


Figure 1

### 1. INTRODUCTION

Manual Seating Tool Assembly 1424931-1 is used to apply PC/104 and PC/104-Plus connectors to a printed circuit (pc) board.

**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 7, REVISION SUMMARY.

### 2. DESCRIPTION


The manual seating tool assembly consists of Manual Press 1428138-1 (also available separately) and Seating Tool Assembly 1424686-1 (also available separately, refer to 408-8503). See Figure 1.

The manual press is a 3,300 force/lb, hand-lever actuated terminator that applies the force required to apply the connectors to the pc board. The manual press features a fine-adjust mechanism to provide precise stroke adjustment for varying connector heights.

The seating tool assembly consists of a base, slide plate, upper (ram) tooling, Fixture Board Assembly 1424685-1 (also available separately, refer to 408-8502), and securing hardware.

### 3. OPERATION

1. If applying connectors with organizers, loosen the set screws securing the insert plate, and remove the insert plate See Figure 2.

**NOTE**  Organizers are supplied with the connector, and are available separately.

2. Align and adjust the seating tool assembly as described in Section 4, ADJUSTMENTS.
3. If applying connectors with organizers, place the organizer on the fixture board (in place of the insert plate).

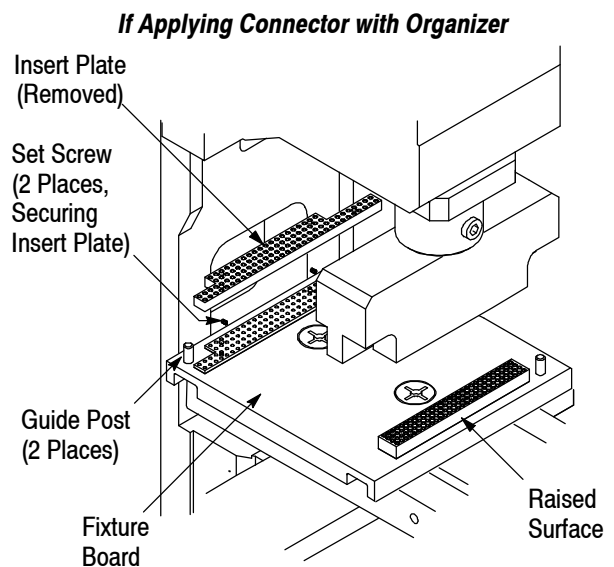


Figure 2

4. Place the pc board on the fixture board assembly, locating it using the two guide posts (shown in Figure 2).
5. Place the connectors on the pc board as shown in Figure 3.
6. Grasp the handle of the slide plate, and move the slide plate back until it stops against the two set screw stops located at the back of the base.
7. Pull the hand lever down until the first connector is applied to the pc board.
8. Slide the slide plate forward to the detented terminating position.

9. Pull the hand lever down until the next connector is applied to the pc board.
10. Move the slide plate forward (toward the front of the press).
11. Carefully lift the pc board *straight* off of the fixture board.



**CAUTION** To avoid bending the contact posts, make sure to carefully lift the pc board straight off of the fixture board.

12. Inspect the applied connectors according to application specification 114-13021. If the application is correct, continue applying connectors. If necessary, adjust the shut height as described in Paragraph 4.2.

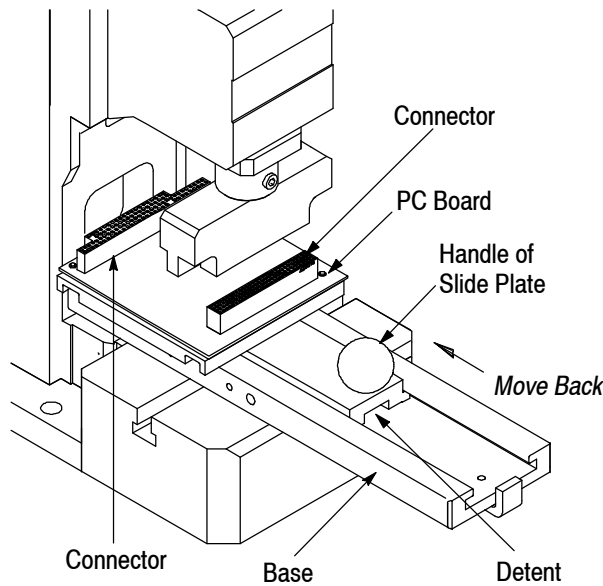


Figure 3

#### 4. ADJUSTMENTS

The manual seating tool assembly is pre-set and adjustments should not normally be required; however, if adjustments are necessary, proceed with the following.

##### 4.1. Alignment (See Figure 4)

1. Loosen the screws securing the slide plate to the base of the press.
2. Align the screws (in the X and Y axis) with the center of the ram.
3. Tighten the screws that were loosened in Step 1.

#### Alignment

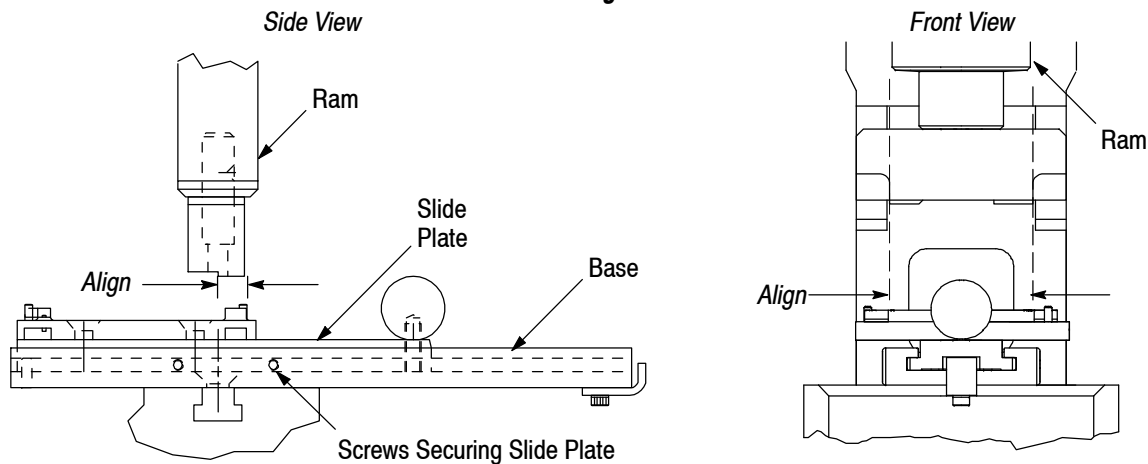


Figure 4

## 4.2. Shut Height Adjustment

The shut height is pre-set and, under normal circumstances, should require no further adjustment; however, should adjustment be necessary, proceed as follows:

1. Pull the hand lever down so that the ram is at its lowest point.
2. Loosen the three screws located behind the frame (see Figure 5).
3. Slide the head up or down until the shut height meets the dimension given in Figure 5.
4. Tighten the screws that were loosened in Step 2.
5. Apply the connector to pc board, and inspect the applied connector as described in 114-13021.
6. If necessary, perform the fine adjustment procedure as described in Paragraph 4.3.

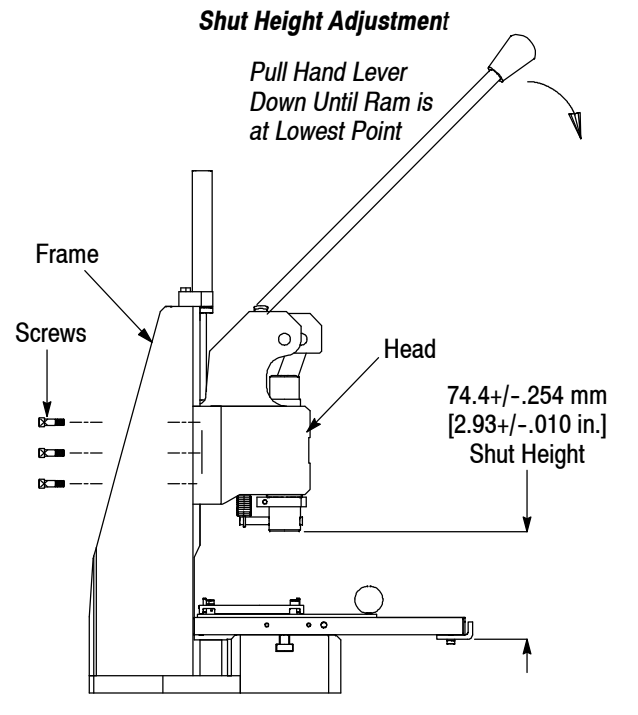


Figure 5

## 4.3. Fine Adjustment (See Figure 6)

If, after the shut height is set, further adjustment is required, adjust the fine adjustment as follows:

1. Loosen the fine-adjust set screw on the fine-adjust mechanism.
2. Turn the adjusting nut *clockwise* to move the ram down; turn the adjusting nut *counterclockwise* to move the ram up.

### NOTE



Moving the adjusting nut one complete gradation mark on the fine-adjust mechanism equals an up or down movement of 0.51 mm [.020 in.].

3. Tighten the fine-adjust set screw.
4. Repeat Steps 1 through 3 as necessary.

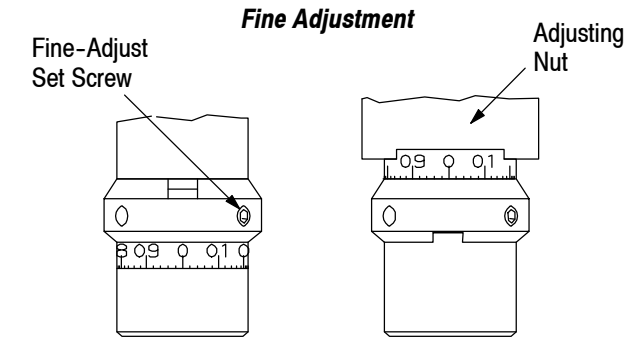


Figure 6

## 5. MAINTENANCE AND INSPECTION

It is a good policy to periodically inspect and clean the manual seating tool assembly. Using a clean cloth, wipe dirt and debris from the fixture board assembly. Be sure all hardware is secure.

Occasionally lubricate the slide plate and moving parts with a good grade lubricant.

### CAUTION

DO NOT over-lubricate.



## 6. REPLACEMENT AND REPAIR

Order manual seating tool assemblies through your 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, call 1-800-526-5136.

## 7. REVISION SUMMARY

Revisions to this instruction sheet include:

- Updated instruction sheet to corporate requirements
- Added Figure 2 and Sections 5 and 6