Main bus connection

For units requiring main bus, connections should be made using 3/8–16 HHCS, flat washers, lock washers, and nut. Apply 18–25 lb ft torque. Bus splice plates will be shipped connected to one end of the unit split. See Figure 1.

Figure 1. Main Bus Splice

Note: The boots are included only in the event that the main bus is insulated. Otherwise, the bus is not booted.

Ground bus connection

Ground bus is typically linked between units/splits using a braided flexible shunt (P/N 151B587G02). Ground bus links will be shipped connected to one end of the split. See Figure 2 and Figure 3. Connections should be made using 3/8-16 HHCS with flat and lock washer. Apply 18–25 lb ft torque. In specific configurations, hard bus links may be used, but hardware and torque values will be consistent.

Figure 2. Flexible Ground Bus Link

Figure 3. Flexible Ground Bus Link
In drive-to-drive applications, the ground bus connection will generally be made through the forward most opening in the side sheet. In rear aligned drive to AMPGARD® applications, the ground bus connection will be made through the central opening of the drive, while the forward opening is blanked by a cover plate. See Figure 4.

![Forward Ground Bus Opening](image1)

**Figure 4. Ground Bus Openings**

**Structure connection**

Drive-to-drive and shipping splits within a drive unit are directly coupled. One coupling method uses a side sheet with weld nut where the mating side sheet has a clearance hole. Other couplings use clearance holes in both mating sheets. In either case, 3/8-16 HHCS, flat washer, and lock washer are to be used and torqued to 18–25 lb ft torque. See Figure 5.

![Example of Structure Connection Points](image2)

**Figure 5. Structure Connection Points and Connection Detail**

Drive units are secured to AMPGARD units through the use of a transition section. In these applications, Tinnerman® nuts are placed in the side sheet of the drive and the transition section is bolted to it using 3/8-16 HHCS with flat and lock washer. Tinnerman nuts (5/16-18) are also placed in the opposite flange (AMPGARD side) of the transition section. See Figure 6 and Figure 7.

![Transition Section](image3)

**Figure 6. Transition Section**

![Transition Section](image4)

**Figure 7. Transition Section**
As shown in Figure 8, the AMPGARD-Drive connection is made by passing hardware through the AMPGARD side sheet into the Tinnerman nuts of the transition, and requires the use of 5/16-18 x 2 HHCS, two flat washers, lock washer, and spacer (Eaton PN 25A4184H01, .625OD x .328ID x .85LGH and torqued to 10–14 lb ft). See Figure 9.

**Figure 8. Transition Connection to AG**

The AMPGARD Structure Connection Point

Hardware Required for Connection of AMPGARD to Transition Section

**Figure 9. Hardware for Transition to AG**

**LV connection**

LV pathways for drive-to-drive and shipping splits within a drive are located in the upper front area of the side sheet as shown in Figure 10. Within the drive, LV cables are routed along the top front of the cabinet (Figure 11) and in some cases are nested in wireways (Figure 12).

**Figure 10. LV Pathway Between Splits**

Drive/Drive LV Pathway

Drive/AMPGARD LV Pathway

**Figure 11. LV Pathway**

LV Path—Top Front

**Figure 12. LV Wireway**

LV Wireway

**Figure 13. LV Termination at Split**

Example of LV Termination at Split

LV pathways between drives and AMPGARD are most often located in the center of the drive side sheet as shown in Figure 10. In each case, pull apart terminal blocks are the general method of providing breaks between units. See Figure 13.
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