

Figure 1

## 1. INTRODUCTION

This instruction sheet covers the use and maintenance of Tyco Electronics Seating Tools 318860-[ ]. The tools are used to seat Z-PACK 2mm FB (Futurebus+) 5-row pin headers onto a printed circuit (pc) board. These headers contain compliant lead contacts to allow solderless pc board installation.

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

### NOTE



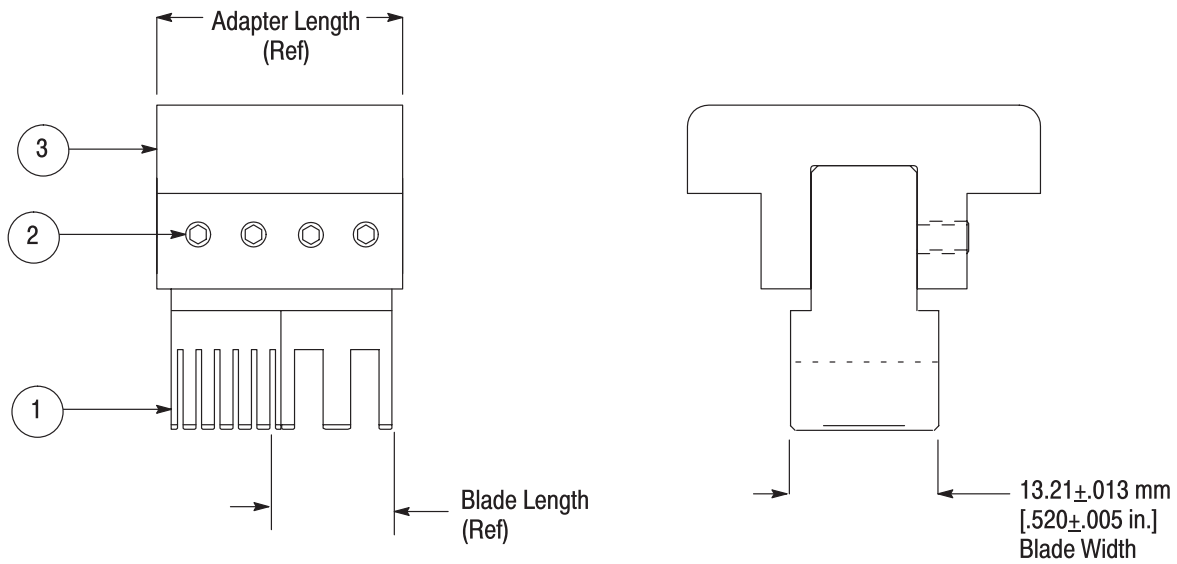
*Dimensions on this sheet are in metric units [with U.S. customary units in brackets]. Figures are not drawn to scale.*

Reasons for reissue of this instruction sheet are provided in Section 8, REVISION SUMMARY.

## 2. DESCRIPTION

Each seating tool is an assembly of one or more different length *blades* to one of seven different length *adapters*. The choice of lengths allows you to build tools to seat any of the available pin header sizes. Figure 2 matches tool part number to the size of the pin header to be seated. The adapter straightens the header, during the cycle of the applicator ram, to provide proper insertion into the pc board. When seating the header, the blades are positioned over the contact shoulders to prevent damage to the contacts. Each tool is designed for a specific combination of contacts in a row and number of rows in a header.

During seating, the tool sits inside the header housing with the blades engaging the housing floor and contact shoulders, preventing contacts from pushing out of the housing.



ITEM	PART NUMBER	DESCRIPTION (Length in mm [in.])	QUANTITY FOR SEATING TOOL 318860-SUFFIX PART NUMBER / PIN HEADER SIZE=													
			-1 / 30S	-2 / 60S	-3 / 90S	-4 / 120S	-5 / 150S	-6 / 180S	-7 / 210S	-8 / 240S	-9 / 270S	-10 / 300S	-11 / 330S	-12 / 630S	-13 / 540S	-14 / 10P30S
1	318655-1	Blade 11.89 [.468]	1	2	3		1	2	3		1	2	3	1	2	1
	318655-2	Blade 47.88 [1.885]				1	1	1	1	2	2	2	2	5	4	
	1214222-1	Blade 11.89 [.468]														1
2	2-21012-8	Socket Setscrew 6-32 × .19 in.	4	4	5	5	10	10	10	10	7	10	10	15	13	4
3	354698-2	Adapter 50.80 [2.000]			1	1										
	354699-1	Adapter 95.25 [3.750]					1	1	1	1						
	354703-1	Adapter 25.40 [1.000]	1	1												1
	122430-7	Adapter 114.30 [4.500]									1					
	122430-8	Adapter 165.10 [6.500]										1	1			
	1-122430-0	Adapter 254.00 [10.000]												1		
	122430-9	Adapter 215.90 [8.500]														1

▪ S — Signal P — Power

Figure 2

**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 tool to the header pins, and to protect the pc board and header posts from damage. Design a pc board support fixture for your specific needs.

**3.2. Application Tooling**


Power for the seating tool must be provided by application tools (with a ram) capable of supplying a maximum downward force of 102 Newtons (N) [23 lb] per contact. For available application tools, call PRODUCT INFORMATION at the number at the bottom of page 1.

**CAUTION** *Over-driving of the header assembly could cause damage to the pc board.*




4. Position appropriate seating tool into header, making sure tool is bottomed on housing floor.
5. Center seating tool and header under the applicator ram of the power source; slowly lower ram until it just meets the seating tool. Verify the alignment of the board support, pc board, header, and seating tool.

**CAUTION** *Damage to the pc board, tool, or header may occur if the wrong size tool is used, if seating height is improperly set, or if tool is not properly seated in the header before cycling the applicator ram.*



6. Cycle applicator ram according to instructions for the power source. Check assembly for proper seating, using the requirements in Figure 3.

**NOTE** *For additional information on inspection requirements, refer to Application Specification 114-1075.*



**4. SEATING**

1. Set seating height to the dimension shown in Figure 3 (applicator *shut height* will equal the seating height PLUS the combined thicknesses of the pc board and pc board support).
2. Position header into pc board so that header contacts are properly aligned to the board and board support.
3. Insert header into pc board until the compliant sections of the contacts are resting securely on, but have not fully entered, the pc board.

7. Remove pc board and seated header, or reposition board and board support for seating additional headers.

**5. TOOL INSPECTION**

Each seating tool is assembled and inspected before shipment. We recommend that the tool be inspected immediately upon arrival at your plant to assure that it has not been damaged during shipment.

**View After Seating**

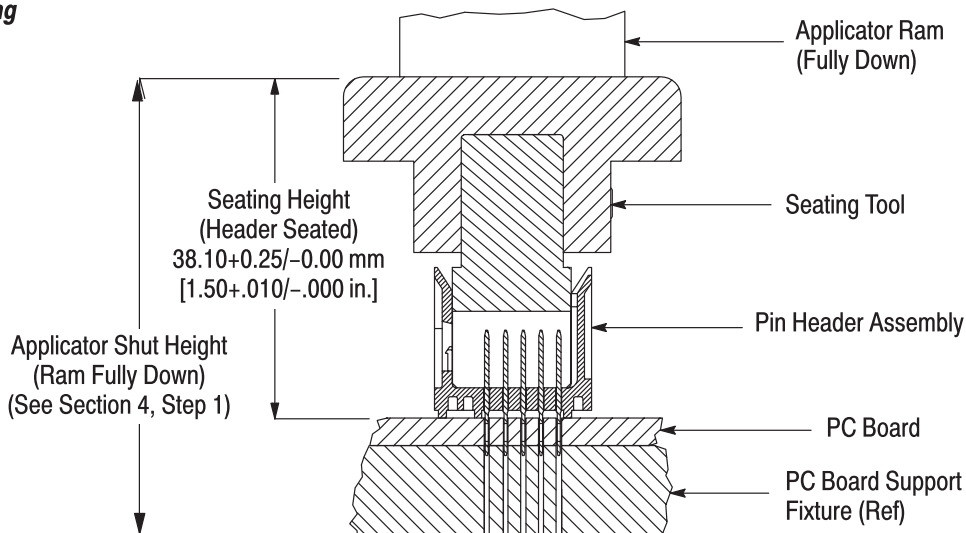


Figure 3

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

## 6. 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 other contaminants with a clean, soft brush, or lint-free cloth. Do NOT use objects that could damage the tool.
2. Ensure that the screws are in place and secured.
3. When the tool is not in use, store it in a clean, dry area.

## 7. REPLACEMENT AND REPAIR

The parts listed in Figure 2 are customer-replaceable. 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 Tyco Electronics 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

## 8. REVISION SUMMARY

Since the previous release of this instruction sheet, the logo was changed.