

Figure 1. Contact insertion and removal techniques are defined in addition to the procedures for attaching and removing the cover/lever assembly. This instruction sheet also provides the mating and unmating procedures for the connector assembly.

A cover/lever assembly is required on each plug assembly to provide the mechanical assist for mating and unmating as well as the means of locking the plug assembly to the header interface. The cover/lever assembly should not be attached to the plug until all of the crimped contacts are inserted because it blocks access to the contact cavities.

**NOTE** The cover/lever assembly is sold separately: part number 1456835-1 for the 30° wire exit; and part number 1456996-1 for the 90° exit version. These versions are shown in Figure 2.

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

PART NUMBER	DESCRIPTION
1456570-[ ]	38-Way Plug Assembly
1393366-[ ]	0.64 mm GET Receptacle Contact
1326032-[ ]	2.8 mm Receptacle Contact
7158-3110 thru 3113	Yazaki Wire Seal for 2.8 mm Receptacle
7116-4140 thru 4143	6.3 mm Yazaki Receptacle Contact
7138-3081 thru 3084	Yazaki Wire Seal for 6.3 mm Receptacle
1456835-[ ]	30° Exit Cover/Lever Assembly
1456996-[ ]	90° Exit Cover/Lever Assembly

Figure 1

## 1. INTRODUCTION

This instruction sheet provides assembly and disassembly procedures for the 38-Way Sealed Hybrid (Lever Assisted) ABS Connector shown in



Figure 2

**2. DESCRIPTION**

The plug assemblies are shipped as one piece, with the Terminal Position Assurance (TPA) lock in the open position. The assembly consists of a housing, a mat or family-type wire seal for the 0.64 mm contacts, a seal cover, a peripheral seal, and the TPA lock.

The seal cover has molded-in seal plugs that are punched out during the connector manufacturing process to create different blocked and open circuit configurations. To request a new pin-out configuration, contact the Product Information number at the bottom of page 1. The lever/cover assemblies are shipped as separate items for assembly to the plug housing at the harness manufacturer after insertion of crimped contacts.

This connector accepts three different contact sizes: 0.64 mm, 2.8 mm, and 6.3 mm. The 0.64 mm and 2.8 mm contact systems are produced by Tyco Electronics. The 6.3 mm contacts are available from Yazaki North America, Inc. The 2.8 mm and 6.3 mm contacts use individual wire seals that are installed as part of the crimping process. Refer to Application Specifications 114-13060 and 114-13013 for the proper application tooling and methods for the 0.64 mm and 2.8 mm receptacle contacts. Contact Yazaki North America, Inc. for application information on the 6.3 mm receptacle contacts.

**3. ASSEMBLY PROCEDURES**

**NOTE** *Check to be sure the TPA lock is in the open or as-shipped position. Refer to Figure 3.*

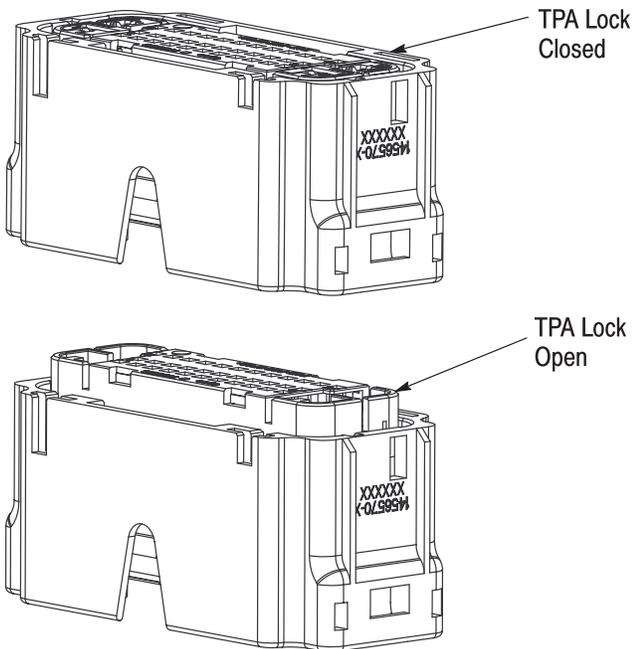
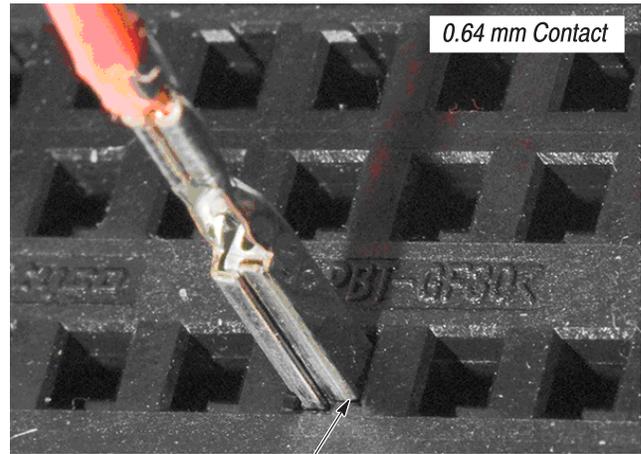


Figure 3

**NOTE** *If the TPA lock is fully or partially closed, Refer to Section 4, DISASSEMBLY PROCEDURES (Steps 1 through 4)*

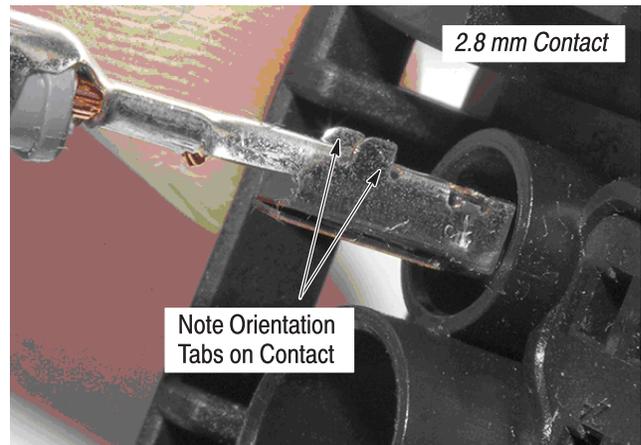
Proceed as follows:

1. Observe the proper orientation of the crimped contact (refer to Figures 4, 5, and 6), and insert by grasping the wire and pushing it straight into the appropriate circuit cavity as far as it will go. Refer Figure 7 (A, B, and C). If significant resistance is felt prior to complete insertion, remove the crimped contact and verify the proper orientation.



Note Orientation Feature on Contact and Seal Cover

Figure 4



Note Orientation Tabs on Contact

Figure 5

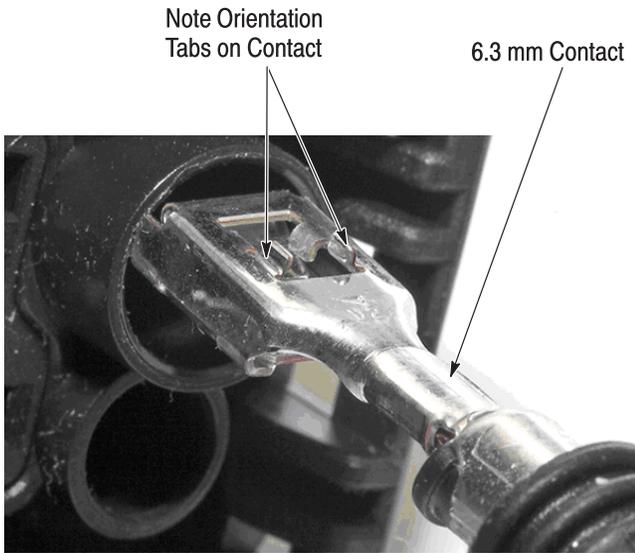


Figure 6

2. Pull back lightly on the wire and contact to ensure the retention latch finger is holding the contact. Refer to Figure 7C.

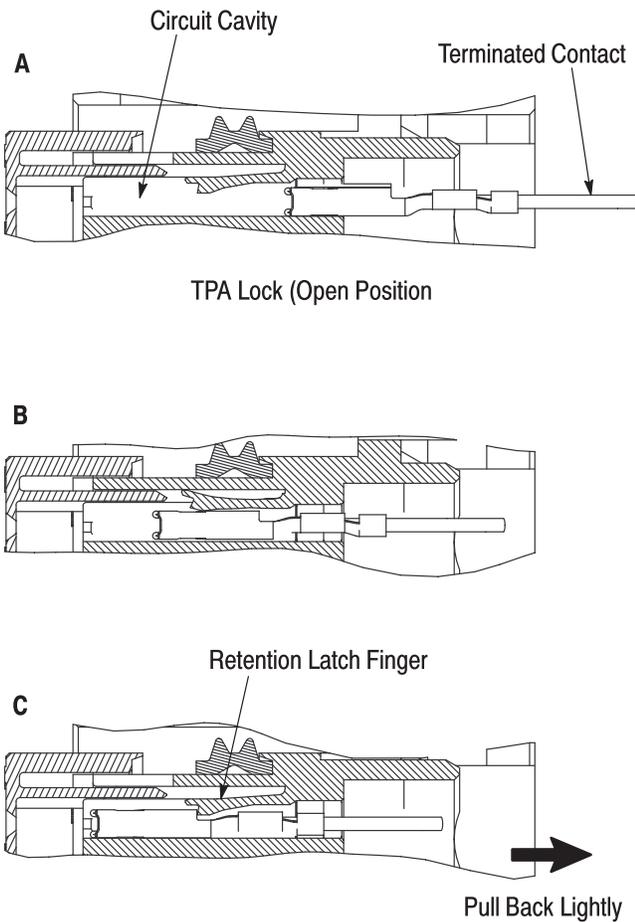


Figure 7

3. After all the required contacts have been installed, the TPA lock must be closed. To close the lock, push evenly on the flat surfaces of the TPA front face (see Figure 8). The TPA lock should fit flush with the connector outer shroud and the plastic around the 2.8 mm and 6.3 mm circuit cavities on the ends of the connector.



Figure 8



*If the TPA lock does not snap easily into the closed position, one or more of the contacts may not be fully inserted. Repeat Steps 1 and 2.*

**4. DISASSEMBLY PROCEDURES (Contact Removal)**

Before removing contacts from the plug housing, the TPA lock must be completely removed. To remove the TPA lock and contacts, proceed as follows:

1. Insert a 3–4 mm flat blade screwdriver into one of the slots in the TPA lock as shown in Figure 9.

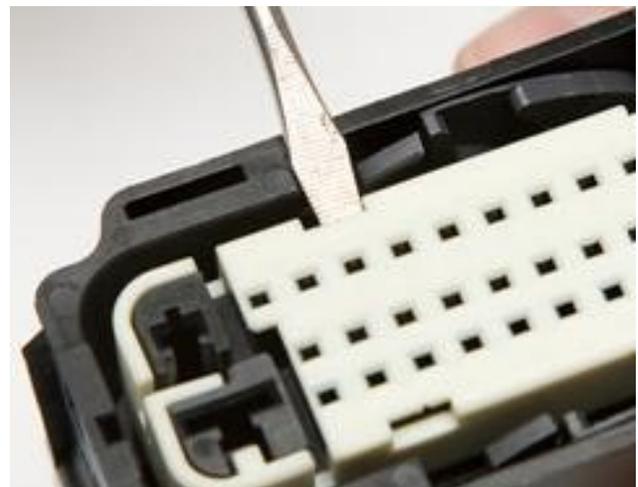


Figure 9

2. Pry the TPA lock open on that end by pushing down on the screwdriver handle. See Figure 10.

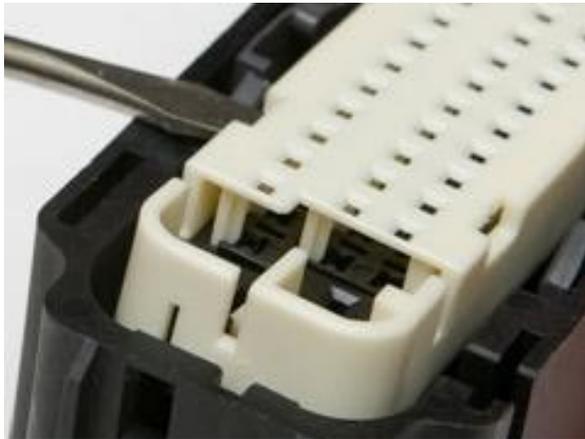


Figure 10

3. Repeat this process on the other end of the TPA lock.
4. The TPA lock should now be in its open position.
5. To fully remove the TPA lock, either grasp it by hand and pull it off of the plug housing, or use the screwdriver and pry each end until it is free of the housing.
6. Insert a 1 mm flat blade screwdriver into the selected exposed circuit cavity as shown in Figure 11A.
7. Grasp the wire of the contact to be removed, and push the contact forward into the contact cavity until it stops.
8. Using the 1 mm screwdriver, gently deflect the retention latch finger. See Figure 11 B. Simultaneously pull the wire and contact from the plug housing. See Figure 11 C.



*Special care should be taken when removing the 0.64 mm contacts to prevent damage to the mat seal.*

9. Follow Steps 6 through 8 for any remaining contacts to be removed.

## 5. COVER/LEVER ASSEMBLY

The cover/lever subassembly is attached to the plug housing after all terminated contacts have been inserted. First, pre-form the wire bundle by grasping and bending it towards one end of the connector as shown in Figure 12. Wire exit direction will be determined by the harness layout. The cover/lever can be assembled to the plug housing with the wire exit toward either end. The cover/lever is then

attached over the wire bundle by first inserting the open end of the cover down over the bundle and engaging the tabs on the cover with slots on the plug housing as shown in Figure 13.

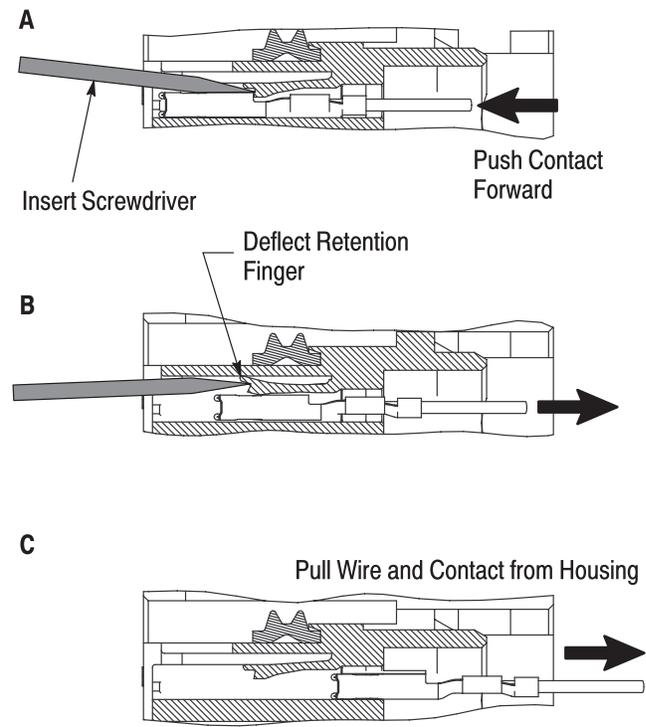


Figure 11

The other end of the cover is then rotated downward and latched into the plug housing as shown in Figure 14. An audible click will be heard as the cover latch engages the housing and locks into place. Figure 15 shows a fully installed cover/lever assembly. Care must be taken in these operations to ensure that the wire bundle is completely captured within the cover and no wires are pinched between the plug housing and the cover. The wire bundle should then be attached to the cover.



Figure 12



Figure 13



Figure 14



Figure 15

### 6. REMOVING THE COVER/LEVER ASSEMBLY

The cover/lever assembly can be removed from the plug assembly by first removing any tape or wire ties that hold the wire bundle to the cover. A small flat blade screwdriver is then used to deflect the cover to the plug housing latch. While deflecting the latch, apply force to separate the cover from the plug housing.

Using a rotating motion, disengage the tabs on the cover from the plug housing and remove the cover. See Figures 16 thru 18.



Figure 16



Figure 17



Figure 18



Figure 20

### 7. MATING THE CONNECTOR

Ensure that the lever is locked in the fully open position. Observe the proper orientation of the connector with the keys on the mating interface. Push the connector onto the interface until it locks in the pre-lock position. Release the lever by depressing the latch. Rotate the lever until it locks in the fully mated position with an audible click. Visually ensure that the connector is fully mated with the interface. See Figures 19 thru 23.



Figure 21



Figure 19

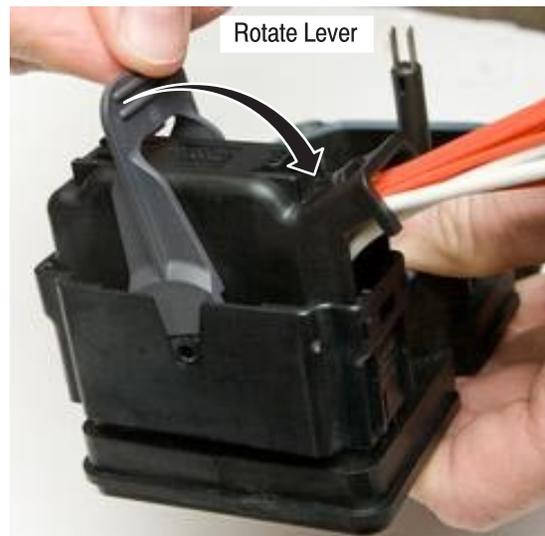


Figure 22



Figure 23

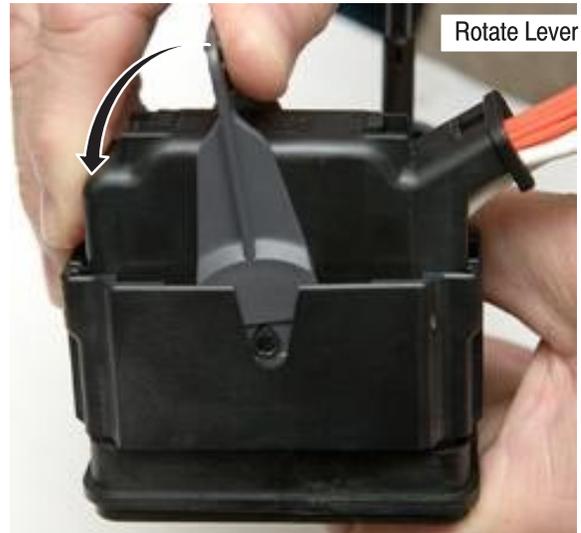


Figure 25

### 8. UNMATING THE CONNECTOR

Release the lever by depressing the latch as shown in Figure 24. Rotate the lever away from the wire bundle until it locks in the open position. Grasp the connector and pull it off of the interface being careful to pull perpendicular to the interface. See Figures 25 and 26.



Figure 24



Figure 26

### 9. REVISION SUMMARY

- Initial release of document