



INSTRUCTION TO SERVICE

ITS-61522		January 27, 2026
SECTION:	260 – Battery System	
SUBJECT:	XALT batteries, XMOD and BDU removal for recycling	
ISSUE:	Feudenberg GEN3 batteries (XMOD125E, XMOD123E, XMP123E) recall cost.	
SUMMARY:	Dismantle ESS XALT Packs and remove battery modules and BDU for recycling.	

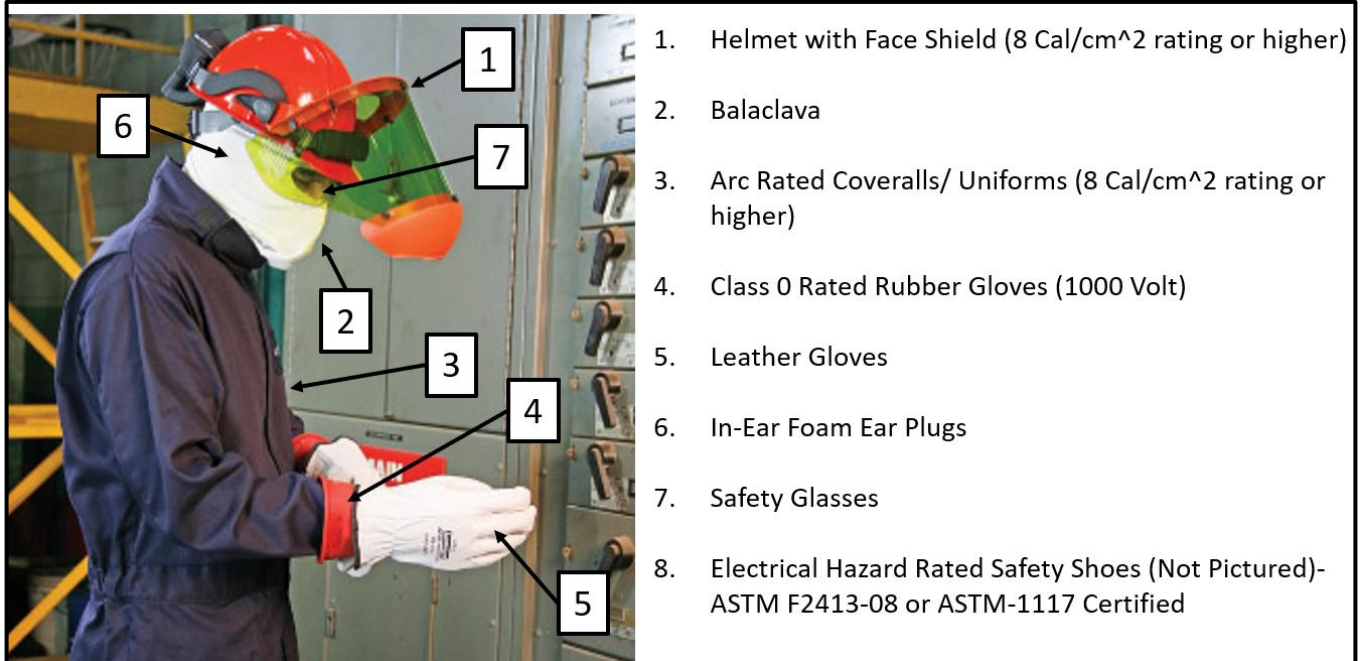
ITS-61522

Ref. NHTSA Recall No.	Ref. Transport Canada Recall No.
Not Applicable	Not Applicable

THIS ITS DOCUMENT SHOULD BE RETAINED AND REFERRED TO FOR FUTURE MAINTENANCE UNTIL THE NEW FLYER PARTS AND/OR SERVICE MANUAL IS UPDATED TO REFLECT WORK DONE AS A RESULT OF THIS DOCUMENT. ENSURE THAT THIS DOCUMENT IS AVAILABLE FOR PARTS AND MAINTENANCE STAFF GOING FORWARD.

SAFETY:

When exposed to high voltage, NFPA 70E Class 2 (8 Cal/cm²) PPE is required. Inspect the provided PPE for damage or defects prior to use. See below for the required equipment. Never work with high voltage alone. Always have another qualified electrician in the area. Use 1000V insulated tools wherever possible, when voltage is present. CAT 0 1000V gloves and leather liners should be worn if there are exposed terminals.



PROCEDURE:

1. This ITS is to be performed after removal of ESS Enclosure from the bus.
2. Remove the lid of ESS Enclosure by removing all 42 fasteners and warranty cable.

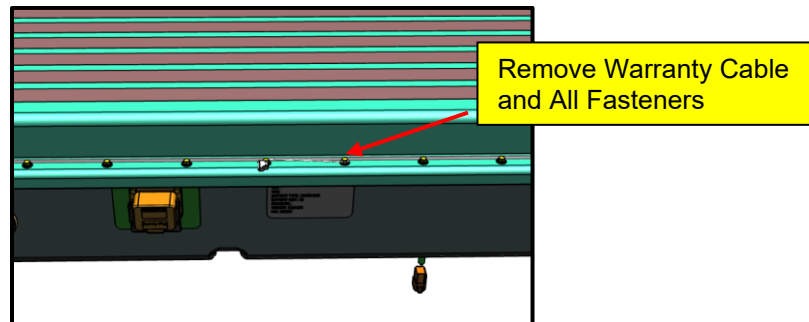


Figure 1: Front of ESS Enclosure

3. Cover the BDU with a HV Insulating mat.
4. Remove the terminal cover on Battery 1 (negative) and disconnect the HV cable by removing M6 fastener.
5. Remove the terminal cover on Battery 7 (positive) and disconnect the HV cable by removing M6 fastener.
6. HV insulating mat can be removed once HV cables are disconnected.

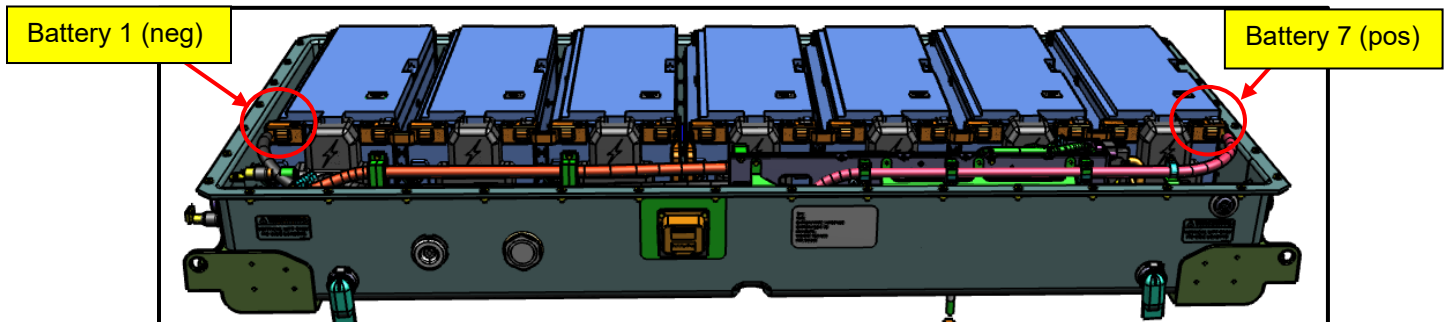


Figure 2: Battery High Voltage Cables Connection

7. Remove flexible bus bars marked in Figure 3 by removing terminal covers and M6 fasteners.
8. Place all bus bars in a bin for recycling.

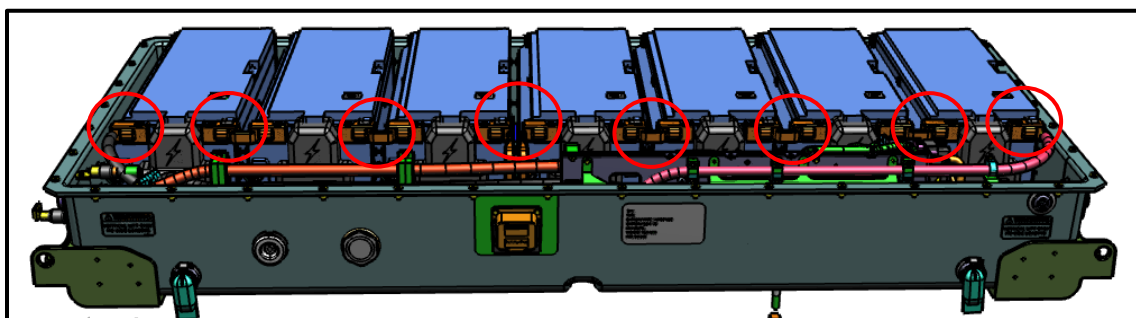


Figure 3: Flexible Bus Bars Removal

9. All terminal covers must be installed back on all battery modules.



Figure 4: Terminal Covers Installed Back on Battery Modules

10. Disconnect the low voltage harness from the BDU assembly, ground and sensors.

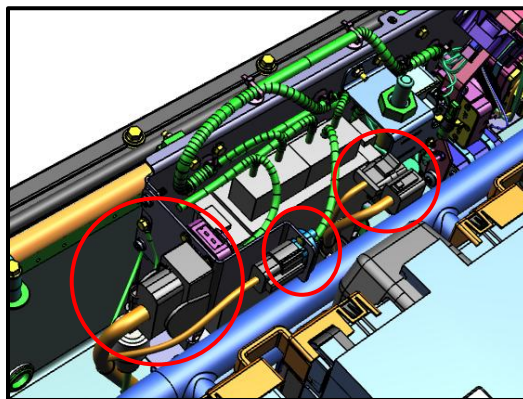


Figure 5: Low Voltage Connectors on BDU

11. Remove HV cables on BDU assembly by removing cable clamps and towers.
12. Set aside HV cables for recycling purposes along with the bus bars.



Figure 6: High Voltage Cables on BDU

13. Once LV harness and HV cables are disconnected, remove BDU assembly by removing M5 bolts on the mounting bracket. Place BDU assembly in BDU Packaging for recycling.

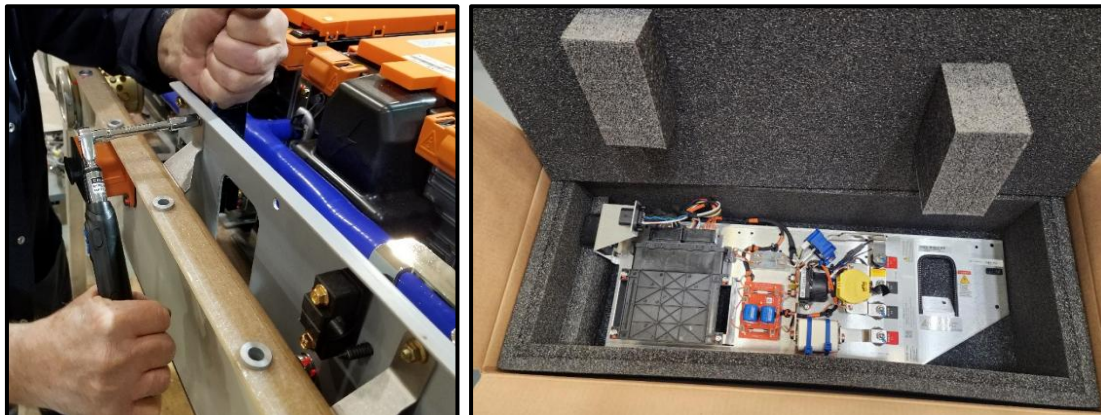


Figure 7: BDU Assembly on Mounting Bracket and Packaging

14. Remove MSD bus bars on battery 3 and 4 by removing M6 hardware. Terminal covers would have to be removed on the battery side. Reinstall terminal covers after removing bus bars.

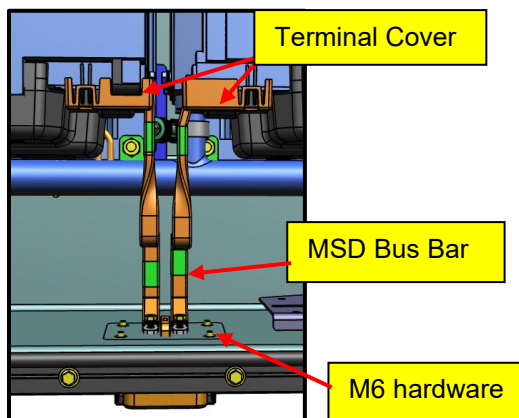


Figure 8: Front of ESS Enclosure

15. Remove ideal waveseal/flexgear Clamps (5/16" 8mm hex head) on upper coolant header hose.
16. Disconnect hose from bulkhead and battery. Discard coolant hose.
17. Repeat 16-17 for lower coolant header hose.
18. Collect residual coolant from hose in the catch bucket.

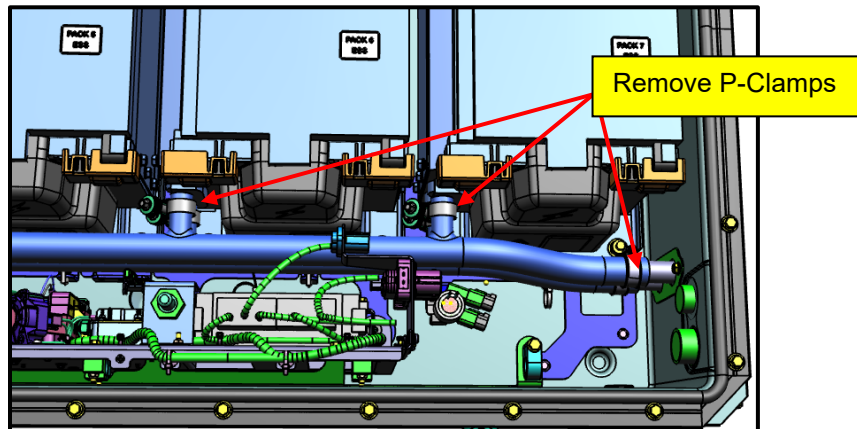


Figure 10: Coolant Header Hoses and Clamps Removal

19. Install caps on coolant ports of each battery.

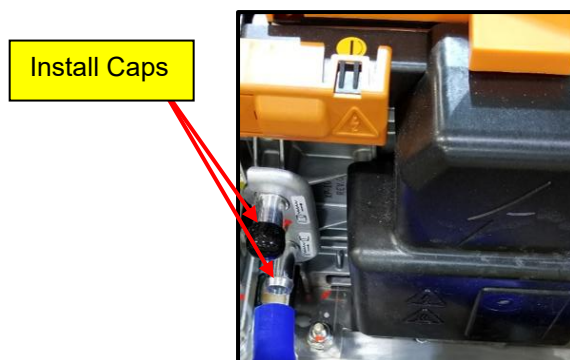


Figure 11: Cover Battery Coolant Ports

20. Remove the battery face cover and disconnect the VTB connectors on each battery. Reinstall battery face cover after.

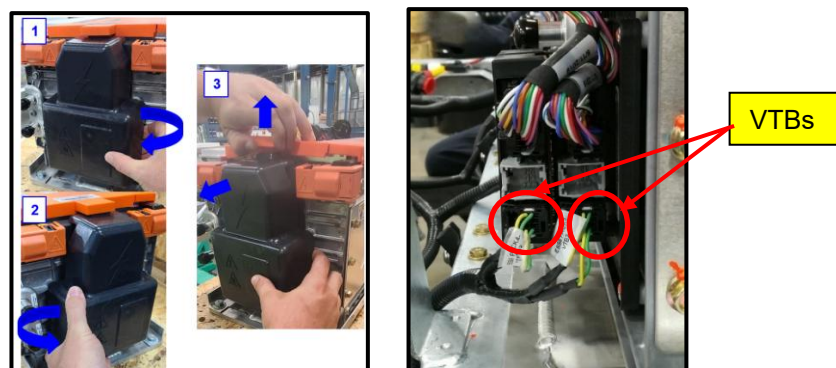


Figure 12: VTB Connectors Removal

21. Remove M10 nuts on each battery. Note that there is a ground lug (to be removed) between battery 3 and 4.

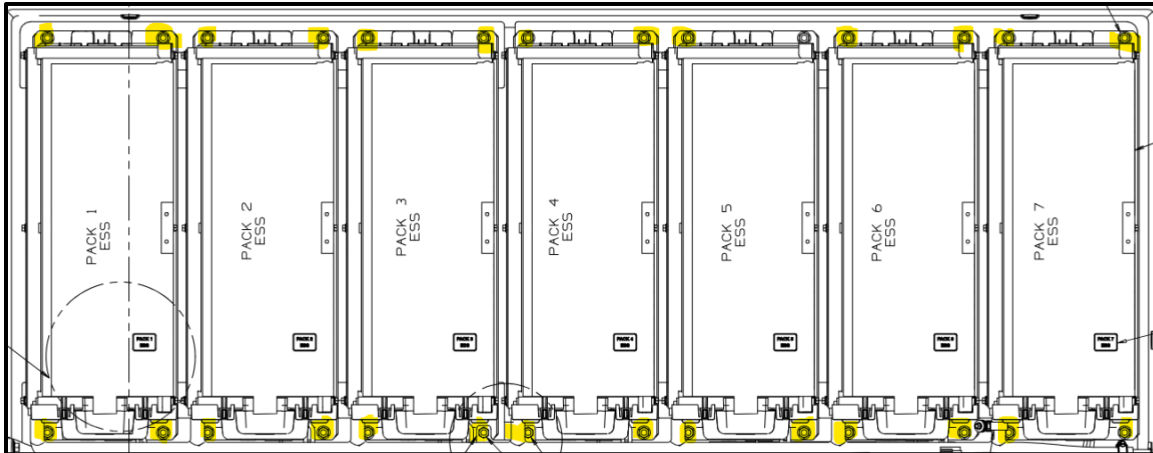


Figure 13: ESS Enclosure Top View

22. Use approved lifting device and overhead crane to remove each battery from ESS enclosure.

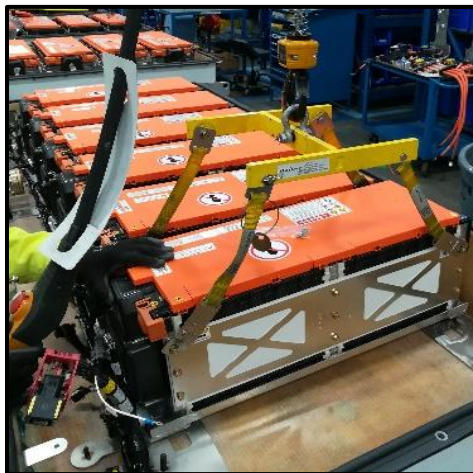


Figure 14: XALT Battery Removal using Lifting Device

23. Place all 7 batteries in battery box for recycling purposes.

- Place battery module on the packaging base. Properly align battery modules on mounting holes.



Figure 15: XALT Battery on Packaging Base

- Secure modules on all four corners with provided bolts and washers of the packaging.



Figure 16: XALT Battery Mounted on Packaging Base

- Install the packaging cover and clips.



Figure 17: XALT Packaging

24. Repeat procedure for the rest of ESS enclosures.
25. Remove all tools and debris.
26. Properly dispose/scrap the rest of components.

LABOUR ESTIMATE

	Operation	Number of Technician(s)	Hours	Labor Time T X HR
1	Remove and package XALT batteries and BDU for recycling.	3	7	21

PARTS REQUIRED

Item	Part Number	Description	Qty. per Coach	Units	Notes
	6701875	Battery Coolant Port Plug (.591)	100	ea	Qty 14 per string

SPECIAL TOOLS REQUIRED

Item	Part Number	Description	Qty.	Units	Notes
	6485510 or equivalent	XALT Lifting Tool			
		ESS Lifting Tool			
		Overhead Crane or Forklift			
		XALT Batteries Packaging			
		BDU Packaging			