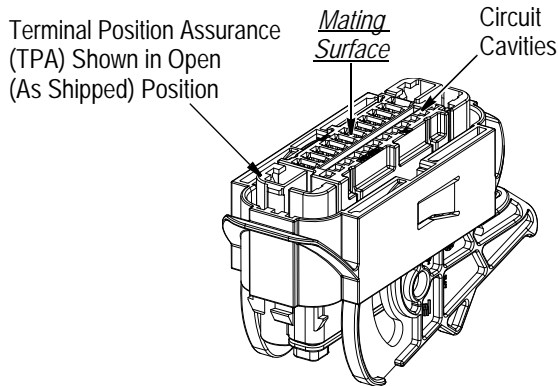
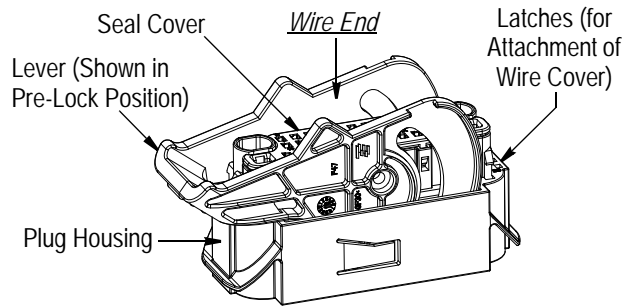
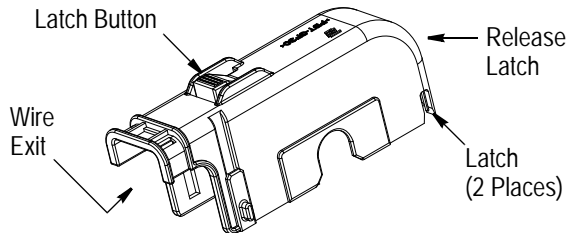


*38-Way Sealed Hybrid Lever-Assisted ABS Connector
(2138659-1 Shown)*



Wire Cover 2098811-1 (Available Separately)



CONTACT (Available Separately)	DESCRIPTION
54001431 ■	2.8-mm FCI Receptacle
2098753-[]	0.64-mm Generation Y Receptacle
7116-4140 through 4143 ■	6.3-mm Yazaki Receptacle

■ Not available from TE Connectivity

Figure 1

1. INTRODUCTION

38-way sealed hybrid lever-assisted ABS connectors 2138659-[] and 2272223-[] accept the contacts (3 different sizes) listed and the wire cover shown in Figure 1.

The contacts and wire cover are required for assembly, and must be purchased separately.

FCI is a trademark. Yazaki is a trademark.

This instruction sheet covers the assembly procedure (contact insertion, installing the wire cover, and mating) and disassembly procedure (contact extraction, removal of the wire cover, and unmating) for the connectors.



NOTE

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

Reasons for reissue of this instruction sheet are provided in Section 6, REVISION SUMMARY.

2. DESCRIPTION

Each connector consists of a plug housing with circuit cavities, a mat wire seal for the 2.8-mm and 0.64-mm contacts (6.3-mm contacts use individual wire seals installed during the crimping process), peripheral seal, seal cover, lever, and terminal position assurance (TPA). The seal cover contains molded-in punched-out seal plugs that create different open and blocked circuit configurations. The lever provides mechanical assist for mating and unmating, as well as a means of locking the connector to the header interface.

Each connector is shipped as one piece with the TPA in the open (as shipped) position and lever in the pre-lock position.

3. ASSEMBLY PROCEDURE

3.1. Contact Insertion

1. Ensure that the contacts are properly crimped.

For application of the 2.8-mm contacts, contact FCI.

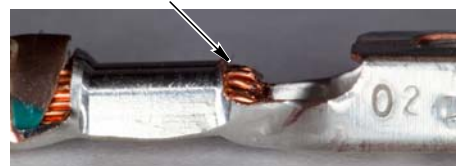


CAUTION

The wire strands must NOT extend above the wire barrel crimp; otherwise, the strands could cause damage to the mat wire seal as the contact passes into the circuit cavity. Refer to Figure 2.

Inspection of 2.8-mm Crimped Contact

Acceptable — Wire Strands Below Wire Barrel Crimp



Unacceptable — Wire Strands Above Wire Barrel Crimp

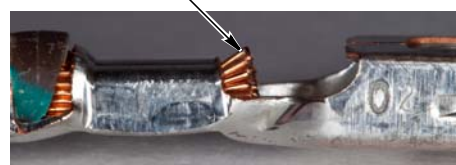


Figure 2

For proper application tooling and methods for the 0.64-mm contacts, refer to Application Specification 114-13183.

For the 6.3-mm contacts, individual wire seals must be installed during the crimping process. For application of the 6.3-mm contacts, contact Yazaki North America, Inc.

Note: All figures show connectors 2138659-[]; the same applies to connectors 2272223-[].

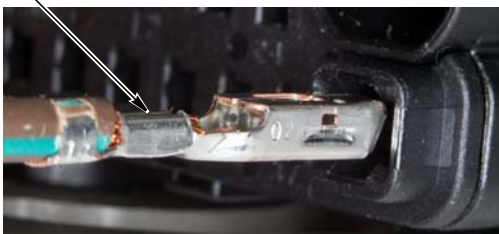
2. Ensure that the TPA of the connector is in the open (as shipped) position as shown in Figure 1. If the TPA is closed or partially closed, refer to Step 1 of Paragraph 4.1.

3. Align the crimped contact with the appropriate circuit cavity of the connector. Refer to Figure 3.

Aligning Contacts with Contact Cavity

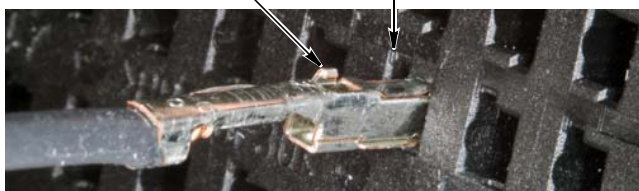
2.8-mm Contact

Seam of Wire Barrel May Face Toward (Shown) or Away from 6.3-mm Contact Cavity



0.64-mm Contact

Orientation Tab Faces Notch in Contact Cavity



6.3-mm Contact

Orientation Tab Must Face Away from 2.8-mm Contact Cavity



Figure 3

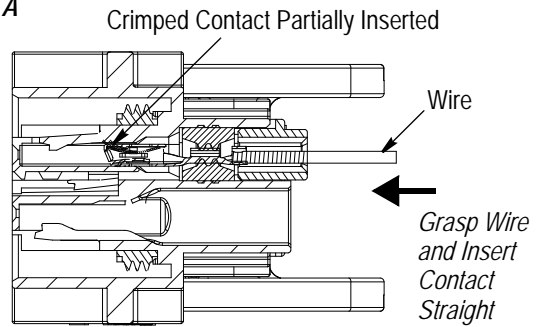
4. Grasp the wire of the crimped contact, and insert the contact straight into the circuit cavity. See Figure 4, Detail A. The retention latch finger of the contact cavity will be deflected by the contact as shown in Figure 4, Detail B.

5. Push the wire until the contact is fully inserted as shown in Figure 4, Detail C. If there is significant resistance during insertion, remove the contact and verify proper orientation.

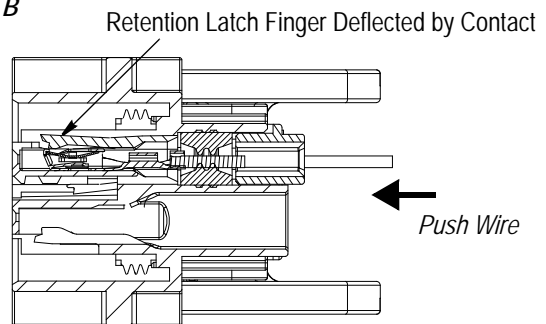
6. Lightly pull the wire to ensure that the retention latch finger of the plug housing is holding the contact. Refer to Figure 4, Detail C.

Inserting Contacts into Connector

Detail A



Detail B



Detail C

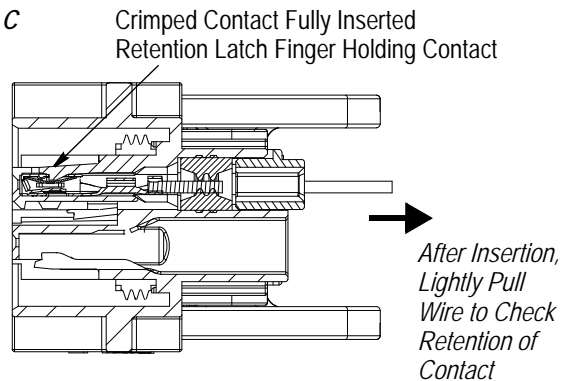


Figure 4

7. After all contacts have been inserted, push evenly on the flat surfaces at both ends of the TPA until it is in the closed position. See Figure 5. The TPA is in the closed position when the TPA is flush with the mating surface of the connector. In addition, for the 2.8-mm and 6.3-mm contacts, the TPA must be flush with the plastic around the circuit cavities located at the sides of the connector.



NOTE

If the TPA does not move easily into the closed position, one or more of the contacts is not fully inserted. Move the TPA to the open position, and check that all contacts are fully inserted.

Moving TPA to Closed Position

Flat Surfaces at Ends of TPA



Figure 5

3.2. Installing the Wire Cover



NOTE

The wire cover should be installed after all contacts have been inserted.

1. Form the wire bundle by grasping and bending it toward the end of the connector opposite the handle of the lever as shown in Figure 6.

Formed Wire Bundle Handle of Lever



Figure 6

2. Align the bottom of the wire cover with the wire end of the plug housing so that the wire exit is over the wire bundle. See Figure 7, Detail A.

3. Align the latches of the wire cover with the latches of the plug housing. Refer to Figure 7, Detail B.

4. Ensure that the wire bundle is completely captured within the wire cover and no wires are pinched between the plug housing and the wire cover, then push the wire cover onto the plug housing until it locks into place. There will be an audible click. Ensure that both ends of the wire cover are secure. Figure 7, Detail C shows the wire cover installed and fully seated onto the plug housing.

Installing Wire Cover

Detail A

Wire Exit of Wire Cover Over Wire Bundle



Detail B

Latches of Wire Cover Aligned with Latches of Plug Housing



Detail C



Both Ends of Wire Cover Fully Seated onto Plug Housing

Figure 7

5. Using tape or wire ties, attach the wire bundle to the wire cover.

3.3. Mating the Connector

1. Align the mating face of the connector (ensuring that the keys are properly oriented) with the header interface as shown in Figure 8, Detail A.

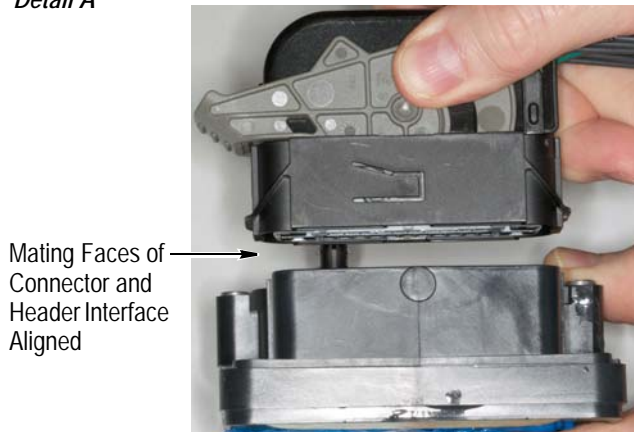
2. Lightly squeeze both sides of the lever against the sides of the wire cover, and push the connector onto

the header interface, allowing the lever to move to the pre-lock position as shown in Figure 8, Detail B.

3. Grasp the lever in the lever grip area, and rotate the lever until it locks in the fully mated position. There will be an audible click. See Figure 8, Detail C. Visually ensure that the connector is fully seated on the header interface as shown in Figure 8, Detail D.

Mating Connector

Detail A



Detail B

Connector Seated and Lever in Pre-Lock Position



Detail C

Rotate Lever

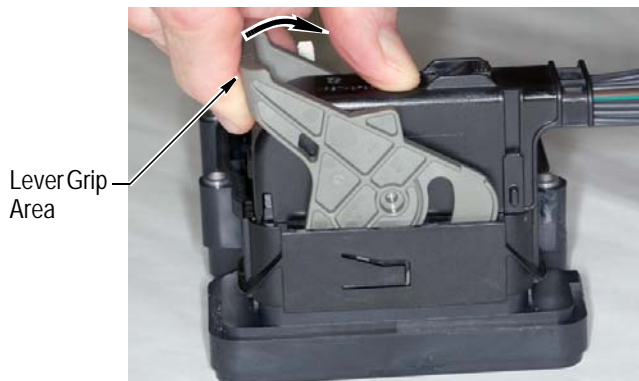


Figure 8 (Cont'd)

Detail D



Connector Fully Mated with Header Interface

Figure 8 (End)

4. DISASSEMBLY

4.1. Contact Removal

1. Move the TPA to the open position as follows:

- a. Insert a 3- to 4-mm flat blade screwdriver under one of the tabs of the TPA as shown in Figure 9, Detail A, and lift that end of the TPA by pushing against the TPA and rotating the screwdriver as shown in Figure 9, Detail B.
- b. Repeat Step 1a for the other end of the TPA. The TPA should now be in the open position.

Moving TPA to Open Position

Detail A

Tip of Screwdriver Under Tab of TPA



Detail B

TPA in Open Position



Figure 9

2. Remove the 2.8-mm and 6.3-mm contacts according to Steps 3 through 5. Before removing the 0.64-mm contacts, either manually grasp the TPA and pull it out of the plug housing or use the screwdriver to lift each end until the TPA is free. Remove the 0.64-mm contacts according to Steps 3 through 5.
3. Push the wire of the contact to be removed so that the contact moves toward the front of the plug housing.
4. Insert the tip of a 1-mm screwdriver into the circuit cavity of the contact to be removed. See Figure 10, Detail A.
5. Gently rotate the screwdriver toward the contact to deflect the retention latch finger. Hold the screwdriver in place, and pull the wire until the contact is out of the plug housing. See Figure 10, Detail B.



CAUTION

When removing any 2.8-mm or 0.64-mm contacts, special care should be taken; otherwise, damage to the mat seal could occur.

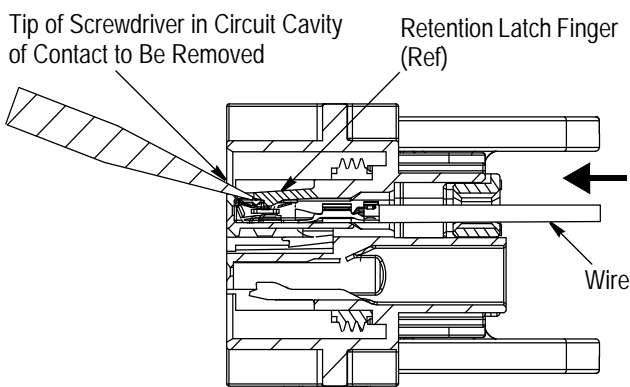
6. After all contacts have been removed, re-install the TPA into the plug housing in the open position.

4.2. Removing the Wire Cover

1. Remove any tape or wire ties that hold the wire bundle to the wire cover.
2. Slide the tip of a small flat blade screwdriver under the lever of the plug housing and into the release latch of the wire cover, then using the tip of the screwdriver, simultaneously apply a slight upward pressure to the wire cover and deflect the latch away from the plug housing. See Figure 11, Detail A.
3. Using the screwdriver, disengage the tabs of the wire cover from the latches of the plug housing, then remove the wire cover. See Figure 11, Detail B.

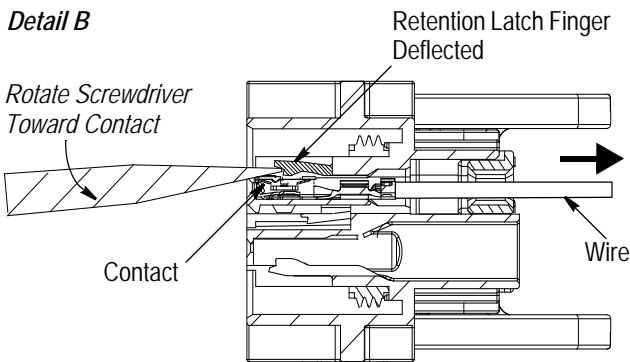
Removing Contacts

Detail A



Push Wire to Move Contact Toward Front of Plug Housing

Detail B



Pull Wire Until Contact is Out of Plug Housing

Figure 10

Removing Wire Cover

Detail A



Detail B

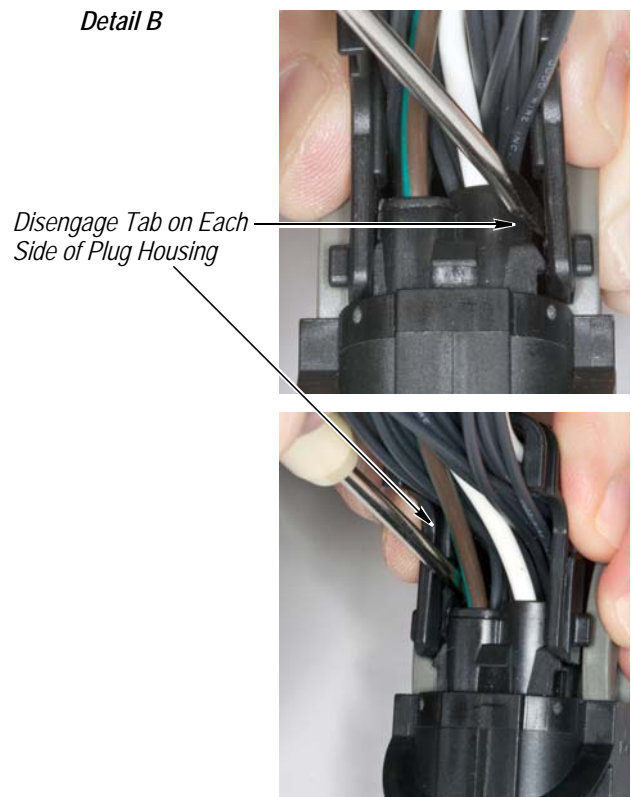


Figure 11

4.3. Unmating

1. Depress the lever button as shown in Figure 12, Detail A.
2. Grasp the lever in the lever grip area, and rotate the lever until it is in the open position. Refer to Figure 12, Detail B.
3. Grasp the connector and pull it off of the header interface as shown in Figure 12, Detail C — make sure to pull perpendicular to the header interface.

5. REPLACEMENT AND REPAIR

DO NOT use defective or damaged product. The connectors, wire cover, and TPA are not repairable. DO NOT re-use contacts by removing the wire.

6. REVISION SUMMARY

Revisions to this instruction sheet include:

- Added connector part number
- Modified second sentence in Section 1

Unmating

Detail A

Depress Lever Button

Wire Bundle
(Ref)



Detail B

Rotate Lever

Lever Grip
Area



Detail C

*Pull Connector Off
of Header Interface*



Figure 12