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FIELD SERVICE PROCEDURE

eBoost eWay → eWay Pro

Busbar Upgrade Procedure

750 A 4-terminal busbar → 1200 A 5-terminal busbar

DOCUMENT CONTROL

Product	Fortress Power eBoost Battery System
Component	eBoost eWay Busbar Assembly
Upgrade result	4-terminal 750 A busbar → 5-terminal 1200 A busbar

SERVICE-LEVEL PROCEDURE
This upgrade must be performed only with the battery system fully de-energized and verified at zero volts. Read Section 2 in full before beginning.

1. Overview

This procedure describes how to convert an eBoost **eWay** busbar assembly to the higher-capacity **eWay Pro** configuration. The upgrade replaces the positive and negative busbars with wider, higher-current bars and adds one additional connection terminal, increasing both continuous current capability and parallel-battery capacity.

The original busbar provides **four terminals** – one inverter feed plus three battery connection points – and is rated for **750 A**, supporting up to **three** eBoost units in parallel. The eWay Pro busbar adds a **fifth terminal**, raises the continuous rating to **1200 A**, and supports up to **four** eBoost units in parallel.

At a glance – original vs. eWay Pro

Parameter	Original eWay	eWay Pro (upgraded)
Busbar continuous rating	750 A	**1200 A**
Connection terminals	4 (1 inverter + 3 battery)	**5 (1 inverter + 4 battery)**
Parallel eBoost capacity	Up to 3 units	**Up to 4 units**
Bridge component	Original	1200A Bridge
Voltage Sensor	Original	Re-used (re-mounted)

WHAT THIS UPGRADE DOES NOT CHANGE
The bridge component and the-sensor assembly are retained from the original eWay. Only the positive and negative busbars are replaced. Do not discard the bridge or sensor during disassembly.

2. Safety Information

WARNING –
DC energy is present in battery systems. Improper service may cause electric shock, severe injury, or equipment damage.
Before performing this procedure:

- Power down the battery system completely.
- Disconnect the inverter and all external DC connections.
- Verify **zero voltage** on the terminals with a e meter.
- Use insulated tools throughout.

CAUTION — INSTALLATION INTEGRITY

Incorrect installation of the busbars may result in improper sensing, overheating, or system fault conditions. Always verify correct polarity and torque values before returning the unit to service.

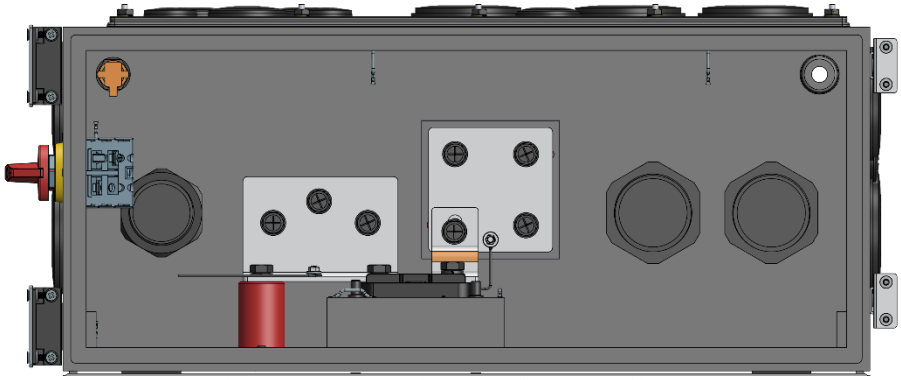

Figure 1 — eWay assembly placed on the service workbench

4. Required Tools and Parts

Item	Description	Type
M3 hex socket	Drives the M3 current-sensor screws	Tool
M13 hex socket	Drives the M13 busbar bolts	Tool
Ratchet / wrench	Drive handle for both sockets	Tool
Positive busbar (Pro)	1200 A 5-terminal positive bar	Part
Negative busbar (Pro)	1200 A 5-terminal negative bar	Part
M13 bolts	Replacement busbar bolts	Optional

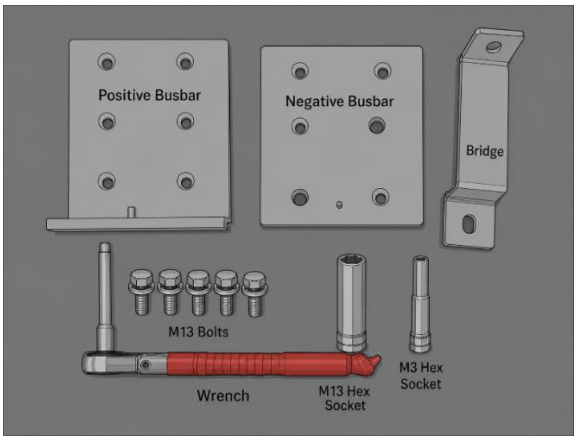

Figure 2 — Required tools and parts (Pro busbars, bridge, M13 bolts, sockets, wrench)

RULE OF THUMB

Lay out the positive busbar, negative busbar, and bridge before you begin so each part is identified. The bridge from the original assembly is re-used — keep it within reach.

5. Remove the Existing Busbars

Remove the existing positive and negative busbars, then remove the current-sensor assembly.

Remove	Fastener	Driver
Positive & negative busbars	M13 hex bolts	M13 socket
Current-sensor assembly	M3 hex screws	M3 socket

> **RETAIN THESE PARTS**
> Set the current sensor and the bridge component aside for re-use. Only the bus bars are being replaced.

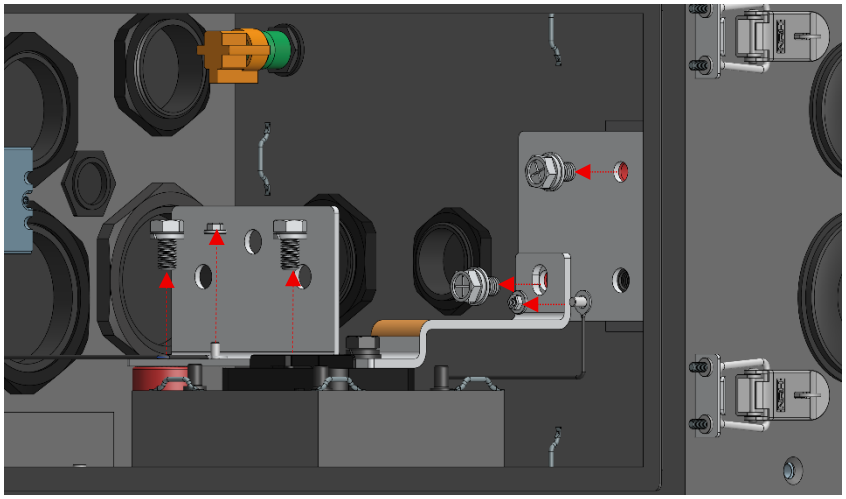

Figure 3 — Busbar and sensor removal from the eWay

6. Install the Negative Busbar

1. Confirm the original negative busbar has been removed.
2. Install the sensor mounting screws. **Do NOT fully tighten yet.**
3. Position the new negative busbar.

Installation order

Bridge plate → Busbar

> **BRIDGE IS RE-USED**
> The existing bridge component does not require replacement. Seat the new busbar on top of the original bridge plate in the order shown above.

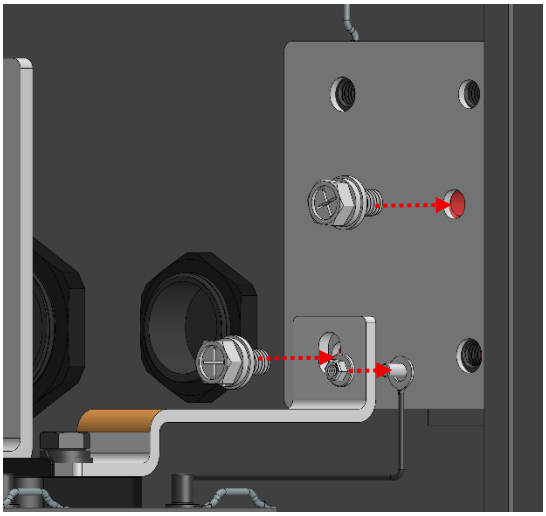

Figure 4 — Negative busbar installation over the retained bridge plate

7. Secure the Negative Busbar

4. Tighten the busbar using the M13 bolts. **The longer bolt goes into the lower-left slot.**
5. After the busbar is secured, tighten the sensor screws.

Torque specification

Fastener	Torque	Driver
M13 busbar bolt	45 – 55 Nm	M13 socket
M3 sensor screw	0.5 – 0.7 Nm	M3 socket

> **CAUTION — SENSOR CLEARANCE**
> Ensure the current sensor does not contact the bridge component. Contact between the sensor and the bridge can cause inaccurate current readings or a fault condition.

8. Install the Positive Busbar

6. Install the sensor screws first.
7. Leave the screws slightly loose.
8. Position the positive busbar.

9. Secure the Positive Busbar

9. Tighten the busbar using the M13 bolts.
10. Tighten the sensor screws.

Torque specification

Fastener	Torque	Driver
M13 busbar bolt	45 – 55 Nm	M13 socket
M3 sensor screw	0.5 – 0.7 Nm	M3 socket

> **CAUTION — SENSOR CLEARANCE**
> Verify sensor clearance from the bridge component on the positive side as well. The sensor must not touch the bridge.

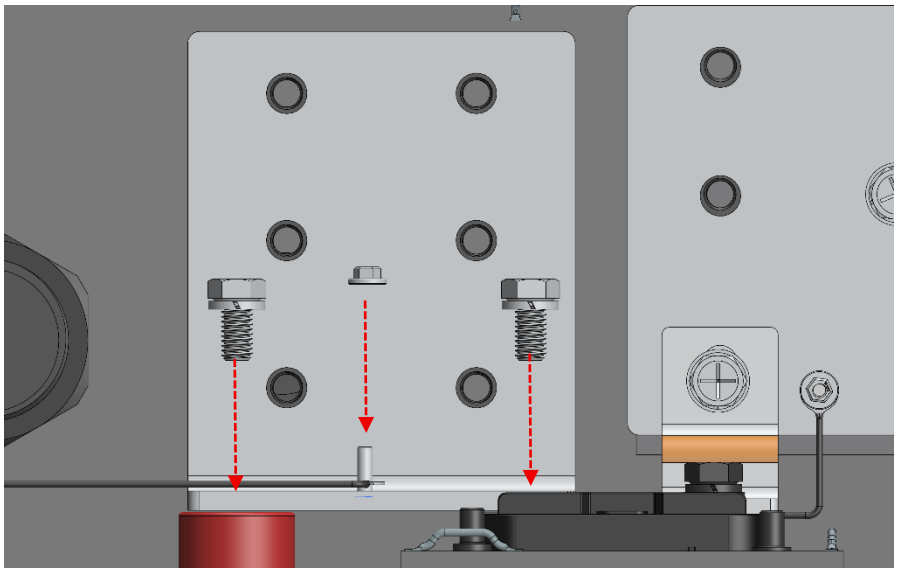

Figure 7 — Final busbar installation

10. Final Inspection

Before reinstalling the unit, verify each of the following:

- ✓ Positive and negative busbars correctly oriented
- ✓ All M13 bolts torqued to specification (45 – 55 Nm)
- ✓ Current sensor mounted correctly and screws torqued (0.5 – 0.7 Nm)
- ✓ No contact between the sensor and the bridge component
- ✓ All hardware properly secured

RECOMMENDED — LABEL THE TERMINALS

Clearly label the positive and negative terminals to avoid confusion. Use the original eWay label or an additional label so polarity is unambiguous at every connection point.

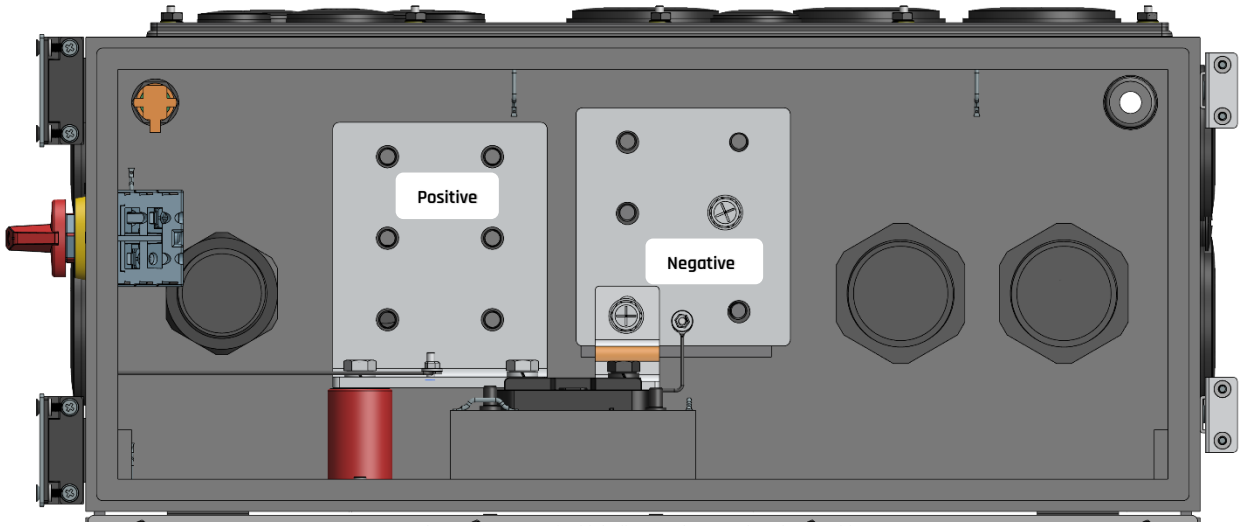

Figure 8 — Terminal labeling on the completed assembly

11. Result

After completing this upgrade, the assembly is converted to the eWay Pro configuration:

- Busbar continuous current capacity increases to **1200 A**.
- The system supports up to **4 eBoost batteries** in parallel.
- Improved system scalability and current-handling capability.

QUICK REFERENCE — TORQUE & RATINGS

M13 busbar bolts: 45 – 55 Nm · M3 sensor screws: 0.5 – 0.7 Nm · Pro busbar rating: 1200 A · Parallel capacity: 4 eBoost units.