

Cell Replacement Procedure

By Eric Martocci, Spring 2017

Tools Needed

5/32" Allen wrench
7mm socket and ratchet
(4) 1/4"-20 X 3/4" Button Head Allen Bolts
Cell compression tool
7/16" combination wrench
Utility knife

Cell Removal Procedure

1. Remove top center panel and sides from pack.
2. Remove AMS boards keeping track of their order on the cells. (Fig. 1)



Fig. 1

3. Using 7mm socket and ratchet, remove M4 hex head bolts and busbars from bad cell. (Fig. 2)

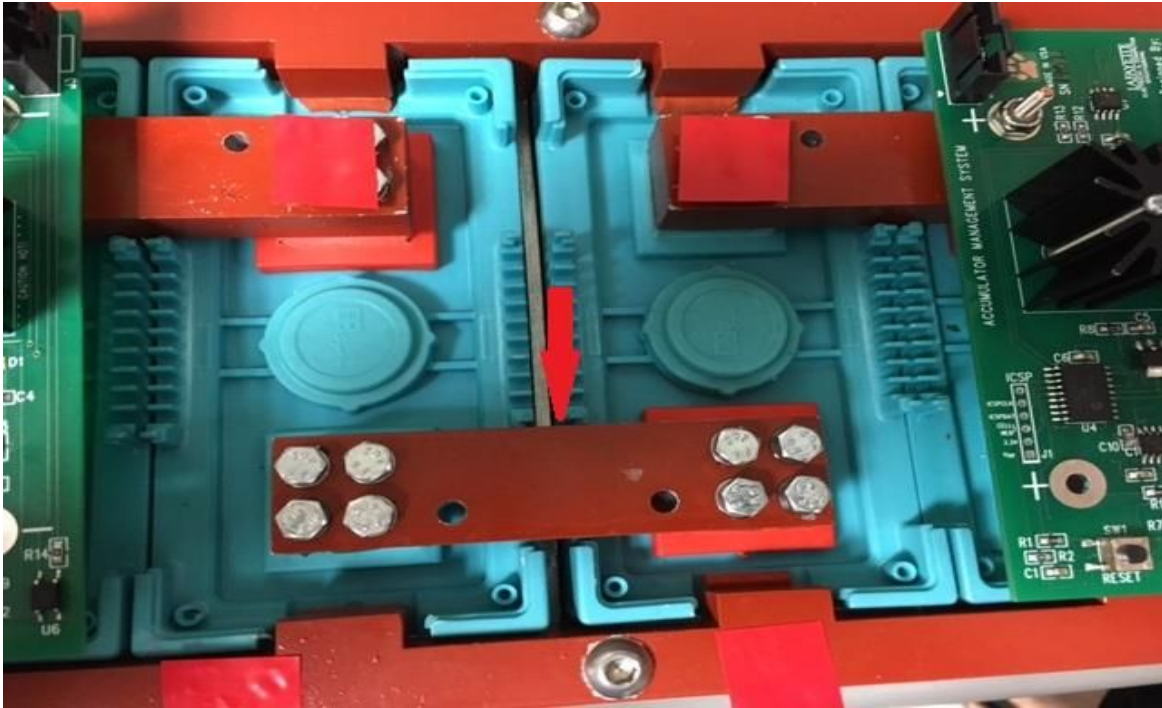


Fig. 2

4. Lay pack on its side and loosen four 1/4"-20 button head allen bolts. (Fig. 3)



Fig. 3

5. Install cell compression tool on side of cell section using (4) 1/4"-20 x 3/4" button head allen bolts and tension 1/4" rod using 7/16" combination wrench. (Fig. 4)



Fig. 4

6. Remove (3) $\frac{1}{4}$ "-20 button head allen bolts from top of cell hold down bar and remove bar. (Fig. 5)



Fig. 5

7. Remove tension from 1/4" rod on cell compression tool and remove compression tool from side of cell section.
8. Repeat steps 5 -7 on opposite side of cell section.
9. Remove bad cell.

Cell Installation Procedure

1. Using the utility knife remove the nobs from the sides of the new cell. (Fig. 6)



Fig. 6

2. Slide new cell into pack.
3. Install cell compression tool on side of cell section using (4) 1/4"-20 x 3/4" button head allen bolts and tension 1/4" rod using 7/16" combination wrench. (Fig. 4)
4. Check that all cells have a rubber block on top of them and install cell hold down bar using (3) 1/4"-20 x 1-1/2" button head allen bolts. (Fig. 5)
5. Remove tension from 1/4" rod on cell compression tool and remove compression tool from side of cell section.
6. Repeat steps 3 – 5 on opposite side of cell section.

7. Lay pack on its side and tighten four 1/4"-20 button head allen bolts. (Fig. 3)
8. Place a thin layer of conductive grease on cell connection pads where busbars were removed and install busbars using M4 hex head bolts. (Fig. 2)
9. Install all AMS boards keeping the same order in which they were removed. (Fig. 1)
10. Install top center panel and sides on pack.