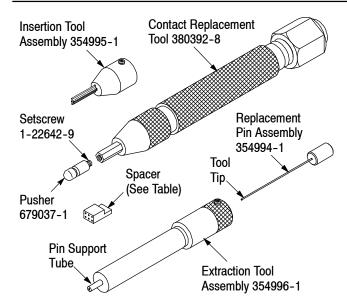


#### **PROPER USE GUIDELINES**

Cumulative Trauma Disorders can result from the prolonged use of manually powered hand tools. Hand tools are intended for occasional use and low volume applications. A wide selection of powered application equipment for extended-use, production operations is available.



REPAIR KIT	Z-PACK CONNECTOR TYPE	SPACER
354687-1	2mm HM and FB	679043-1
354687-2	HS3 6- and 10-Row	679043-2
354687-3	HM 12-Row	679043-3

Figure 1

# 1. INTRODUCTION

Signal Pin Repair Kits 354687-1, -2, and -3 are used to insert and extract signal pin contacts from Z-PACK connectors. See Figure 1.



Parts shown in Figure 1 are also available separately.

Reasons for reissue of this instruction sheet are provided in Section 4, REVISION SUMMARY.

# 2. DESCRIPTION

Each repair kit features a basic contact replacement tool with a spring-loaded adapter tip, an extraction tool assembly, single-pin insertion tool assembly, replacement pin assembly, pusher, and spacer.

The spacer, which is used to accommodate long tail signal pin contacts, is a block that fits over the signal

pin contact tail and reinforces it while the tool pushes the signal pin contact out.

The extraction tool assembly has two positions for the signal pin contact tip—BACK or INSIDE the pin support tube and FORWARD or BEYOND the pin support tube. The tool pin tip has a concave surface to aid in positioning the tool over the contact and to maintain its location during the removal process.

The tip of the insertion tool assembly is a T-shaped steel section. It has a larger, flat back section, a narrow, ribbed front section, and a slot between the ribs.

# 3. USING THE REPAIR KIT

#### 3.1. Contact Removal

- 1. Assemble the pusher (PN 679037-1) with the setscrew onto the contact replacement tool.
- 2. Snap the extraction tool assembly into the contact replacement tool.
- 3. Locate the rear of the signal pin contact to be removed.
- 4. Place the spacer over the signal pin contact tail (for mid-plane/long-tail product).



If the repair is being made prior to assembling the connector housing, use the higher surface of the spacer. If the repair is being made after assembling the rear housing, use the lower surface of the spacer.

- 5. Depending on the location of the tip of the signal pin contact in relation to the board (or spacer) surface, position the tool tip as follows:
- If the tip of the signal pin contact is flush with the board (or spacer) surface, position the tool tip in the FORWARD position (refer to Figure 2) and place the tool tip on the signal pin contact tip. The signal pin contact tip should be located in the concave tip of the tool.



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To be sure of proper location, slowly spin the tool between your thumb and index finger. If the tool tip remains on the contact tip, the tool tip is properly located.

 If the signal pin contact tip is below the board (or spacer) surface, position the tool tip in the FORWARD position and place into the hole.

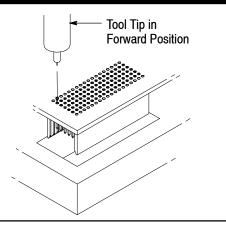


Figure 2

— If the signal pin contact tip is above the board (or spacer) surface, position the tool tip in the BACK position (refer to Figure 3) and place the tool over the contact tail, which will extend into the pin support tube.

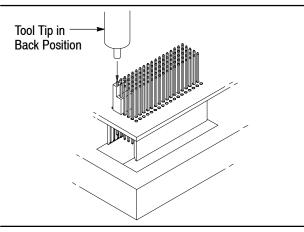


Figure 3

- 6. Make sure that the board is securely supported, with clearance for the signal pin contact to be pushed clear.
- 7. Position the tool perpendicular to the pc board surface. Use one hand to maintain the position of the tool, and use the other hand to exert the required force on the tool. Push the contact *straight* out of pc board and connector housing.

# 3.2. Contact Insertion

- 1. Snap the insertion tool assembly onto the contact replacement tool.
- 2. Orient and insert the replacement contact into the tip of the insertion tool. The pin should fit *snugly* between the ribs in the front of the tip.



DO NOT push the end of the contact with your finger—the contact will penetrate the skin. Pinch the pin between your thumb and index finger.

3. The push shoulders on the sides of the signal pin contact should each be against the ribs on the tool tip. The axis of the pin should be the same as the axis of the tool tip, with the flat section of the pin parallel to the BACK of the tip. See Figure 4.

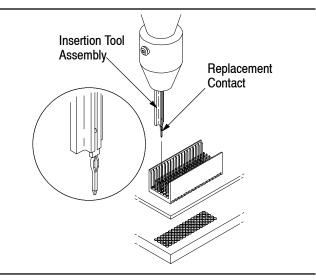


Figure 4

4. Orient and start the replacement contact through the top of the connector housing and into the appropriate cavity. The flat surface of the back of the tip should be parallel to the side walls of the connector housing. If replacing an outer row contact against the wall, the ribs in the front of the tool should fit between the plastic reinforcement ribs of the housing.



Before applying force to the replacement contact, make sure that the contact is aligned properly in the connector housing. The tool must be held perpendicular to the pc board.

Apply force to the tool until the tool bottoms on the connector housing and the contact is fully seated.



After the contact is fully seated, the push shoulders must be flush with the internal ribs on the floor of the connector housing.

6. Remove the tool from the contact, making sure not to damage the other contacts. If damaged contacts are evident, they must be replaced.

### 4. REVISION SUMMARY

Revisions to this instruction sheet include:

Updated instruction sheet to corporate requirements

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TE Connectivity: 354687-1