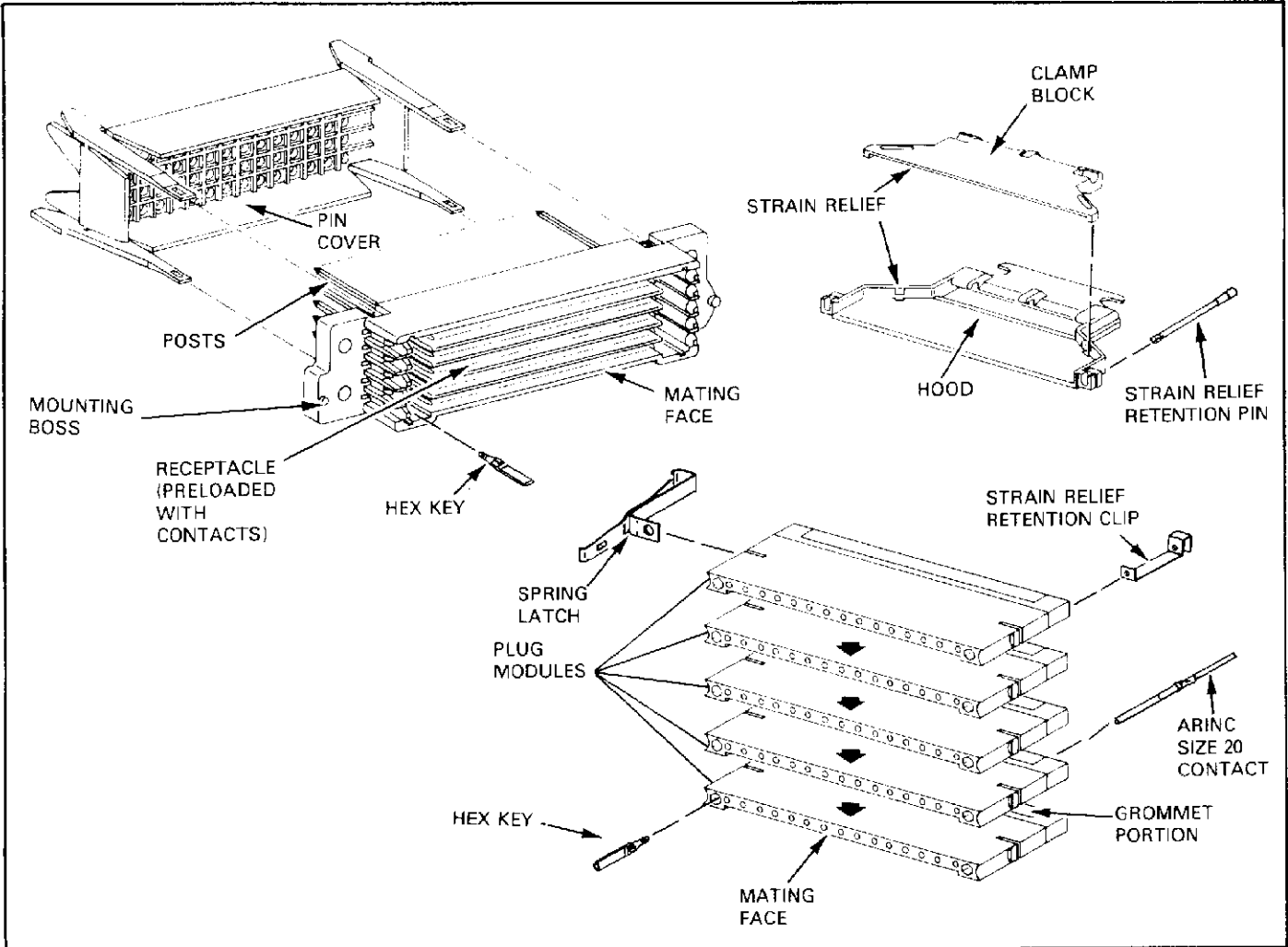


CUSTOMER HOTLINE 1 800 722-1111



NO. OF POSN	PART NO.		NO. OF POSN	PART NO.					STRAIN RELIEF			
	RECEPTACLE ASSEMBLY WITH COVER	HEX KEY		SPRING LATCHES	PLUG MODULE*	COMPONENT PLUG MODULE	ARINC SIZE 20 CONTACT	HEX KEY	CLAMP BLOCK	HOOD	RETENTION CLIP	RETENTION PIN
30 75	213396-1	213384-1	15	213388-1	213408-1	213389-1 213389-2 213389-3	208267-2	213384-1	213392-1	213391-1	213456-1	213393-1
			30	213388-2								
			45	213388-3								
			60	213388-4								
			75	213388-5								

Fig. 1

* BLANK PLUG MODULE 213408-2, CONSISTING OF A PLUG MODULE WITHOUT THE CAVITIES TO ACCEPT SOCKET CONTACTS, IS ALSO AVAILABLE. IT WILL ACCEPT THE SPRING LATCHES TO MATE WITH RECEPTACLE ASSEMBLY 213396-1 OR 213396-1. USE ANY COMBINATION OF PLUG MODULES (213408-1), BLANK PLUG MODULES (213408-2) OR COMPONENT PLUG MODULES (213389-1, -2, OR -3) TO FULFILL REQUIREMENTS. EACH PLUG MODULE CONTAINS 15 CONTACT POSITIONS.

1. INTRODUCTION

This instruction sheet (IS) covers the components, mounting procedures, and assembly of the AMP Wire Integration Unit. The unit, designed for panel-mount applications, consists of two mating counterparts: a receptacle assembly, mounted to a panel; and a module assembly, conveying wires to the receptacle assembly. A variety of accessories are part of the unit. See Figure 1.

Read this sheet and all referenced material before starting assembly of these specified.

NOTE All dimensions on this instruction sheet are in inches unless otherwise notified..

2. DESCRIPTION

The receptacle assemblies, consisting of receptacles and pin covers, are available in sizes of 30 and 75

positions. Each receptacle contains preloaded pin contacts; the contacts include .045-in.-square posts, each with a length of 1.044 (max) in. for wrap-type terminations. Each 30-position receptacle contains four hex-key cavities and two .150-in.-dia. through holes for panel mounting. The 75-position receptacle has 10 cavities for hex keys and four through holes. Cavity and row identification is included on the mating and rear faces. Other features of the receptacle assemblies include the following: hex-key retention devices to secure the hex keys to the receptacle assembly; alignment guides to ease mating of the plug modules and receptacle assemblies; locking tabs to accept assembly; and mounting bosses to fit into different-sized holes on the panel to orient the receptacle assembly with the panel. Accessories used with the receptacle assemblies are hex keys.

The plug modules are supplied in only one size — 15 positions. They can be stacked in modular arrangement to attain either the 30- or the 75-position plug assembly requirement. Each plug module accepts ARINC Size 20 socket contacts which will accommodate a wire size of from No. 20 to No. 22 AWG. Once inserted, the socket contacts mate with the pin contacts of the receptacle assembly. The grommet portion on the wire-entry (rear) face is manufactured from silicone rubber and provides wire support and a vibration-dampening effect. Each plug module features the following: latch mounting slots to accept the spring latches; strain relief retention pin mounting hole to accept the strain relief pin, thus securing the strain relief assembly to the plug module; hex key cavities to accept hex keys; and strain relief retention clip mounting slot to accept strain relief retention clip, which is partially attached to the plug module. Accessories used with the plug assemblies are the hex keys, spring latches, strain relief assembly, retention clip, and retention pin.

3. CRIMPING AND TERMINATING PROCEDURES

The preloaded posted contacts in the receptacle assemblies should have the wrap-type terminations applied after being panel mounted. Use commercially available instructions from the equipment vendor for procedures on how to apply these terminations.

The socket contacts used in the plug modules are ARINC Size 20 contacts, AMP Part No. 208267-2, or equivalent. Be sure the contacts are compatible with the wire size and with the module assemblies.

4. PANEL MOUNTING, INSTALLING COVERS

Make a cutout in the panel using the dimensions shown in Figure 2. Seat the mounting flange of the

AMP WIRE INTEGRATION UNIT

receptacle assembly against the panel, as shown, making sure the mounting bosses fit into the respective mounting boss holes. When assembly is properly positioned, secure it with screws, washers, and nuts (not supplied).

NOTE

After the wrap-type terminations have been applied, the posted ends of the pin contacts should be protected against possible damage. It is suggested that the pin cover which is attached to the receptacle assembly when shipped be used for this purpose. The wires should be dressed first. Two legs of each cover are narrower than the other two legs (Figure 1) and will fit into the narrower slots of the receptacle assembly. Align the covers and simply guide the cover over the posts until it latches onto the rear face of the receptacle assembly. To remove the cover, press the latches together and pull the cover back.

5. INSERTION OF CONTACTS

The crimped contacts are inserted into the rubber portion of the plug modules. AMP Insertion/Extraction Tool No. 91066-4 is recommended for inserting the crimped contacts into the plug modules. This is a double-ended tool: one end contains the extraction tip and the other contains the insertion tip. Use AMP instruction sheet IS 7491, packaged with the hand tool, and follow the procedures listed for Size 20 socket contacts to insert the crimped contacts into the plug module.

6. EXTRACTION OF CONTACTS

The end of the AMP hand tool opposite the insertion end is used for extracting contacts. Follow the procedures listed in AMP instruction sheet IS 7491 for extracting Size 20 contacts from the plug modules.

7. INSTALLING HEX KEYS

It is required that hex keys be used to provide keying between the mating members. The hex key will fit into the hex-key cavity in six different positions. As shown in Figure 3, each hex key has a blade portion and a tapered portion. After the hex keys have been installed in one of the mating members, the blade portions of the hex keys installed in the other mating member must be rotated 180° from those of the first mating member. Otherwise, it will be impossible to mate the two assemblies.

When installed on the plug module, the hex keys serve a dual purpose: (1) to provide keying, and (2) to secure the spring latches to the plug module. In this instruction sheet, it is assumed that the hex keys are installed first on the receptacles.

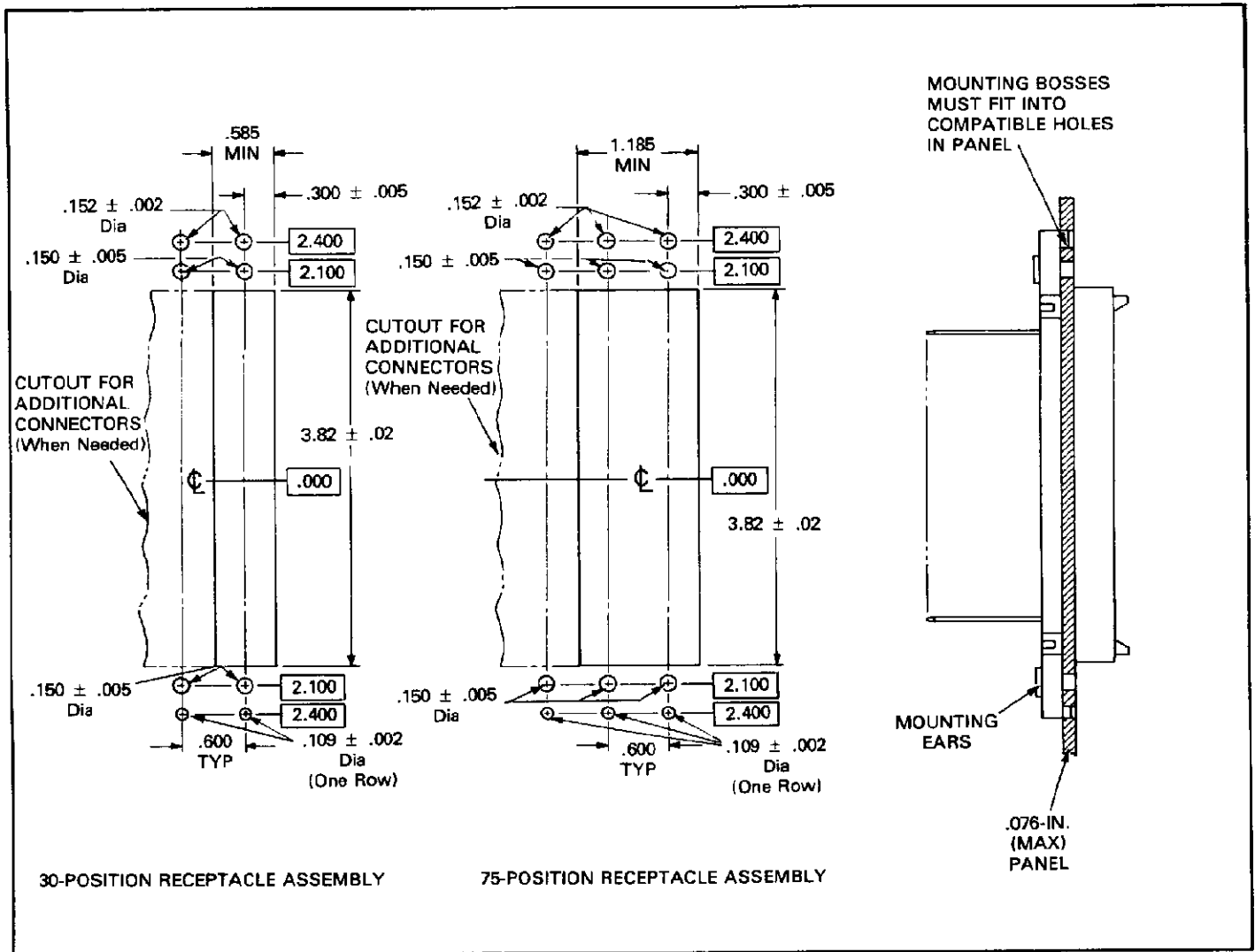


Fig. 2

7.1. Receptacles

The steps which follow are recommended to install the hex keys on the receptacles. When sure of the keying arrangement, proceed as follows:

1. Align the hex key with the desired hole and correct position, as shown in Figure 3. Then — keeping it aligned with the hole — position it into the hole. Make sure that the flat blade portion of the hex key will be oriented properly; use a needle-nose pliers, if necessary.
2. Using a jeweler's screwdriver or similar blunt instrument, push sufficiently on the hex key to ensure that the key bottoms in the retention device.
3. Repeat Steps 1 and 2 until all hex keys are installed on the receptacle assembly.

7.2. Plug Modules

The hex keys are installed in the plug module at the same time the spring latches are attached. Since the spring latches are not attached to the plug module until after the strain relief has been assembled, the procedure to install the hex keys in the plug module is included in Paragraph 8.2., Installing Spring Latches. Paragraph 8.2. covers the installation for both the spring latches and the hex keys on the plug module.

8. ASSEMBLING STRAIN RELIEF AND INSTALLING SPRING LATCHES ON PLUG MODULE

The strain relief and the spring latches are attached to the plug module. The strain relief is attached using

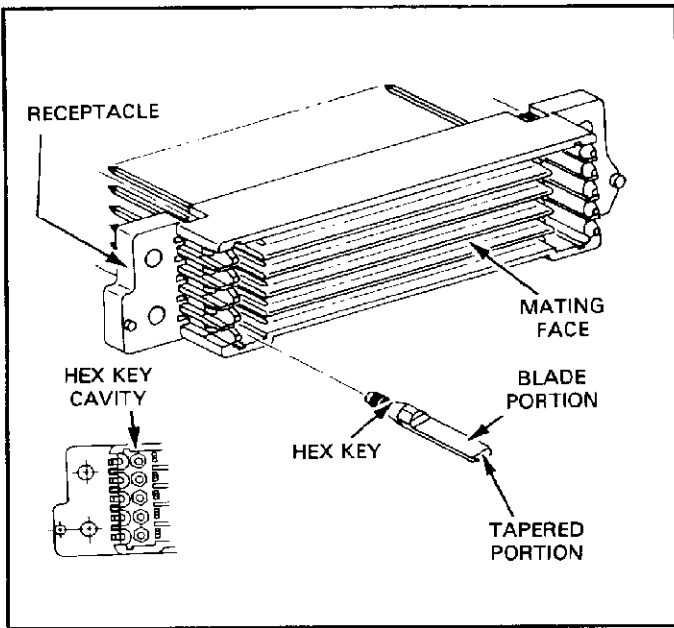


Fig. 3

1. Lay the plug module on a table or work bench as shown in Figure 4 — the mounting slots which accept the clips should be DOWN.

2. Position the strain relief hood on the table as shown in Figure 4 — its flat side is DOWN and the open portion faces the wire-entry face of the plug module. Then dress the wires through the back end of the hood.

3. Position the strain relief retention clip on the dual slots of the strain relief hood as shown in Figure 5. The clip lance on the extreme left fits into the mounting slot at the bottom of the plug module, and the lance at the extreme right fits from the top *between* the dual slots.

4. Position the second retention clip on the other side of the hood. Once the clips are assembled, the hood should fit snug against the wire-entry face of the plug module.

5. Secure the strain relief hood to the plug module by inserting the strain relief retention pins through the holes of the dual slots and the strain relief retention clips and into the holes of the plug module.

6. Position the clamp block over the strain relief hood (assembled to the plug module) and snap it into place, making sure the wires are properly dressed. The grooves of the clamp block must fit under the ramps of the hood. See Figure 6.

strain relief retention clips and strain relief retention pins. The spring latches are attached by the hex keys.

8.1. Attaching Strain Relief

When sure all the components are accessible and can easily be handled, proceed as follows:

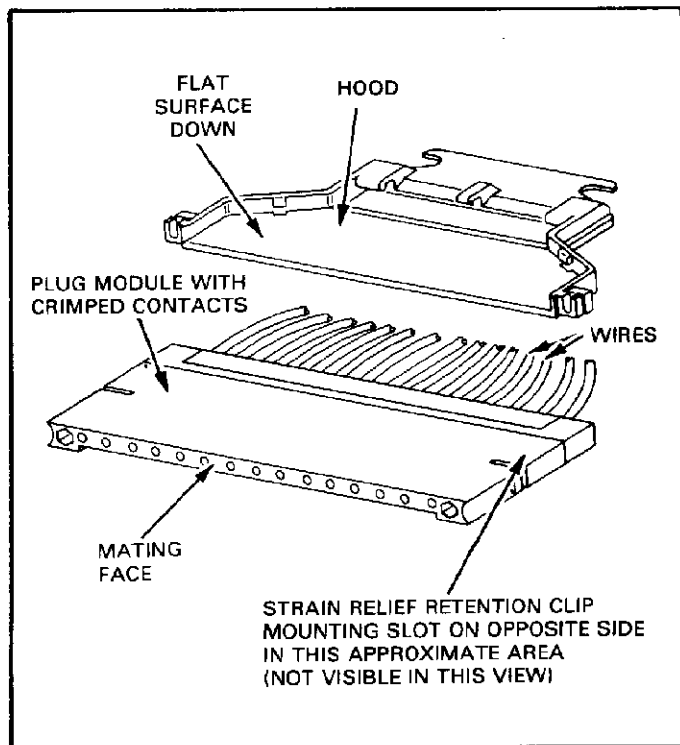


Fig. 4

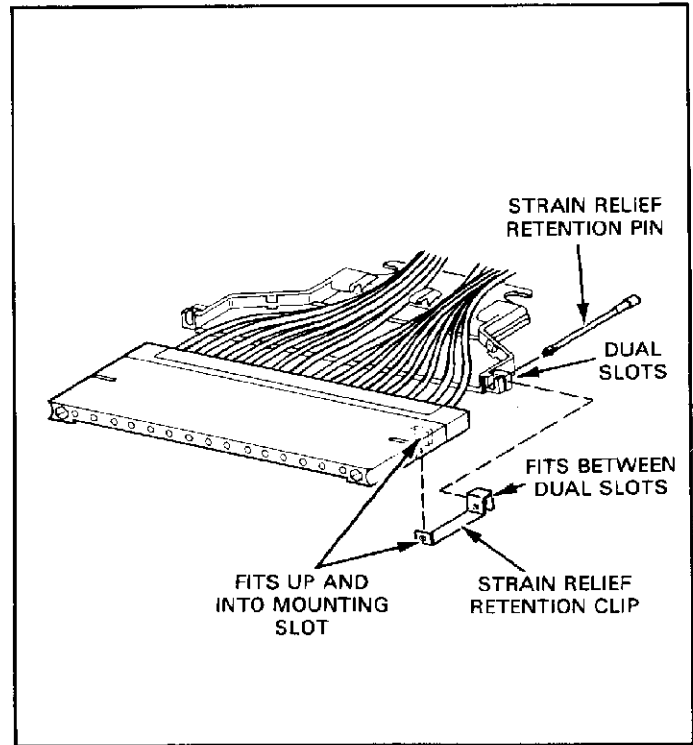


Fig. 5

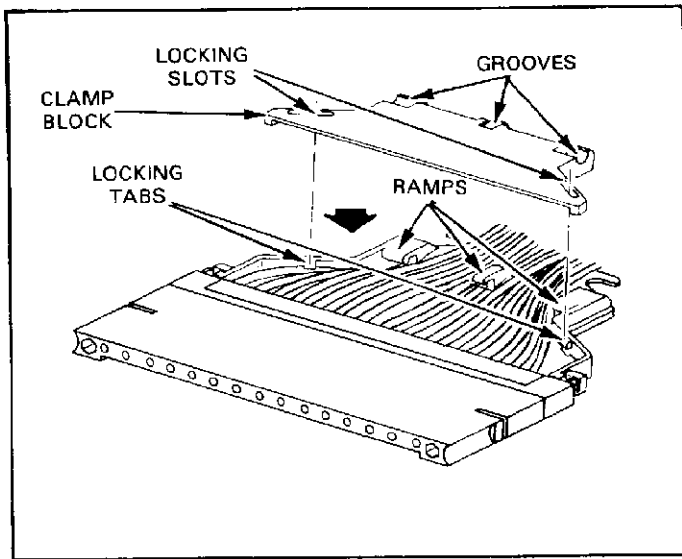


Fig. 6

7. Repeat the above steps for securing all necessary strain reliefs to the plug modules. All plug modules, except the blank modules and component modules, require the strain reliefs.

8.2. Installing Spring Latches

Once attached, the spring latches enable the plug module assembly to be fastened to the receptacle assembly. (The term, plug module assembly, is used herein to designate the plug module containing crimped contacts, strain relief, and all associated hardware.) Proceed as follows:

1. Refer to Figure 7 and fit a spring latch into the slot of the plug module. If using a multiple (two, three, four, or five plug modules) spring latch, arrange as many plug modules on top of each other as specified, so that the spring latch can be positioned in the slots.
2. Install a hex key into the key hole, using the procedures listed for the receptacle in Paragraph 7.1. Make sure the key fits through the hole of the spring latch. If using a multiple spring latch, install hex keys in every position.

NOTE

Make sure the hex keys are properly oriented (180°) with respect to the hex keys installed in the receptacle. If not oriented properly, the plug module assembly will be unable to mate with the receptacle.

3. Ensure full insertion into the retention device by pushing on the hex key(s) with a jeweler's screwdriver or similar blunt instrument.
4. Repeat the above steps to secure all the spring latches to the required number of plug modules.

9. MATING THE ASSEMBLIES

To mate the plug module assembly to the panel-mounted receptacle assembly, align the two mating members, making sure that the alignment grooves of the plug module assembly will slide along the alignment guides of the receptacle assembly. Push the plug module assembly against the receptacle assembly until the spring latches secure the two mating members. The slots of the spring latches fall into the locking tabs of the receptacle assembly. See Figure 8.

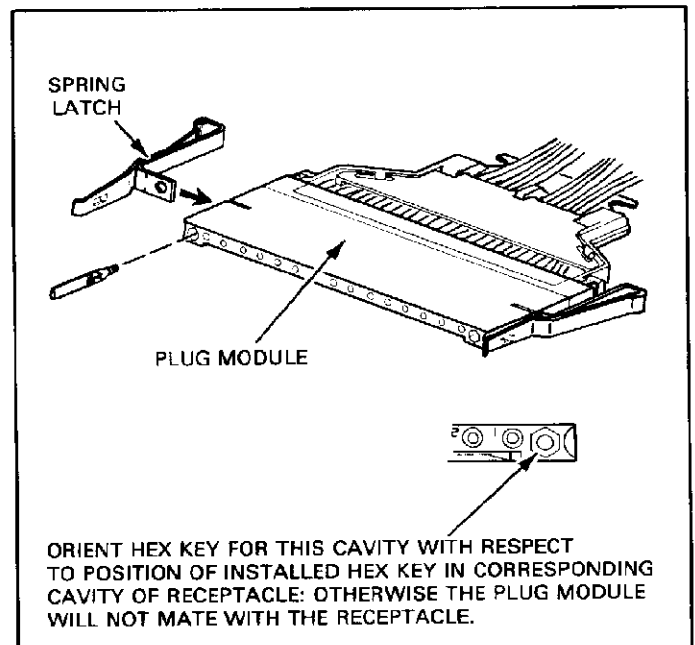


Fig. 7

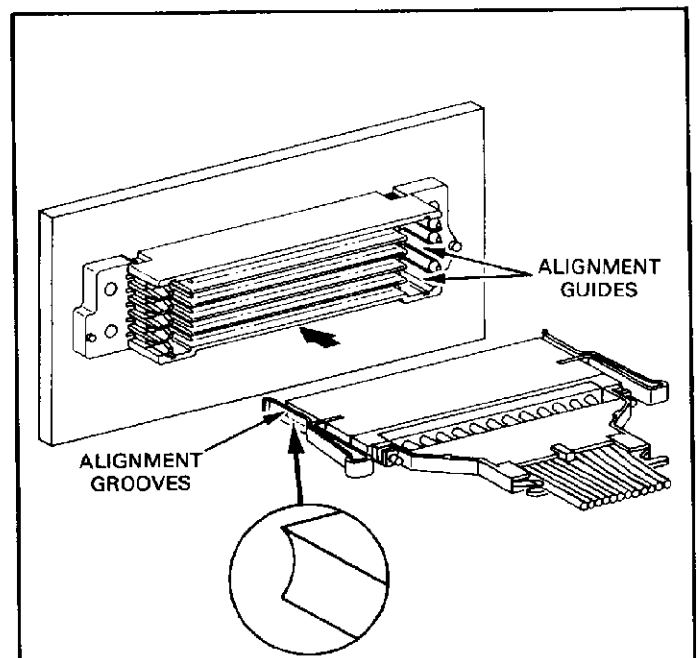


Fig. 8