Seating Tools 58172–[ ] for AMP–HDI* Connectors

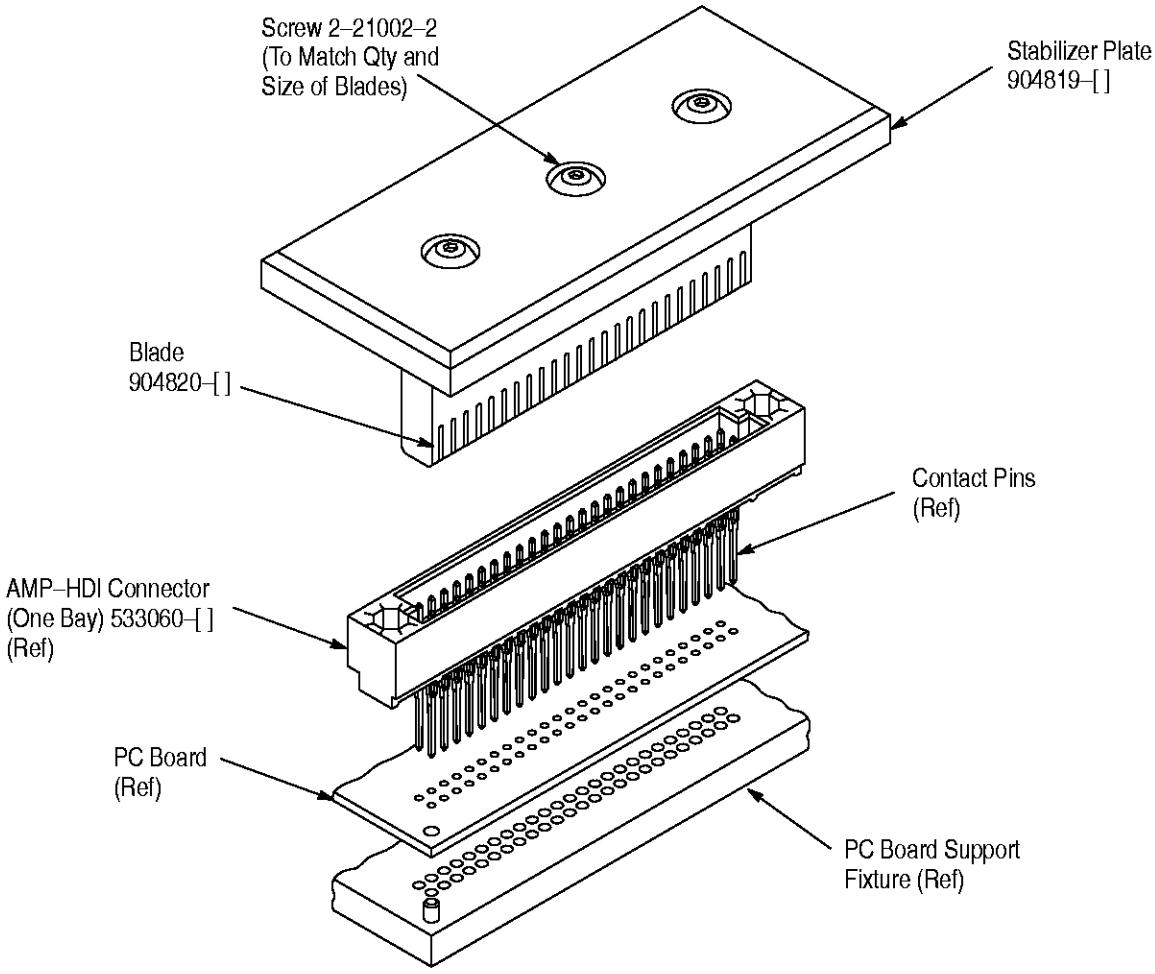

Figure 1

1. INTRODUCTION

This instruction sheet covers the application and maintenance of AMP* Seating Tools 58172–1 through –69. The seating tools are used to seat AMP–HDI Pin Connectors into printed circuit (pc) boards. See Figure 1. Read this instruction sheet thoroughly before using the tool.

NOTE *Dimensions on this sheet are in metric units [with U.S. customary units in brackets]. Figures and illustrations are for identification only and are not drawn to scale.*

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

2. DESCRIPTION (Figure 1)

AMP Seating Tool 58172–[ ] is designed with a stabilizer plate and blade. The stabilizer plate straightens the connector, during cycle of applicator ram, to provide proper insertion into the pc board. When seating the connector, the blades(s) are positioned over the shoulder of the contacts to prevent damage to the contacts. Each tool is designed with a specific combination of contacts in a row and number of rows in a connector bay. A seating tool is required for each connector bay. Refer to Figure 2 to determine tool and connector compatibility.

3. SEATING 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 contact pins, and to protect the pc board and contact posts from damage. You will need to design a board support fixture for your specific needs, using the recommendations in instruction sheet 408–6927.

CONNECTORS						SEATING TOOLS	
BASE PART NUMBER		NO. OF ROWS	NO. OF BAYS	NO. OF PINS/ROW/BAY	TOTAL NO. OF PINS	NO. OF TOOLS	PART NUMBER
532429	533060	2	1	15	30	1	4–58172–2
532446	533091			20	40		6–58172–7
				30	60		58172–2
				35	70		58172–3
				40	80		58172–4
				50	100		58172–5
				55	110		58172–6
				63	126		5–58172–4
				70	140		58172–7
				75	150		58172–1
				25	50		5–58172–1
				60	120		5–58172–2
				84	168		5–58172–7
				100	200		5–58172–3
532432	533081	3	1	25	75	1	5–58172–0
533447	533093			30	90		4–58172–5
533061	533429			32	96		58172–9
				35	105		6–58172–0
				40	120		1–58172–0
				50	150		3–58172–9
				55	165		1–58172–6
				60	180		3–58172–8
				70	210		1–58172–9
				75	225		58172–8
				80	240		6–58172–6
				84	252		5–58172–9
				97	291		4–58172–9
532919	533434	3	2	40	240	2	1–58172–0
533294	533513			43	258		1–58172–1
533296				49	294		1–58172–4
				52	312		1–58172–5
				55	330		1–58172–6
				61	366		1–58172–8
533094	533512	3	3	43	387	3	1–58172–1
533426				30	270		4–58172–5
				45	405		1–58172–2
532435	533254	4	1	15	60	1	6–58172–5
532448	533270			25	100		2–58172–1
532818				30	120		6–58172–8
				32	128		2–58172–2
				35	140		4–58172–0
				40	160		2–58172–3
				41	164		4–58172–3
				45	180		2–58172–5
				50	200		2–58172–9
				60	240		3–58172–6
				70	280		5–58172–5
				75	300		2–58172–0
				80	320		4–58172–7
				65	260		5–58172–6
				84	336		5–58172–8

Figure 2 (cont'd)

CONNECTORS						SEATING TOOLS	
BASE PART NUMBER		NO. OF ROWS	NO. OF BAYS	NO. OF PINS/ROW/BAY	TOTAL NO. OF PINS	NO. OF TOOLS	PART NUMBER
532921	533446	4	2	40	320	2	2–58172–3
532933	533447	↓	↓	41	328	↓	4–58172–3
533445	598264			43	344		2–58172–4
				45	360		2–58172–5
				46	368		2–58172–6
				55	440		3–58172–3
				58	464		3–58172–5
				61	488		3–58172–7
				192	384		6–58172–9
532837	533404	4	3	41	492	3	4–58172–3
532841	533448	↓	↓	43	516	↓	2–58172–4
533056				45	540		2–58172–5
				51	612		3–58172–0
				55	660		3–58172–3

Figure 2 (end)

3.2. Application Tooling

The connectors can be seated with an application unit capable of supplying a downward pressure of 178 Newtons (N) [40 lb] per contact. AMP 10/20–Ton "H" Frame Assembly 803880–6 is capable of seating up to 1000 contacts, while AMP SM–3 Frame Assembly 814700–[ ] can seat up to 150 contacts. For operating and setup procedures of the frame assemblies, refer to customer manual 409–5567 (for 10/20–Ton "H" Frame Assembly), and 409–5626 (for SM–3 Frame Assembly).

3.3. Seating Height (Figure 3)

The seating height—distance from the bottom surface of applicator ram (fully down) to the top of the pc board—must be set at 38.1 mm [1.50 in.] before starting seating procedure.

NOTE *Shut height equals seating height, plus thickness of pc board, and pc board support.*

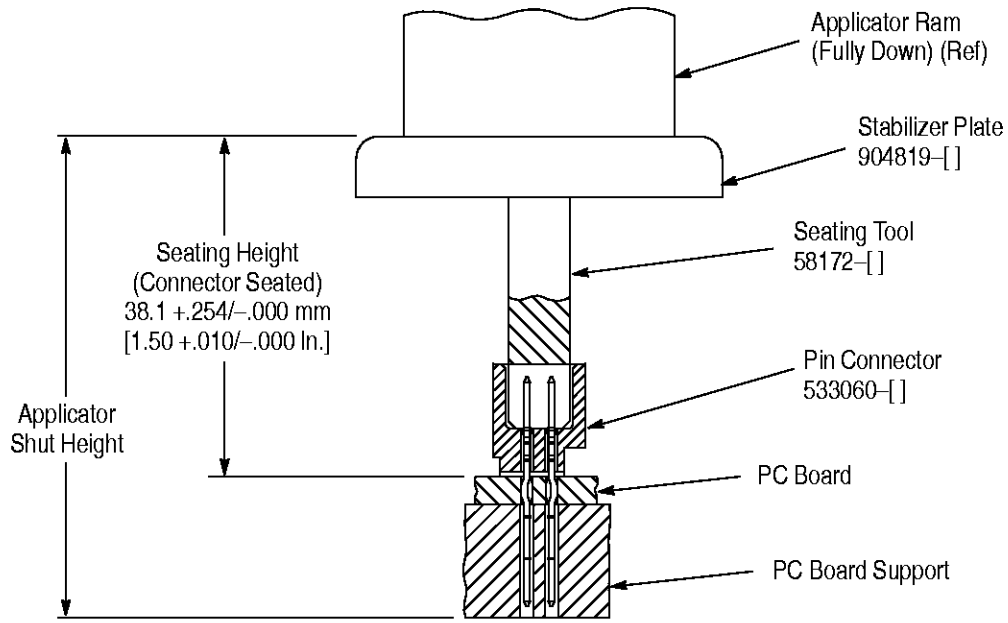

Figure 3

4. SEATING PROCEDURE

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

— A seating tool is required for each connector bay.

— Seating tool, connector, and applicator ram must be properly aligned before cycling the frame assembly.

CAUTION *Damage could occur to the tool and/or connector if they are incompatible with each other, or improperly aligned in the frame assembly.*

1. Place pc board on support fixture; then align pc board holes with the fixture holes.

2. Insert connector contacts into the pc board until compliant pin sections of the posts start to enter pc board holes.

3. Position the proper seating tool(s) into each connector bay.

4. Center seating tool(s) and connector under the applicator ram. Lower the ram slowly and verify alignment of tool(s) to the connector.

5. Cycle frame assembly to seat connector into the pc board.

6. Remove seating tool(s) and pc board from the support fixture.

5. TOOL INSPECTION

AMP Seating Tools 58172–1 through –69 are assembled and inspected before shipment. It is recommended that the tool(s) be inspected immediately upon arrival at your facility to ensure that the tools have 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 be 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 or any of its components.

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 1–717–986–7605, or write to:

CUSTOMER SERVICE (38–35)
AMP INCORPORATED
P.O. 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

Since the previous release of this document, the following changes and additions were made:

Per EC 0990–1260–98:

- Added 6–58172–9 in text and Figure 2.
- Deleted 6–58172–4, 4–58172–8, 4–58172–6, 6–58172–3, 1–58172–3, 1–58172–7, 6–58172–1, 4–58172–1, 4–58172–4, 2–58172–8, 3–58172–1, 3–58172–5, 2–58172–7, 2–58172–8, 3–58172–2, 3–58172–4, and 532839 from Figure 2.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

TE Connectivity:

2-58172-1