Service Alert

Mazda North American Operations
Irvine, CA 92618-2922

Subject:	
HIGH-VOLTAGE FUSE INSPECTION (INTERNAL TO PHEV BATTERY)	Service Alert No.: SA-054/25
	Last Issued : 11/21/2025

BULLETIN NOTES

APPLICABLE MODEL(S)/VINS
2024-2026 CX-90
2025-2026 CX-70

DESCRIPTION

No inspection procedure is provided in the WSM for the high-voltage fuses located inside the high-voltage battery.

REPAIR PROCEDURE

HIGH-VOLTAGE BATTERY INSPECTION

<< HIGH VOLTAGE WARNINGS >>

- Inspection/removal/installation servicing of the high-voltage parts of this vehicle is a dangerous operation defined by the Industrial Safety and Health Law. For this reason, the inspection and removal/installation work on high-voltage parts can only be performed by a person who has completed special training for low-voltage line work.
- If the necessary measures are not taken before servicing an electric vehicle, it could cause electrical shock and result in serious injury or, in the worst case, death. Before servicing the electric vehicle, refer to **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]** in the general information and implement the necessary measures.
- Vehicles damaged in an accident could have electrical leakage due to internal damage to the high-voltage battery. If servicing is carried out under electrical leakage conditions, it could cause electrical shock and result in serious injury or, in the worst case, death.
- Refer to **[Handling High Voltage Battery on Vehicle Damaged in Accident]** in **[DAMAGED VEHICLE HANDLING]** in the general information and determine if an internal inspection of the high-voltage battery is necessary. Perform servicing only if an internal inspection of the high-voltage battery is unnecessary. If it is determined that an internal inspection of the high-voltage battery is necessary, contact the technical assistance for your market without performing servicing.
- Wear insulating gloves and electrical-hazard safety shoes that have been properly inspected and in proper working condition when inspecting or removing/installing the high-voltage parts. Contact with a high voltage part when you are not wearing insulating gloves may result in serious injury or death caused by electric shock. (See **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]**.)

- Before inspecting or removing/installing the high-voltage parts, remove the service plug and wait until 10 minutes have elapsed. Servicing without removing the service plug or before 10 minutes have elapsed after removing the service plug could cause electrical shock and result in serious injury or, in the worst case, death.

- DO NOT spin the tires while performing work for inspection or removal/installation of high-voltage parts. If the tires spin, power generation occurs even if the service plug is removed. If power generation occurs, it could cause electrical shock and result in serious injury or, in the worst case, death.

- Verify that the charging connector is not connected to the vehicle when inspecting or removing/installing the high-voltage parts. If the charging connector is connected to the vehicle, high voltage may be supplied to the vehicle. If this occurs, it could cause electrical shock and result in serious injury or, in the worst case, death.

- Always observe the following items thoroughly to ensure safety when inspecting or removing/installing the high-voltage parts. Otherwise, the high voltage circuit may operate on the vehicle regardless of whether or not the main power is switched OFF or ON (READY off or on). If this occurs, it could cause electrical shock and result in serious injury or, in the worst case, death.
    - **DO NOT perform normal charging or quick charging.**
    - **Access connected vehicle maintenance mode (MyMazda App connected vehicle). Refer to [SA-017/25 - MAZDA CONNECTED SERVICES - FREQUENTLY ASKED QUESTIONS (FAQ)] for additional information.**
    - **Refer to [PERSONALIZATION FEATURES] and scroll down to the [Climate Control Timer] section, and then cancel the climate control timer.**

- When inspecting or removing/installing the high-voltage parts, place a [HIGH VOLTAGE WORK] sign on the vehicle to alert other workers. (See **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]**.)

- The high-voltage battery is a high-voltage part and is dangerous. Therefore, the terminal voltage inspection cannot be performed. Perform the troubleshooting on the output DTC or a visual inspection.

<< HIGH VOLTAGE CAUTION >>

- DO NOT switch the main power ON (READY on) after removing the service plug. If the main power is switched ON (READY on) after removing the service plug, a malfunction may occur with the vehicle.

NOTE:

- The high-voltage parts can be identified as follows.
- Parts that are connected using orange wiring harnesses
- Parts with a high voltage warning label attached
- Items to be prepared *before* beginning repairs or diagnosis.

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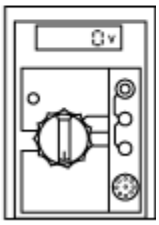

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1	Insulating gloves
2	Electrical-hazard safety shoes
3	High voltage work sign
4	Electrical tape
5	Voltmeter (Capable of measuring DC 450 V or more) **NOTE:** The *Fluke 1587 FC* is recommended and is available from the Mazda Tool and Equipment Program. Additional information is also found here on MGSS in the Special Service Tools tab.

DTC INSPECTION

Using the M-MDS, perform a DTC inspection and verify if any high-voltage battery-related DTCs are detected. (Refer to **[DTC INSPECTION]** in the troubleshooting manual).

Was a DTC detected?

YES: Inspect for possible causes of detected DTCs in the order from the top. (Refer to [DTC TABLE [MHB]] in the troubleshooting manual)

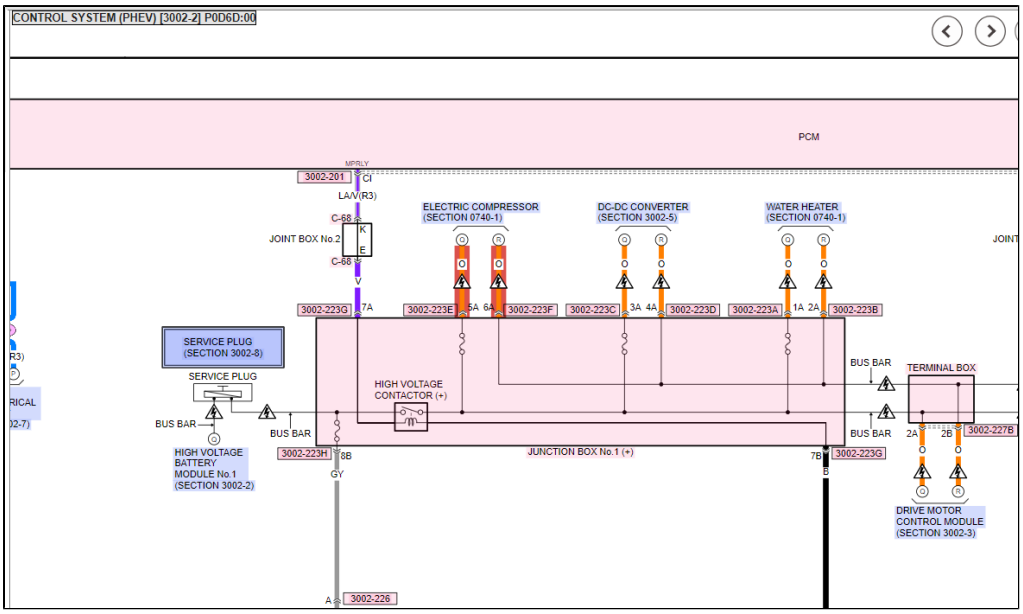
<< HIGH VOLTAGE WARNING >>

- Wear insulating gloves and remove the service plug
- If the malfunction is not resolved, replace the high-voltage battery. (See **[HIGH VOLTAGE BATTERY REMOVAL/INSTALLATION]**.)

NO: Perform a visual inspection. (See **[HIGH VOLTAGE BATTERY INSPECTION]**)

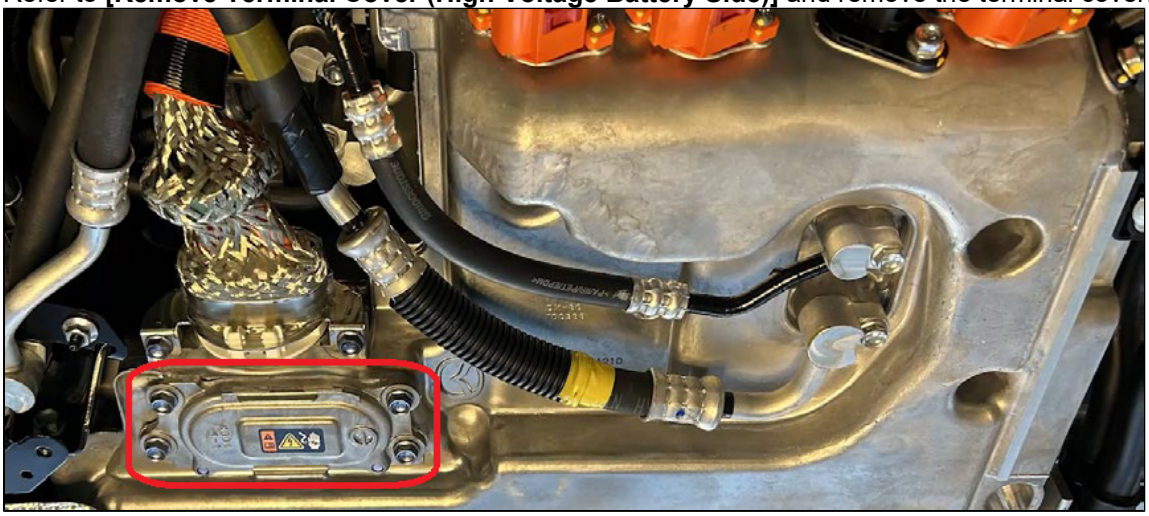
HIGH-VOLTAGE CIRCUIT INSPECTION PROCEDURE

This procedure checks the continuity of the high-voltage circuit, including the A/C compressor, DC-DC converter, and Water Heater fuses.



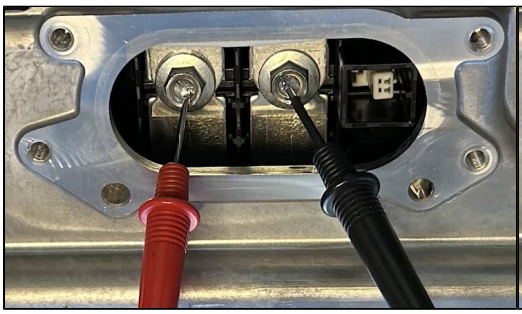
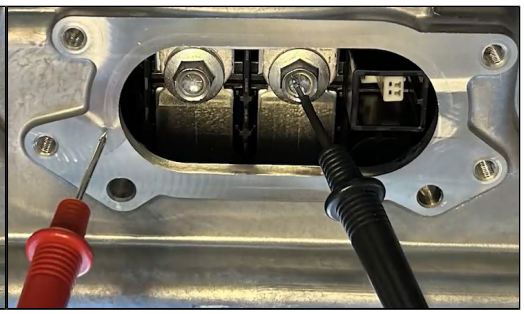
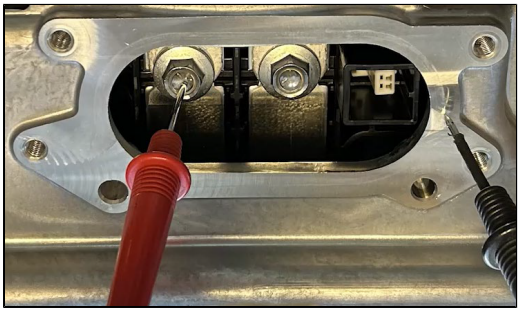
1. Set the vehicle on the lift.
2. Move the driver's seat to the most forward position to make it easy to access the service plug.
3. Turn off the vehicle to IG-OFF.
4. Refer to **[NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION]** and disconnect the 12V battery negative terminal.
5. Refer to **[SERVICE PLUG REMOVAL/INSTALLATION]** and unplug the service plug.
   CAUTION: Always follow the **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]** when working on any high-voltage components.
6. Lift the vehicle.
7. Refer to **[FRONT UNDER COVER REMOVAL/INSTALLATION]** and remove *Front Under Cover No.3* and *Floor Under Cover (left side)*.
8. Wait for 10 minutes after unplugging the service plug.

9. Refer to **[Remove Terminal Cover (High Voltage Battery Side)]** and remove the terminal cover.



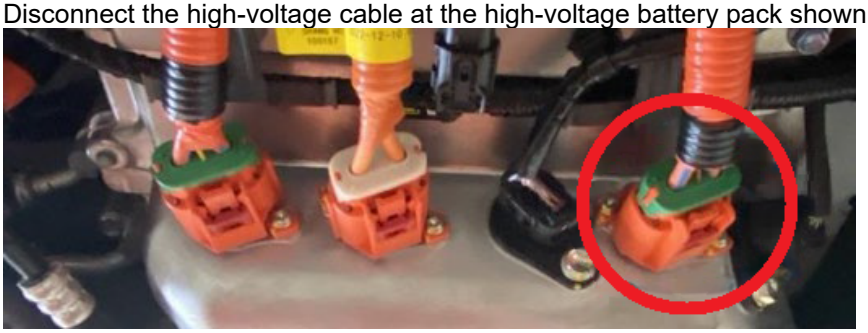
NOTE: Gaskets do not need to be ordered at this stage; if battery repair or replacement is required, gaskets will be ordered as needed during that process.
CAUTION: Always follow the **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]** when working on any high-voltage components.

10. Measure the voltage between the terminals, and between each terminal and body ground. Verify that all three measurements indicate zero volts.

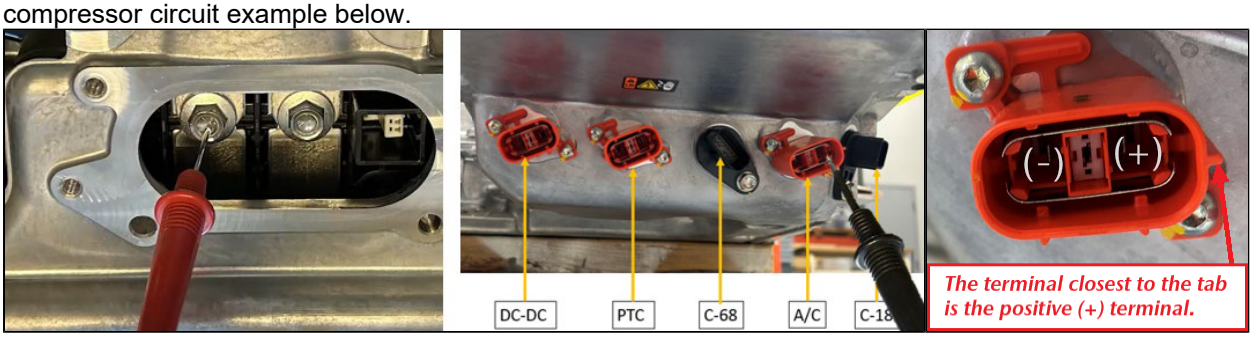
CAUTION: Always follow the **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]** when working on any high-voltage components.

11. Disconnect the high-voltage cable at the high-voltage battery pack shown below.



12. Switch your DVOM to read ohms (Ω) and then touch the leads together to ensure the resistance reading is steady and near 0Ω.
    NOTE: If your resistance is not near zero or fluctuates when touching the leads together, use another DVOM.

13. Measure the resistance between the high-voltage connector and the terminal box (+) side shown in the A/C compressor circuit example below.

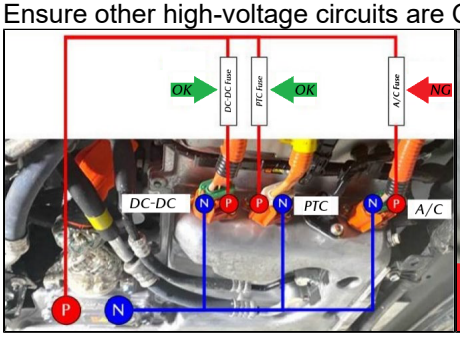


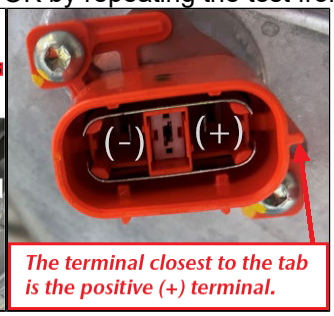
    CAUTION: Always follow the **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]** when working on any high-voltage components.

14. If a fuse is blown, the measurement will be open; if the fuse is OK, the measurement will be 1 Ω(ohm) or less.

Condition	Resistance (Ω)
NG	Open (OL or ∞)
OK	< 1.0 Ω

15. Ensure other high-voltage circuits are OK by repeating the test from STEP 13 on the DC/DC and PTC connectors.





CAUTION: Always follow the **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]** when working on any high-voltage components.

16. Check the continuity between the terminal box (+) and each high-voltage connector's positive side DC-DC and PTC.
CAUTION: Always follow the **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]** when working on any high-voltage components.

17. Check the continuity between the terminal box (-) and each high-voltage connector's negative side DC-DC, PTC, and A/C.
CAUTION: Always follow the **[HIGH VOLTAGE SYSTEM SERVICE CAUTIONS]** when working on any high-voltage components.

WARRANTY INFORMATION

	Repair Performed	No Problem Found
Warranty Type	A	
Symptom Code	59	
Damage Code	9Q	8Z
Part Number Main Cause	****-30-210	5555-NT-EGI
Quantity	0	
Operation Number / Labor Hours:	F0008XDX / Actual Time	F0008XDX . 0.5 hours