

**2P Sealed Ethernet Plug Connector**

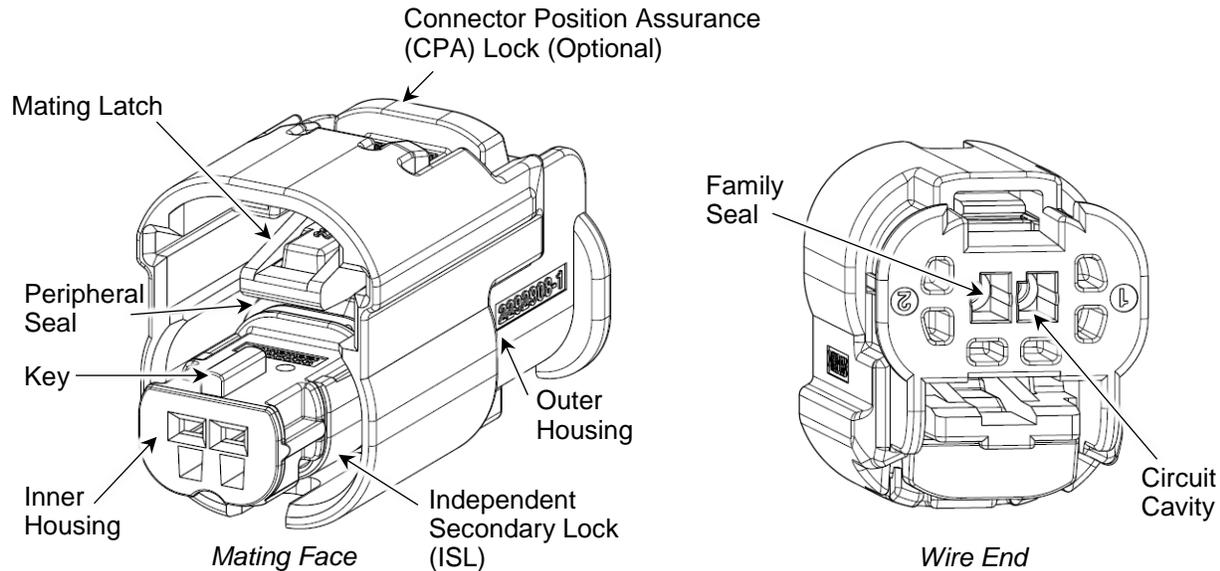


Figure 1

**1. INTRODUCTION**

This instruction sheet provides assembly (terminal insertion and connector mating) and disassembly (connector unmating and terminal extraction) procedures for 1.2-mm MCON sealed plug (female) connectors, 2292906-[ ], shown in Figure 1. These connectors accept 1.2-mm MCON clean body (CB) receptacle terminals.

**i NOTE**  
These connectors mate with various devices and 1.2-mm 2P MCON sealed Ethernet cap (male) connectors. For assembly and disassembly procedures for the male connectors, refer to instruction sheet 408-32254.

**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 an inner plug housing with circuit cavities, outer plug housing with mating latch, independent secondary lock (ISL), peripheral seal, and family seal. Different keying configurations are available. The connectors are available with or without a connector position assurance (CPA) lock. The CPA lock is used to provide a visual indication that the connector is fully mated. If the connector is not fully mated, the CPA lock will not engage.

Each circuit cavity is polarized to prevent the terminal from being inserted upside-down. After all terminals are inserted, the ISL 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 ISL will not close properly.

The peripheral seal prevents moisture from entering the connector interface. The wires seal to the plug housing 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.

**i 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 ISL is open as shown in Figure 2, Detail A. If the ISL is twisted as shown in Figure 2, Detail B, or otherwise not fully open, open the ISL according to Paragraph 4.2.

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 terminals 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 2, Detail C.

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. See Figure 2, Detail C.

5. Install a seal plug (part number 1-1452424-3) into any unused circuits. See Figure 2, Detail D. Alternate seal plug part number: 0413-204-2005.

6. After all terminals have been inserted, slide the ISL until it is closed. The ISL should be easy to close. See Figure 2, Detail E. Visually inspect that the ISL is closed and rests uniformly flush within the plug housing. If the ISL does not close completely, confirm the terminals are indeed fully seated in the circuit cavities prior to re-closing the ISL.

**CAUTION**  
 To prevent damage to the ISL, DO NOT force the ISL to close. The ISL is designed to close only if all terminals are fully seated in the circuit cavities.

**3.2. Mating**

**CAUTION**  
 For proper mating and circuitry, the design of the mating connector must strictly adhere to interface drawing C-2295114.

1. Align the plug connector with the mating connector so that the connector mating latch faces the mating latch of the mating connector, and the key slot faces the key of the mating connector. Then, push the connectors together. Refer to Figure 3.

2. If using the CPA lock, push the CPA forward until there is an audible and tactile “click”; locking and mating the connector together. See Figure 3.

3. The CPA lock should be easy to engage. It will be difficult to engage if the connector and mating connector are not fully mated.

**CAUTION**  
 To prevent damage to the CPA lock or connector, DO NOT force the CPA lock to engage. The CPA lock is designed to engage only if the connector and mating connector are fully mated.

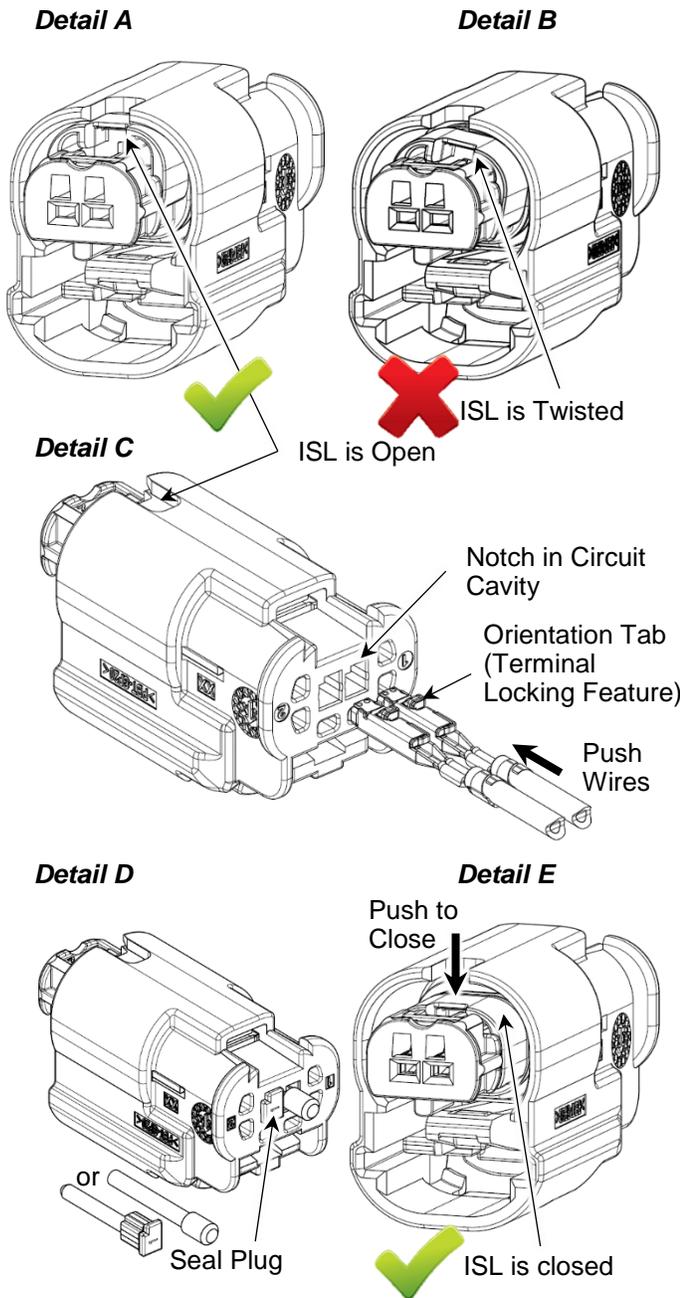


Figure 2

**NOTE**  
 Ensure that the Terminals crimped to twisted pair wire are inserted simultaneously

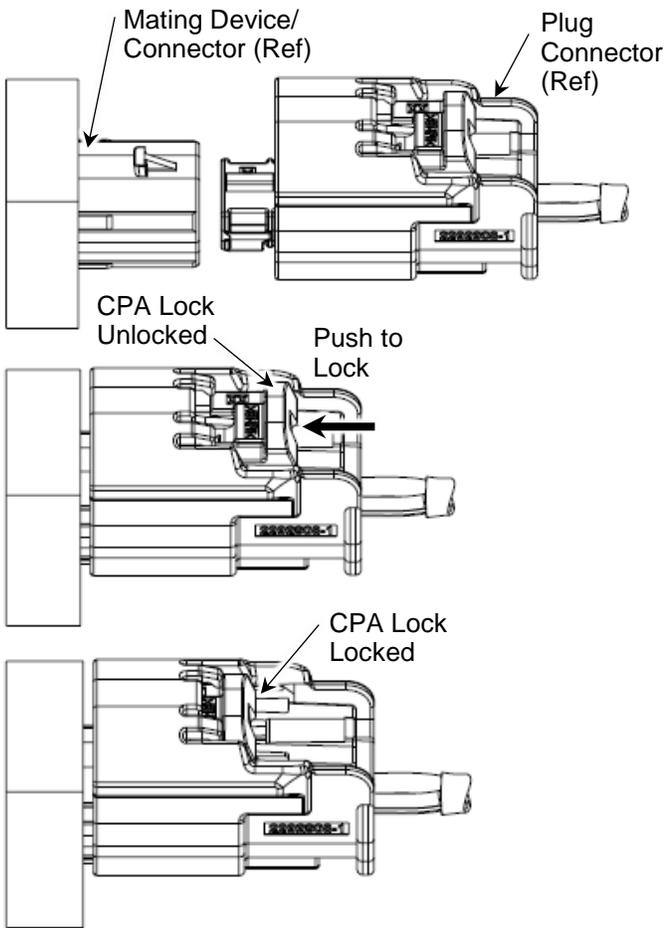


Figure 3

**4. DISASSEMBLY PROCEDURE**

**4.1. Unmating**

1. If using the CPA lock, pull back on the CPA lock to unlock the connector and mating connector. Refer to Figure 4.
2. Depress the connector latch of the plug connector and gently pull the plug connector and mating connector apart

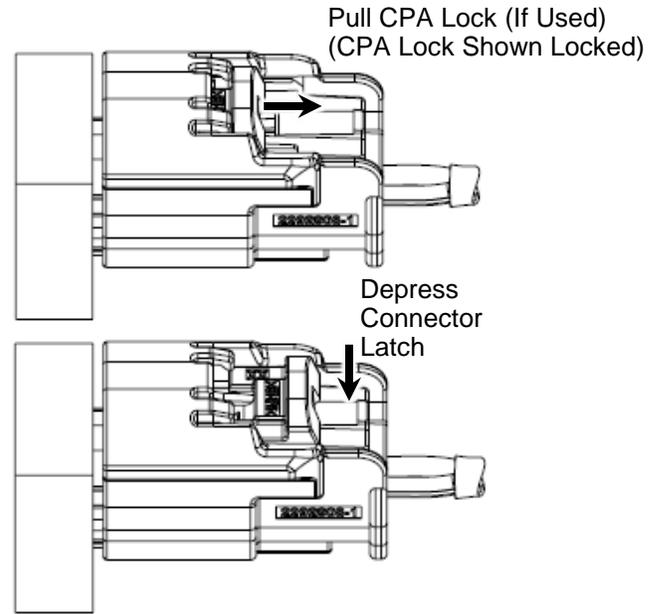


Figure 4

**4.2. Terminal Removal**

1. Open the ISL as follows:

- a. Insert the tip of a small screwdriver into the opening of the ISL, and lift the ISL until it is free from the inside of the housing. See Figure 5

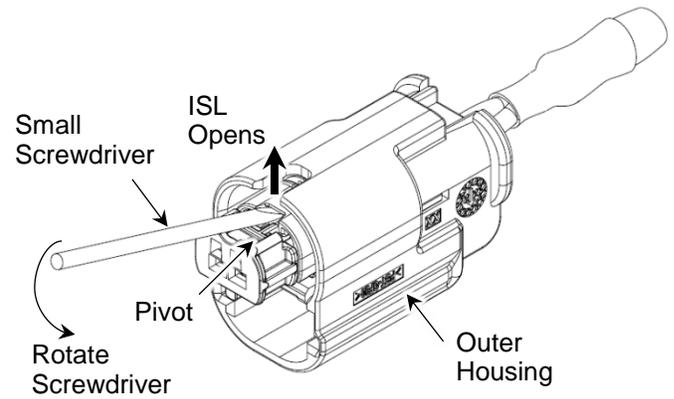


Figure 5

- b. The ISL will move by approximately 1.5 mm so that it is flush with the inside of the outer housing. See Figure 2, Detail A. This is the “open position” and the ISL must be in this position before removing the terminals from the connector.

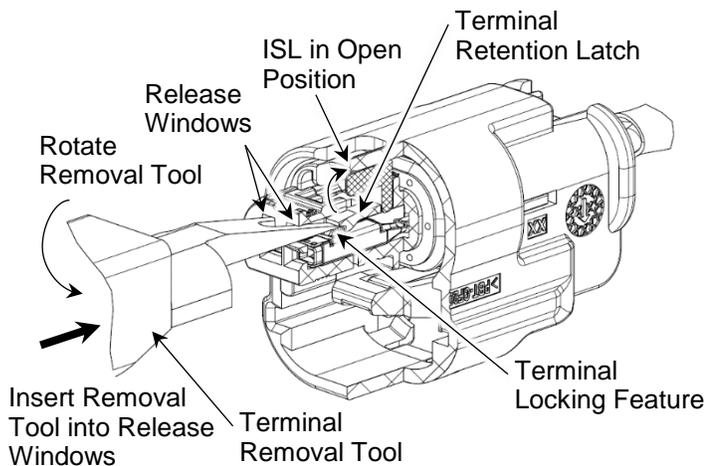
**i NOTE**  
*The ISL is latched to the inner housing on both sides and it is possible to unlatch one side without the other. Ensure that both sides of the ISL are opened. The ISL should not appear tilted in the “open position”.*

2. With the ISL in the open position, pull slightly on the wires while pushing on the back of the housing.

a. Insert the tip of TE Removal Tool 2844610-1 into the release windows for the terminal(s) to be removed and direct the tip between the Terminal Locking Feature and the Terminal Retention Latch. The flat side of the removal tool faces the terminal.

b. When the removal the 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.

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



*Gently Pry Terminal Retention Latch  
 Away from Terminal Locking Feature*

Figure 6

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

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

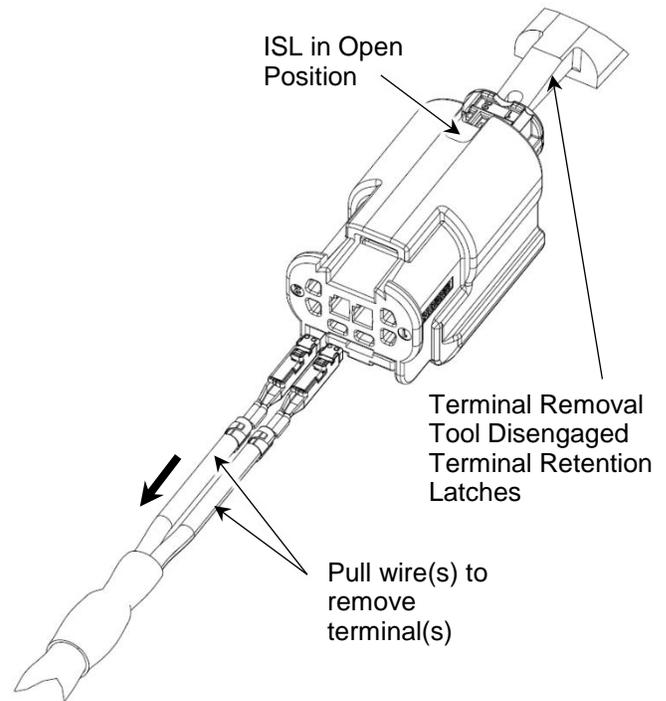


Figure 7

**5. REPLACEMENT AND REPAIR**

The terminals and connectors 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**

Added figure showing twisted ISL.