

Figure 1

1. INTRODUCTION

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

i **NOTE**
For information on the female connectors, refer to instruction sheet 408-32103.

i **NOTE**
Dimensions in this instruction sheet are in metric units [with U.S. customary units in brackets]. Figures are not drawn to scale.

2. DESCRIPTION (See Figure 1)

Each connector consists of a housing with circuit cavities, terminal position assurance (TPA), mating latch, and mounting clip holder. 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 circuit cavities is provided through the use of wire seals (to be installed onto the wires) and sealing plugs (to be inserted in the circuit cavities). Selection of applicable wire seals and sealing plugs is wire and application dependent.

3. ASSEMBLY PROCEDURE

3.1. Terminal Insertion

1. Make sure that the terminals are properly crimped and wire seals are installed onto the wires. Refer to Application Specification 114-18464 for inspection requirements.



CAUTION

The insulation barrel crimp measurement requirements are dependent on the wire insulation type and outside diameter. Make sure that the insulation barrel crimp is sufficient enough to grip the seal so that it does not slide out of the crimp when inserting the terminal into the circuit cavity, but not so tight that it tears the seal.

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 Delphi Tool 15313892 into the mating face of the connector, and hook it onto the back of the release window of the TPA. See Figure 2, Detail B.
- b. Pull the TPA forward by 5.0 mm. This is the open (unlocked) position.

4. Insert each terminated terminal as follows:

- a. Align the terminal with the selected circuit cavity of the housing so that the terminal locking feature faces the circuit cavity identification number. See Figure 3, Detail A.

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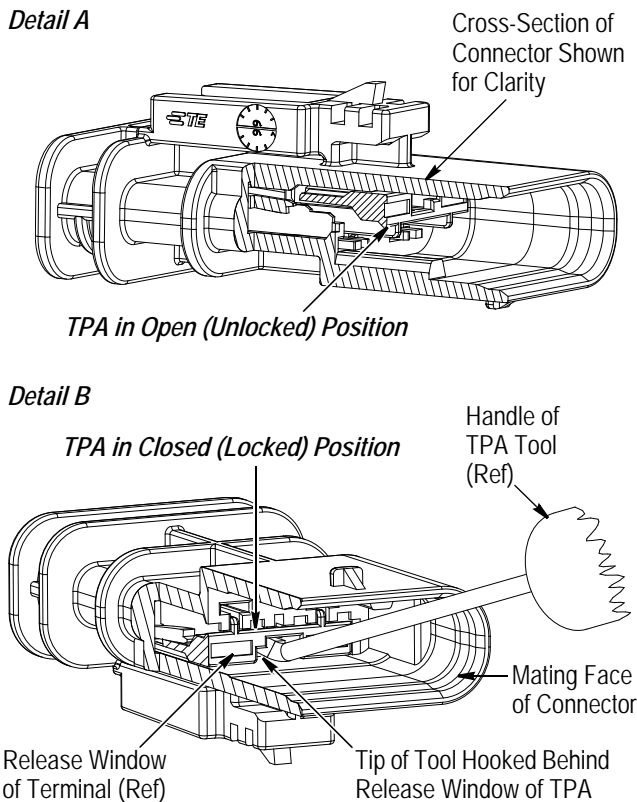


Figure 2

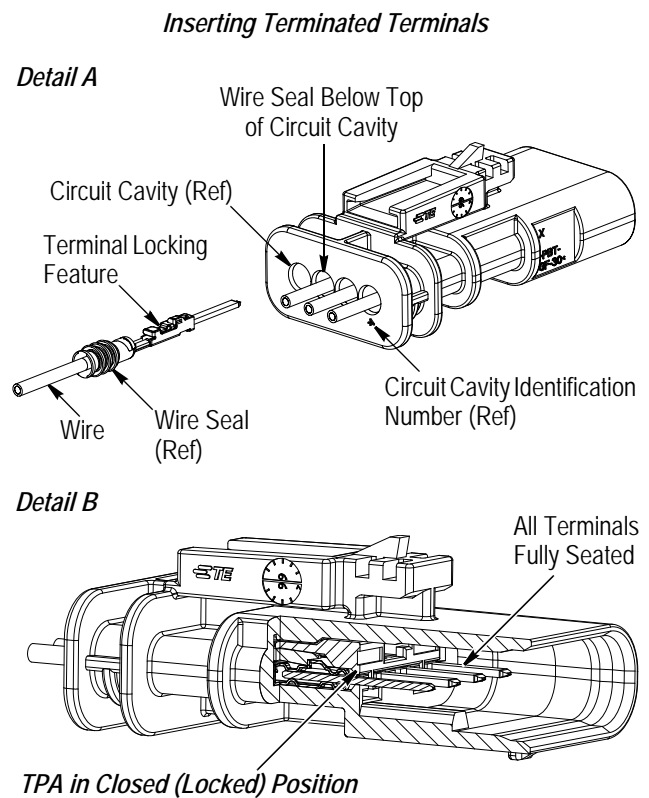


Figure 3

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.

c. Check that the wire seal is below the top of the circuit cavity. See Figure 3, Detail A. If it is not, press the protruding part of the wire seal into the circuit cavity, ensuring that it stays in place. If necessary, use a blunt probe with a rounded edge. Take care not to tear the wire seal. If the wire seal tears, the terminal and wire seal must be replaced.

5. Install a sealing plug into any empty circuit cavity (ensure that the circuit cavity of the mating connector contains a sealing plug).

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 B.



CAUTION

To prevent damage to the TPA, 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.

3.3. Mating

Refer to instruction sheet 408-32103, included with the mating female connector, for the mating procedure.

4. DISASSEMBLY PROCEDURE

4.1. Unmating

Refer to instruction sheet 408-32103, included with the mating female connector, for the unmating procedure.

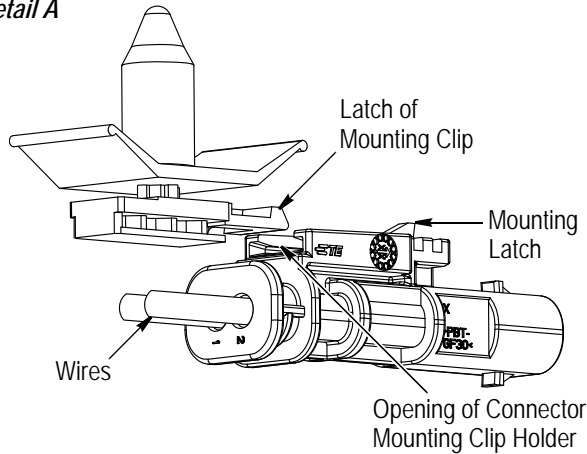
4.2. Dismounting

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.

Mounting

Detail A



Detail B

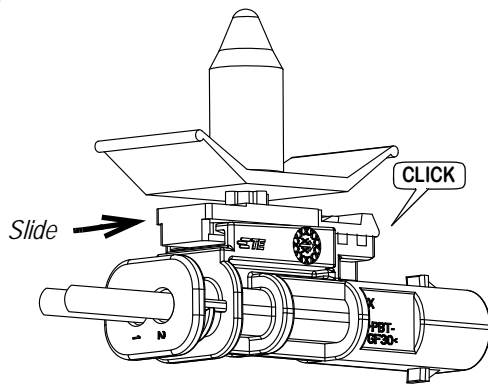


Figure 4

Dismounting

Note: Panel Not Shown

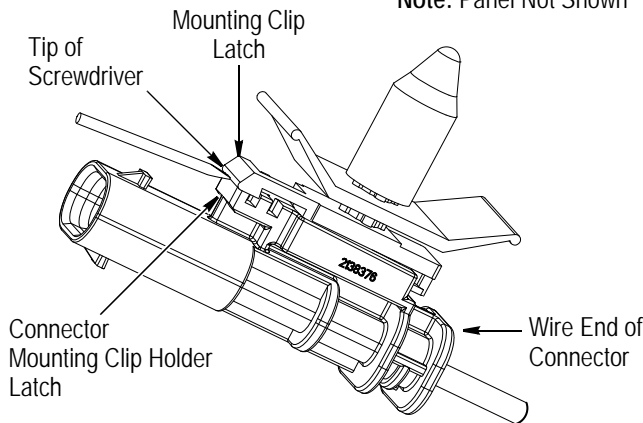
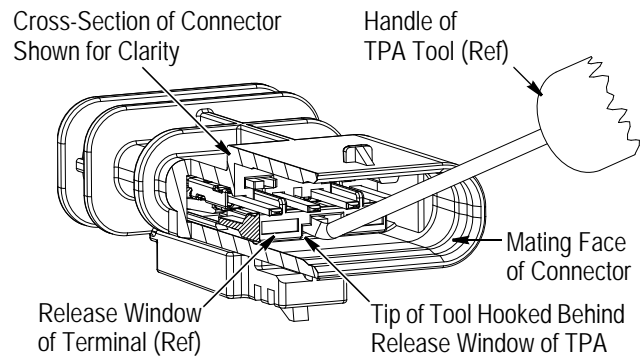


Figure 5

4.3. Terminal Removal

1. Insert the tip of Delphi Tool 15313892 into the mating face of the connector, and hook it onto the back of 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. Insert the tip of Delphi Removal Tool 12152110 or 12094429 (or equivalent) into the release window of the terminal to be removed so that it slides under the terminal and over the housing locking latch. Then, simultaneously push the wire of the terminal to be removed and gently pry the housing locking latch away from the terminal locking feature (this will release the terminal). See Figure 6, Detail B.
3. Holding the tool in place, use the wire to pull the terminal from the connector.
4. If applicable, insert any terminals according to Step 4 of Paragraph 3.1.

Detail A



Detail B

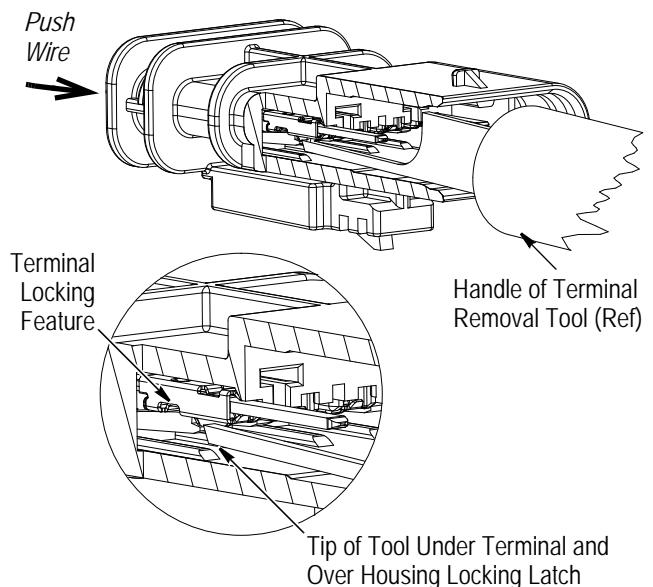


Figure 6

5. Ensure that the TPA is properly oriented, and slide it into the mating face of the connector until it is in the closed (locked) position. Be careful not to damage any terminal blades.



CAUTION

To prevent damage to the TPA, DO NOT force the TPA to close. If there is resistance during the installation of the TPA, ensure that the TPA is properly oriented and that all terminals are fully seated. The TPA is designed to close only if all terminals are properly oriented and fully seated in the circuit cavities.

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