

2P Ethernet Cap Connector

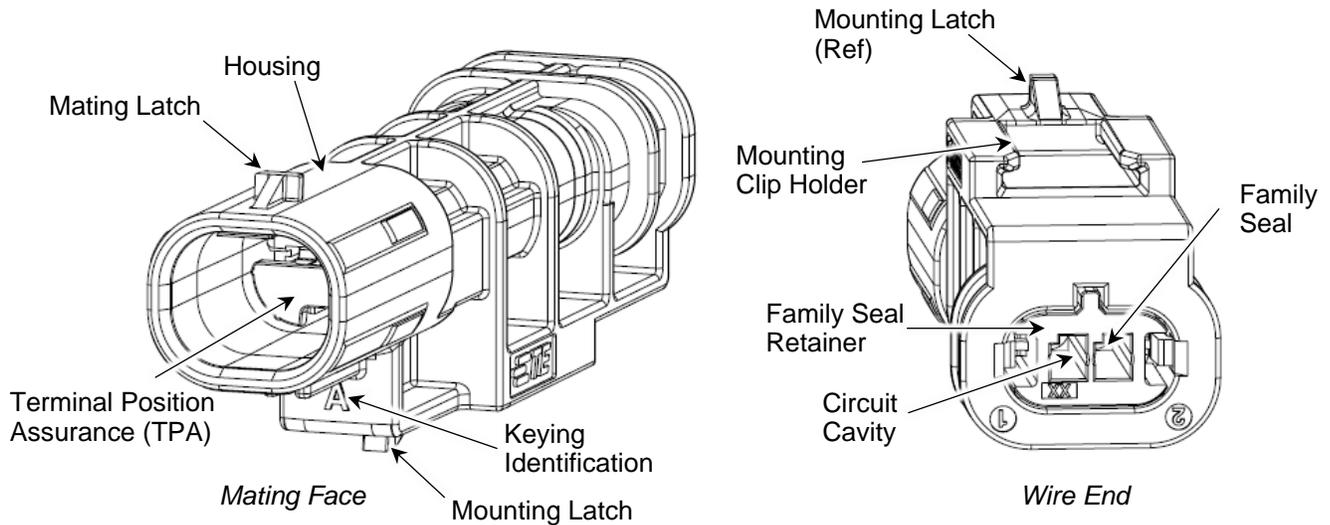


Figure 1

## 1. INTRODUCTION

This instruction sheet provides assembly (terminal insertion, mounting, and connector mating) and disassembly (connector unmating, dismounting, and terminal extraction) procedures for 1.2-mm MCON sealed cap (male) connectors. 2292937-[ ], shown in Figure 1. These connectors accept 1.2-mm MCON clean body (CB) tab terminals, mate with 1.2-mm MCON sealed plug (female) connectors, and accept various types of mounting clips.

**i NOTE**  
These connectors mate with 1.2-mm MCON sealed Ethernet plug (female) connectors. For assembly and disassembly procedures for the female connectors, refer to instruction sheet 408-32256.

**i NOTE**  
Dimensions in this instruction sheet are in metric units. Figures are not drawn to scale.

## 2. DESCRIPTION (See Figure 1)

Each connector consists of a housing with circuit cavities and mating latch, terminal position assurance (TPA), family seal, family seal retainer, and mounting clip holder with mounting latch. Different keying configurations are available. The mounting clip holder secures the mounting clip to the connector. When mating the connectors, the mating latch engages the latch of the mating connector to prevent separation.

Each circuit cavity is polarized to prevent the terminal from being inserted upside-down. After all terminals

are inserted, the TPA is used to ensure that all terminals are fully seated and to provide additional terminal retention. If a terminal is not fully seated or improperly orientated in the circuit cavity, the TPA will not close properly.

Moisture resistance for the cap housing to the wires is provided through the use of a family seal.

## 3. ASSEMBLY PROCEDURE

### 3.1. Terminal Insertion

1. Make sure that the terminals are properly crimped. Refer to Application Specification 114-18464 for inspection requirements.



**CAUTION**  
The wire strands must NOT extend above the wire barrel crimp; otherwise, the strands could cause damage to the family seal as the terminal passes into the circuit cavity.



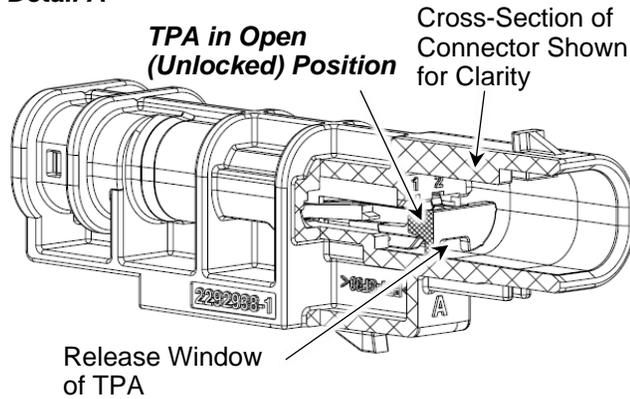
**NOTE**  
The insulation barrel crimp measurement requirements are dependent on the wire insulation type and outside diameter.

2. Determine the keying configuration by referring to the customer drawing of the specific connector, then select the corresponding connector.

3. Make sure that the TPA is in the open (unlocked) position as shown in Figure 2, Detail A. If it is not, open the TPA as follows:

- a. Insert the tip of TE Removal Tool 776441-1 (or similar hook tool) into the mating face of the connector, and hook it behind the release window of the TPA. See Figure 2, Detail B.
- b. Pull the TPA forward by 3.0 mm. This is the open (unlocked) position.

**Detail A**



**Detail B**

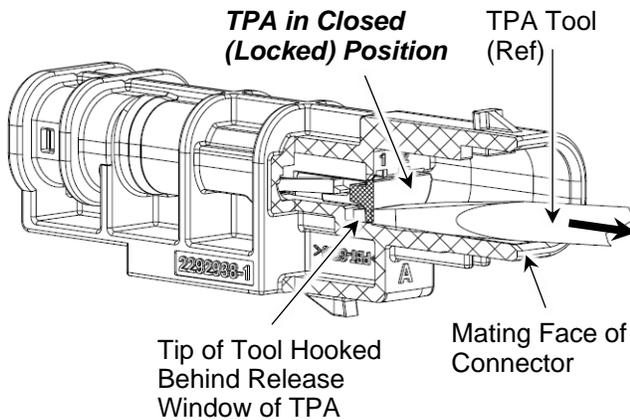


Figure 2

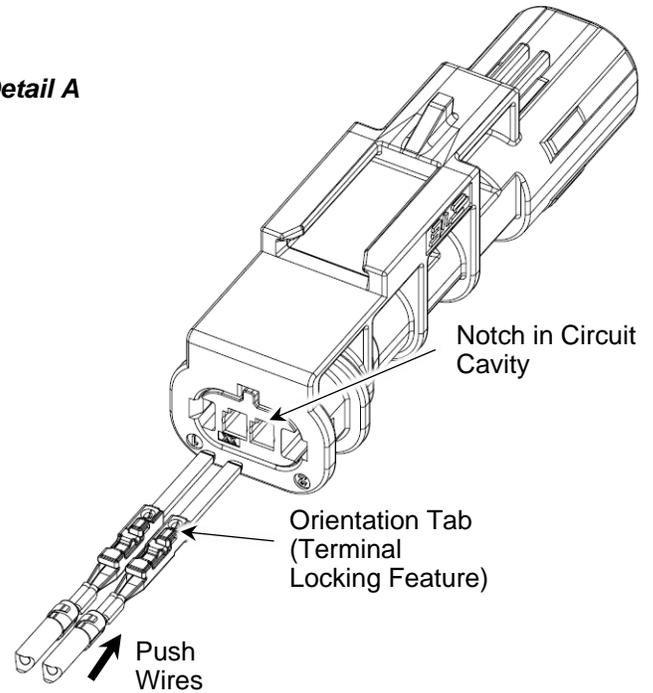
4. When using twisted pair wires, both terminals are inserted simultaneously. When using discrete wires, the terminals can be inserted one at a time. Insert terminals as follows:

- a. Align the terminal with the selected circuit cavity of the housing so that the terminal orientation tab faces in the same direction as the notch in the circuit cavity. See Figure 3, Detail A.
- b. Insert the terminal into the circuit cavity until it bottoms. There should be an audible or tactile “click”

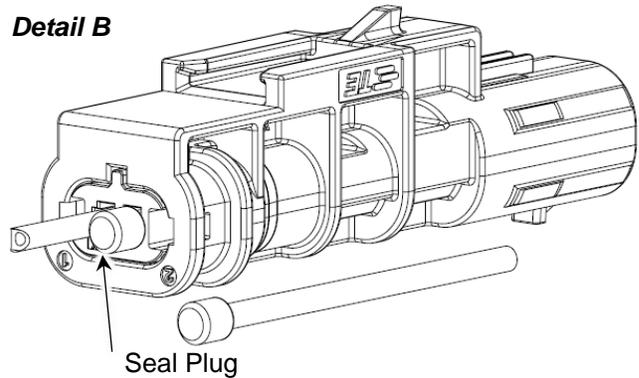
when the terminal is fully seated. Gently pull the wire to ensure that the terminal is locked in place.

**Inserting Terminated Terminals**

**Detail A**



**Detail B**



**Detail C**

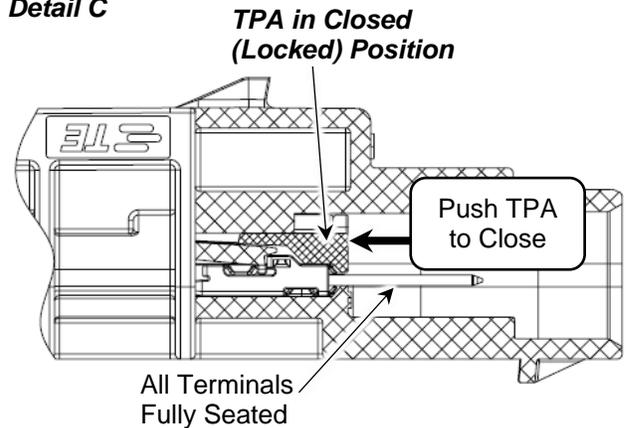


Figure 3

5. Install a seal plug (part number 0413-003-1605) into any unused circuits. See Figure 3, Detail B.
6. After all terminals have been inserted, move the TPA to the closed (locked) position. The TPA should be easy to close. See Figure 3, Detail C.



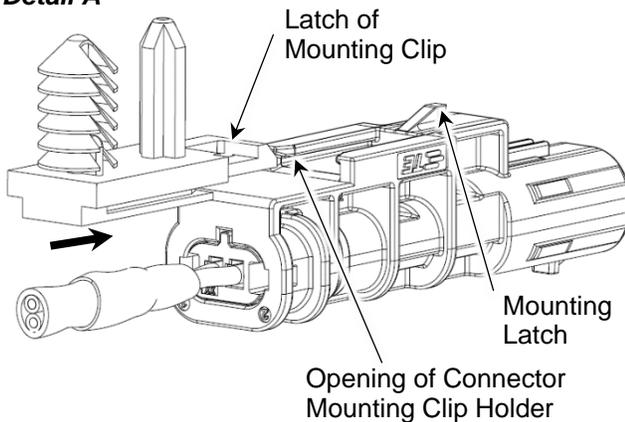
**CAUTION**

To prevent damage to the TPA or Housing, DO NOT force the TPA to close. The TPA is designed to close only if all terminals are properly oriented and fully seated in the circuit cavities.

**3.2. Mounting**

1. Align the latch of the mounting clip with the opening of the connector mounting clip holder as shown in Figure 4, Detail A.
2. Slide the mounting clip into the mounting clip holder until the latches engage and there is an audible “click”. See Figure 4, Detail B. The connector is now ready to mount onto the panel.

**Detail A**



**Detail B**

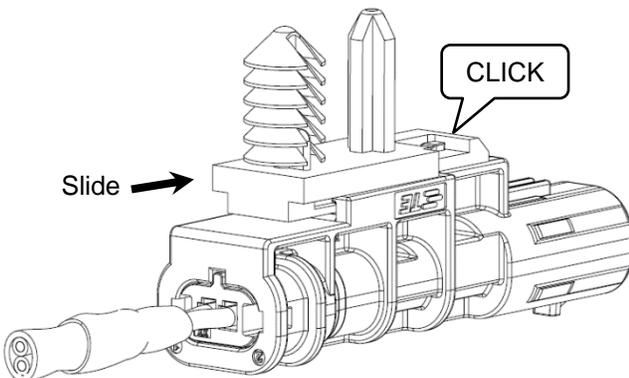


Figure 4

**3.3. Mating**

Refer to instruction sheet 408-32256, included with the mating female connector, for the mating procedure.

**4. DISASSEMBLY PROCEDURE**

**4.1. Unmating**

Refer to instruction sheet 408-32256, included with the mating female connector, for the unmating procedure.

**4.2. Dismounting**

1. Insert the tip of a small screwdriver between the latch of the mounting clip and the latch of the connector mounting clip holder. See Figure 5.
2. Rotate the screwdriver until the latches disengage, then slide the mounting clip toward the wire end of the connector until it is out of the connector mounting clip holder.

Note: Panel Not Shown

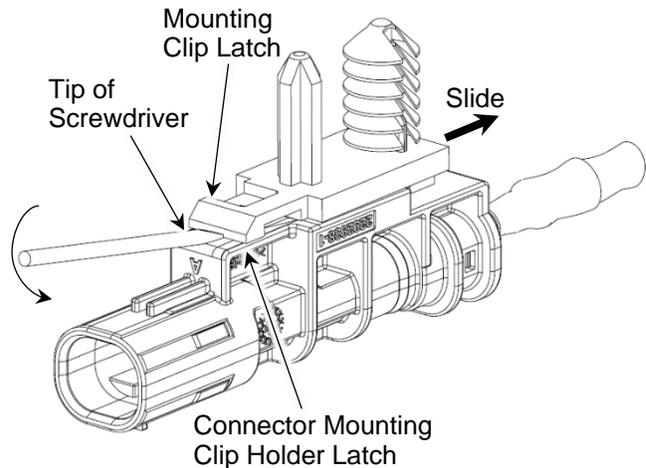


Figure 5

**4.3. Terminal Removal**

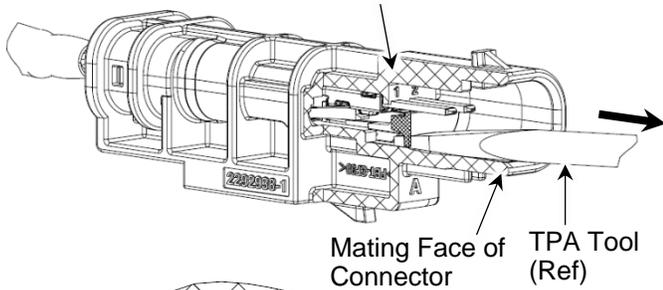
1. Insert the tip of TE Removal Tool 776441-1 (or similar hook tool) into the mating face of the connector, and hook it behind the release window of the TPA. See Figure 6, Detail A. Then, pull the TPA straight out of the connector. Care must be taken to retain the TPA and observe the orientation of the TPA for re-insertion.

2. With the TPA removed, pull slightly on the wires while pushing on the back of the housing. This will pull the terminal back to the terminal retention latch of the housing.

a. Insert the tip of TE Removal Tool 2844610-1 into the mating face of the connector. Align the bottom surface of the tool with the inside of the shroud. The tool will bottom against the front face of the connector when fully inserted. When the removal tool is properly located, the sharp tip will be between the terminal locking feature and housing latch. See Figure 6, Detail A.

b. When the removal tool is properly located, rotate the tool in the direction shown to gently pry the housing locking latch away from the terminal locking features (this will release the terminal). See Figure 6, Detail B.

**Detail A** Cross-Section of Connector Shown for Clarity



Tip of Tool Hooked Behind Release Window of TPA

**Detail B**

Pull Slightly on Wires

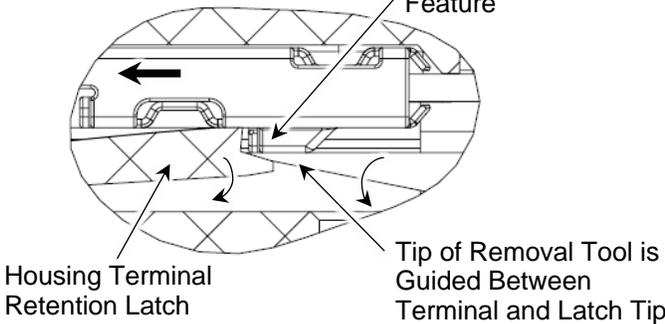
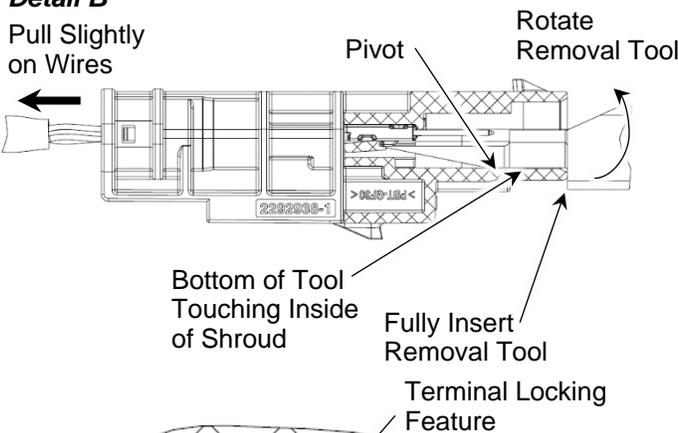


Figure 6



**CAUTION**

To avoid damage to the terminal retention latch in the housing, do not flex the latch further than necessary.

3. With the terminal latches disengaged, use the wire(s) to pull the terminal(s) from the connector. See Figure 7.



**NOTE**

When removing terminals crimped to twisted pair wire, pull both wires simultaneously to remove both terminals together.

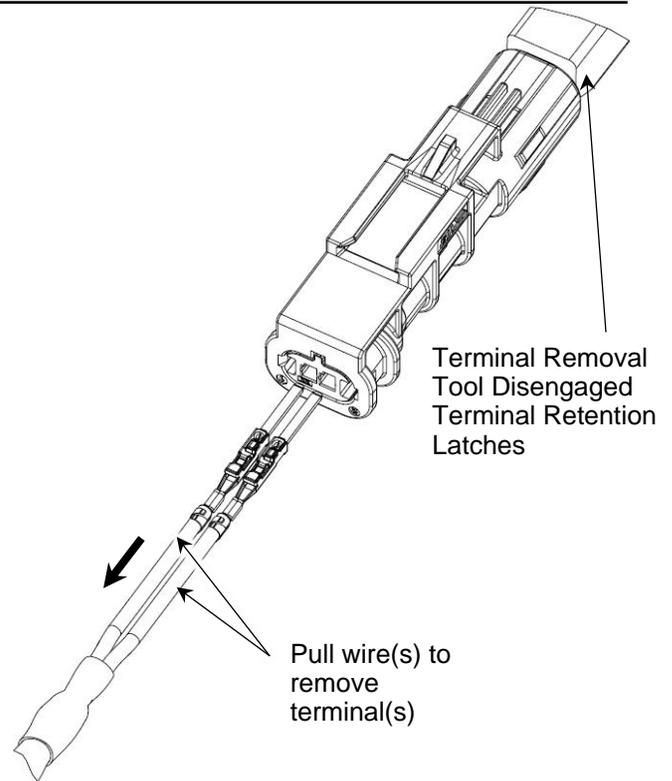


Figure 7

**5. REPLACEMENT AND REPAIR**

The connector, TPA, and terminals are not repairable. DO NOT use any defective or damaged terminals or connectors. DO NOT re-use a terminated terminal by removing the wire.

**6. REVISION SUMMARY**

Initial release of instruction sheet.