

**Application Tool 767511-[ ]**

**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.

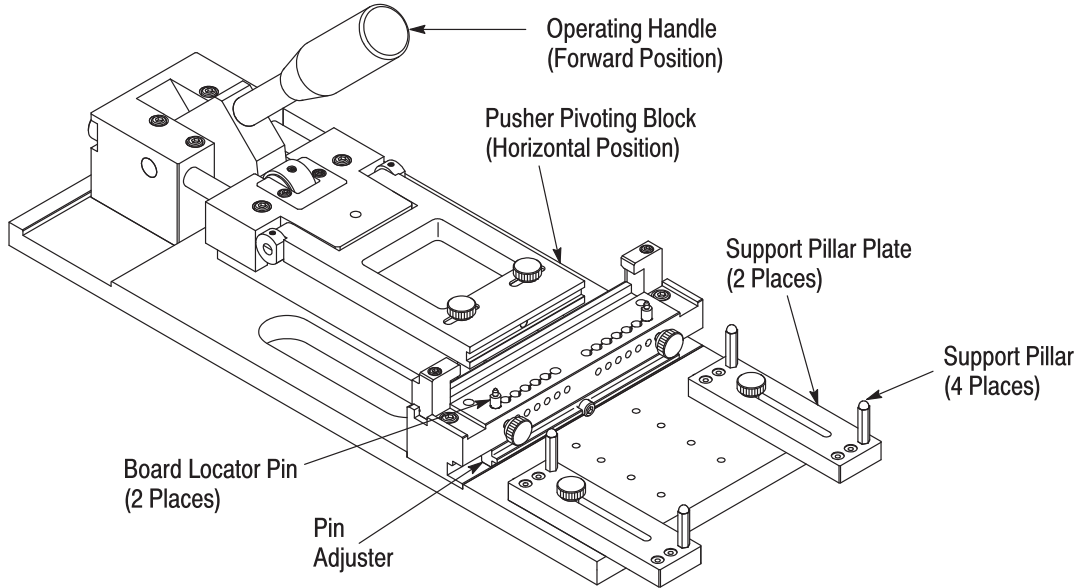


Figure 1

**1. INTRODUCTION**

Application Tool 767511-[ ] is a free standing tool used to mount MICTOR\* SMT (Surface Mount Technology) Right-Angle Plug and Receptacle Connectors onto the edge of the pc board. Read these instructions thoroughly before operating the tool.

Reason for revision is given in Section 7, REVISION SUMMARY.

**NOTE** *Dimensions on this sheet are in metric units [with U.S. customary units in brackets]. Figures and illustrations are for reference only and are not drawn to scale.*

**2. DESCRIPTION** (Figure 1)

The application tool consists of an operating handle, board locator pins, pusher pivoting block, support pillars, support pillar plates, and a pin adjuster. The pc board is held in place by the board locating pins, properly positioned by the pin adjuster, and supported by the support pillars and plates. The connector is aligned to the pc board by an inserter (see note below). The inserter is installed onto the pusher pivoting block which, when the operating handle is pulled forward, moves the connector bus solder tines onto the pc board bus via through holes.

**NOTE** *Inserters are designed for each connector size and must be ordered separately (see Figure 3).*

**3. SETUP**

Initial setup of the tool must be performed according to the size of connector (number of positions), thickness of pc board, and size of pc board being used. For changeovers, follow only the instructions which apply.

**CAUTION** *To avoid damage to tooling, setup procedures must be performed with the operating handle in its retracted position and the pusher pivoting block in its vertical fixed position. See Figure 2.*

**3.1. Size of Connector** (Figure 2)

**A. Installing Board Locator Pins**

1. Remove the two locating screws from the holes located at the front of the support block.

**NOTE** *Do not exchange locating screws with standard setscrews. The locating screws are designed to hold the board locator pins at a specific height.*

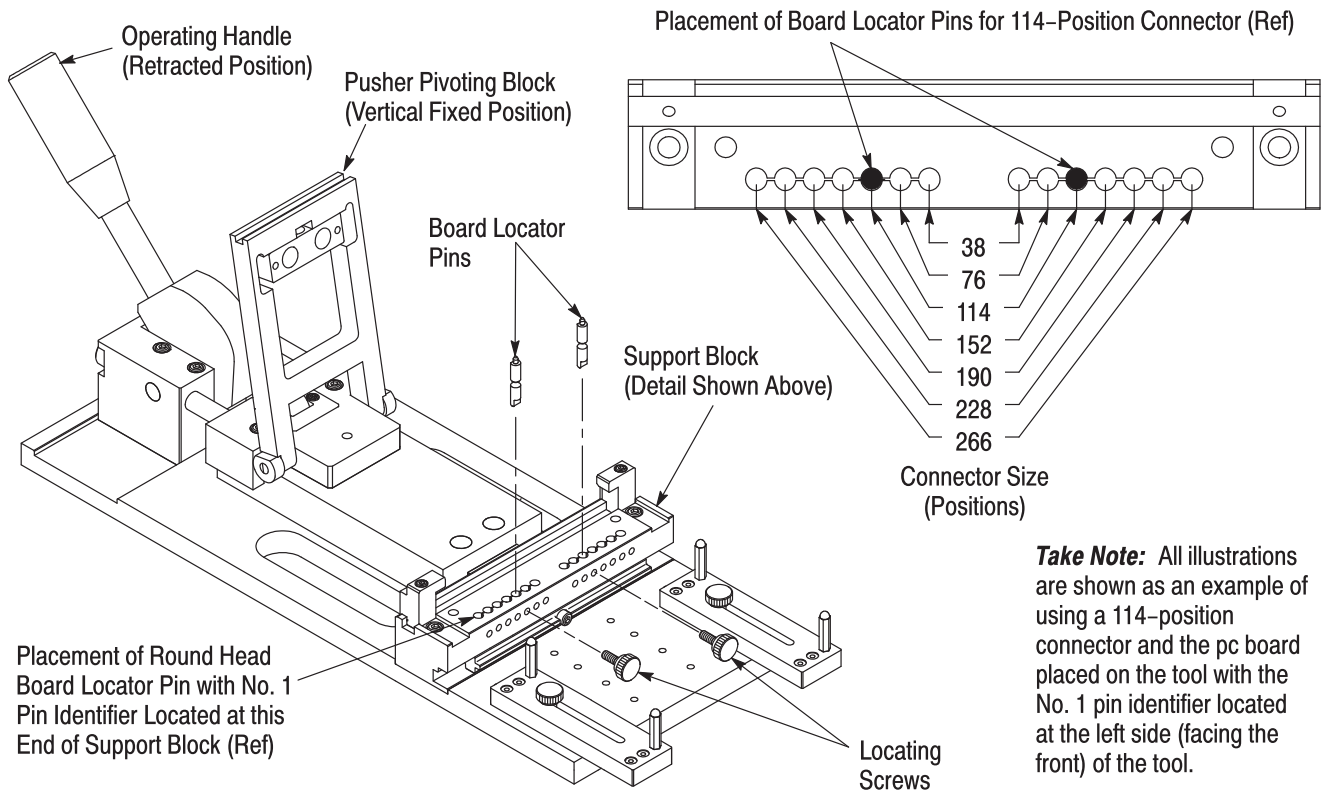


Figure 2

2. Lift the two board locator pins out of the holes in the top of the support block and re-install them into the appropriate holes according to the size of the connector being used (refer to Figure 2). Twist the pins until they drop into position and are firmly seated, then turn the pins until they are snug.

**NOTE** *Make sure that the round head pin is placed into the end of the support block that locates the pc board No. 1 pin identifier (tooling hole), and then place the diamond head pin into the other end of the support block.*

3. Re-install the two locating screws into the holes in the support block that align with the board locator pins as shown in Figure 2. Tighten the screws.

### B. Installing Inserter (Figure 3)

1. Loosen the two thumbscrews located on top of the pusher pivoting block.

2. Facing the back of the tool, slide the thumbscrews across the slots in the pusher pivoting block until the socket head cap screw is visible in the hole in the block. Using a  $\frac{9}{64}$ -in., 2.5-in.-long hex wrench, remove the screw.

3. If necessary, remove the inserter from the pusher pivoting block. Refer to Figure 3 to determine the appropriate inserter according to the size of the connector being used.

4. Install the inserter onto the pusher pivoting block so that the part number marked on the inserter is oriented toward the round head board locator pin (and the pc board No. 1 pin identifier).

5. Re-install the socket head cap screw into the pusher pivoting block. Tighten the screw.

6. Tighten the thumbscrews.

### 3.2. Thickness of PC Board (Figure 4)

1. Using a  $\frac{9}{64}$ -in. hex wrench, remove the socket head cap screw located in the center of the pin adjuster.

2. Slide the pin adjuster out of the slot in the support block. Refer to Figure 4 and orient the pin adjuster according to thickness of the pc board being used.

**NOTE** *Make sure that the text marked on the pin adjuster is oriented as shown in Figure 4.*

3. Slide the pin adjuster into the slot in the support block and re-install the socket head cap screw. Tighten the screw.

4. Remove the support pillars from the threaded holes in the support pillar plates. Refer to the markings above the holes and re-thread the pillars into the holes according to the thickness of the pc board being used. Tighten the pillars.

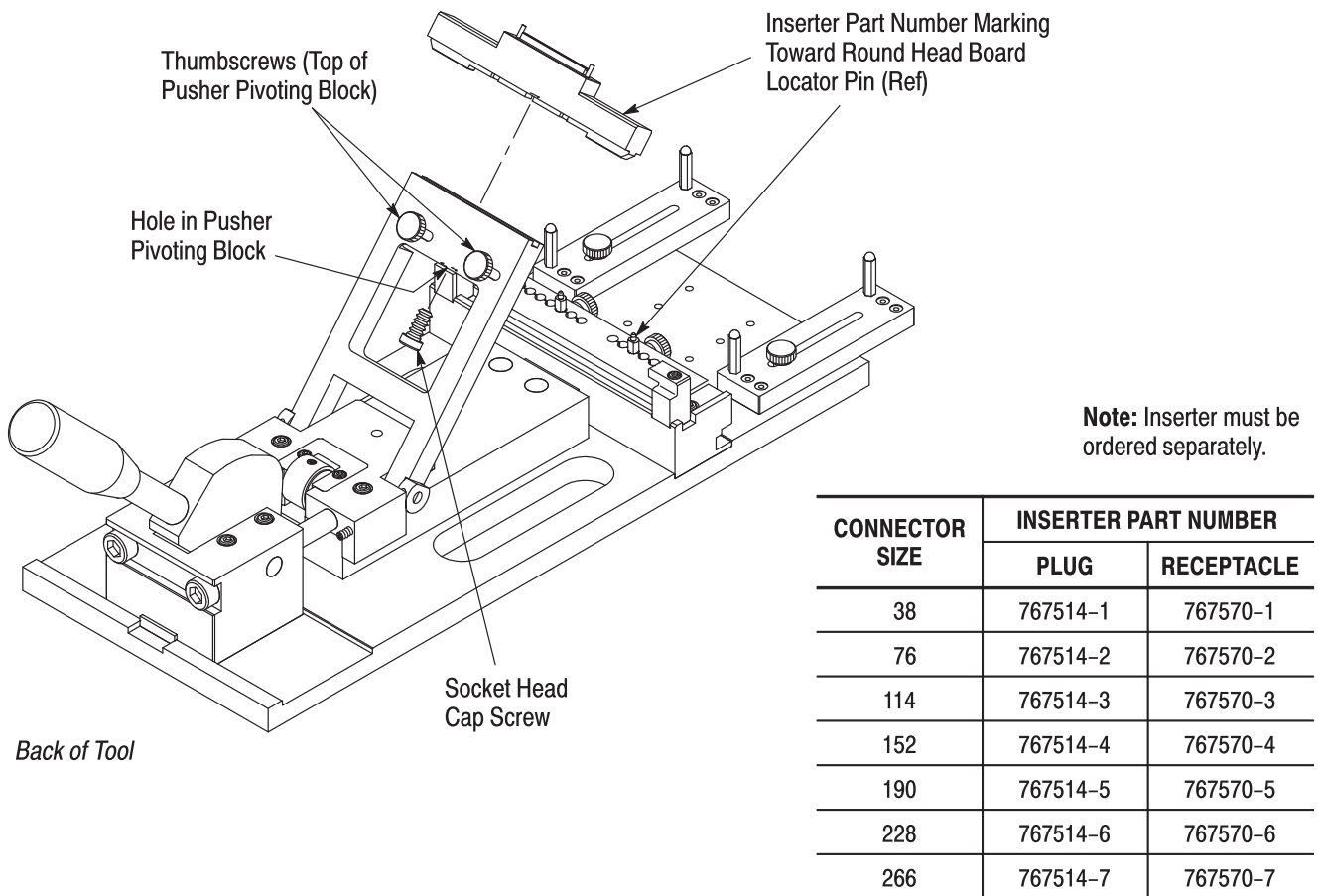


Figure 3

Orientation of Pin Adjuster for:

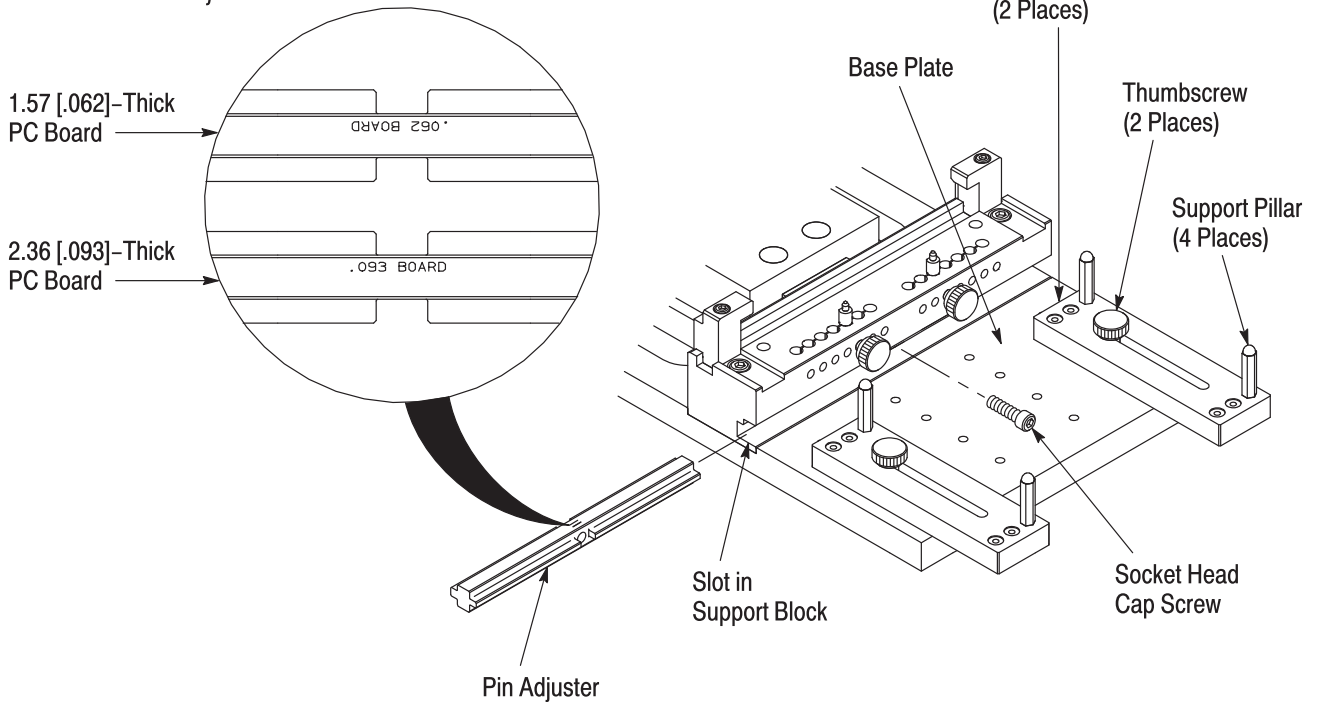


Figure 4

### 3.3. Size of PC Board (Figure 4)

1. Loosen the thumbscrews on the support pillar plates.
2. Position the plates on the base plate so that the pillars support the length of the pc board and do not interfere with any applied components.
3. Tighten the thumbscrews, making sure that they enter the tapped holes in the base plate.

### 3.4. Vertical Height Adjustment (Figure 5)

After completing the setup procedure, place the pc board and connector onto the tool according to Section 4. Check the alignment of the connector to the pc board—the connector bus solder tines must be central to the thickness of the pc board. If this alignment is not correct, proceed as follows:

1. Loosen the two thumbscrews located on top of the pusher pivoting block.
2. Facing the back of the tool, slide the thumbscrews across the slots in the pusher pivoting block to the right to raise the connector and to the left to lower the connector. This will shift the magnet retainer block.

#### NOTE



*The magnet retainer block is sensitive to movement; it is only necessary to shift the block in small increments at a time.*

3. Tighten the thumbscrews.

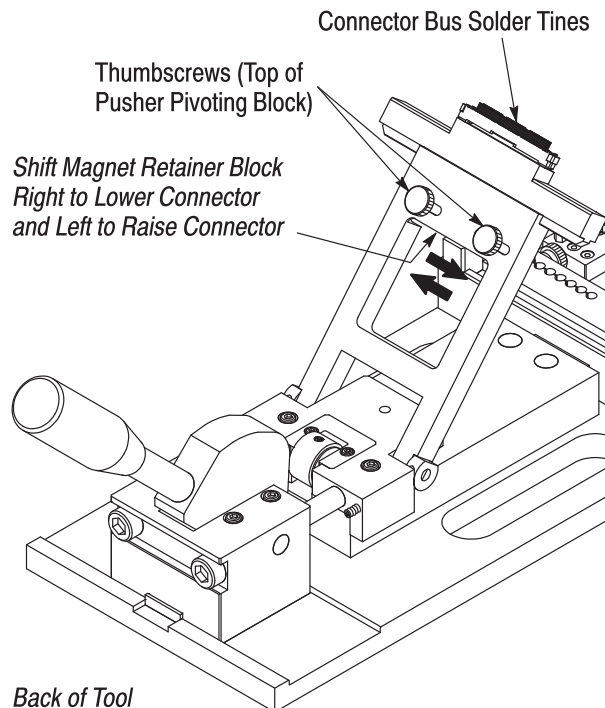


Figure 5

## 4. OPERATING PROCEDURE

#### DANGER



*To avoid personal injury, ALWAYS wear safety glasses when operating the tool.*

Prepare the pc board according to industry standards and the recommendations provided in Application Specification 114-13088. Make sure that the bus vias (through holes) are properly slit according to Instruction Sheet 408-4334.

If, during the operating procedure, the connector size, pc board, or both is changed, make sure to follow the applicable instructions in Section 3 for changeover procedure before proceeding.

1. Place the pc board onto the tool with the tooling holes over the board locating pins. Make sure that the No. 1 pin identifier is over the round head board locating pin. Allow the board to rest on the support pillars. See Figure 6.

#### CAUTION



*The areas of the pc board that come in contact with the inserter must be free of any applied components during tool operation. This “keep out” area and “restricted” area must be determined before mounting the connector. See Figure 7.*

2. Place the connector, mating face first, onto the raised portion of the inserter. Make sure to align the logo stamped on the connector (which indicates the No. 1 pin position) with the part number stamped on the inserter. This is the only way the connector will fit onto the inserter. Seat the connector until it is nearly flat against the inserter.

#### NOTE



*Since the inserter can be installed onto the pusher pivoting block with the part number oriented to the left or right, make sure that the connector No. 1 pin position aligns with the pc board No. 1 pin identifier. If it does not align, refer to Paragraph 3.1.B.*

3. Lower the pusher pivoting block to its horizontal position (shown in Figure 1).
4. Carefully hold the pc board in place on the locating pins and support pillars, and slowly pull the operating handle to its forward position (shown in Figure 1). Check to make sure that the connector is properly aligned to the edge of the pc board. If it is not aligned, refer to Paragraph 3.4.
5. Move the handle to its retracted position and carefully remove the pc board from the tool, taking care not to disturb the connector.
6. Inspect the connector to make sure that there is space between the edge of the pc board and the connector housing. See Figure 8.

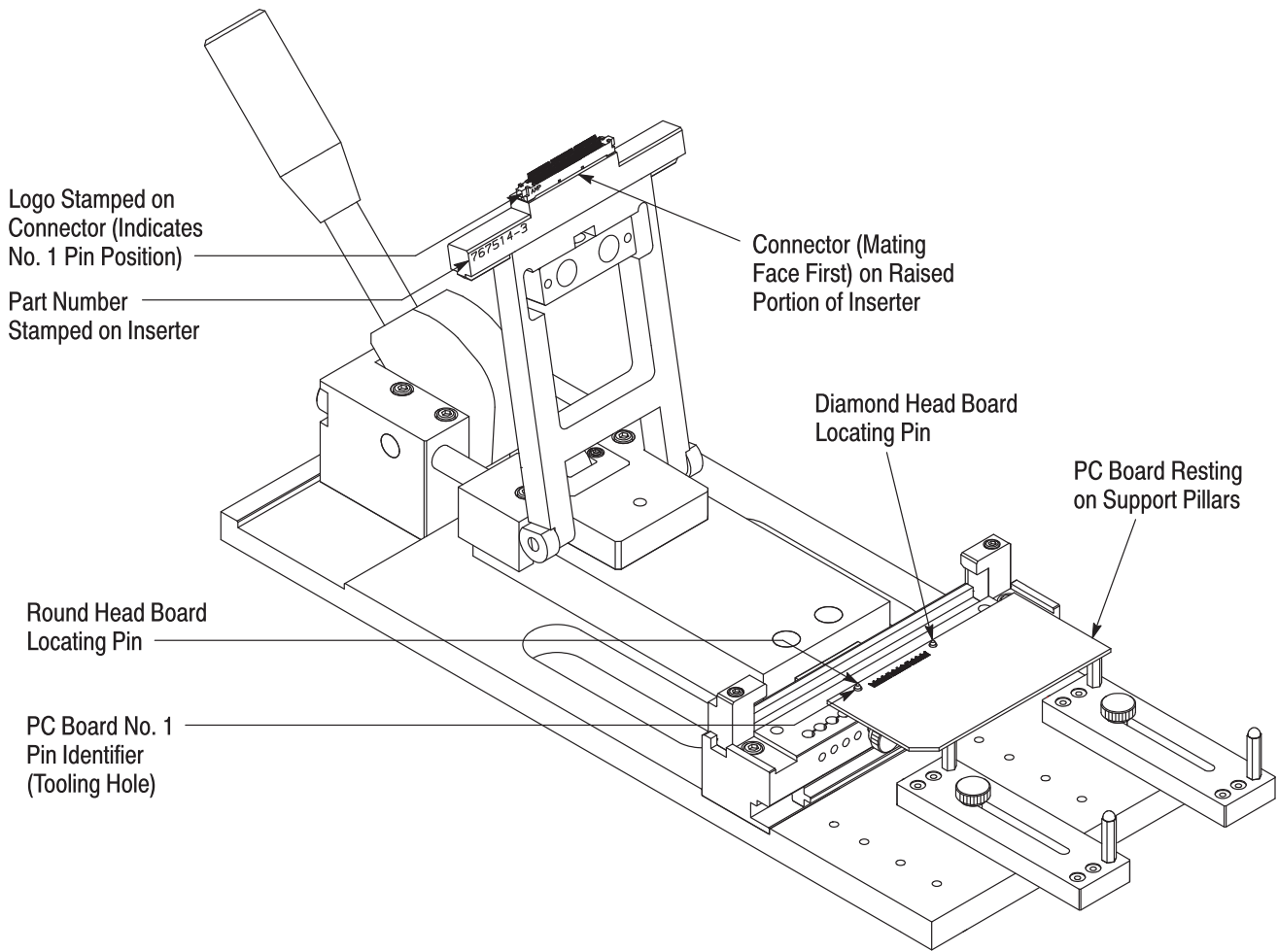


Figure 6

**Component “Keep Out” Area and “Restricted Area” for PC Board  
(Footprint for 114-Position Connector Shown)**

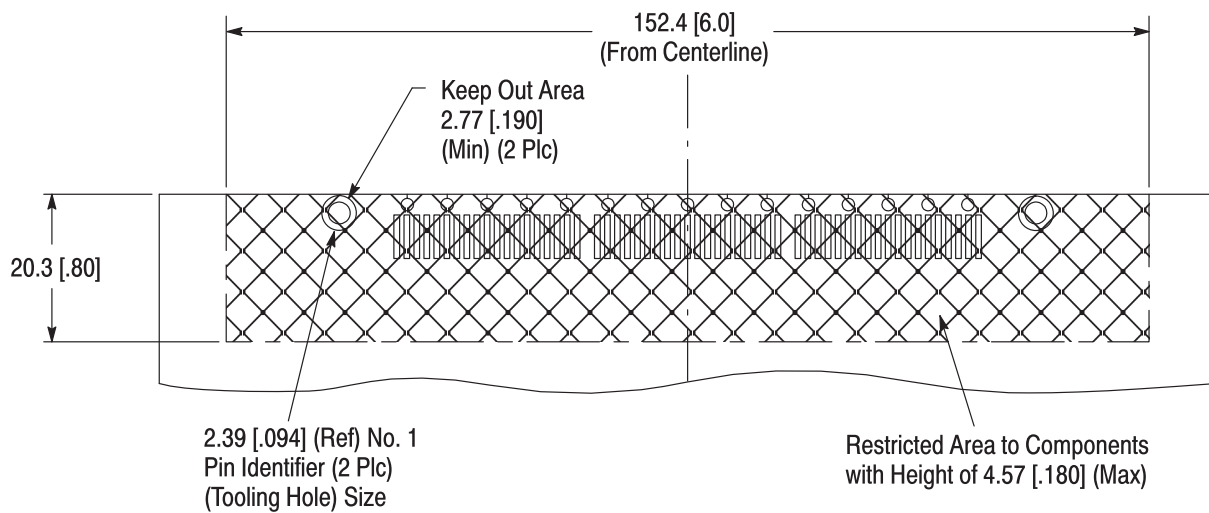


Figure 7

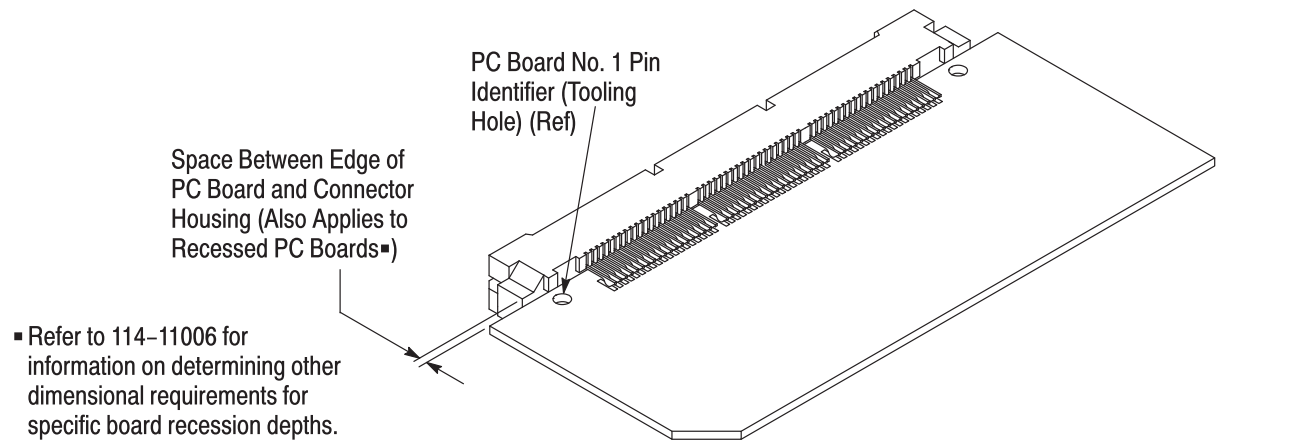


Figure 8



The tool is pre-set to provide a nominal space of 0.25 mm [.010 in.] for plugs and 0.43 mm [.017 in.] for receptacles. This space will vary according to the position of the tooling hole (refer to Figure 8). For detailed information concerning connector inspection, refer to 114-13088.

**5. MAINTENANCE AND INSPECTION**

**5.1. Maintenance**

The application tool requires little maintenance other than to keep it clean. Remove debris and contaminants from the tooling with a clean, soft, lint-free cloth or a clean, soft brush. Do not use objects that could damage the tooling and do not use any solvents that could harm paint or plastic material. When not in use, store the tool in a clean, dry area.

**5.2. Inspection**

The application tool should be inspected immediately upon arrival at your facility and at regularly-scheduled intervals thereafter to ensure that it has not been damaged. Examine the tooling for any signs of damage or excessive wear during inspections. If

replacement of parts is necessary, refer to Figure 9 for the list of customer-replaceable parts.

**6. REPLACEMENT AND REPAIR**

Customer-replaceable parts are provided in Figure 10. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary. Order replacement parts through your Tyco Electronics Representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605 or write to:

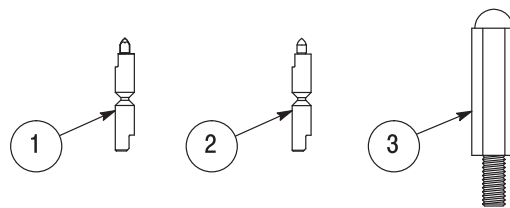
CUSTOMER SERVICE (038-035)  
 TYCO ELECTRONICS CORPORATION  
 PO BOX 3608  
 HARRISBURG PA 17105-3608

For customer repair service, contact a Tyco Electronics Representative at 1-800-526-5136.

**7. REVISION SUMMARY**

The following changes have been made to this revision:

- Updated logo.



**REPLACEMENT PARTS**

ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL
1	767523-1	BOARD LOCATOR PIN, Round	2
2	767526-1	BOARD LOCATOR PIN, Diamond	2
3	767522-1	SUPPORT PILLAR	4

Figure 9