

Figure 1

1. INTRODUCTION

These instructions cover installation, setup, and termination procedures for AMP* Base Assembly Universal Arbor Tool 768338-4. The universal arbor tool is used in conjunction with the connector-specific kits (listed in Figure 1) to terminate connectors onto

0.64 mm [.025 in.] centerline flat ribbon cable. The tooling assemblies are installed onto AMP Manual Arbor Frame Assembly 91085-2 (see Figure 2) or AMP Pneumatic Auto-Cycle Unit 91112-3.

For information regarding the setup and operation of the arbor frame assembly, refer to AMP Instruction Sheet 408-7777 and 408-6732 for the auto-cycle unit. Installation and setup procedures for the connector-specific kits are available in the specific instruction sheet (408-series) listed in Figure 1.

Read these instructions (and other referenced documents) thoroughly before terminating any connectors.

NOTE

Dimensions on this sheet are in millimeters [with equivalent inches in brackets]. Figures are not drawn to scale.

2. DESCRIPTION (Figure 1)

The universal arbor tool consists of an upper tool and a lower tooling assembly. The lower tooling consists of a machined base, a fluted plate, four cable guides, two cable clamps, a cable stop, a frame guard with an extension guard, and a front guard.

The machined base allows the tooling to be moved into and out of the crimping area of the arbor frame assembly. The fluted plate is designed to provide proper guidance of the ribbon cable. The cable guides aid in positioning the ribbon cable with the connector assembly, and the cable clamps hold the ribbon cable in position. The cable stop provides proper positioning of the ribbon cable for flush terminations.

3. INSTALLATION OF UNIVERSAL ARBOR TOOL

(Figure 2)

NOTE

The procedures in this section are typical for both the Manual Arbor Frame Assembly and the Pneumatic Auto-Cycle Unit.

DANGER

To avoid personal injury, DISCONNECT air from main air valve before installing the universal arbor tool in the Pneumatic Auto-Cycle Unit.

1. Secure upper tool to ram with the two socket head cap screws.
2. Remove tool stop from the front of the manual arbor frame (or auto-cycle unit) slide base.
3. Position lower tooling assembly onto slide base and slide into position.
4. Re-assemble tool stop and tighten it to secure the lower tooling assembly onto the slide base.

4. TERMINATION PROCEDURE

4.1. Setup

Install the appropriate connector-specific kit onto the universal arbor tool; then set up the tooling components for termination and insert the connector into connector-specific kit. Refer to the instructions supplied with the connector-specific kit.

DANGER To avoid personal injury, make sure all guards are installed onto the manual arbor frame (or the auto-cycle unit) and the universal arbor tool before terminating any connectors.

A. End of Cable Termination (Figure 2)

DANGER To avoid personal injury, the extension guard must be installed onto the frame guard using the mounting hardware provided. Refer to Figure 1.

NOTE Only one cable clamp and two cable guides are used for end of cable terminations.

1. Open the left side cable clamp and place cable into the flutes of the fluted plate, as shown in Figure 2.

NOTE Cable conductors must stay in the same flutes for the entire length of the fluted plate.

2. Loosen the thumbscrew on the cable stop and position the stop at the center of the connector, as shown in Figure 2. Tighten the thumbscrew.

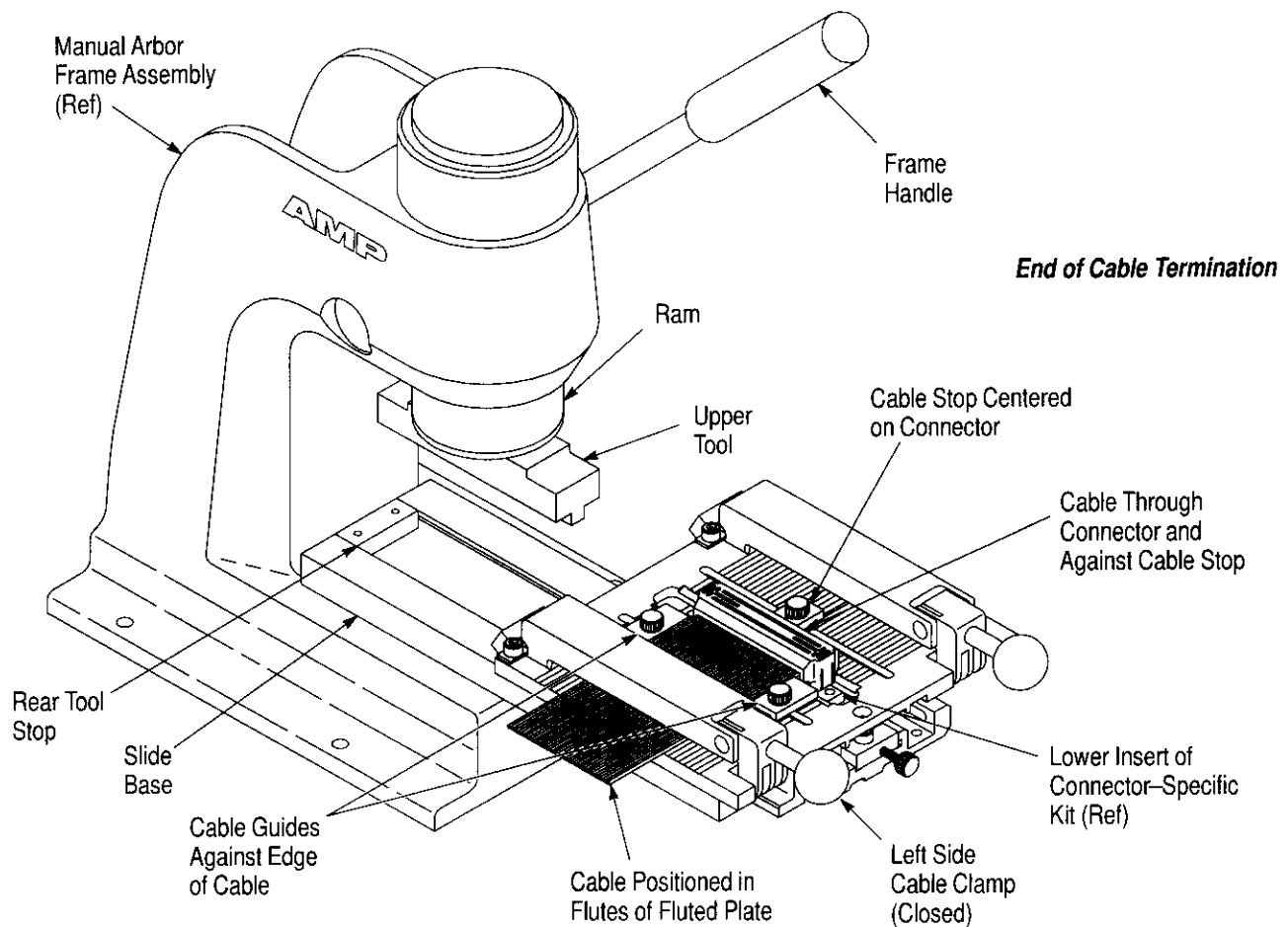
3. Slide the cable through the connector so that the end of the cable is against the cable stop. The cable must be positioned between the cable guides.

4. Adjust the cable so that the first conductor aligns with the second to sixth connector contact.

5. Loosen the thumbscrews on the cable guides and slide the guides against the edges of the cable. Tighten the thumbscrews.

NOTE Make sure that the cable guides sit flat into the flutes on the fluted plate.

6. Close the cable clamp.



Note: Guards not shown for clarity.

Figure 2

B. Daisy-Chain Assembly (Figure 3)**DANGER**

To avoid personal injury, the frame guard must be installed; however, the extension guard must be removed **from** the frame guard for daisy-chain terminations.

NOTE

The minimum cable length between connectors for daisy-chain assemblies is 19.05 mm [.75 in.] when using the manual arbor frame and 63.5 mm [2.50 in.] when using the auto-cycle unit.

1. Remove the cable stop from the fluted plate. Be careful not to lose the hex nut.
2. Open the cable clamps and place the cable into the flutes of the fluted plate, as shown in Figure 3.

NOTE

Cable conductors must stay in the same flutes for the entire length of the fluted plate.

3. Slide the cable over the connector contacts and between the cable guides, as shown in Figure 3.
4. Adjust the cable so that the first conductor aligns with the second to sixth connector contact.
5. Loosen the thumbscrews on the cable guides and slide the guides against the edge of the cable. Tighten the thumbscrews.

NOTE

Make sure that the cable guides sit flat into the flutes on the fluted plate.

6. Close the cable clamps.

4.2. Alignment and Termination (Figure 4)**CAUTION**

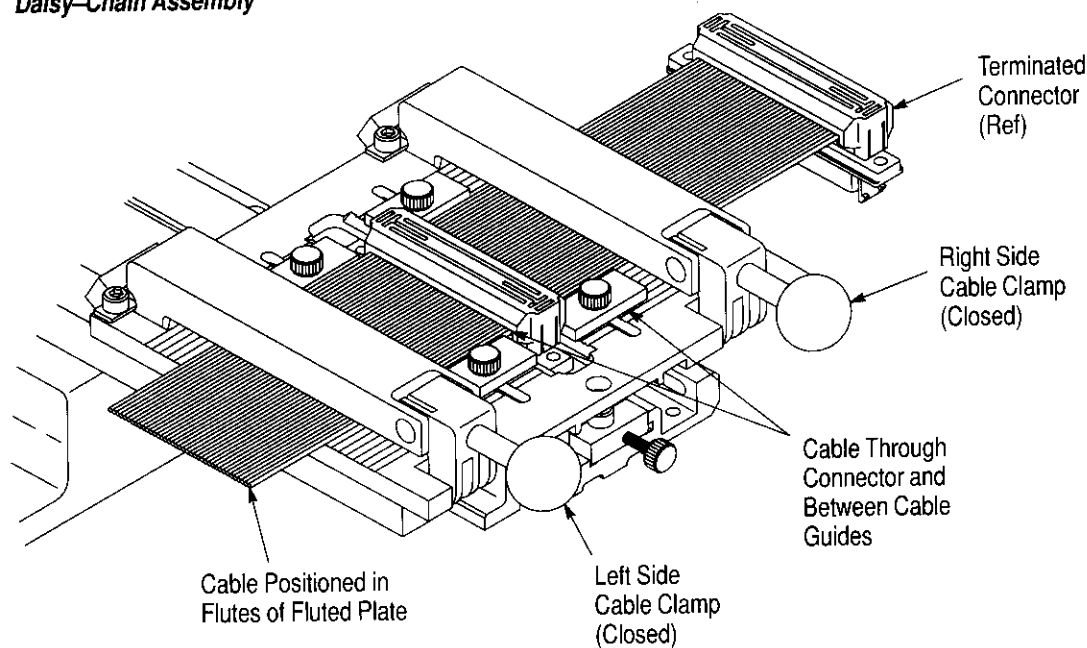
For proper termination, alignment is critical; therefore, a magnifying device must be used during alignment procedure.

1. Using the appropriate wrench, loosen, but do not remove, the two locking setscrews located in the machined base directly underneath the fluted plate. See Figure 4.
2. Using the fine adjustment screw, move the lower insert of the connector-specific kit so that the first contact of the connector aligns with the first conductor of the cable.
3. Tighten the locking setscrews to secure the lower insert. Verify alignment has not changed.
4. To actuate the ram for the manual arbor frame, slide lower tooling assembly toward rear of slide base until it is positioned against the rear tool stop (see Figure 2). Pull down on the arbor frame handle to terminate the cable to the connector.

NOTE

To actuate the ram for the auto-cycle unit, slide lower tooling assembly toward the rear of the slide base until the sensing port closes. The auto-cycle unit will automatically cycle and terminate the cable to the connector.

5. To retract the ram for the manual arbor frame, raise the tool handle. Slide tooling assembly out from under the ram and remove the terminated connector.

Daisy-Chain Assembly

Note: Guards not shown for clarity.

Figure 3

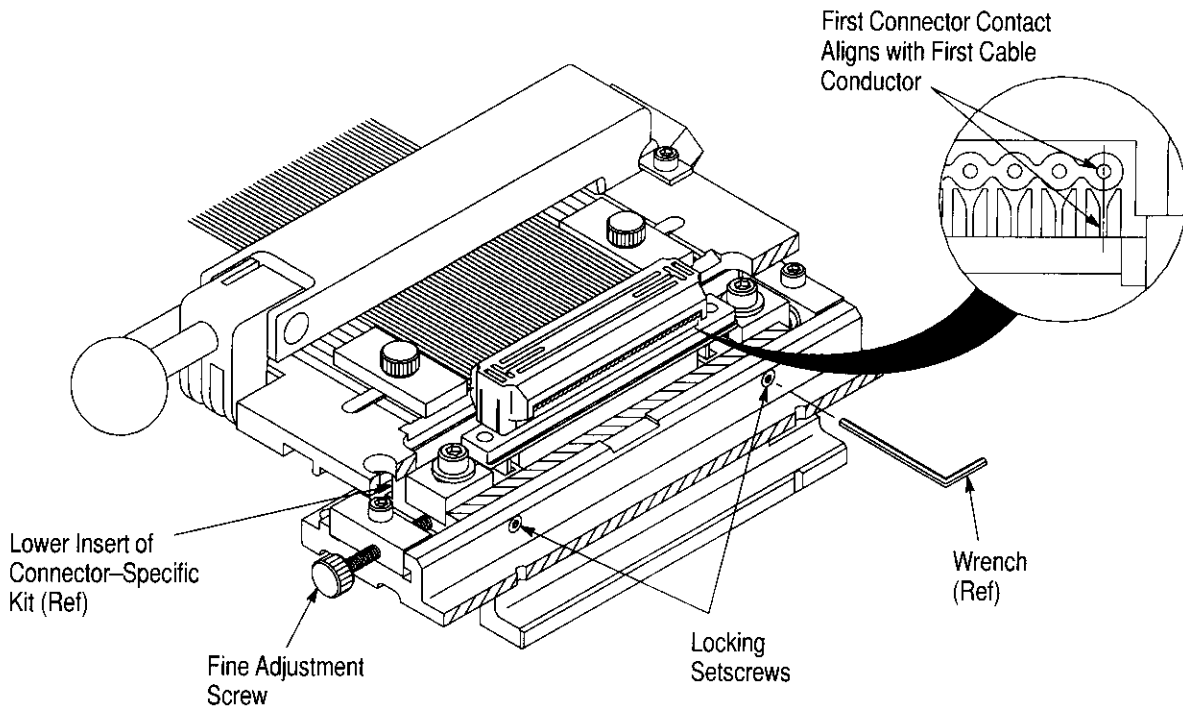


Figure 4

NOTE

The ram will automatically retract when the auto-cycle unit has completed the cycle. Slide the lower tooling out from under the ram to remove the terminated connector.

4.3. Connector Inspection

1. Perform a test termination and inspect the connector to ensure that the cable conductors are aligned with the contacts. If available, use a tester to inspect the termination, or remove the connector cover and inspect the termination with a microscope. Refer to applicable AMP application specification (114-series) for termination height dimensions.
2. If the connector contacts are not aligned with the conductors, a re-alignment of the connector is necessary. Refer to Paragraph 4.2. Determine the direction the connector must be moved to align the contacts with the conductors. Loosen the two locking setscrews (which secure the lower insert) and re-align the lower insert.

5. MAINTENANCE AND INSPECTION**5.1. Maintenance**

The universal arbor tool requires little maintenance other than to keep it clean. Remove debris and contaminants from the tooling with a clean, soft, lint-free cloth or a clean, soft brush. Do not use objects that could damage the tooling and do not use any solvents that could harm paint or plastic

material. When not in use, store the tooling in a clean, dry area.

5.2. Inspection

The tooling should be inspected immediately upon arrival at your facility and at regularly-scheduled intervals thereafter to ensure that it has not been damaged. Examine the tooling for any signs of damage or excessive wear during inspections. If replacement of parts is necessary, refer to Figure 5 for the list of customer-replaceable parts.

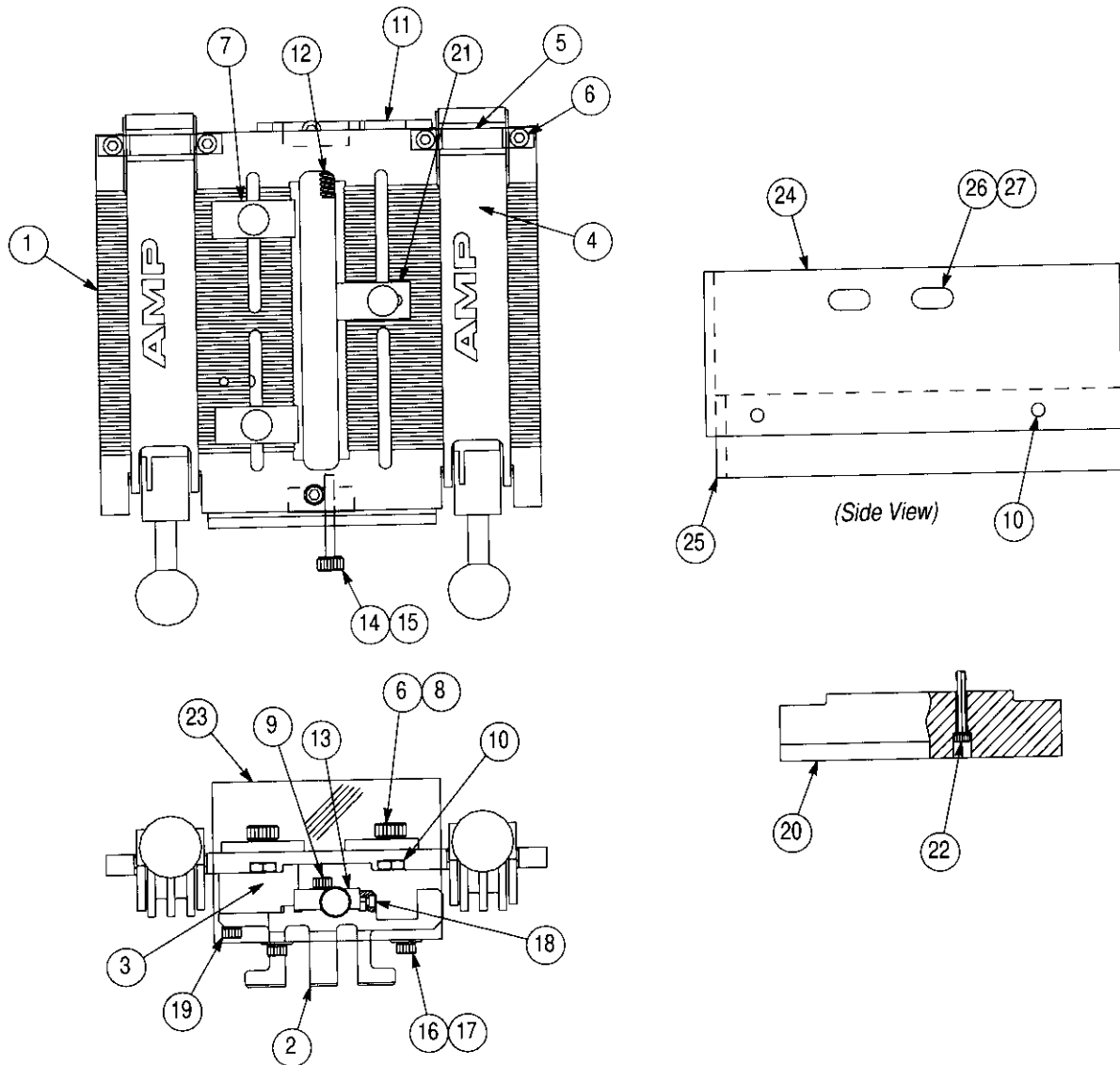
6. REPLACEMENT AND REPAIR

Figure 5 provides a list of customer-replaceable parts for the universal arbor tool. Order replacement parts through your local 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
PO BOX 3608
HARRISBURG PA 17105-3608

Tools may also be returned to AMP for evaluation and repair. If repairs exceed the parts available on the list of customer-replaceable parts, or evaluation is desired, send the tool with a written description of the problem to:

CUSTOMER REPAIR (01-02)
AMP INCORPORATED
1523 NORTH 4TH STREET
HARRISBURG, PA 17102-1604



CUSTOMER REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL
1	224999-1	PLATE, Fluted	1
2	768599-1	BASE, Modified	1
3	679070-1	SPACER	1
4	768915-1	CABLE CLAMP ASSEMBLY	2
5	768603-1	PIN, Pivot	2
6	1-21000-9	SCREW, Socket Head Cap, 6-32 x .38 in.	4
7	224987-1	GUIDE, Cable	4
8	27708-2	KNOB, Thumbscrew, No. 6	5
9	2-21000-0	SCREW, Socket Head Cap, 6-32 x .50 in.	8
10	21018-5	NUT, Hex, 6-32	7
11	224990-1	BLOCK, Spring Retain	1

Figure 5 (Continued)

ITEM	PART NUMBER	DESCRIPTION	QTY PER TOOL
12	1-22279-8	SPRING	1
13	224989-1	BLOCK, Adjustment	1
14	7-21000-8	SCREW, Socket Head Cap, 4-40 x 1.00 in.	1
15	27708-1	KNOB, Thumbscrew, No. 4	1
16	1-21000-8	SCREW, Socket Head Cap, 6-32 x .25 in.	2
17	21055-5	WASHER, No. 6	4
18	2-21006-7	SCREW, Set, 6-32 x .12 in.	2
19	2-21000-3	SCREW, Socket Head Cap, 6-32 x .88	2
20	224991-1	UPPER TOOL	1
21	224988-1	STOP, Cable	1
22	1-21000-7	SCREW, Socket Head Cap, 4-40 x .75 in.	2
23	318728-1	GUARD, Front	1
24	318726-1	GUARD, Frame	1
25	318727-1	GUARD, Extension	1
26	21002-7	SCREW, Socket Head Cap, 10-31 x .50 in.	3
27	21055-7	WASHER, Flat, No. 10	3

Figure 5 (End)