

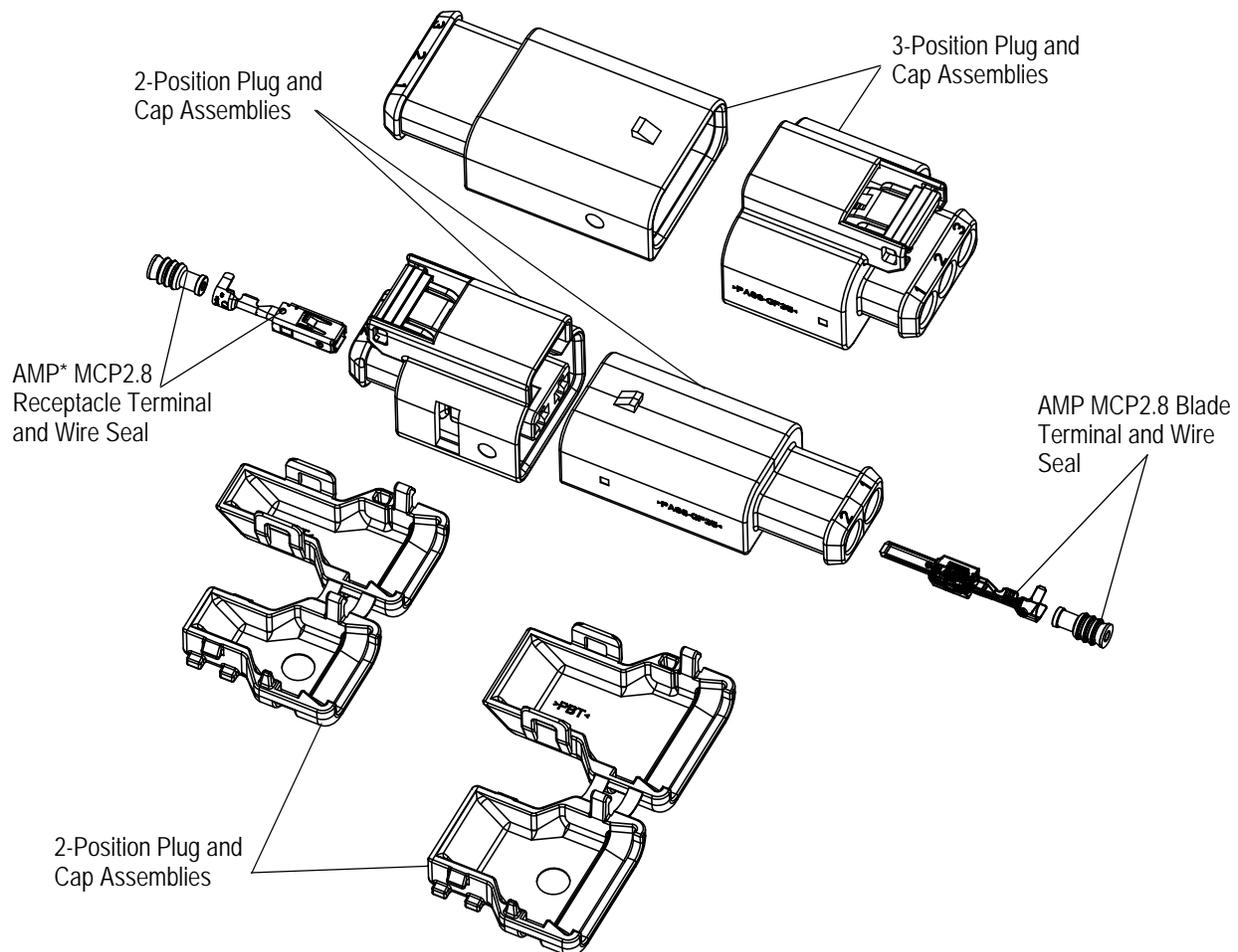
**Truck Light Connector System**


Figure 1

## 1. INTRODUCTION

This instruction sheet provides assembly and disassembly procedures for the 2-position and 3-position Truck Light Connector System. Read these instructions carefully prior to assembly or disassembly of this product.



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

## 2. REFERENCE DOCUMENTS

### 2.1. Specifications

Application Specification 114-18148-1 provides information on the application of AMP MCP2.8 Contact System Receptacles and Application Specification 114-18051-1 provides application information on AMP MCP2.8 Contact System Blades.

### 2.2. Drawings

Customer Drawings for each product part number are available from the service network. The information contained in Customer Drawings takes priority if there is a conflict with this specification or with any technical documentation supplied by Tyco Electronics. The following customer drawings are available for this product line:

- 1326455 - Assembly, Plug, Sealed, 2-Position, AMP MCP2.8
- 1326743 - Assembly, Cap, Sealed 2-Position, AMP MCP2.8
- 1326459 - Wire Dress, 2-Position, 180° Living Hinge
- 1326460 - Assembly, Plug, Sealed, 3-Position, AMP MCP2.8
- 1326744 - Assembly, Cap, Sealed, 3-Position, AMP MCP2.8
- 1326464 - Wire Dress, 3-Position, 180° Living Hinge

### 2.3. Supporting Tooling

The following tooling should be used for extraction of contacts from the housing assemblies:

1-1579007-6 Extraction Tool, AMP MCP2.8 Blade  
 1-1579007-2 Extraction Tool, AMP MCP2.8 Receptacle

In addition, a customer-supplied flat-blade screwdriver will also be required.

**3. DESCRIPTION** (See Figure 1)

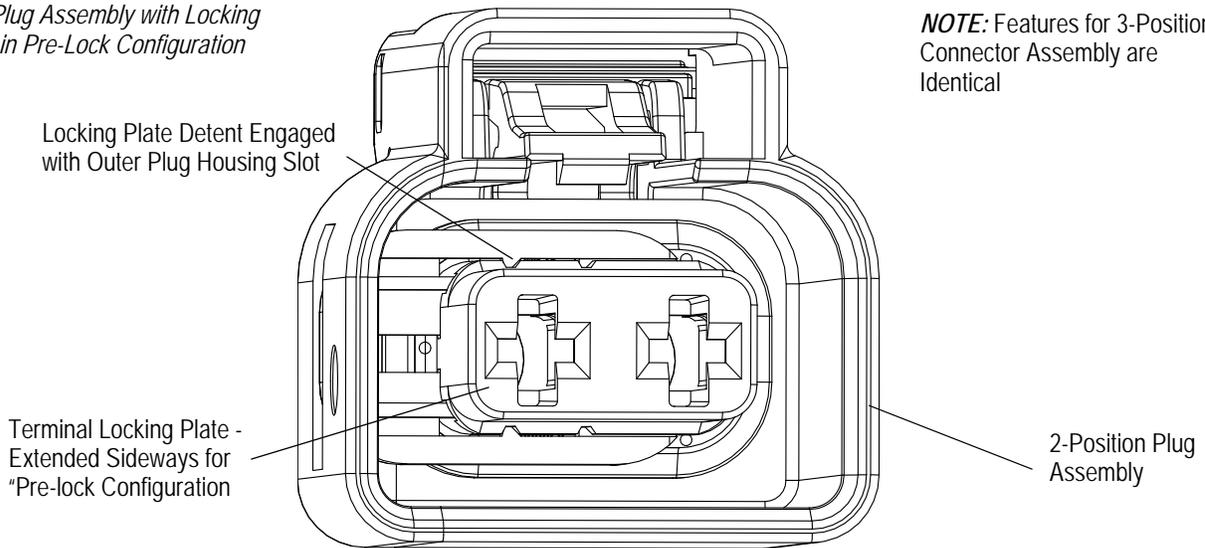
The Truck Light Connector System is a sealed connector system. The components to the system consist of a cap connector assembly, plug connector assembly, wire covers and AMP MCP2.8 terminals with wire seals. There are two configurations for this system (2- and 3-position connector pairs). The plug and cap connectors are designed with integrated terminal locking features. Termination of the wire to the AMP MCP2.8 terminals is provided in Application Specifications 114-18148-1 and 114-18051-1. The wire size range is 0.8 mm<sup>2</sup> [18 AWG] to 2.0 mm<sup>2</sup> [14 AWG].

**4. ASSEMBLY PROCEDURES**

To begin the assembly process, you first need to load the terminals into the respective cap and plug assemblies.

Each of the connector assemblies are supplied with terminal locking features which are set to a “pre-lock” position. The “pre-lock” position allows the terminals to be placed within the terminal cavity. If the locking feature is in a “full-lock” position, the terminal will not pass into the terminal cavity. Check the connector to ensure that the terminal locks are properly positioned (see Figures 2A and 2B). If the locking feature is in a “full-lock” position, you can reset this element to its’ proper position by following the process defined in Section 5 (DISASSEMBLY PROCEDURES).

*2A Plug Assembly with Locking Plate in Pre-Lock Configuration*



*2B Cap Assembly with Retainer in Pre-Lock Configuration*

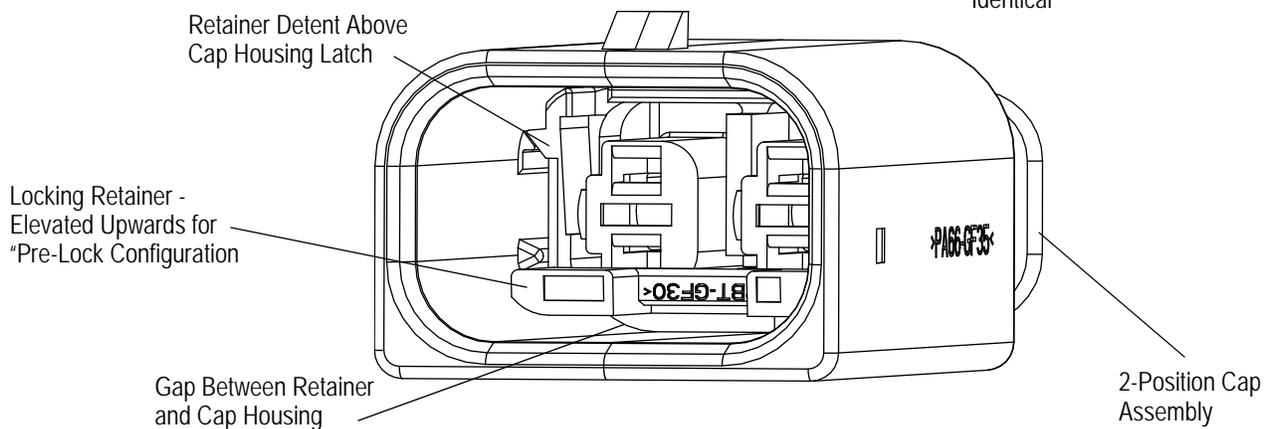


Figure 2

Terminal Insertion into Plug and Cap Assemblies

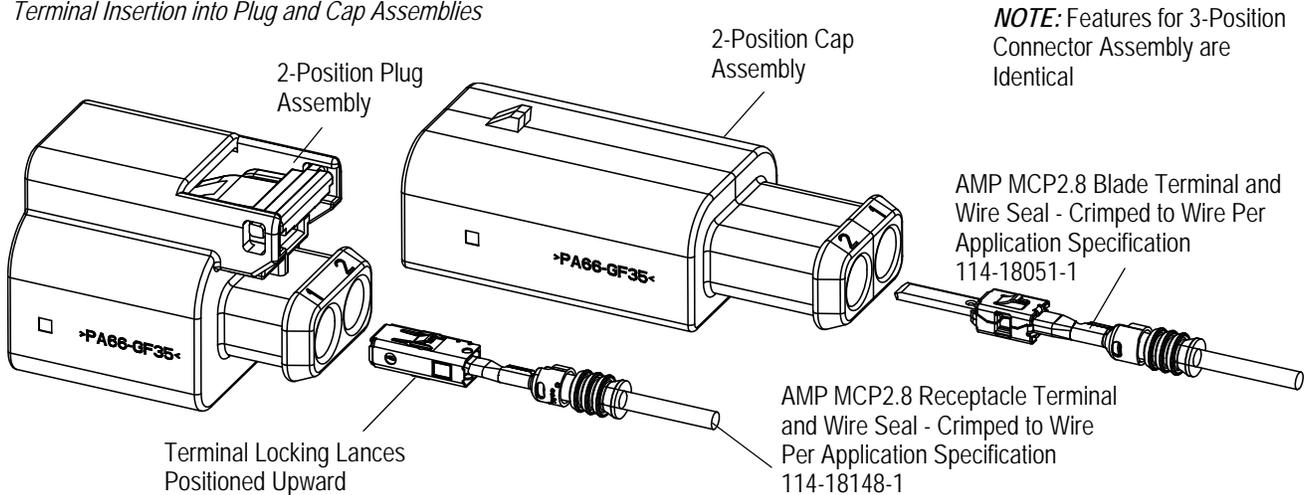


Figure 3

Terminals with wire seals which have been properly crimped can be loaded into the connector assembly from the rear of the connector. (See Figure 3.) The terminal should be oriented with the locking lances facing upward. Load the terminals into the cavity, pushing the terminal and wire seal into the connector until they are completely encased. An audible and tactile “click” will be heard and felt indicating the locking lances have engaged the locking detents within the terminal cavities. Slightly pull back on the wire to verify the loaded terminal is engaged with the connector detent.

With the connector fully populated with terminals, the locking feature can now be placed to the “full-lock” position. (See Figures 4A and 4B.) For the plug assembly, the locking feature should be pushed inward so the locking detent is now in the right most position (looking into the plug assembly). For the cap assembly, the locking feature should be pressed downward.

Fully assembled cap and plug components can now be mated. Orient the cap assembly with the plug assembly such that the rounded feature (internally on the plug and externally on the cap) are aligned. Push the cap assembly into the plug assembly, displacing the plug latch mechanism. An audible and tactile “click” should be heard and felt once the cap is fully mated to the plug. See Figure 5.

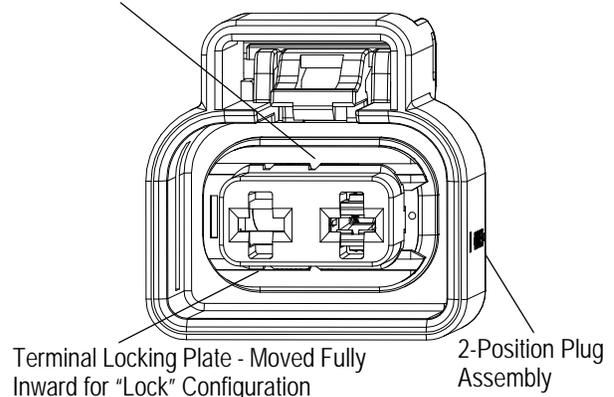
5. DISASSEMBLY PROCEDURES

Disassembly of the Truck Light Connector System begins with the unmating of the connector pairs. The plug assembly provides a latching feature which when depressed will lift the latch beams and allow the cap assembly to be pulled away from the plug connector. See Figure 5.

4A Plug Assembly with Locking Plate in Lock Configuration

Locking Plate Detent Engaged with Inner Plug Housing Slot

NOTE: Features for 3-Position Connector Assembly are Identical



4B Cap Assembly with Retainer in Lock Configuration

Retainer Detent Below Cap Housing Latch

NOTE: Features for 3-Position Connector Assembly are Identical

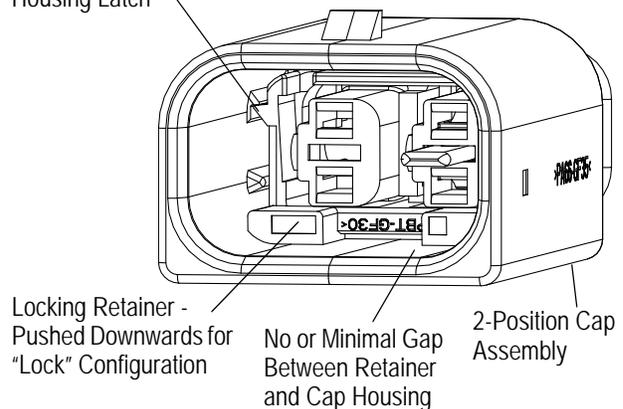


Figure 4

Having two separate connector assemblies, the process moves to the removing of the terminals from the connector. The first step is to place the internal locking features within the connector assemblies back to the “pre-lock position.”

*Plug and Cap Assemblies in Full Mate Configuration*

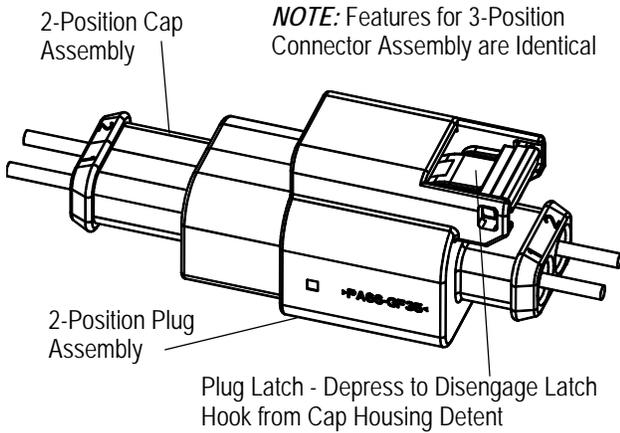


Figure 5

The terminal locking feature within the cap assembly can be restored to the “pre-lock” position by taking a flat-tip blade screwdriver with a tip thickness around 1 mm or any thin blade device and positioning it under the center of the locking feature (see Figure 6). Applying an upward force onto the bottom of the locking feature, dislodge the retainer from its’ full-locked” position, and move it upward to the “pre-locked” position. This effort may require performing this motion along several points across the bottom to obtain complete positioning. With the locking feature in the “pre-locked” position, a gap between the floor of the cap housing and the locking feature is evident. In this position, the terminals can be removed.

*Positioning Cap Assembly Retainer to Pre-Lock Position*

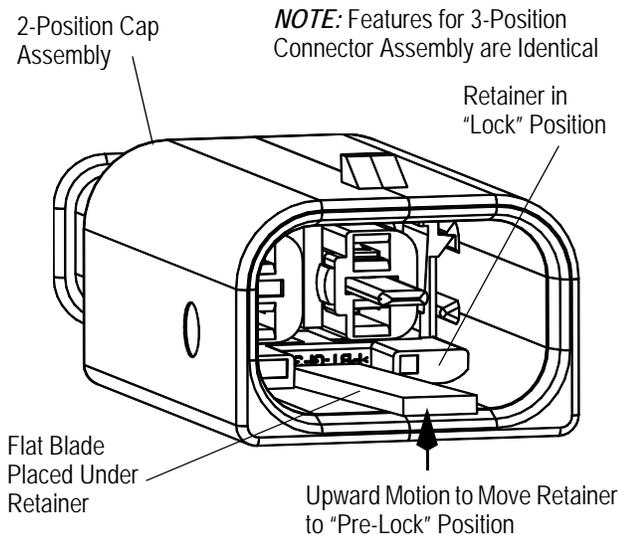


Figure 6

Positioning of the lock feature to the “pre-lock” position within the plug assembly requires sliding the element outward (see Figure 7). To do this, take a thin blade screwdriver or any thin flat blade device, and insert the tip into the depression on the left side of the locking feature. Apply a small amount of force on the feature leveraging the shank of the screwdriver on the plug surface. This should dislodge the locking feature and move it from the locket detent position to the “pre-locked” detent position. If performed correctly, the left end of the locking feature will be slightly placed in the opening on the side of the connector. If too much force is applied, the locking feature will be completely removed from the connector. If this should happen, replace the locking feature back into the appropriate grooves on the connector, and slide the feature to the “pre-locked” detent on the left side of the plug connector.

*Positioning Plug Assembly Locking Plate to Pre-Lock Position*

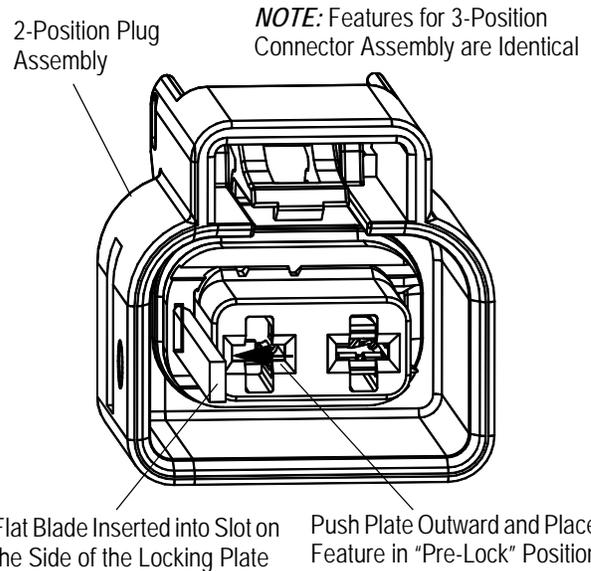


Figure 7

With the locking feature properly positioned in the “pre-lock” configuration, the terminals can be removed from the connector housings. The process of removing a terminal is the same for both the blade or receptacle (see Figure 8). Taking the appropriate extraction tool (see Paragraph 2.3), insert the blades of the tool into the holes above and below the terminal.



*Avoid placing any tool into the center of the terminal as this will damage the contact beam making the terminal useless.*

Insert these blades approximately 8 mm deep (or until an audible “click” is heard). At this point, the terminal latches have been depressed and the terminals are ready to be removed. With the extraction tool still in place, pull on the back side of the wire to remove the terminal.

Terminal Removal

**NOTE:** Features for 3-Position Connector Assembly are Identical

**NOTE:** 2-Position Cap Assembly Shown - Process Same for Plug Assembly

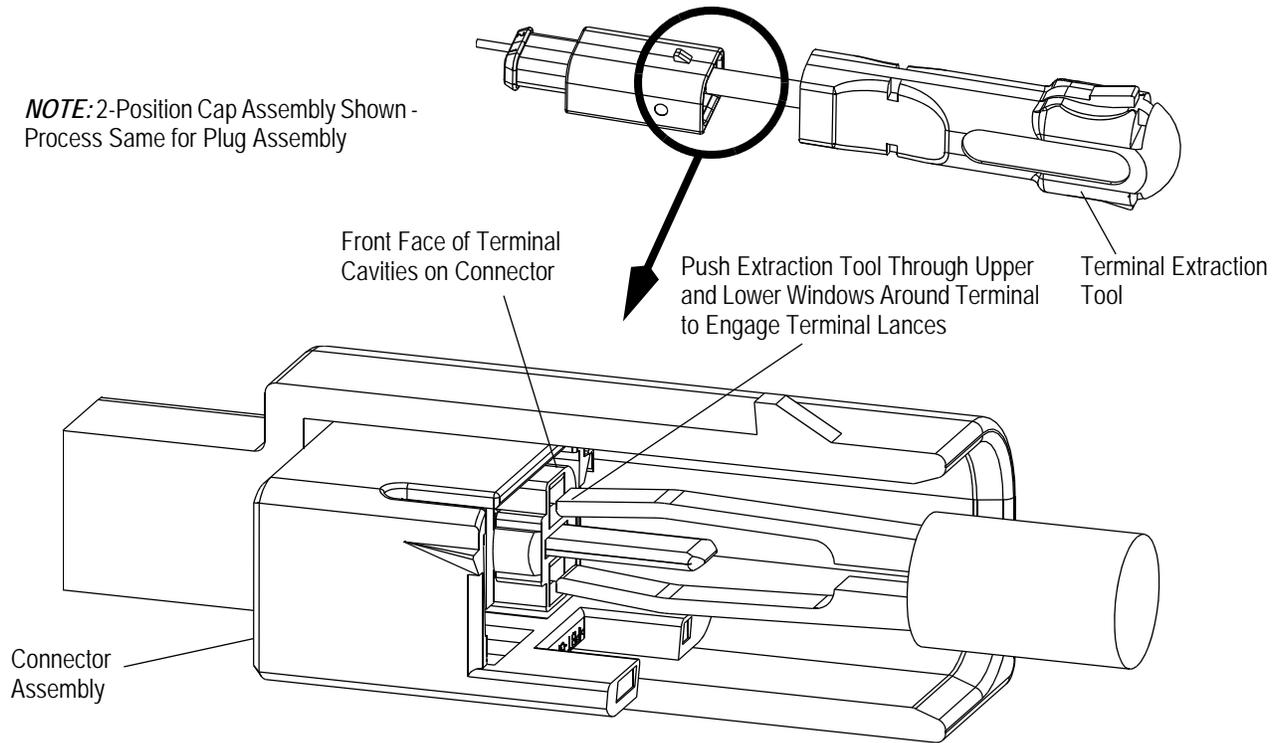


Figure 8

6. WIRE DRESS

A wire dress is provided as part of the assembly to protect the wire entry of the connector assemblies and to provide some strain relief to the wire bundle near the connector entry. The wire dress component is supplied as a set of wire dress halves connected via a living hinge. One end of the wire dress halves has a formed pocket that conforms to the end of the connector housings (cap and plug). This is the end that will mate with both connector housings. See Figure 9.

To mate the wire dress to the wired connector assembly, place one half of the wire dress to the bottom side of the connector housing at the tapered end. Ensure that the wire bundle is neatly placed at the rear of the wire dress so that when the halves are closed, there is no wire pinching. Fold over the free half of the wire cover so that it mates with the mated half that has already been placed. Compress the two halves together engaging the four latches that will secure the assembly.

The wire dress was designed with four locking latches to provide closure of the component while in use. To open the wire dress, it will be necessary to depress the four locking latches in a synchronized manner in order to open the two halves and remove the wire dress.

Wire Cover Assembly

**NOTE:** Features for 3-Position Connector Assembly are Identical

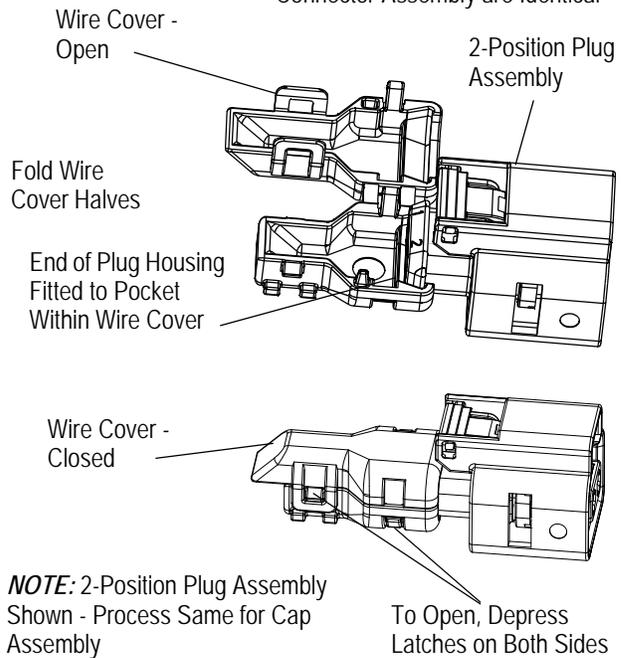


Figure 9

7. REVISION SUMMARY

- Initial release of document