

Figure 1

1. INTRODUCTION

Seating Tool 2018460-1 is used to seat Z-PACK TinMan UPM hybrid connectors (reference part number 2065699-1) and Seating Tool 2018460-2 is used to seat Z-PACK TinMan Orthogonal UPM hybrid connector (reference part number 2065910-1). These connectors have eye-of-needle compliant pin contacts to allow solderless pc board installation.

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.

Reason for revision is given in Section 8, REVISION SUMMARY.

2. DESCRIPTION

Each seating tool consists of a holder with 10 insert plates (quantity matches number of connector columns) and an adapter. The seating tool features a cutout to allow for the guide pin of the connector. See Figure 1.

The adapter provides a surface to accept the force applied by the application tool to seat the connector onto the pc board. During seating, the seating tool sits inside the connector and the insert plates prevent the contacts from pushing out of the connector.

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 to protect the pc board and connector from damage. The board support fixture must be designed for specific needs using the following recommendations:

- it should be at least 25.4 mm [1 in.] wider than the pc board
- it should have a flat surface with a cutout deep to allow adequate clearance for the protruding tips of the contacts

3.2. Application Tooling

Power for the seating tool must be provided by application tools (with a ram) capable of supplying a downward force of 44.5 N [10 lb] per contact.

Manual Electric Servo Presses (CMP 6T) 1585699-8 and (CMP 12T) 1585698-8, and Bench Top Electric Servo Press (CBT 5T) 1585696-9 are available for this seating tool. For information on the presses, visit the press-fit assembly equipment website at:
<http://tooling.te.com/pressfit.asp>.



Over-driving of the connector could cause damage to the pc board.

4. SETUP

When setting up equipment to seat the connector, pay particular attention to the following:

- the seating tool must be matched to the connector
- the seating tool, connector, and application tool ram must be properly aligned before cycling the application tool



If the seating tool and connector are mismatched or are improperly aligned, damage could occur to the tooling, connector, or both.

Set the seating height to the dimension shown in Figure 2 (application tool shut height will equal the

seating height PLUS the combined thicknesses of the pc board and support fixture). After insertion, a gap of no more than 0.10 mm [.004 in.] between the connector standoffs and the pc board is allowed.



Use the seating height as a reference starting point. This height may need to be adjusted to obtain the amount allowed (maximum of 0.10 mm [.004 in.]) between the standoffs of the connector and the pc board.

5. INSERTION (See Figure 2)

1. Place the pc board on the support fixture.
2. Place the connector on the pc board so that the contacts are aligned and started into the matching holes in the pc board.
3. Orient the seating tool over the connector so that the insert plates face the alignment slots of the connector and the cutout aligns with the guide pin of the connector (shown in Figure 1). Then lower the seating tool into the connector until it bottoms on the floor of the connector.



To avoid damage to the connector, the seating tool must bottom on the floor, NOT ON THE CONTACTS, of the connector before cycling the application tool.

4. Center the seating tool (with the connector) under the ram of the application tool. Slowly lower the ram until it just meets the seating tool. Verify alignment of pc board support, pc board, connector, and seating tool.

NOTE: Not to Scale

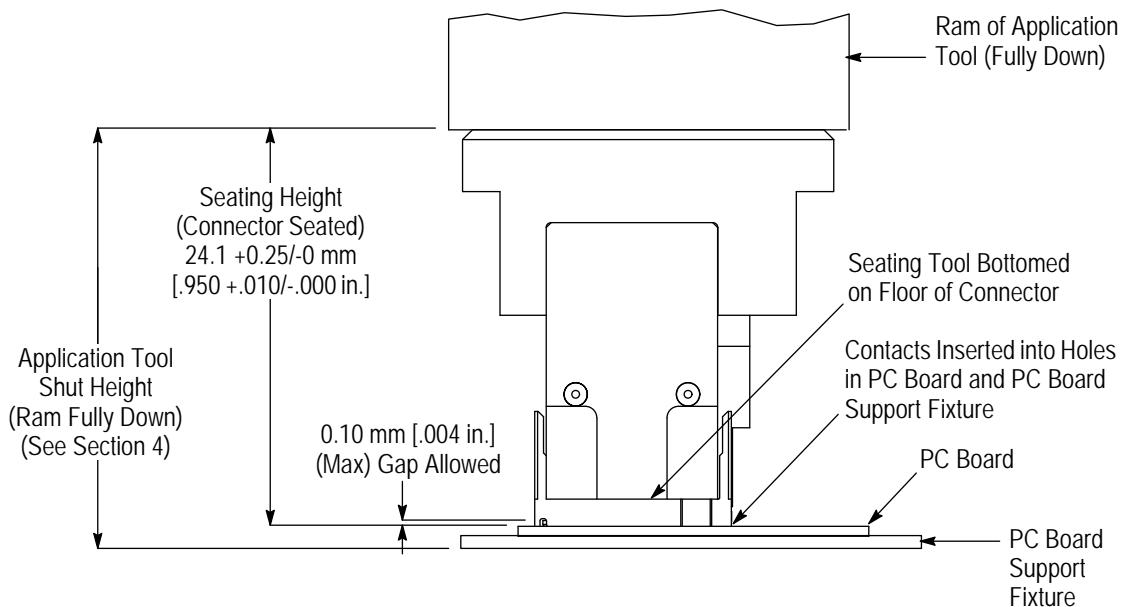


Figure 2

CAUTION

Damage to the pc board, seating tool, or connector may occur if the seating tool is not properly inserted into the connector before cycling the application tool.

5. Cycle the application tool to seat the connector on the pc board. Then retract the ram, and carefully remove the seating tool by pulling it straight from the connector.

6. Check the connector for proper insertion according to the following:

- a. the widest section of each compliant pin is inside its intended pc board hole
- b. the connector is seated on the pc board with the seating height-measured from the top of the connector to the top of the pc board-given in Figure 2
- c. if present, the gap between the standoffs and the pc board is no more than 0.10 mm [.004 in.]

CAUTION

Damage connectors should not be used. If a damaged connector is evident, it should be removed from the pc board and replaced with a new one.

6. 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 it has not been damaged during shipment and that it conforms to the dimensions provided in Figure 3.

6.1. 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. When the seating tool is not in use, store it in a clean, dry area.

6.2. 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.

7. REPLACEMENT AND REPAIR

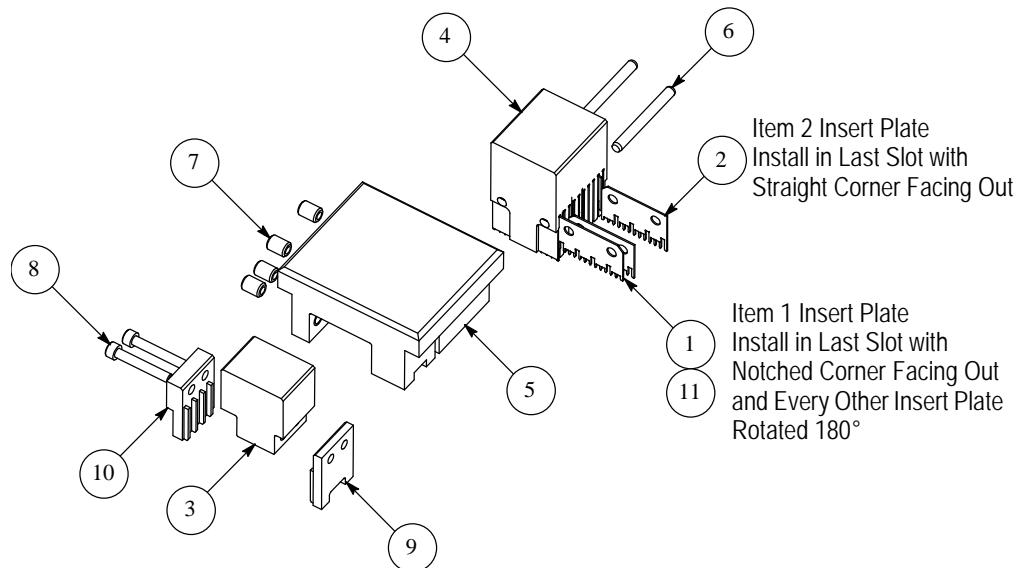
Customer-replaceable parts are listed in Figure 3. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary. Order replacement parts through your TE Connectivity Representative, or call 1-800-526-5142, or send a facsimile of your purchase order 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.

8. REVISION SUMMARY

- Updated document to corporate requirements
- Changed title
- Added new text to Section 1, INTRODUCTION
- Changed text in Paragraph 3.2
- Added new information to table in Figure 3



REPLACEMENT PARTS FOR SEATING TOOLS 2018460-[]

ITEM	PART NUMBER	DESCRIPTION	QUANTITY PER SEATING TOOL	
			-1	-2
1	2018022-1	INSERT PLATE, 4.5/6.0 mm Post Height	9	---
2	2018466-1	INSERT PLATE, Special	1	---
3	2018462-1	BODY	1	1
4	2018465-1	HOLDER, 4-Pair	1	1
5	2018461-1	ADAPTER	1	1
6	1-21919-5	DOWEL PIN	2	2
7	2-21006-8	SCREW, Set, Cup Point 6-32 x .188 in.	4	4
8	6-22031-8	SCREW, Socket Head Cap, 2-56 x .562 in.	2	2
9	2018464-1	TIP, Left	1	1
10	2018463-1	TIP, Right	1	1
11	2031942-2	INSERT PLATE, 4 x 8 Orthogonal	---	10

Figure 3

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[2018460-1](#)