

CONNECTOR		MANUAL SEATING TOOL	
IN-ROW AND ROW-TO-ROW CENTERLINE SPACING	PART NUMBER	NUMBER OF DUAL POSITIONS	PART NUMBER
.125 x .250	119200 119841 119202 119842 119822 119843 119840	10 thru 60	58184-1 thru 4-58184-6

Fig. 1

## 1. INTRODUCTION

This instruction sheet (IS) covers AMP PACE connector Manual Seating Tools. The tools are used for the manual seating of AMP PACE connectors with AMP\* ACTION PIN\* contacts into printed circuit (pc) boards. The connectors, listed in Figure 1, have .125- x .250-in. contact centerlines and full card scoops.

Should additional information concerning the AMP PACE connectors listed on the chart in Figure 1 be required, refer to AMP Instruction Sheet IS 9093 packaged with connectors.

**NOTE**

All dimensions on this instruction sheet are in inches.

Read these instructions carefully prior to using any tools and seating any connectors.

## 2. DESCRIPTION

Each tool features a push bar to which the tool holder housings are attached. The tool holder housings contain push pins which are held in alignment by the locator plates. Guide pins hold the locator plates in place (the guide pins are integral parts of the locator plates). A tie rod, which passes through the locator plates, maintains their longitudinal alignment.

Each locator plate is keyed to fit into the end of the card entry slot. If assembling a tool, ensure that the locator plate at each end of the tool has the key area turned outward, as shown in Figure 3.

## 3. REQUIREMENTS

### A. PC Board Support Fixture (Customer Supplied)

A pc board support fixture is required to ensure that: 1) each connector is aligned with the tool during the seating process, and 2) posts are protected during the procedures. Fixtures are not provided by AMP, and must be supplied by the customer. IS 6927 shows AMP recommendations.

### B. Application Tooling

The seating tool shown in Figure 1 is designed for use in AMP applicator assemblies, or similar manual applicators with sufficient ram surface and capability of applying an insertion force of 40 pounds (max) per contact post. A pneumatic machine can also be used, provided the machine is equipped with shut-height stops, board sensor, or a pressure response mode.

### C. Seating Height

Seating height — the distance from the bottom surface of the ram to the top of the pc board when the ram is DOWN — must be set at  $1.50 + .005 / -.000$  in. before starting the seating procedure. See figure 2.

### D. Applicator Shut Height

The applicator shut height equals the seating height plus the combined thicknesses of the pc board and the pc board support fixture. See Figure 2.

## 4. SEATING PROCEDURE

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

- Make sure that the number of rows and positions in the connector is identical to the number of rows and push pins in the tool.

- Be sure that the seating tool and connector are properly aligned before cycling the application tooling.

### CAUTION

*If tool and connector are incompatible or improperly aligned in the equipment, damage could occur to tooling, connector, or both.*

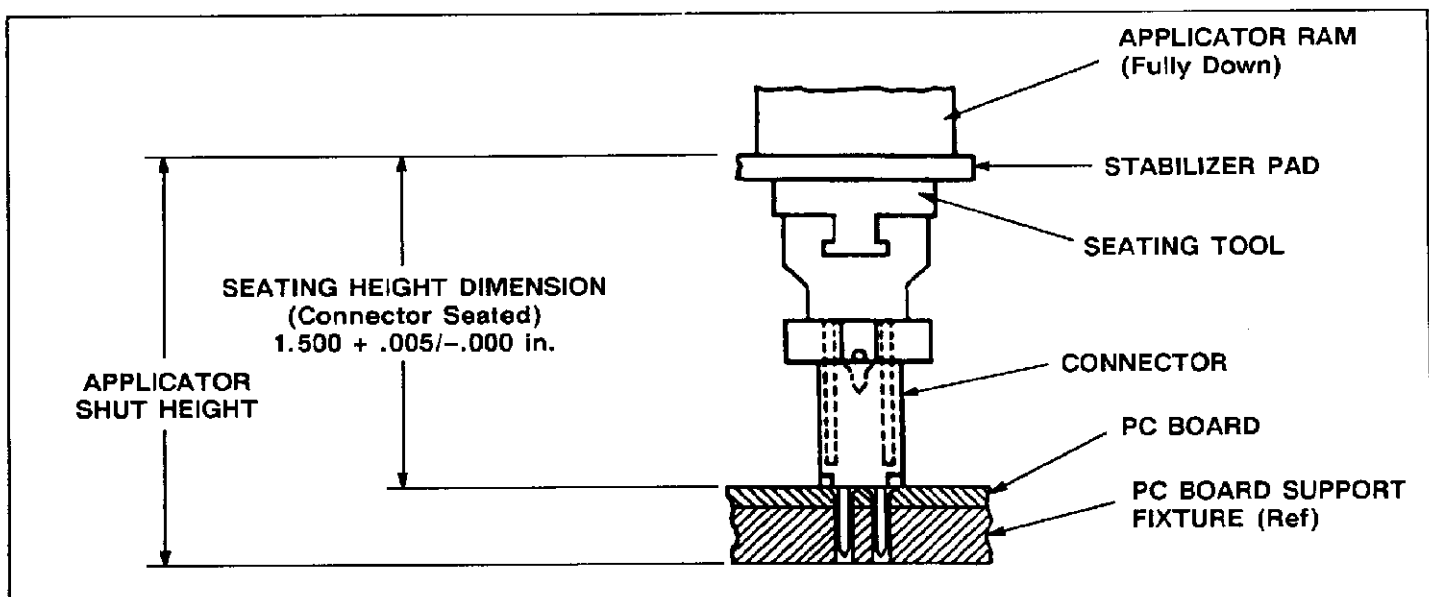


Fig. 2

After the tooling has been installed and the equipment has been set up with the pc board fixture in place, proceed as follows:

**NOTE**

*The clear plastic strip, used to hold contact posts in alignment, remains in place both during and after insertion of the connector.*

1. Place a pc board with proper hole pattern onto board support fixture.
2. Insert contact posts of connector into the board until the compliant pin areas of the posts start to enter the board holes.
3. Position the locator plates of the tool over the connector to be seated.
4. Center the tool and connector under the push surface of the ram.
5. Lower the ram slowly and verify alignment of the tool to the connector.
6. Apply force to the tool push plate to seat the connector to the pc board. (The tool will compress and the push pins will seat the contact posts into the pc board.)
7. Manually retract the ram, and carefully remove the seating tool.
8. Continue seating connectors as described in Steps 2 through 7 until all connectors have been seated.
9. Remove pc board with seated connectors from pc board fixture.

## 5. TOOL INSPECTION

Each seating tool is assembled and inspected before shipment. AMP recommends that the tool be inspected immediately upon its arrival in your plant to assure that it has not been damaged during shipment, and that it conforms to the dimensions given in Figure 3.

## 6. MAINTENANCE/QUALITY CONTROL

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

### B. Periodic Inspection

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.

## 7. REPAIR

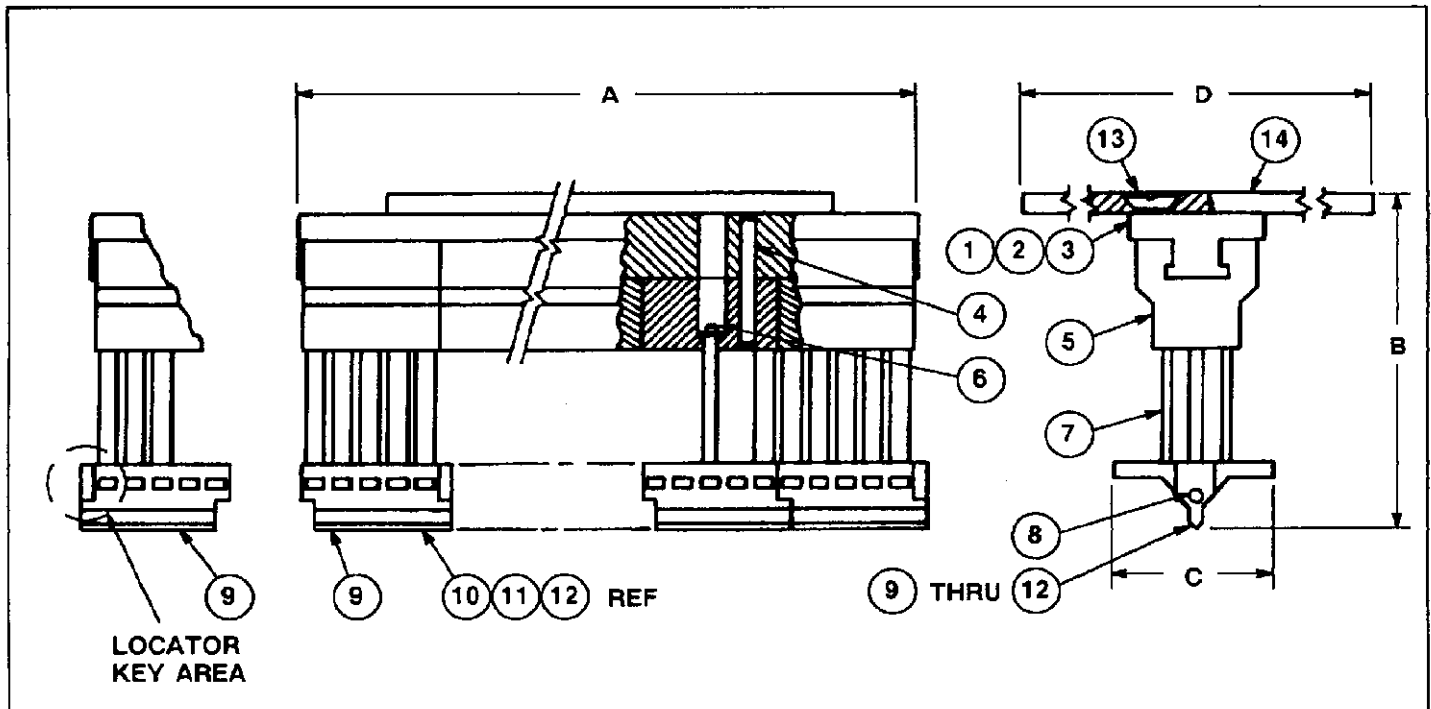
When repair is necessary, to ensure the quality and reliability of the tool, return the tool with a written description of the problem to:

AMP Incorporated  
Customer Repair  
1523 North 4th Street  
Harrisburg, PA 17102-1604

Customer-replaceable parts, those specified in Figure 3, can be ordered from:

AMP Incorporated  
P.O. Box 3608  
Harrisburg, PA 17105-3608

or a wholly-owned subsidiary of AMP Incorporated.



ITEM	PART NUMBER	DESCRIPTION	QUANTITY REQUIRED
1	312652-1	BAR, Push (For 15-30 Dual Positions)	1
2	312652-2	BAR, Push (For 31-45 Dual Positions)	1
3	312652-3	BAR, Push (For 46-60 Dual Positions)	1
4	21028-8	PIN, Slotted Spring	Note 3
5	---	HOUSING, Tool Holder	Note 3
6	20612-1	"E"-RING	Note 3
7	312027-2	PIN, Push	Note 2
8	312021-1	ROD, Tie	1
9	---	PLATE, Locator (5 Position)	Note 1
10	---	PLATE, Locator Card Scoop (1 Position)	1 (When Required; See Note 1)
11	---	PLATE, Locator Card Scoop (2 Position)	1 (When Required; See Note 1)
12	---	PLATE, Locator Card Scoop (3 Position)	1 (When Required; See Note 1)
13	1- 21065-7	SCREW, Flat Skt Hd Cap	4
14	313499	PAD, Stabilizer	1

TOOL SPECIFICATIONS					
NUMBER	DIMENSIONS				WEIGHT (Approx)
	A	B	C	D	
58184-1 thru 1-58184-6	3.79	1.664 ↓	.480 ↓	2.00 ↓	1 lb (58184-1 Tool)
1-58184-7 thru 3-58184-1	5.67				
3-58184-2 thru 4-58184-6	7.54				

NOTE 1: THE NUMBER OF LOCATOR PLATES REQUIRED FOR A GIVEN TOOL IS DETERMINED BY DIVIDING THE NUMBER OF DUAL CONTACT POSITIONS BY FIVE. THE REMAINDER OF THE POSITIONS, IF ANY, WILL REQUIRE AN APPROPRIATE MODIFIED LOCATOR PLATE.

NOTE 2: THE NUMBER OF PUSH PINS REQUIRED FOR A GIVEN TOOL IS DETERMINED BY MULTIPLYING THE NUMBER OF DUAL CONTACT POSITIONS BY TWO.

NOTE 3: THE NUMBER OF PARTS REQUIRED IS EQUAL TO THE NUMBER OF DUAL POSITIONS IN THE TOOL DIVIDED BY FIVE WITH THE REMAINDER COUNTING AS ONE ADDITIONAL.

Fig. 3