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REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
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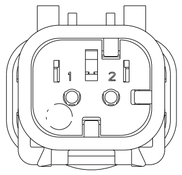
	E1	REVISED PER PCN-23-190965	31OCT2023	AP	CB



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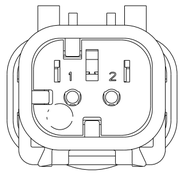

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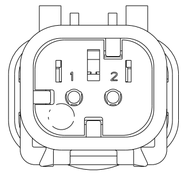
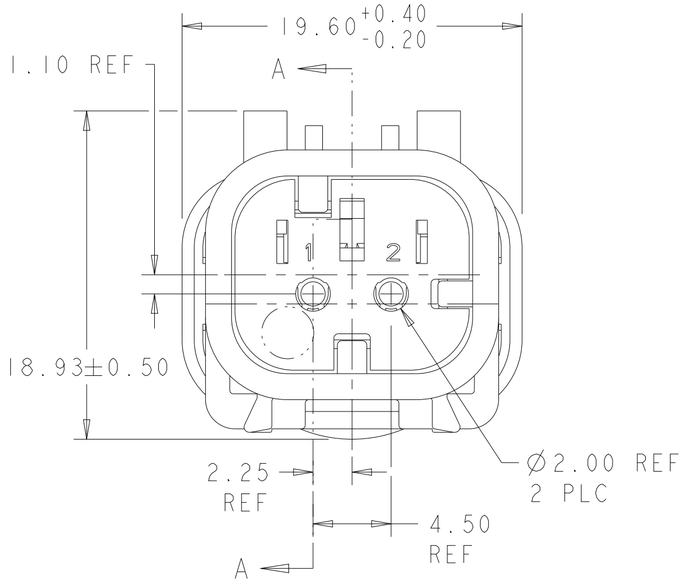


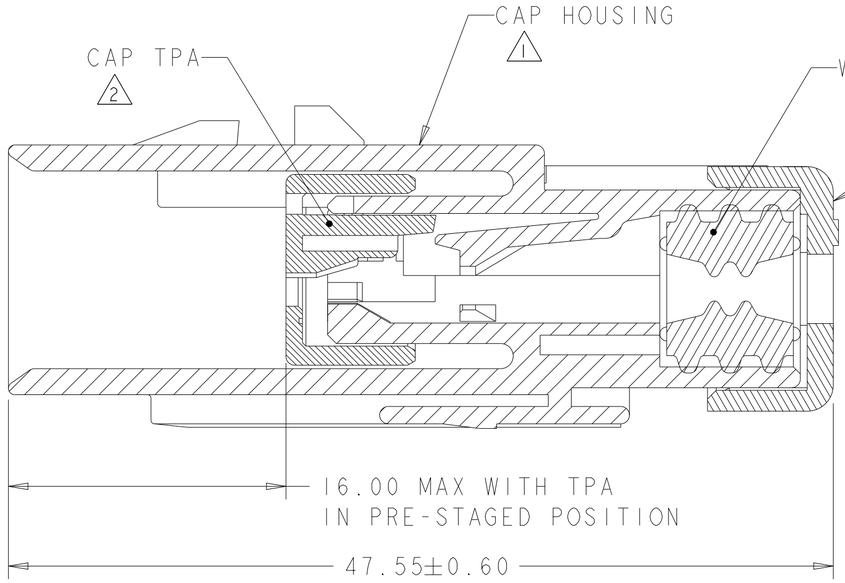
776428-4
SCALE 2:1
KEY D

勝特力電材超市-龍山店 886-3-5773766
勝特力電材超市-光復店 886-3-5729570
胜特力电子(上海) 86-21-34970699
胜特力电子(深圳) 86-755-83298787
http://www.100y.com.tw

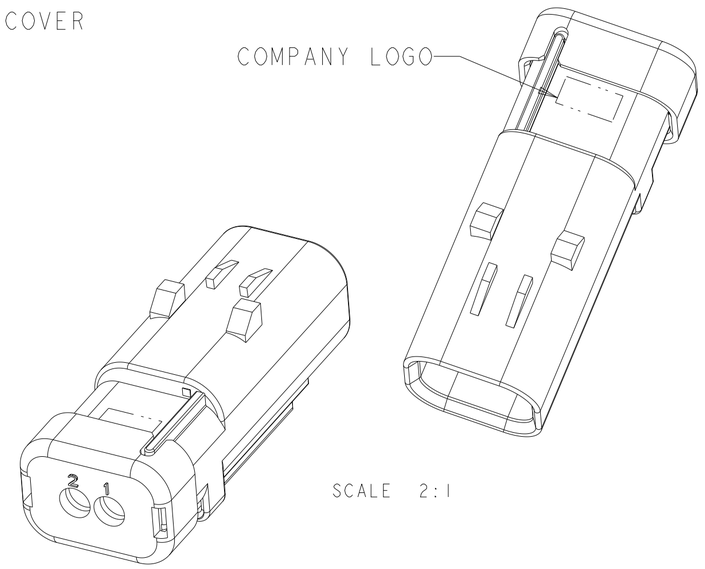
1. MATERIAL: 15% GLASS FILLED THERMOPLASTIC
   COLOR: BLACK
2. MATERIAL: 15% GLASS FILLED THERMOPLASTIC
   COLOR: (SEE TABLE)
3. MATERIAL: SILICONE
   COLOR: MARINE BLUE
4. RECOMMENDED WIRE DIAMETER RANGE IS 2.18 TO 3.67mm.



776428-1 SHOWN
KEY A



SECTION A-A



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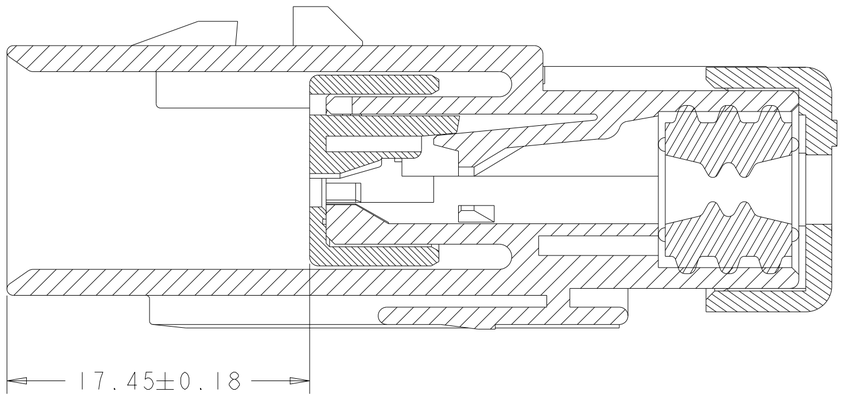


SECTION A-A
WITH TPA IN CLOSED POSITION

TPA COLOR	PART NUMBER
GREEN	776428-4
YELLOW	776428-3
GRAY	776428-2
RED	776428-1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±-
2 PLC ±-
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -
-

FINISH -
-

DWN 22FEB2000 Y.PETERSON
CHK 11DEC2001 R. GREINER
APVD 11DEC2001 M. TRULL
PRODUCT SPEC 108-2184
APPLICATION SPEC 114-13065
WEIGHT 9

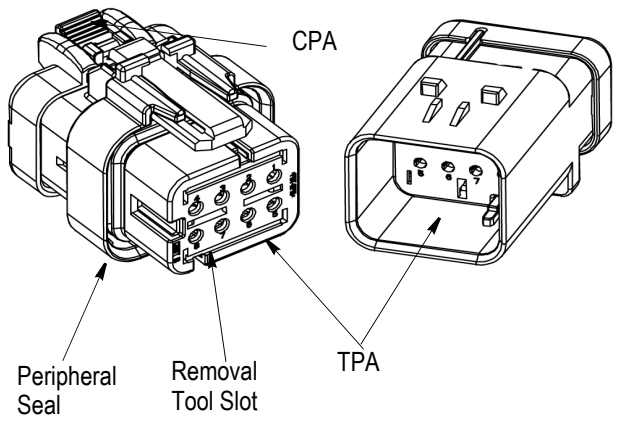
TE Connectivity

NAME CAP ASSEMBLY, 2 POSITION, SINGLE ROW, AMPSEAL 16

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	00779	C-776428	-

Customer Drawing | SCALE 4:1 | SHEET 1 OF 1 | REV E1

Plug Assembly (Typ) *Cap Assembly (Typ)*



CIRCUIT POSNS	STANDARD DIA. WIRE SEAL (SDWS)		REDUCED DIA WIRE SEALS (RDWS)	
	PLUG ASSY•†	CAP ASSY• †	PLUG ASSY•†	CAP ASSY•†
2 S	776427	776428	776522	776534
3 S	776429	776430	776523	776535
4 D	776487	776488	76524	776536
6 D	776433	776434	776531	776537
8 D	776494	776495	776532	776538
12 D	776437	776438	776533	776539

• Assembly dash number indicates color and keying position (-1 Red, -2 Gray, -3 Yellow, -4 Green)

† Call PRODUCT INFORMATION at the number at the bottom of this page for product availability..

S = Single Row; D = Dual Row

Figure 1

1. INTRODUCTION

This instruction sheet provides assembly and disassembly procedures for the connectors listed in Figure 1. The plug and cap housing assemblies are available in 2 through 12 circuit versions and are intended for wire-to-wire and wire-to-device applications.

NOTE

Dimensions in this instruction sheet are in millimeters [with inches in brackets]. Figures and illustrations are for reference only and are not drawn to scale.

Reasons for reissue of this instruction sheet are provided in Section 8, REVISION SUMMARY.

2. DESCRIPTION

A connector assembly consists of a plug assembly loaded with size 16 socket contacts, and/or a cap assembly loaded with size 16 pin contacts. Circuit identification is marked on each housing. Four different keying configurations are available (color and mechanical).

An integral connector position assurance (CPA) is designed on each plug assembly and both assemblies have a terminal position assurance (TPA) feature to lock the contacts in the housings. Sealing plugs are available for unused circuits. Moisture resistance is provided through the use of wire seals and a peripheral seal in the interface area.

3. CONTACTS (Figure 2)

The heavy duty stamped and formed (HDSF) size 16 pin and socket contacts accept wire sizes 14 through 20 AWG . The connectors will seal properly to wires having insulation diameters from 1.30-2.54 mm [0.051-1.00 In.] (for RDWS) and 2.18-3.67 mm [0.085-0.144 In.] (for SDWS). Refer to Application Specification 114-13045 for information on contacts and application tooling.

Size 16 Contacts

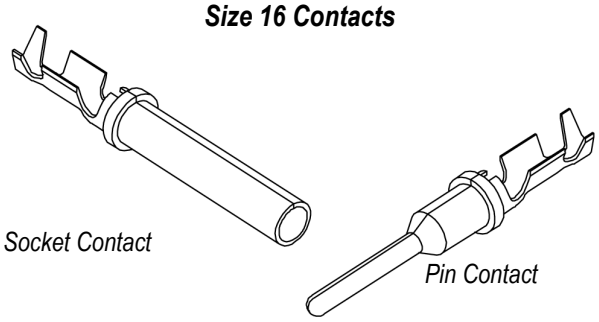


Figure 2

4. ASSEMBLY PROCEDURES

Before manually loading the crimped contacts into the housing assemblies, verify that the TPA is in the pre-staged position (see Figure 3).

1. Align the contact with the desired circuit cavity at the rear of the housing assembly (socket contacts with plug assemblies and pin contacts with cap assemblies).

2. Push the contact straight into the cavity, forcing it through the wire seal. Continue to push the contact until the contact retention finger returns to its normal position behind the retention shoulder on the contact. See Figure 4.

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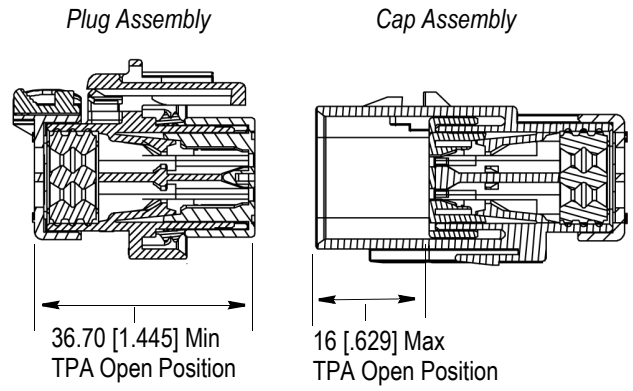

Figure 3

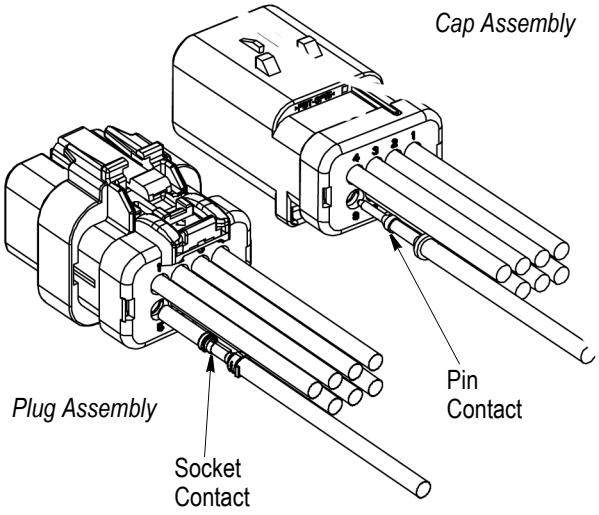

Figure 4

3. When all of the required contacts have been inserted, complete the assembly by pushing the TPA into the fully locked position. See Figure 5.

a. The TPA on the plug assembly may be fully locked by holding the rear of the assembly and pushing the TPA toward the rear of the assembly.

b. The TPA on the cap assembly must be locked in place using the Contact/TPA Removal Tool 776441-1 (or a reasonable substitute such as a small, flat-blade screwdriver). Insert tip of Removal Tool into removal tool slot of TPA, with notch in tool facing centerline of the TPA. Hook the notch of the removal tool against the edge of the slot in the TPA and push the TPA into the locked position.

If a substitute tool is used, the following method may be used to secure the TPA. Place the tip of the tool as near to the center of the TPA as possible. Make sure the tip is turned 90º to any grooves on the top of the TPA. Push the TPA into the cap assembly until you feel it move into the locked position.

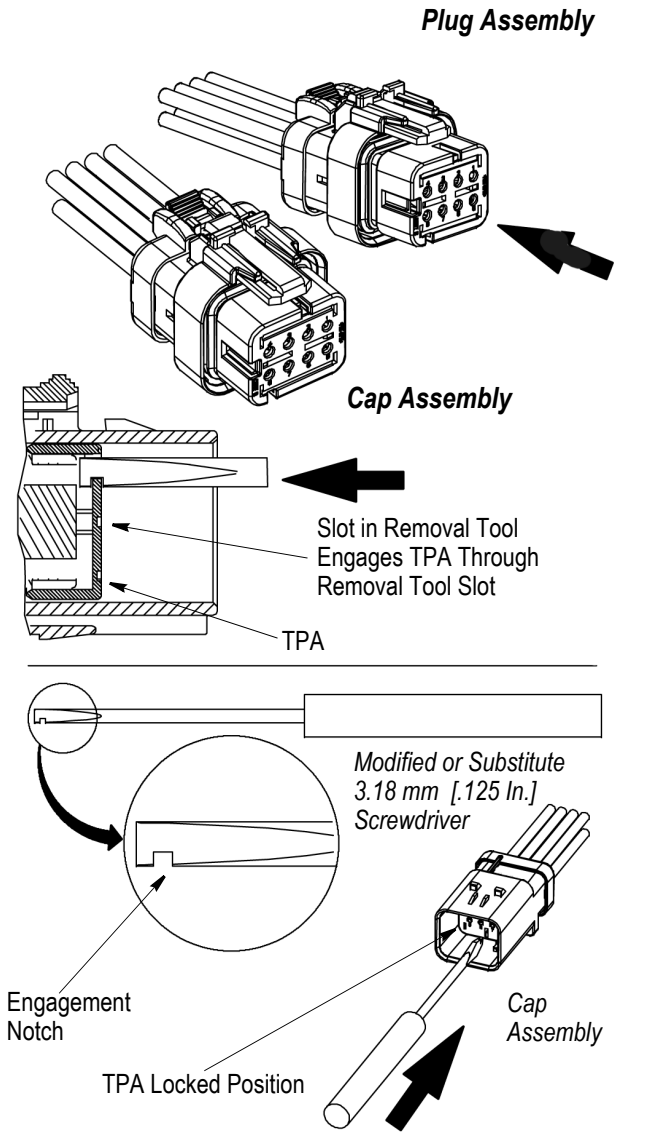

Figure 5

4. Verify that all contacts are locked in place by giving a slight tug on each wire with a force between 4.5 and 8.9 N [1 and 2 lb-f].

5. Place a sealing plug (part number 776363-1) into any unused circuits. The sealing plug should be pushed into the wire entry end of the plug or cap assembly until the sealing plug flange is firmly against the seal cover. See Figure 6.

6. When all contacts have been locked securely in the assemblies, complete the connector system by mating the plug and cap or device until the connector latch is in the fully locked position. See Figure 7.

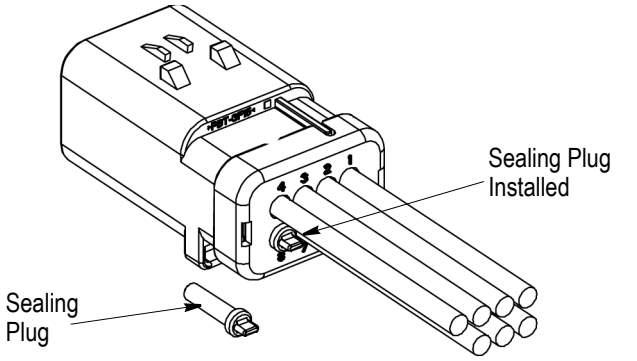

Figure 6

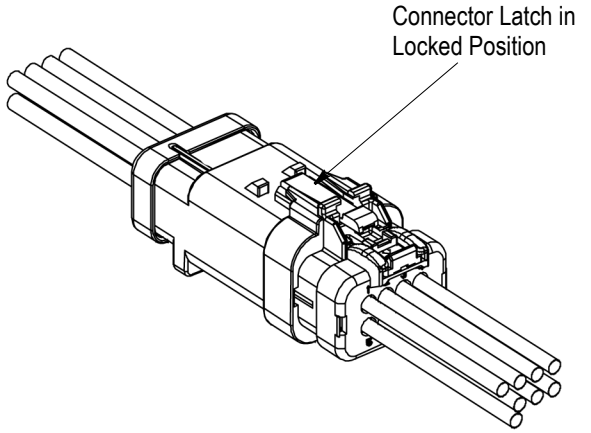

Figure 7

7. By pushing the CPA toward the plug housing, it can be slid into the locked position in which it covers the tip of the connector latch. See Figure 8.

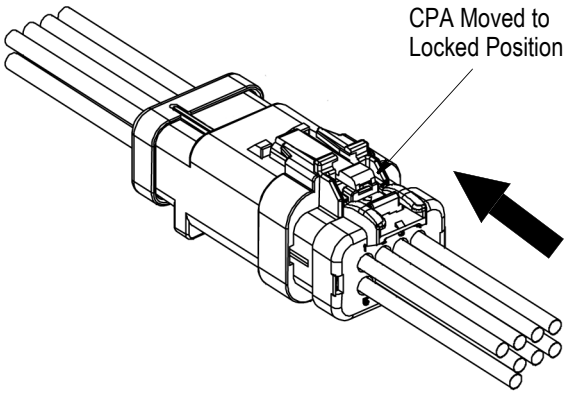

Figure 8

5. DISASSEMBLY PROCEDURES

Damaged or misplaced contacts can be removed and replaced as follows:

1. Slide the CPA toward the rear (wire end) of the cap assembly to reveal the connector latch tip.

2. Then depress the end of the connector latch and pull on the rear of the plug assembly to separate the mated connector assembly. See Figure 9.

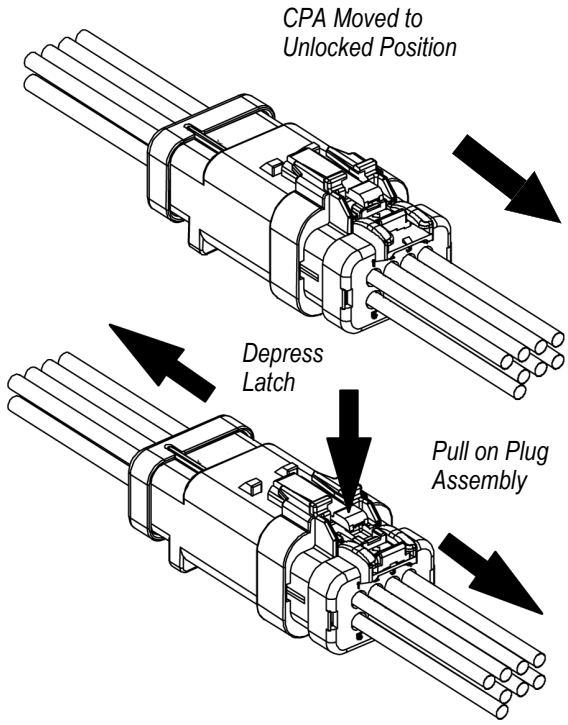

Figure 9

3. Orient the contact/TPA removal tool (or equivalently modified 3.18 mm [.125 in.] screwdriver) so that the slot in the tool is facing the centerline of the TPA. Insert the removal tool into the extraction slot in the plug or cap assembly TPA as shown in Figure 10.

4. Hook the removal tool firmly against the edge of the slot and pull on the TPA until it is completely removed from the housing assembly. Retain the TPA for use with the connector assembly after the contacts are replaced.

CAUTION

Do not remove the TPA in the plug assembly without using the extraction tool.

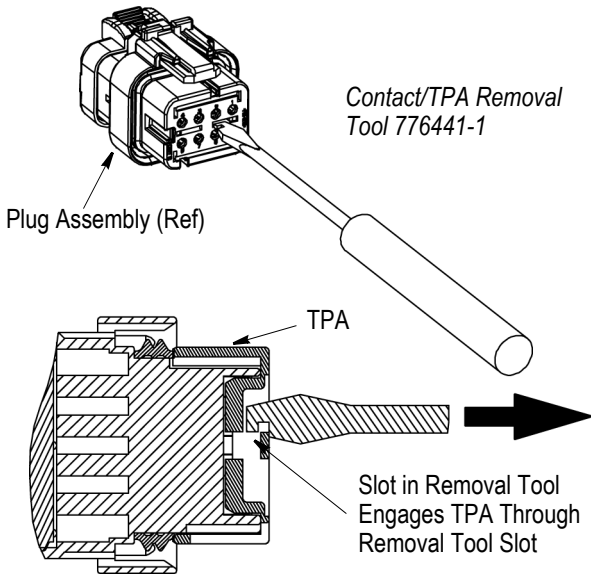

Figure 10

5. Insert the tip of the contact/TPA removal tool into the contact cavity and deflect the contact retention finger. Gently pull the wire until the contact is free from the housing. Repeat this procedure for the remaining number of contacts to be removed. See Figure 11.

CAUTION

Rotating the contacts to remove them from the housing without using the extraction tool may damage the housing resulting in reduced contact retention upon subsequent use of the housing.

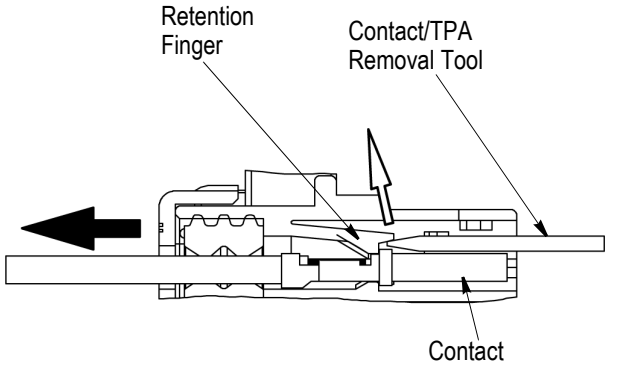

Figure 11

6. RE-ASSEMBLY OF CONNECTOR

To re-assemble the plug or cap assembly after servicing a contact, proceed as follows:

1. Align the keying features of the TPA with the appropriate features in the plug and cap housings. Place the TPA locking fingers inside the plug or cap housing.

NOTE

Single row plug and cap assemblies are keyed by the location of the latching fingers of the TPA. A "V" shaped notch inside the housing keys the dual row plug and cap assemblies with a matching "V" shaped rib on the bottom of the TPA.

2. Push the TPA into the pre-staged position by using the extraction tool or manually by hand. Refer to Section 4 and Figure 3 to verify the correct position.

3. Complete the assembly according to Section 4.

7. PERIPHERAL SEAL REPLACEMENT

The peripheral seal (see Figure 1) can be replaced when the connector is separated for servicing. Proceed as follows:

1. Separate the connector system and remove the TPA from the plug assembly according to the procedures in Section 5, Steps 1 through 4.

2. The old seal may be removed by sliding it off the end of the plug housing.

3. The sealing surface of the plug housing should be cleaned to remove any dirt, moisture, or debris that may be on the connector assembly.

4. The new seal may be assembled to the plug assembly by sliding it on the end of the plug housing.

CAUTION

Care should be taken to make sure the seal does not roll during this process.

5. Re-assemble the TPA to the plug housing according to the steps outlined in Section 6.

8. REVISION SUMMARY

Since the previous release of this document, the TE Connectivity logo has been applied.