**

| Qty    | Part No.   | Description     | Notes  |
|--------|------------|-----------------|--------|
| 1 (AR) | 05190161AM | Motor, Electric | JL MGU |
| 1 (AR) | 05190309AF | Motor, Electric | WL MGU |

**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 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.

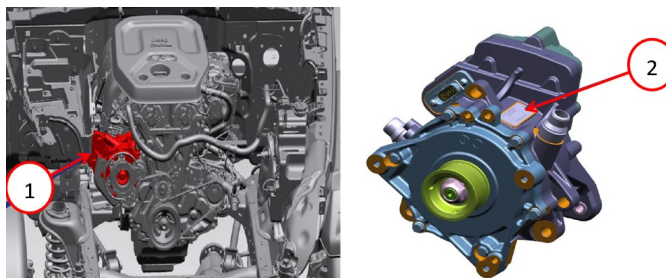
If the customer describes the symptom/condition listed above, perform the Repair Procedure.

**SPECIAL TOOLS/EQUIPMENT:**

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

**REPAIR PROCEDURE:**

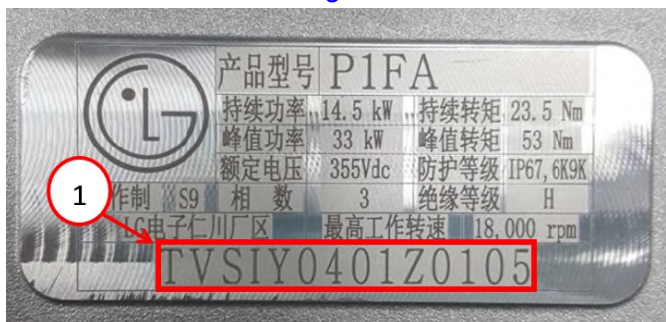
- Is DTC P1B0F-00 - Drive Motor A Position Sensor Offset Incorrect set?
  - YES>>> Proceed to [Step 2](#).
  - NO>>> This bulletin does not apply.
- Locate the MGU label [Fig. 1](#).



**Fig. 1**  
MGU Location

- 1 - MGU Location
- 2 - MGU Label Location

- Read the serial number located on the MGU label [Fig. 2](#).



**Fig. 2**  
MGU Serial Number

- 1 - MGU Serial Number

4. Is the serial number within the following ranges?

|    |                                 |
|----|---------------------------------|
| JL | TVSIY0813Z0241 - TVSIY2413Z0005 |
| WL | TVSIY0903Z0714 - TVSIY2383Z0673 |

- YES>>> Replace the MGU. Refer to the detailed service procedures available in DealerCONNECT/ Service Library under: Service Info> 12 - Electrified Powertrain System / Electric Powertrain Control / Motors, Electric Drive / Removal and Installation.
- NO>>> This bulletin does not apply. Follow the DTC P1B0F-00 - Drive Motor A Position Sensor Offset Incorrect diagnostic procedure in Service Library.

5. Clear DTCs.

6. Does DTC P1B0F-00 - Drive Motor A Position Sensor Offset Incorrect return after MGU replacement?

- YES>>> Normal diagnosis should be performed.
- NO>>> This bulletin is completed.

**POLICY:**

Reimbursable within the provisions of the warranty.

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