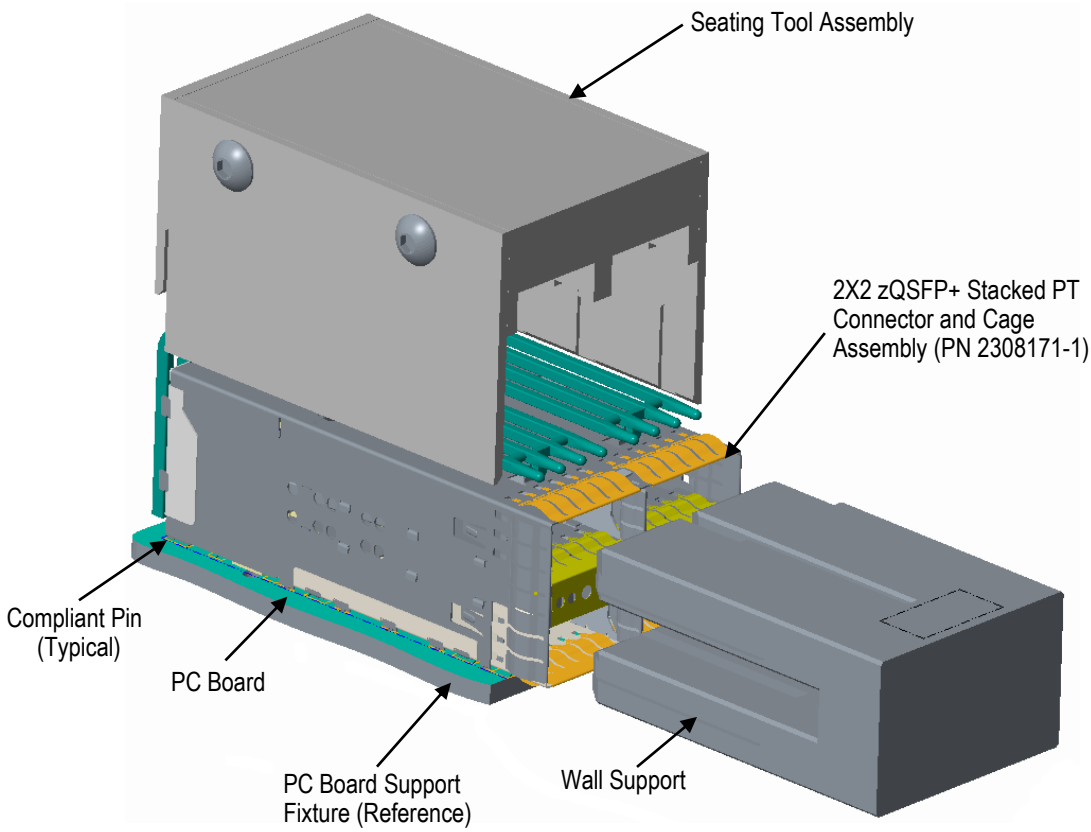
ORIGINAL INSTRUCTIONS

zQSFP+ Stacked PT Connector and Cage Assembly Seating Tool Kit (PN 2185237-1)



Seating Tool Kit PN	Cage Assembly Configuration
2185237-1	2X2

Figure 1

1. INTRODUCTION

The zQSFP+ Seating Tool Kit (PN 2185237-1) is used to seat the zQSFP+ Stacked PT Connector and Cage Assembly configuration listed in Figure 1 onto a pc board. The connector and cage assemblies contain press-fit contacts to allow solderless pc board installation.

NOTE
Read these instructions thoroughly before using the Seating Tool kit.

NOTE
Dimensions in this Instruction Sheet are in millimeters [with inches in brackets]. Illustrations are for reference only and are not drawn to scale.

2. DESCRIPTION

Each PN 2185237-1 Seating Tool Kit consists of a Seating Tool Assembly and a Wall Support.

NOTE
The Seating Tool and Wall Support can be purchased separately.

The Seating Tool has cutouts (two located on each side) to accept the protruding part of the standoffs of the cage assembly. The Wall Support fits into the ports of the cage assembly.

The top of the Seating Tool provides a surface to accept the force applied by the application tool to seat the connector and cage assembly onto the pc board. During seating, the back and sides of the Seating Tool protect the cage assembly from damage; the Wall Support provides rigidity to the ports of the cage assembly.

3. REQUIREMENTS

3.1. PC Board Support Fixture (Customer Supplied)

A pc board support fixture must be used under the pc board to protect the pc board and product from damage. The support fixture must be designed for the specific application; using the following recommendations. The pc board support fixture:

- Should be at least 25.4 mm [1 in.] longer and wider than the pc board
- Should have flat surfaces with holes or a channel large enough and deep enough to receive any protruding components of the product(s) and to prevent the pc board from bowing.

3.2. APPLICATION TOOL

Power for the Seating Tool kit must be provided by an application tool (with a ram) capable of supplying a downward force of 44.5 N [10 lb-force] per contact. Manual Arbor frame PN 58024-1 is available for use with this seating tool kit (refer to Instruction Sheet 408-6923 for additional information).

CAUTION
Over-driving of the cage assembly will deform parts critical to the quality of the connection. Maximum force occurs prior to bottoming of the cage assembly on the pc board.

4. SETUP

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

- The Seating Tool must be matched to the connector and cage assembly.

CAUTION
If the Seating Tool and connector and cage assembly are mismatched or are improperly aligned, damage could occur to the tooling, connector, and cage assembly, or all three.

- The Wall Support must be properly installed, and the Seating Tool, connector and cage assembly, and application tool ram must be properly aligned before cycling the application tool.

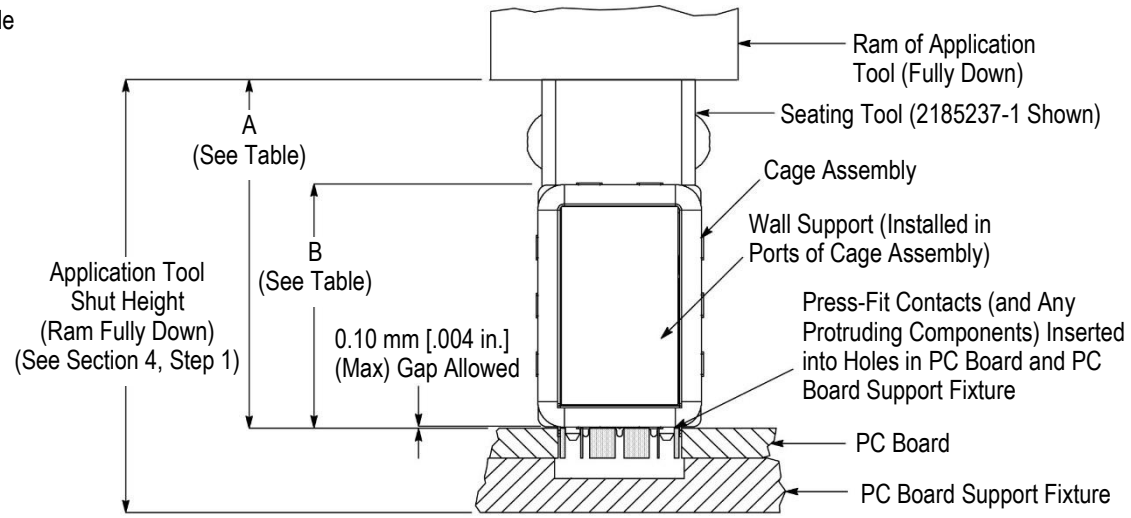
1. Set the *Tool Seating Height* to the dimension shown in Figure 2 (application *Tool Shut Height* will equal the *Tool Seating Height* + the combined thicknesses of the pc board and support fixture).

   After seating, a gap of no more than 0.10 [.004] between the cage assembly standoffs and the pc board is allowed.

NOTE
Use the Tool Seating Height as a reference starting point. This height may need to be adjusted to obtain the amount allowed (maximum of 0.10 [.004]) between the standoffs of the cage assembly and the pc board.

2. Slide the Wall Support into the ports of the cage assembly until the Wall Support is secure.

Note: Not to Scale



DIMENSION "A" TOOL SEATING HEIGHT●	DIMENSION "B" CAGE ASSEMBLY SEATING HEIGHT●
40.40 mm [1.591 in.]	25.4 mm [1.00 in.]

●With Connector and Cage Assembly Seated

Figure 2

5. SEATING

1. Place the pc board on the support fixture.
2. Orient the Seating Tool over the cage assembly so the back of the tool is aligned with the back of the cage assembly. Lower the Seating Tool onto the cage assembly (ensuring the cutouts slide over the protruding components of the cage assembly) until the Seating Tool bottoms on the top of the cage assembly.
3. Place the connector and cage assembly on the pc board so the contacts and alignment posts are aligned and started into the matching holes in the pc board.
4. Center the Seating Tool (with the connector and cage assembly) under the ram of the application tool. Slowly lower the ram until it just meets the Seating Tool. Verify alignment of pc board support fixture, pc board, connector and cage assembly, and Seating Tool.

CAUTION
Damage to the pc board, Seating Tool, connector, and cage assembly may occur if the Seating Tool is not properly seated on the cage assembly before cycling the application tool.

5. Cycle the application tool to seat the connector and cage assembly onto the pc board. Retract the ram and carefully remove the Seating Tool by pulling it straight up from the cage assembly.
6. Check the connector and cage assembly for proper seating in accordance with the following:
   a. The widest section of each compliant pin is inside its intended pc board hole.
   b. Each alignment post is in its intended pc board hole.
   c. The connector and cage assembly is seated on the pc board with a seating height measured from the top of the cage assembly (not including the springs or elastomeric gasket) to the top of the pc board given in Figure 2.
   d. If present, the gap between the standoffs and the pc board is not more than 0.10 [.004].

NOTE
For detailed application requirements of the connector and cage assembly, refer to the applicable Application Specification.

6. MAINTENANCE AND INSPECTION

The Seating Tool kit is assembled and inspected before shipment. It is recommended that the kit be inspected immediately upon arrival at the facility of use to ensure that it has not been damaged during shipment, and that it conforms to the dimensions provided in Figure 4.

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 Kit components.
2. When the Seating Tool and Wall Support are not in use, store in a clean, dry area.

6.2. Periodic Inspection

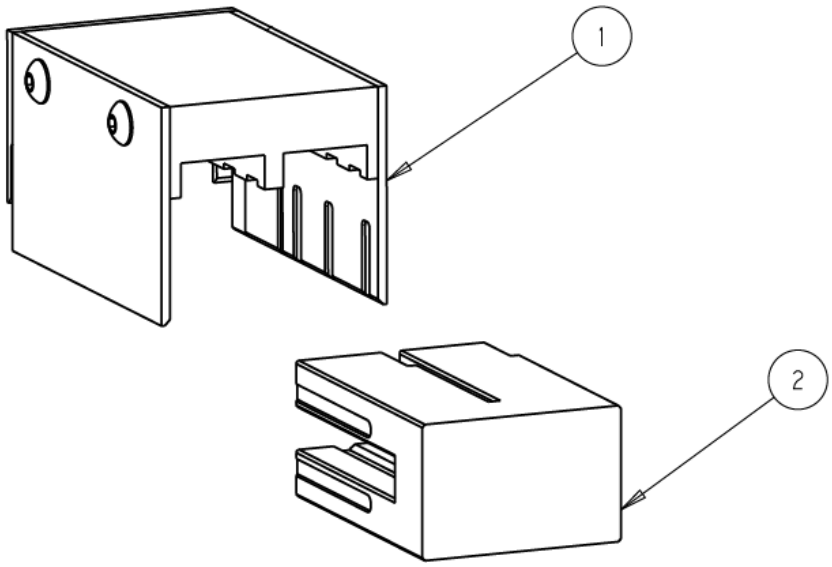
Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the Seating Tool kit or be supplied to personnel responsible for the kit. Inspection frequency should be based on amount of use, working conditions, operator training and skill, 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. Parts other than those listed should be replaced by TE Connectivity (TE) to ensure quality and reliability. Order replacement parts through your TE representative, call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605, or write to:

CUSTOMER SERVICE (038-035)
TE CONNECTIVITY CORPORATION
PO BOX 3608
HARRISBURG PA 17105-3608

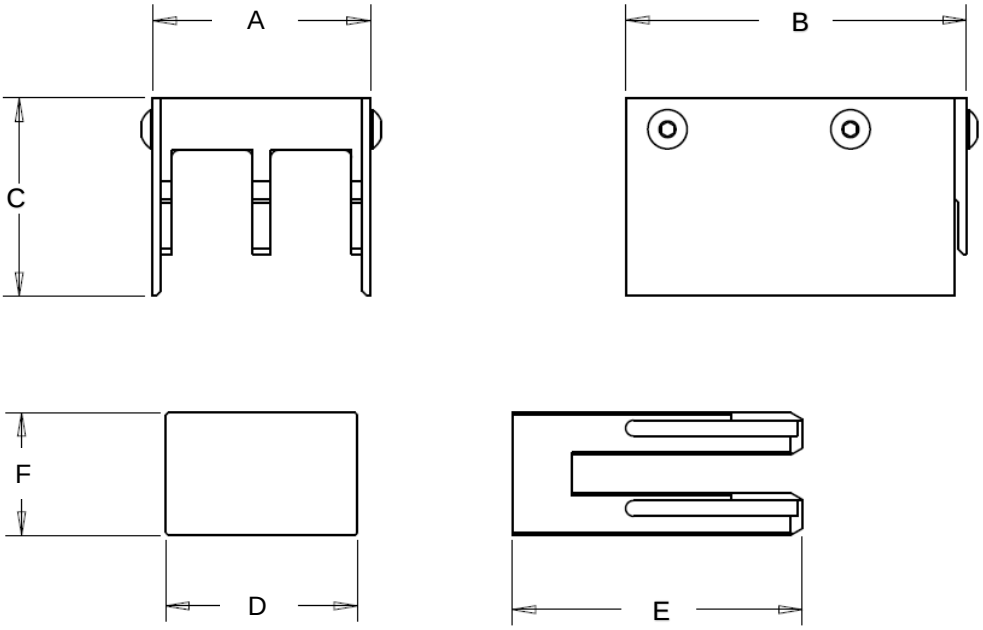
Seating Tool Kit PN 2185237-1 Replacement Parts



Item No.	Component Description	Part Number	Qty Per Kit
1	Assembly, Seating Tool, 2X2	2185238-1	1
2	Support, Wall, 2X2	2215339-1	1

Figure 3

Seating Tool Kit PN 2185237-1 Dimensions



Cage Assembly Configuration	Seating Tool Kit Part Number	Dimension mm [inch]					
		A	B	C	D	E	F
2X2	2185237-1	41.7 [1.64]	65.2 [2.57]	38.0 [1.50]	36.80 [1.449]	55.5 [2.185]	23.55 [.927]

Figure 4

8. REVISION SUMMARY

- Initial release of document