

(NOTE: pc board support not shown)

Seating Tool Kit	Connector and Cage Assembly Configuration ⁽¹⁾	Seating Tool Kit	Connector and Cage Assembly Configuration ⁽¹⁾
2185206-1	2 X 1	2185206-3	2 X 3
2185206-2	2 X 2	2185206-4	2 X 4

(1) With external EMI Springs or EMI Gasket

Figure 1

1. INTRODUCTION

Seating Tool Kits PN 2185206-[] are used to seat the Micro QSFP Stacked PT connector and cage assembly configurations given in Figure 1 onto the pc board. The connector and cage assemblies contain press-fit contacts to allow solderless pc board installation. Read these instructions thoroughly before using the seating tool kit.



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 (SEE FIGURE 1)

Each seating tool kit consists of a seating tool and a wall support. The seating tool and wall support are also available 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 must be installed into the port(s) of the cage

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 connector and cage assembly from damage. The wall support supports the individual port(s) of the cage assembly to prevent the cage assembly from collapsing.

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 product from damage. The support fixture must be designed for specific needs using the following recommendations:

- It should be at least 25.4 mm [1 in.] longer and wider than the pc board.
- It should have flat surfaces with holes or a channel large enough and deep enough to receive any protruding components of the connector and cage assembly and to prevent the pc board from bowing.

3.2. Application Tool

Power for seating tools 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. A manual Arbor Frame Assembly PN 58024-1 is available for use with these seating tool kits. Refer to Instruction Sheet [408-6923](#) for operating procedure.

**CAUTION**

Overdriving of the connector and cage assembly will deform parts critical to the quality of the connection. Maximum force occurs prior to the connector and cage assembly bottoming 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 both.

- The seating tool, connector and cage assembly, and application tool ram must be properly aligned before cycling the application tool
 1. Set *tool seating height* to the dimension shown in Figure 2 (application tool shut height equals the tool seating height (+) the combined thicknesses of the pc board and support fixture). After seating, a gap no greater than 0.10 mm [.004 in.] between the cage assembly standoffs and the pc board is allowed.

**NOTE**

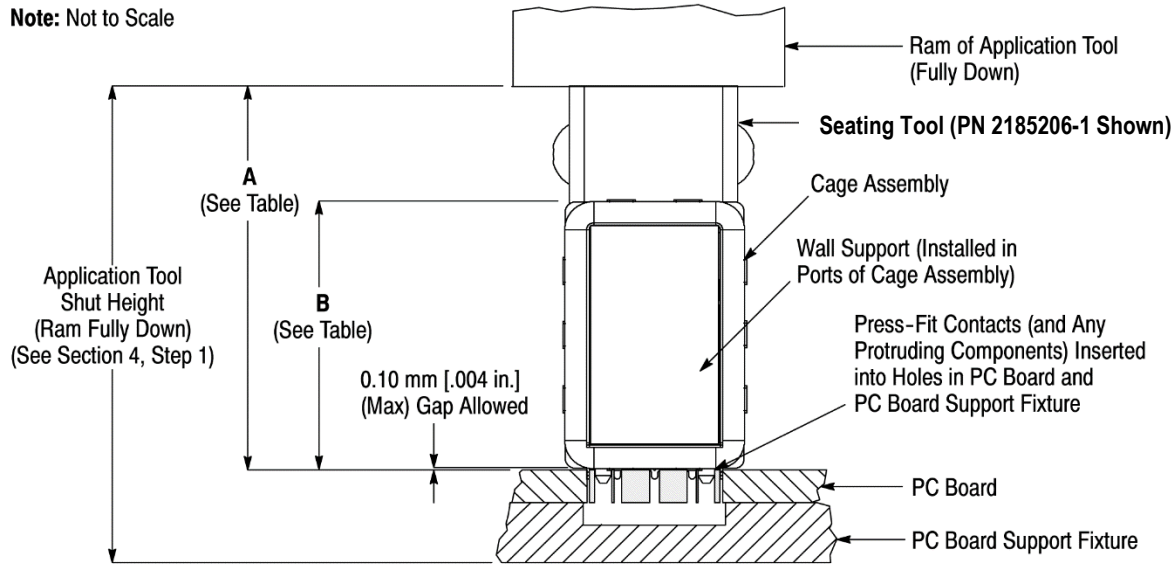
Use the tool seating height as a reference starting point. This height may need to be adjusted to obtain the amount allowed (maximum of 0.10 mm [.004 in.]) between the standoffs of the cage assembly and the pc board.

2. Slide the wall support into the port(s) of the cage assembly until the wall support is secure.

5. SEATING (FIGURE 2)

1. Place the pc board on the pc board support fixture.
2. Orient the seating tool over the cage assembly so that the back is aligned with the back of the cage assembly. Then lower the seating tool onto the cage assembly, making sure that the cutouts slide over the protruding components of the cage assembly, until the seating tool bottoms on the top of the cage assembly.

Note: Not to Scale



Dimension "A" Tool Seating Height	Dimension "B" Cage Assembly Seating Height
38.95 mm [1.533 in]	23.95 mm [0.943 in]

Figure 2

3. Place the connector and cage assembly on the pc board so that 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, pc board, connector and cage assembly, and seating tool.



CAUTION

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

5. Cycle the application tool to seat the connector and cage assembly on the pc board. Then retract the ram, and carefully remove the seating tool by pulling it straight from the cage assembly.
6. Remove the wall support from the cage assembly.
7. Check the connector and cage assembly for proper seating according to 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 no more than 0.10 mm [.004 in.]



NOTE

For detailed application requirements of the connector and cage assembly, refer to the relative application specification.

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:

- Remove dust, moisture, and contaminants with a clean, soft brush or a lint-free cloth. DO NOT use objects that could damage the components.
- When the seating tool and wall support are not in use, store them in a clean, dry area.

6.2. Periodic Inspection

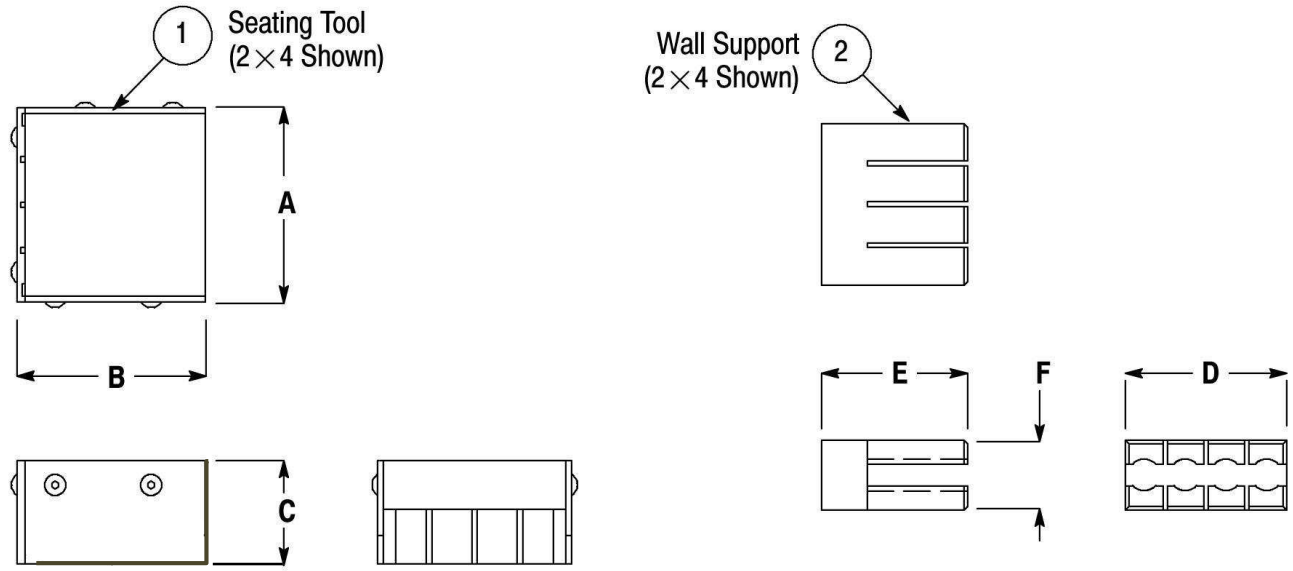
Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the seating tool or be supplied to personnel responsible for the seating tool kit.

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 to ensure quality and reliability. Order replacement parts 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



REPLACEMENT PARTS					
ITEM	PART NUMBER FOR KIT (By Cage Assembly Configuration)				QTY PER KIT
	2 X 1	2 X 2	2 X 3	2 X 4	
1	1-2185206-0	2-2185206-0	3-2185206-0	4-2185206-0	1
2	2215959-1	2215959-2	2215959-3	2215959-4	1

KIT (By Cage Assembly Configuration)	DIMENSION mm [in]					
	A	B	C	D	E	F
2 X 1	18.4 [0.72]	67.5 [2.66]	38.0 [1.50]	13.45 [0.53]	60.0 [2.36]	22.7 [0.88]
2 X 2	32.65 [1.29]			27.7 [1.09]		
2 X 3	46.9 [1.85]			41.95 [1.65]		
2 X 4	61.15 [2.41]			56.2 [2.21]		

Figure 3

8. REVISION SUMMARY

Initial Release