

Figure 1

**1. INTRODUCTION**

This instruction sheet covers the use and maintenance of AMP\* Seating Tools 224671-[ ]. The tools are used to seat Z-PACK 2mm HM (hard metric) 8-row and 8-row +2 Type D pin headers with 128, 160, 176, or 220 positions onto a printed circuit (pc) board. These headers contain ACTION PIN contacts to allow solderless pc board installation. See Figure 1.

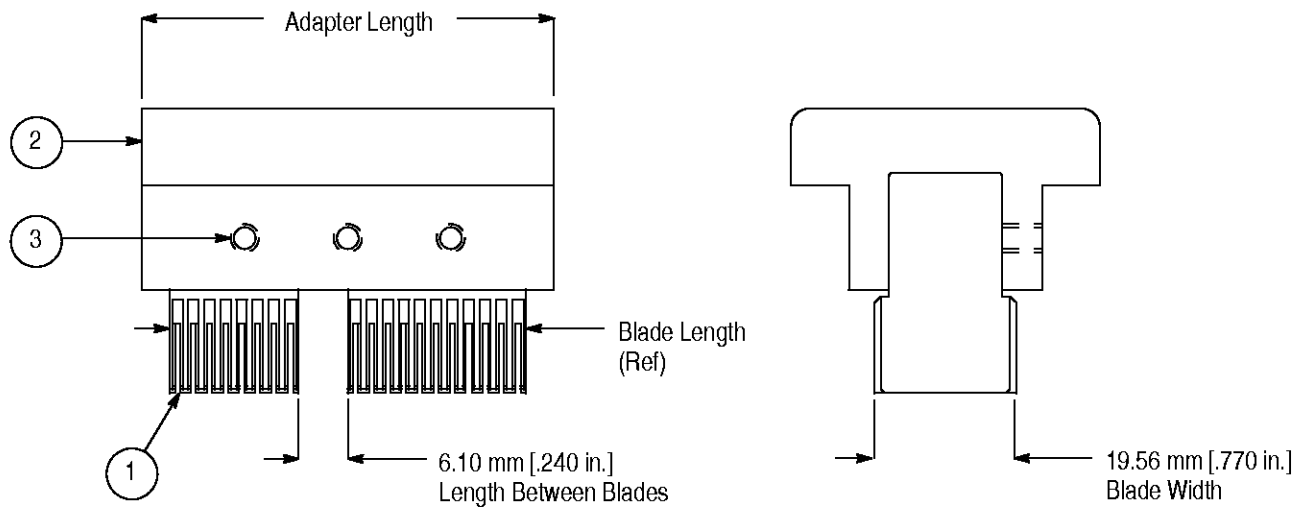
Read these instructions and understand them before using the seating tool.

**NOTE** *Dimensions in this instruction sheet are in metric units [with U.S. customary units in brackets]. Figures 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 two blades and an adapter. Figure 2 matches tool part number to the size (positions) 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. 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.] +0.00/-0.10 [+ .000/- .004])	QUANTITY FOR SEATING TOOL / PIN HEADER SIZE	
			224671-1 / 128 and 160	224671-2 / 176 and 220
1	224667-1	BLADE, 15.90 [.626]	2	—
	224667-3	BLADE, 21.89 [.862]	—	2
2	314274-1	ADAPTER, 50.80 [2.000]	1	1
3	2-21012-8	SOCKET SETSCREW, 6-32 x .19 in.	3	3

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 using the recommendations in Instruction Sheet 408-6927.

**3.2. Application Tooling**

The pin headers can be seated with an application unit capable of supplying a downward force of 133 Newtons (N) [30 lb] per contact. AMP 10/20-Ton “H” Frame Assembly 803880-6 or SM-3 Frame Assembly 814700-[ ] is available for seating contacts. For operating and setup procedure of the frame assemblies, refer to AMP Customer Manual 409-5567 (“H” frame assembly) or 409-5626 (SM-3 frame assembly).

**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 ACTION PIN post section of the contacts are resting securely on, but have not fully entered, 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.

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

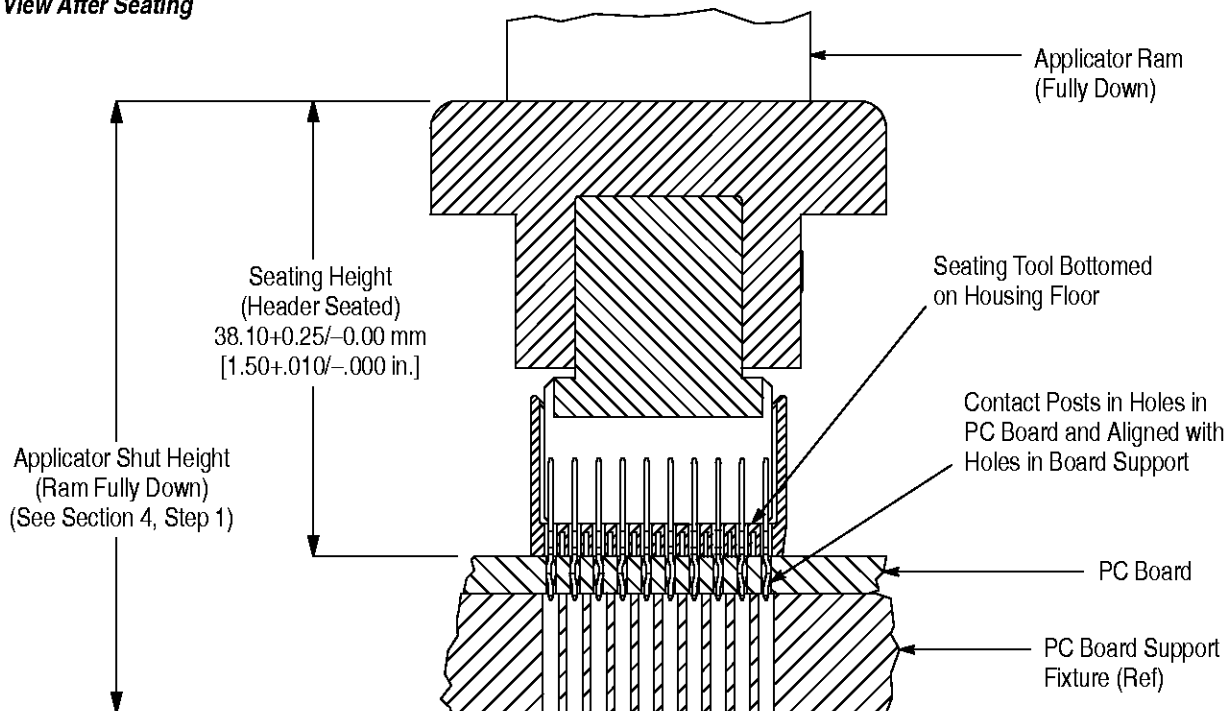
**View After Seating**

Figure 3

**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 ensure that it has not been damaged during shipment.

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 1 are customer-replaceable. A complete inventory can be stocked

and controlled to prevent lost time when replacement of parts is necessary. Order replacement parts through your AMP representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605, or write to:

CUSTOMER SERVICE (38-35)  
AMP INCORPORATED  
PO BOX 3608  
HARRISBURG PA 17105-3608

Tools may be returned to AMP for evaluation and repair. For repairs, send tool, with a written description of the problem, to:

CUSTOMER REPAIR (01-12)  
AMP INCORPORATED  
1523 NORTH 4TH STREET  
HARRISBURG PA 17102-1604

**8. REVISION SUMMARY**

Revisions to this instruction sheet per EC 0990-0573-98 include:

- Modified Figures 1 and 2
- Added description of pin headers to Section 1
- Changed pin header size, and blade part number, description, and quantity in Figure 2
- Removed reference to application specification



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