

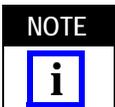
Figure 1

**1. INTRODUCTION**

This instruction sheet provides information on the assembly and installation of the Manual Service Disconnect (MSD) plug assembly 1587992-[] shown in Figure 1. This assembly mates with the receptacle assembly protruding from the vehicle battery pack.

Each plug assembly consists of a plug outer housing, a plug inner housing, peripheral seal, lever, lever release, fuse, two bus bars, two shorting bars, two M8 set screws, and two M8 hex nuts. The plug assemblies are shipped as one piece.

Read these instructions carefully before attempting any assembly procedures. Refer to Instruction Sheet 408-10377 for MSD receptacle connector assembly instructions.



*Dimensions in the instruction sheet are in millimeters. Figures and illustrations are for reference only and are not drawn to scale.*

**2. COMPONENTS**

Figure 1 shows the components of the MSD plug assembly. The MSD plug assembly must be mated to the receptacle assembly in order to complete the installation sequence. For information on the receptacle assembly, refer to Instruction Sheet 408-10377.

**3. ASSEMBLY PROCEDURE**

The following procedures provide the details of the installation of the MSD plug assembly onto the receptacle assembly mounted to the device housing.

**3.1. Connector Mating**

1. Identify the polarization features that are located on the walls of the MSD receptacle outer housing as shown in Figure 2.

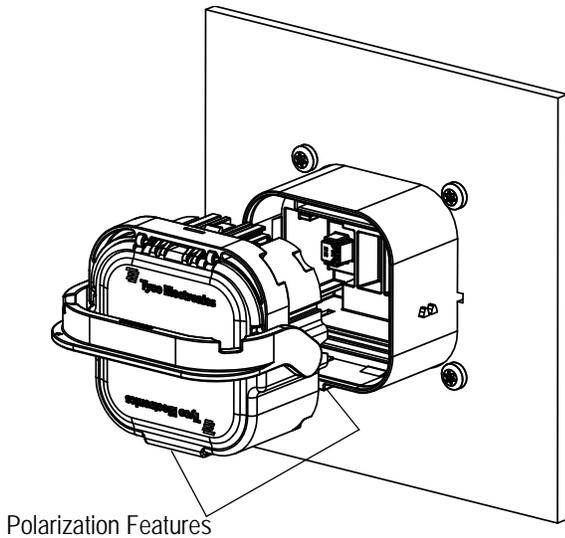


Figure 2

2. Line up the polarization features on the MSD receptacle outer housing with the mating polarization slots on the plug assembly as shown in Figure 2.
3. Ensure that the mounting interface surface of the MSD receptacle wall is clean, and that there are no surface contaminants within the mounting footprint.
4. Manually install the MSD plug assembly into the receptacle mounting interface, making sure that the polarization features are aligned correctly as shown in Figures 2 and 3. This is the pre-staged position, which flexes the passive latches of the lever release outwards so that the lever can be released from the pre-stage position. If the plug assembly and receptacle mounting interface do not fit together easily, check the following:

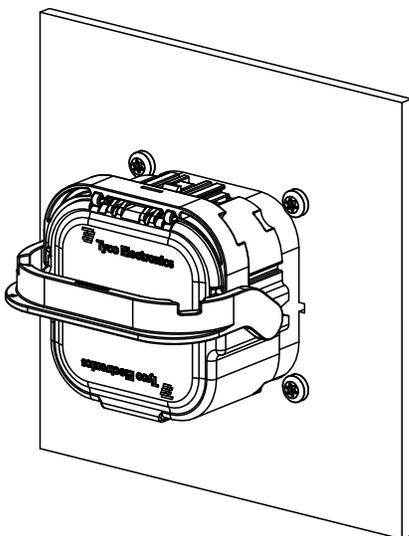
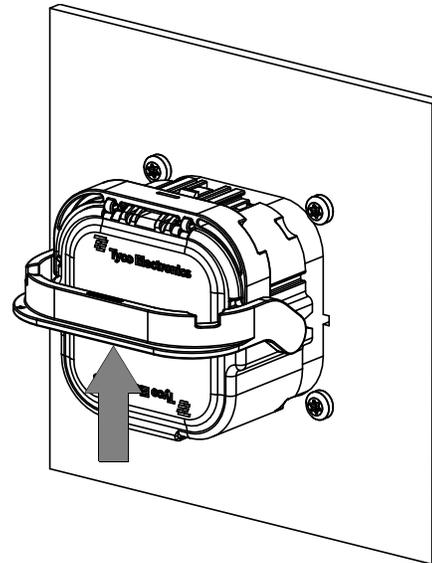


Figure 3

- Keying options on the MSD plug assembly match those on the receptacle mounting interface.
- MSD plug assembly and receptacle mounting interface are correctly oriented (180°).

5. Rotate the lever while maintaining a slight downward force on the plug assembly, as shown in Figures 4A and 4B. The lever gear features will engage the receptacle outer housing and draw the plug assembly down onto the receptacle as the lever is rotated.

4A



4B

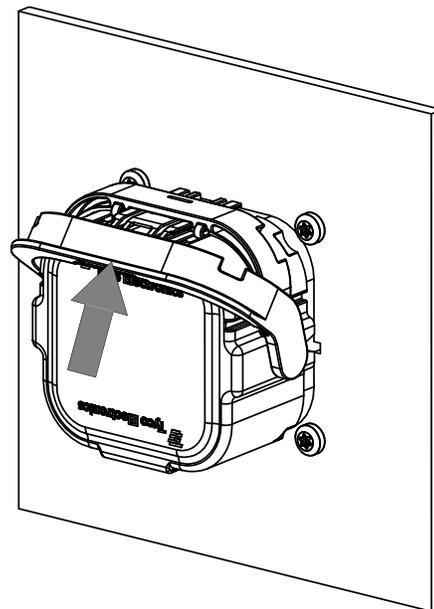


Figure 4

6. Once the lever is rotated to the end of the travel, an audible “click” will be heard as the lever latches into position as shown in Figure 5.
7. Completed assembly is shown in Figure 6.

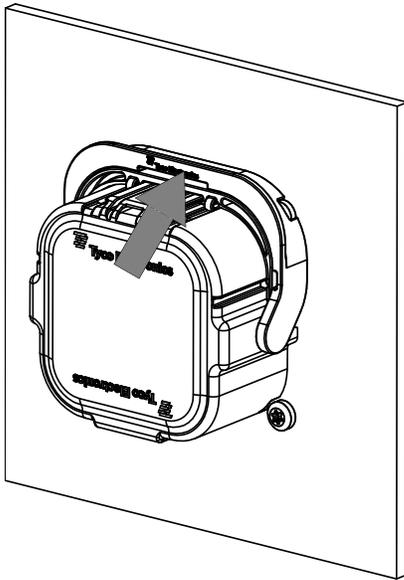


Figure 5

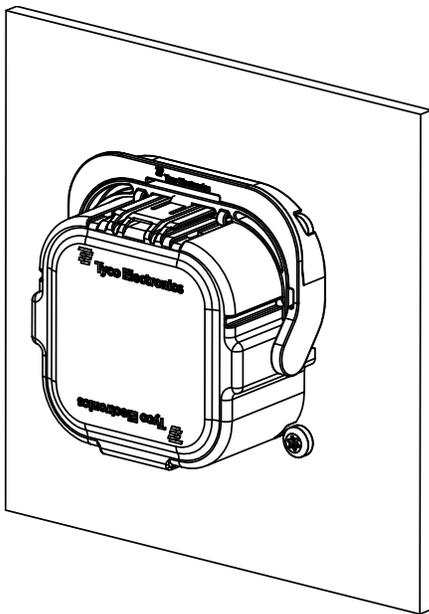


Figure 6

### 3.2. Connector Un-Mating

1. Depress the latch firmly. With the latch fully depressed, rotate the lever upward and away from the pack as shown in Figure 7.
2. Rotate the lever arm until it stops in the intermediate position, at approximately 45° from the pack housing as shown in Figure 8. At this stage, the high voltage inter-lock connection has been broken and the circuit is de-energized.
3. Depress the latch firmly. With the latch fully depressed, rotate the lever upward and away from the pack as shown in Figure 9.

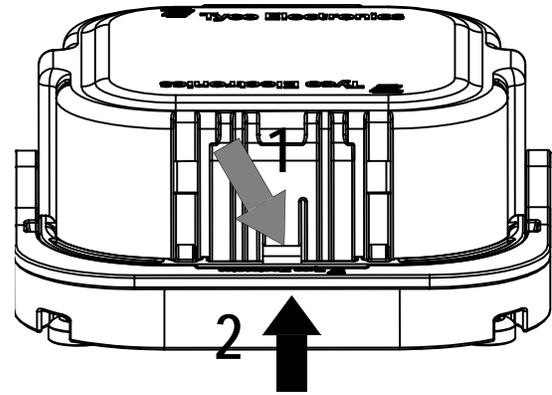


Figure 7

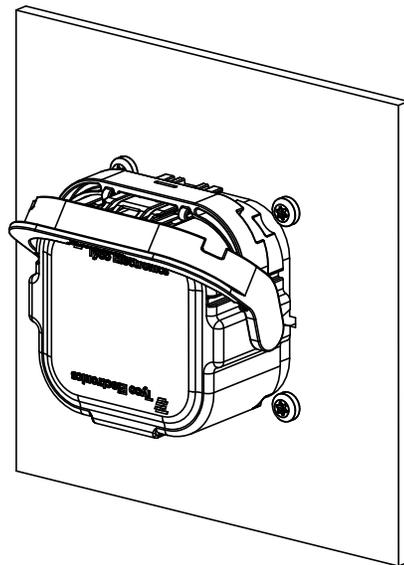


Figure 8

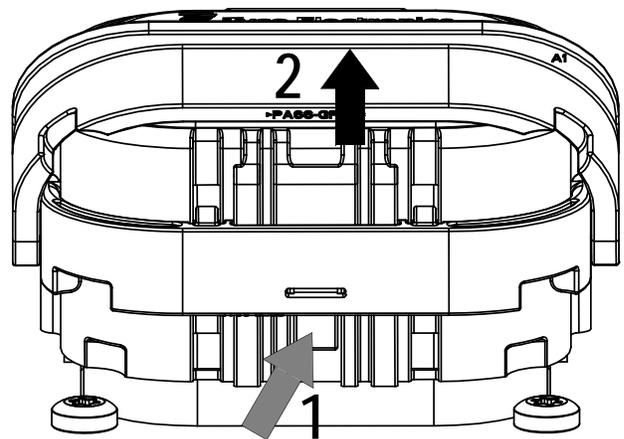


Figure 9

4. Continue to rotate the lever to the end of travel (90° from the pack) as shown in Figure 10.

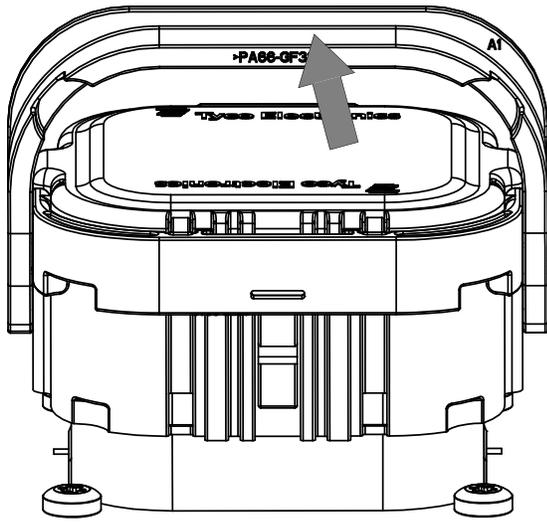


Figure 10

5. Pull straight back on the plug in order to disengage it from the receptacle as shown in Figure 11.

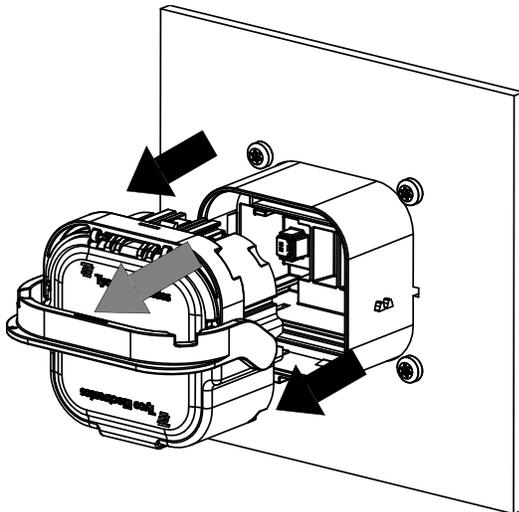


Figure 11

#### 4. CUSTOMER REQUIREMENTS - (WARNINGS AND DISCLAIMERS)



*Internal components of the MSD are not serviceable. In the event of part damage or failure, remove and replace the entire assembly as indicated in this instruction sheet. DO NOT attempt to separately replace single MSD components.*

#### 5. REPAIR



*Damaged product should not be used. If a damaged component is evident, it should be replaced with a new one.*

#### 6. REVISION SUMMARY

Initial release of document.