

Figure 1

1. INTRODUCTION

This instruction sheet covers the use and maintenance of Seating Tool Assemblies 224421-[]. Each tool is designed to seat a UPM vertical receptacle assembly. The receptacle has compliant pin contacts to allow solderless pc board installation.

Read these instructions and understand them before using the seating tool.



NOTE

Dimensions in this instruction 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.

Reasons for reissue of this instruction sheet are provided in Section 7, REVISION SUMMARY.

2. DESCRIPTION

The seating tool consists of a left tip, right tip, and body. The tips are designed to engage the grooves on either side of the receptacle so that the tool firmly seats the receptacle. See Figure 1.

During seating, the body rests above the receptacle housing and, when the tips are fully seated, they engage the contact shoulders preventing the contacts from pushing out of the housing.

3. REQUIREMENTS

3.1. PC Board Support Fixture (Customer Supplied)

A pc board support must be used to provide proper support for the pc board and alignment of the seating tool to the contacts, and to protect the pc board and receptacle from damage. Design the pc board support fixture for specific needs using the following recommendations:

- It should be at least 25.4 mm [1.0 in.] wider than the pc board.
- It should have a flat surface with a cutout or holes to allow adequate clearance for the contacts.

3.2. Application Tooling

Power for the seating tool must be provided by application tooling (with a ram) capable of supplying a downward force of 133 Newtons (N) [30 lb] per contact. For available machines, call PRODUCT INFORMATION at the number at the bottom of page 1.

4. SEATING

1. Set seating height to the dimension shown in Figure 2 (application tooling shut height will equal the seating height PLUS the combined thicknesses of the pc board and pc board support).
2. Place the pc board on the pc board support fixture making sure that the holes (or cutout) align.
3. Place the receptacle on the pc board so that the contacts are properly aligned and started into, but not fully entered into, the holes in the pc board.
4. Position the seating tool onto the receptacle, making sure that the tips are fully inserted into the grooves of the receptacle.
5. Center the seating tool (with the receptacle) under the ram of the application tooling; then slowly lower the ram until it just meets the seating tool. Verify the alignment of the pc board, pc board support fixture, receptacle, and seating tool.



CAUTION

Damage to the pc board, seating tool, or receptacle may occur if the wrong seating tool is used, if the seating height is improperly set, or if the seating tool is not properly aligned with the receptacle before cycling the application tooling.

6. Cycle the application tooling to seat the receptacle onto the pc board. Retract the ram, and carefully remove the seating tool by pulling it straight from the receptacle.
7. Check the receptacle for proper seating according to Application Specification [114-1103](#).



NOTE

The receptacle assemblies are not repairable. Replace any damaged or defective receptacle assembly.

NOTE: Not to Scale

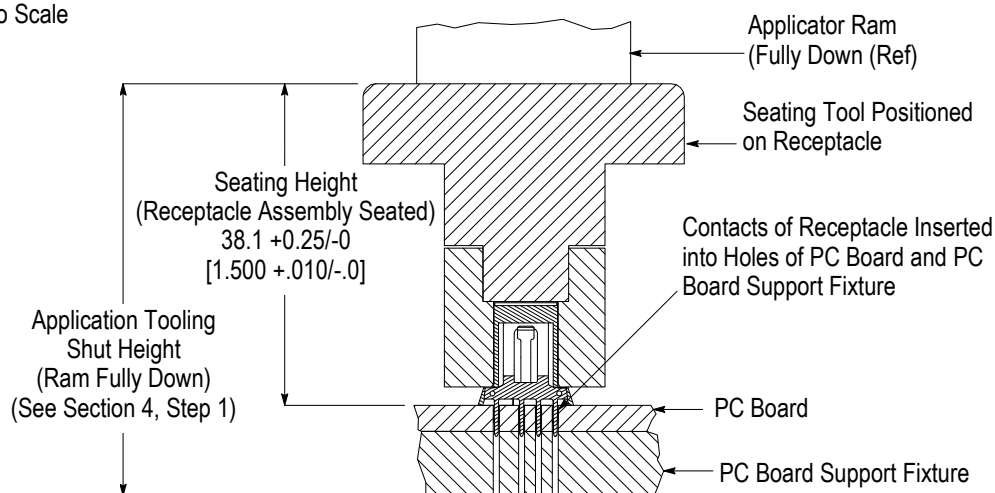


Figure 2

5. MAINTENANCE AND INSPECTION

The seating tool is assembled and inspected before shipment. It is recommended that the seating tool be inspected immediately upon arrival at your facility to ensure that the seating tool has not been damaged during shipment.

5.1. Daily Maintenance

It is recommended that each operator be made aware of, and responsible for, the following steps of daily maintenance:

1. Remove dust, moisture, and contaminants with a clean, soft brush or a lint-free cloth. DO NOT use objects that could damage the seating tool components.
2. Ensure that the screws are in place and secured.
3. When the seating tool is not in use, store it in a clean, dry area.

5.2. Periodic Inspection

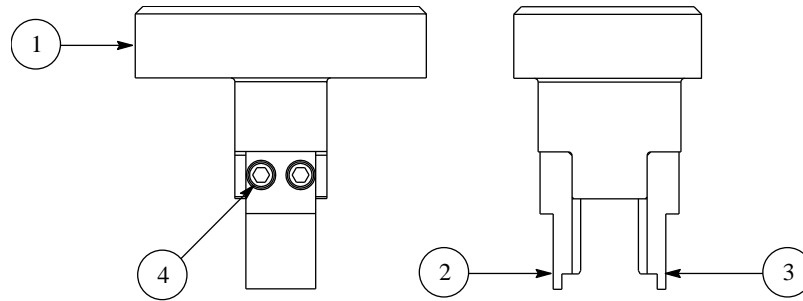
Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the seating tool or be supplied to personnel responsible for the seating tool. Inspection frequency should be based on amount of use, working conditions, operator training and skill, and established standards.

6. REPLACEMENT AND REPAIR

Customer-replaceable parts are listed in Figure 3. Parts other than those listed should be replaced by TE to ensure quality and reliability. For customer repair service or to order replacement parts, call 1-800-522-6752, or fax your purchase order to 717-986-7605, or write to: Customer Service (038-035), Tyco Electronics Corporation, PO Box 3608, Harrisburg, PA 17105-3608.

7. REVISION SUMMARY

- Updated document to corporate requirements
- Changed “Body” amounts in table in Figure 3.



| ITEM | PART NUMBER | DESCRIPTION | QTY PER TOOL (Number of Receptacle Positions) | | | | | | | | | |
|------|-------------|-------------------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|-------------|
| | | | -1 (3) | -2 (4) | -3 (5) | -4 (6) | -5 (7) | -6 (8) | -7 (9) | -8 (10) | -9 (11) | -10 (12) |
| 1 | 1338314-1 | Body | 1 | 1 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 1338314-2 | Body | --- | --- | 1 | 1 | 1 | 1 | --- | --- | --- | --- |
| | 1338314-3 | Body | --- | --- | --- | --- | --- | --- | 1 | 1 | 1 | 1 |
| 2 | 1338316-1 | TIP, Left, 3-Position | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 1338316-2 | TIP, Left, 4-Position | --- | 1 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 1338316-3 | TIP, Left, 5-Position | --- | --- | 1 | --- | --- | --- | --- | --- | --- | --- |
| | 1338316-4 | TIP, Left, 6-Position | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- |
| | 1338316-5 | TIP, Left, 7-Position | --- | --- | --- | --- | 1 | --- | --- | --- | --- | --- |
| | 1338316-6 | TIP, Left, 8-Position | --- | --- | --- | --- | --- | 1 | --- | --- | --- | --- |
| | 1338316-7 | TIP, Left, 9-Position | --- | --- | --- | --- | --- | --- | 1 | --- | --- | --- |
| | 1338316-8 | TIP, Left, 10-Position | --- | --- | --- | --- | --- | --- | --- | 1 | --- | --- |
| | 1338316-9 | TIP, Left, 11-Position | --- | --- | --- | --- | --- | --- | --- | --- | 1 | --- |
| | 1-1338316-0 | TIP, Left, 12-Position | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1 |
| 3 | 1338315-1 | TIP, Right, 3-Position | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 1338315-2 | TIP, Right, 4-Position | --- | 1 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 1338315-3 | TIP, Right, 5-Position | --- | --- | 1 | --- | --- | --- | --- | --- | --- | --- |
| | 1338315-4 | TIP, Right, 6-Position | --- | --- | --- | 1 | --- | --- | --- | --- | --- | --- |
| | 1338315-5 | TIP, Right, 7-Position | --- | --- | --- | --- | 1 | --- | --- | --- | --- | --- |
| | 1338315-6 | TIP, Right, 8-Position | --- | --- | --- | --- | --- | 1 | --- | --- | --- | --- |
| | 1338315-7 | TIP, Right, 9-Position | --- | --- | --- | --- | --- | --- | 1 | --- | --- | --- |
| | 1338315-8 | TIP, Right, 10-Position | --- | --- | --- | --- | --- | --- | --- | 1 | --- | --- |
| | 1338315-9 | TIP, Right, 11-Position | --- | --- | --- | --- | --- | --- | --- | --- | 1 | --- |
| | 1-1338315-0 | TIP, Right, 12-Position | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1 |
| 4 | 1-21000-0 | SCREW, Socket Head Cap, 2-56 X .250 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |

Figure 3

Mouser Electronics

Authorized Distributor

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[1-224421-0](#)