

ECPC SPN 517081/FMI 14 False Fail for Welded Contactors BMS3 or BMS4 SPN 517000/FMI 6 or SPN 517001/FMI 6

TSB-08-001-FTL

Creation Date:2023-12-04

Last Revision Date:2024-04-11

Engine or Vehicle Affected:

- ▶ eM2
- ▶ eCascadia

Description of Revisions: This bulletin replaces the version dated 12/14/2023. Confirming and resolving the false fail fault condition procedure has been updated.

Warranty applies to this described condition. See the warranty information at the end of this bulletin.

Described Condition

In eCascadia and eM2 vehicles, the fault monitoring diagnostics for the AUX contactors in BMS3 or BMS4 may trigger a false SPN517000/FMI6 or SPN517001/FMI6 due to incorrectly identifying contactors as being welded. When a welded contactor condition is active, the high-voltage (HV) startup gets disabled. This incorrect fail status will be rectified and corrected in a forthcoming software update. In the interim, to verify and rectify the false fail fault, perform the following procedure when:

- ECPC is reporting SPN 517081/FMI 14 and
- BMS3 is reporting SPN 517000/FMI 6 or SPN 517001/FMI 6 and the batteries are 2 layer batteries or
- BMS4 is reporting SPN 517000/FMI 6 or SPN 517001/FMI 6 and the batteries are 3 layer batteries.

Confirming and Resolving the False Fail Fault Condition, if any of the above fault codes are active

⚠ Danger: Service and repair of the electric vehicle should only be performed by technicians that have completed HV2 or HV3 Daimler Safety Training. Decommissioning and commissioning of the HV system should only be performed by technicians that have completed HV3 Daimler Safety training. To prevent personal injury or death, or damage to the electric system, do not attempt repairs yourself.

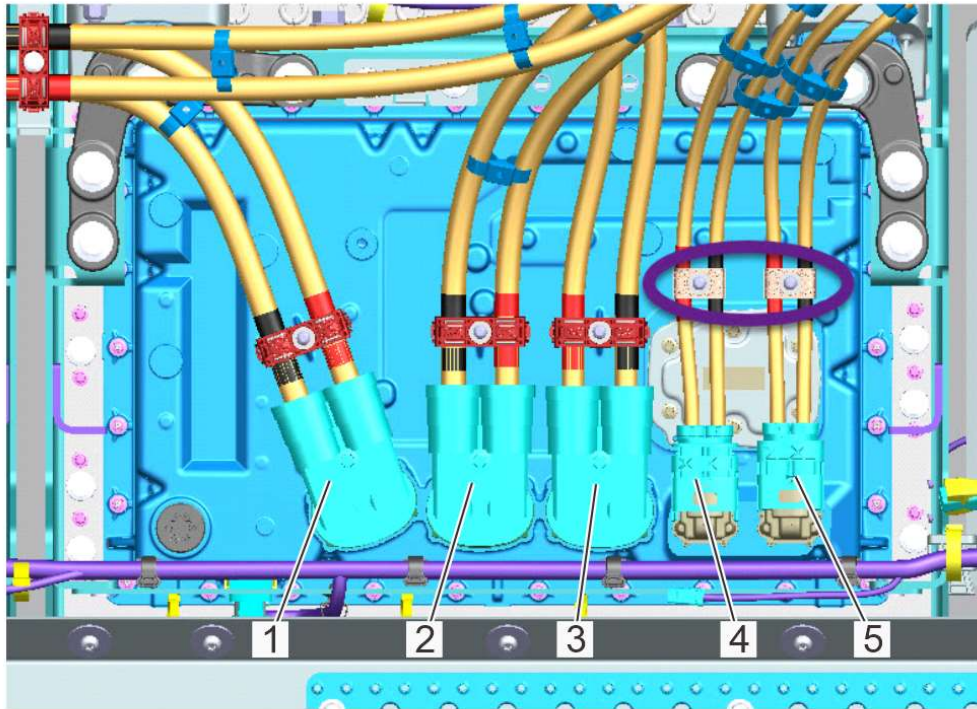
⚠ Danger: If a collision occurs, do not touch any high voltage cables, connectors, or components. Doing so could cause severe personal injury or death.

⚠ Warning: Always disconnect the battery negative (ground) cable before carrying out repairs or service on the electrical system.

⚠ Warning: Before attempting any work on the batteries or the electrical system, remove all metal jewelry. If metal contacts with electrical circuits, a short circuit may occur causing electrical system failure and damage or personal injury.

1. Park the vehicle on a level surface, place the vehicle in neutral, shut down the vehicle, and set the park brake. Chock the tires.
 2. Decommission the vehicle and verify the high-voltage (HV) system is shut down. See **Section 08.08, Subject 110** of the *eCascadia Workshop Manual* or **Section 08.08, Subject 110** of the *eM2 Workshop Manual* for instructions. Is the measurement greater than 12 volts during decommissioning?
 - a. **YES** → Stop the decommissioning procedure. Visit the 'DTTS Cases' link on the service page of the [DTNA Portal](#) for additional assistance.
 - b. **No** → Go to step 3.
 3. Connect all the HV connectors and the cable clamps that were removed during the decommissioning.
 4. Remove the cable retention clamp bolt at the battery 2, connector C3. See Fig. [1](#), item 3.
 5. Remove the bolt and install the guide pin tool (DDE DSNEMG022008) on battery 2, connector C3. See Fig. [2](#).
 6. Lift the high-voltage cable (HV) connector C3 from battery 2, remove the guide pin, then install the breakout box tool (W000588046300) on the battery 2, connector C3.
 7. Leave the E-Stop button pressed and Locked Out. Turn the cab load disconnect switch (CLDS) ON and turn the keyswitch to the ON position.
 8. Connect 12 volts DC into the breakout box positive and EQ ground (center banana jack) ports for one minute. A 12 volt power supply or the vehicle 12 volt battery circuit may be used.
 9. Turn the keyswitch to the OFF position and turn the CLDS OFF.
 10. Remove the breakout box from battery 2, connector C3.
 11. Install the guide pin tool (DDE DSNEMG022008) on battery 2, connector C3.
 12. Install the high voltage cable on the battery 2, connector C3. Remove the guide pin, then install the connector C3 retention bolt and tighten the bolt 14 lb·ft (19 N·m).
 13. Commission the vehicle. See **Section 08.08, Subject 110** of the *eCascadia Workshop Manual* or **Section 08.08, Subject 110** of the *eM2 Workshop Manual* for instructions.
-

HV battery connector callouts and Aux cable retention clamps



07/25/2023

f080501

- 1. Connector 1 (C1)
- 2. Connector 2 (C2)
- 3. Connector 3 (C3)
- 4. Connector 4 (C4)
- 5. Connector 5 (C5)

Fig. 1, HV battery connector callouts and Aux cable retention clamps

Guide Pin



06/20/2023

f080503

14. Turn the CLDS ON and turn the keyswitch to the ON position, then connect DiagnosticLink® and clear the fault codes.
15. After the faults are cleared, continue to monitor the faults for two minutes. Does the fault return active?
- a. Yes → Visit the 'DTTS Cases' link on the service page of the [DTNA Portal](#) for additional assistance.
- b. No → Return the vehicle to operation.

Warranty

This procedure is warrantable only if the described condition exists and the repair is performed within the applicable base or extended coverage warranty period. If a failure is not found, this procedure is considered preventive and warranty does not apply.

See Table 1 for OWL VMRS codes and labor allowance information. Enter this service bulletin number in the Service Bulletin # field.

Table 1, OWL VMRS Codes and Labor Allowance

Primary Failed Part	Component Code	Cause Code	Correction Code	SRT Code	Description	Hours
2 layer: A66-23665-000 3 layer: A66-23670-000	039-001-001	33	24	4BL-5000A	BATTERY ASSEMBLY – HIGH VOLTAGE ELECTRIC VEHICLE	1.0

Table 1, OWL VMRS Codes and Labor Allowance

Note:

039-001-001
F37,F38
REMOVE,INSTALL

CONTACT INFORMATION

For questions, please create a Service Technical Request using the DTTS Application on the DTNA Portal.