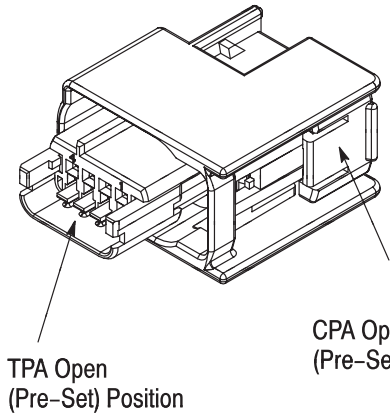
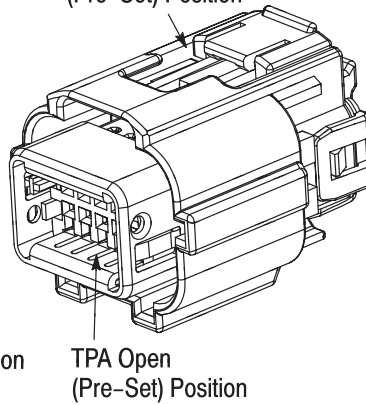


Typical Single-Row Plug Assembly



CPA Open
(Pre-Set) Position



CPA Open
(Pre-Set) Position

TPA Open
(Pre-Set) Position

Typical Double-Row Plug Assembly

SEALED PLUG CONNECTOR
ASSEMBLY COMPONENTS

Part Number	Description
1438426-[]	1 x 2 Plug Assembly
1438454-[]	1 x 3 Plug Assembly
1488107-[]	1 x 4 Plug Assembly
638514-[]	1 x 6 Plug Assembly
1326028-[]	Female Terminal, Au Plated
638551-[]	Female Terminal, Sn Plated
638517-[]	2 x 5 Plug Assembly
638518-[]	2 x 6 Plug Assembly
638849-[]	2 x 12 Plug Assembly
638939-[]	2 x 6 Hybrid Plug Assembly

Figure 1

1. INTRODUCTION

This instruction sheet provides contact assembly and disassembly procedures for the 2, 3, 4, and 6-position single row, and the 10, 12, 12 Hybrid, and 24-position double row automotive sealed plug connector assemblies similar to that shown in Figure 1. This instruction sheet also provides mating and unmating procedures.

The plug assemblies are designed to operate under Class III temperature and Body and IP vibration profiles. If you have special packaging requirements, please contact your Tyco Electronics Sales Representative or the Product Information Center for assistance.

NOTE



All dimensions are in millimeters. Figures and illustrations are for reference only and are not drawn to scale.

2. DESCRIPTION

The plug assembly consists of a housing, a terminal position assurance (TPA) lock, and a connector position assurance (CPA) lock. The plug assemblies are shipped as one piece with the TPA and CPA locks in the open (pre-set) position.

The TPA will fully seat when the contact(s) are properly installed. In the event that a contact is not fully seated or is mis-orientated in the contact cavity, the TPA will not seat or it will be difficult to seat without damaging the TPA. Once the TPA is closed

(seated), the plastic terminal latch inside the plug housing cannot be deflected.

The CPA will seat when the plug assembly is fully mated to the header housing. The CPA provides a visual indication that the connector is fully mated. When in the closed (seated) position, the CPA also prevents deflection of the connector latch, thereby preventing accidental unmating.

Contacts are sold separately and only available in strip form.

3. ASSEMBLY PROCEDURES

3.1. Contact Insertion

NOTE



For information on contact crimping, refer to the instructions packaged with the tooling. For inspection information on crimped contacts, refer to Application Specification 114-13006.

Check to be sure the TPA lock is in the open (pre-set) position, see Figure 1. **(Due to packaging, some TPAs may become closed during shipping.)** Refer to Paragraph 4.2, Contact Removal, Steps 1 and 2. Proceed as follows:

1. Insert a terminated contact by grasping the wire approximately 20 mm behind the insulation crimp and pushing it straight in to the appropriate circuit cavity as far as it will go. Refer to Figure 2.

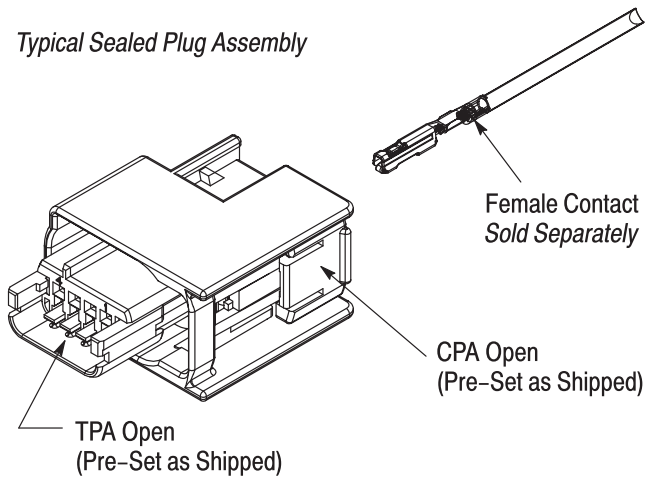


Figure 2

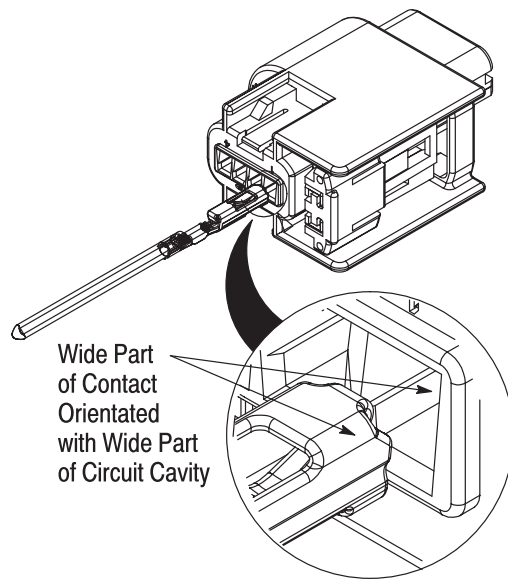


Figure 3



If the wire should “buckle” prior to full insertion, pull the contact back out of the plug housing. Verify that orientation complies with Figure 3 and reinsert contact.

2. Pull back lightly on the wire and contact to ensure the retention finger is holding the contact.
3. After all required contacts have been inserted, the TPA must be closed. To close, push evenly across the TPA lock. The TPA lock should be flush with the plug housing. See Figure 4.

3.2. Connector Mating

Orient the plug assembly so the CPA is aligned with the three protrusions on the mating connector and the squared corner opposite the CPA on the plug housing is aligned with the external key on the mating connector. See Figure 5.

1. Push the plug assembly onto the header until an audible “click” is heard.
2. Push the CPA into the closed (seated) position (Figure 6).



The CPA will not close (seat) unless the connectors are fully mated.

3. Pull back lightly on the plug assembly to ensure that the connector is properly mated.

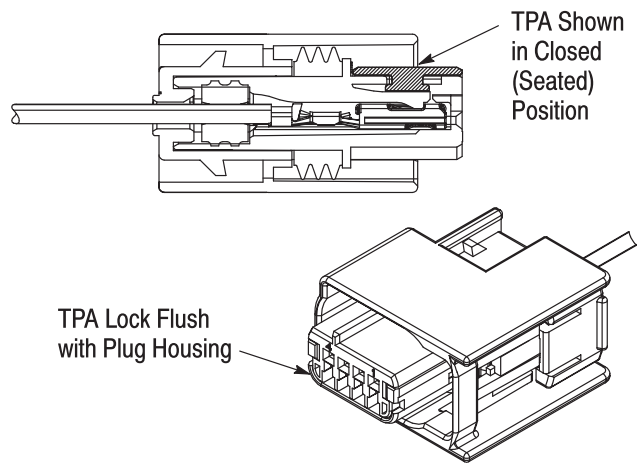


Figure 4

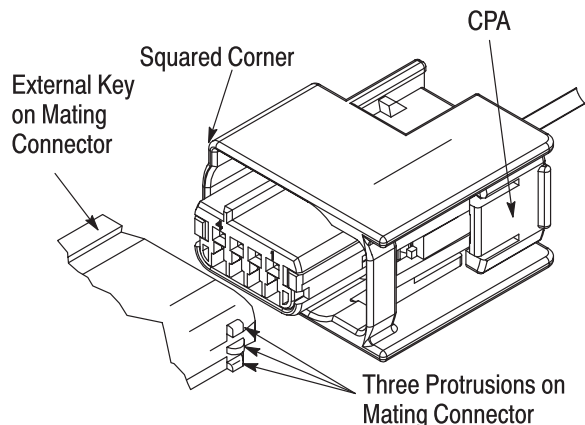
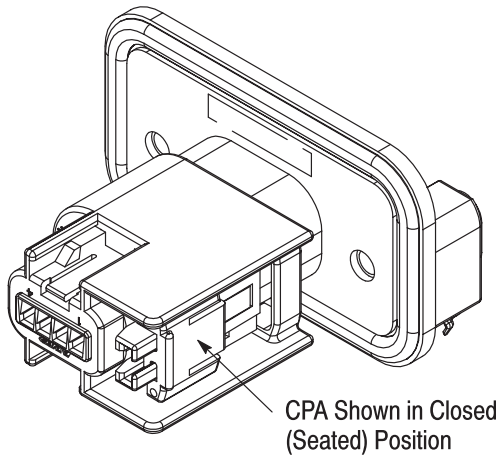


Figure 5



Closed CPA indicates that connectors are properly mated and prevents operation of latch.

Figure 6

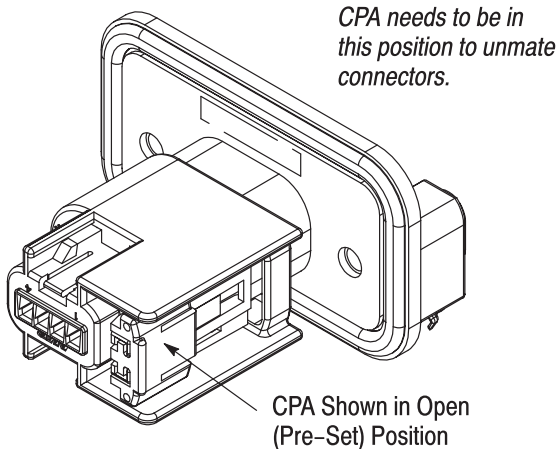
4. DISASSEMBLY PROCEDURES

4.1. Connector Unmating

1. Move CPA lock back into the open (pre-set) position. See Figure 7.

NOTE *It may be necessary to push the plug assembly toward to header to relieve stress on the latch mechanism.*

2. Depress the latch mechanism on the plug housing and pull the plug housing away from the header.



Connector latch can be depressed when the CPA is in this position.

Figure 7

4.2. Contact Removal

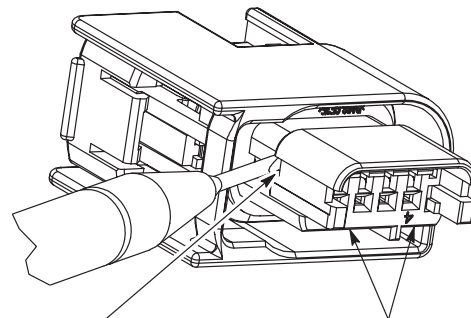
The connector must be unmated (Paragraph 4.1). Before removing contacts from the plug housing, the TPA lock must be moved back into the open (pre-set) position. To open the TPA lock and remove the contacts, proceed as follows:

1. Insert a 1.0 mm – 1.2 mm flat-bladed screwdriver into the notch (hole) in the TPA lock as shown in Figure 8 and Figure 9. (Figure 8 illustrates the single row version. Figure 9 illustrates the double row version.)
2. Using the edge of the housing shroud as a fulcrum, rotate the screwdriver toward the wire bundle. Rotate the screwdriver until the retention bump is above the mating face of the plug assembly as shown in Figures 8 and 9. (Figure 8, Detail B illustrates the single row version. Figure 9, Detail B illustrates the double row version.) It will be necessary to work each side of the TPA.

If both bumps are not visible, repeat Steps 1 and 2 using the notch (hole) on the opposite side of the TPA lock. See Figure 8 and Figure 9.

Single Row Version

Detail A



Insert Screwdriver into Notch

TPA in the Open Position When Retention Bump (One on Each Side) is Above Mating Face of Plug Housing

Detail B

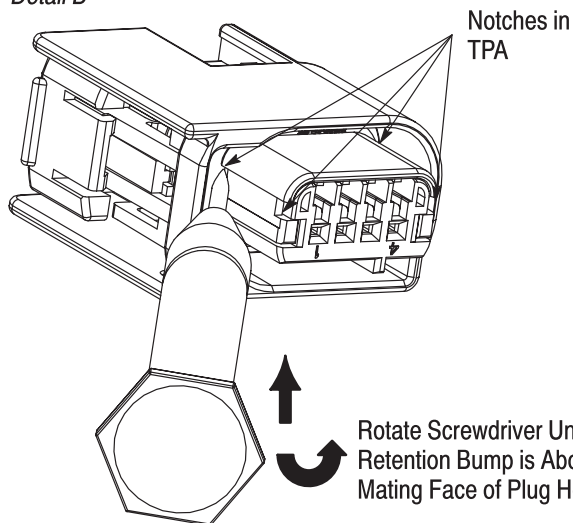
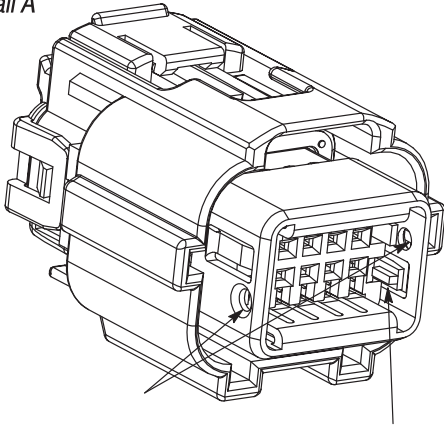


Figure 8

Double Row Version

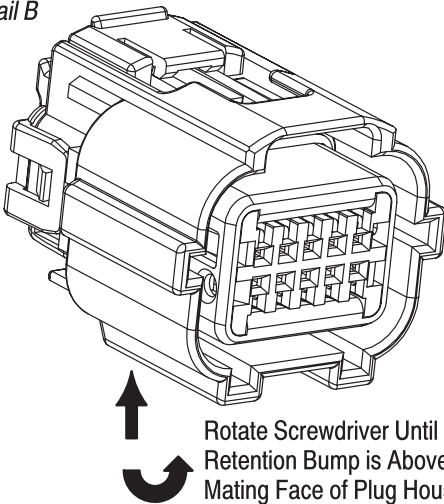
Detail A



Insert Screwdriver into Holes on Either Side

TPA in the Open Position When Retention Bump (One on Each Side) is Above Mating Face of Plug Housing

Detail B



Rotate Screwdriver Until Retention Bump is Above Mating Face of Plug Housing

Figure 9

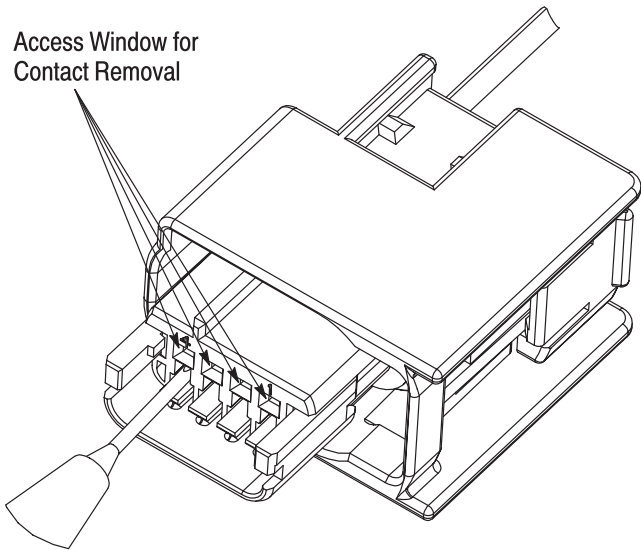
3. Insert an 0.8 mm – 1.0 mm flat-bladed screwdriver into the selected exposed contact cavity, as shown in Figure 10.

4. Grasp the wire of the contact to be removed and push the contact forward until it stops.
5. Using the 0.8 mm – 1.0 mm flat-bladed screwdriver, gently deflect the retention finger. See Figure 11.
6. Simultaneously pull the wire and contact from the plug housing.
7. Follow Steps 3 through 6 for remaining contacts.

NOTE



To reassemble the plug assembly, the TPA lock must be in the open position before insertion of terminated contacts.



Access Window for Contact Removal

Figure 10

5. REVISION SUMMARY

Since the previous revision:

- Updated document to corporate requirements
- Changed part numbers in table in Figure 1

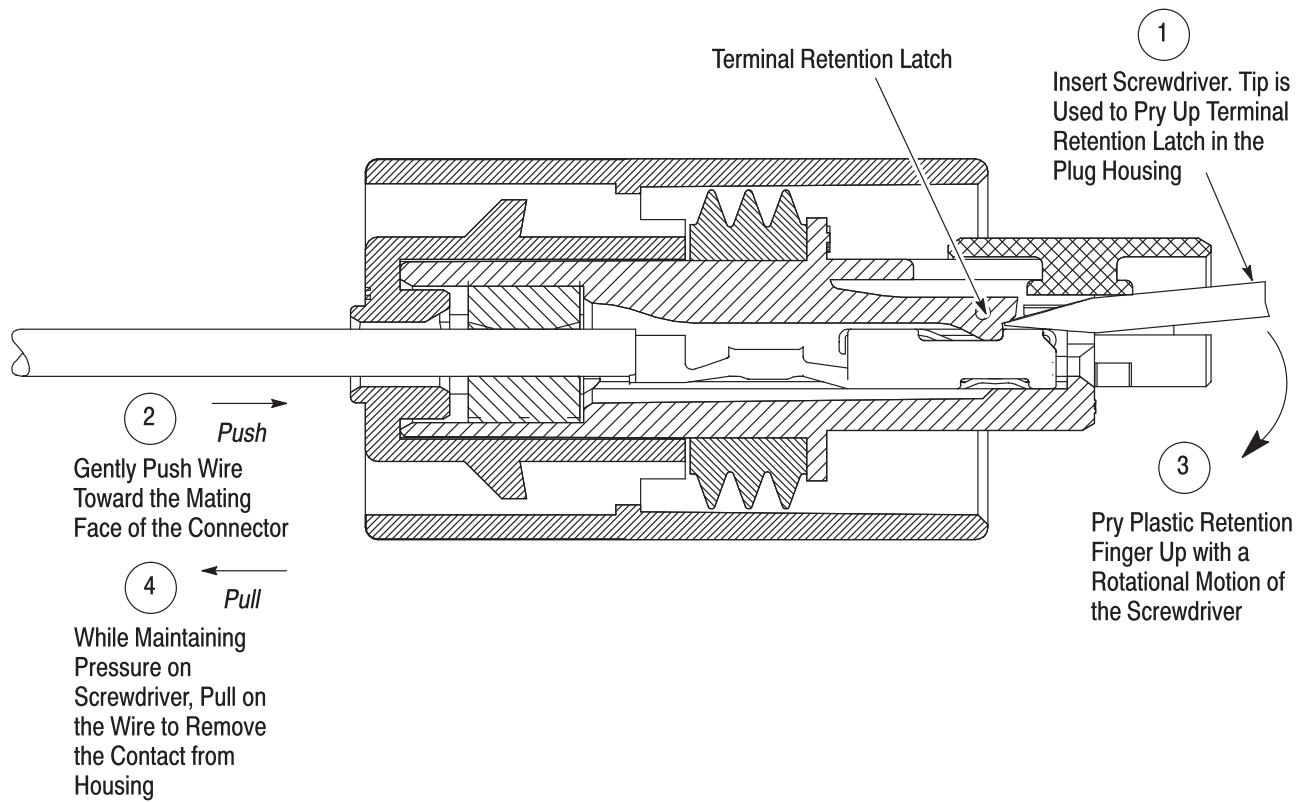


Figure 11