



707, 727-787
STANDARD WIRING PRACTICES MANUAL
ASSEMBLY OF AMP (TYCO) MATE-N-LOK CONNECTORS

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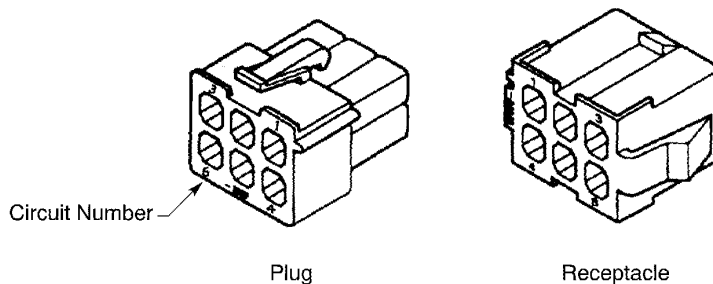
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1. PART NUMBERS AND DESCRIPTION

A. Connector Part Numbers

Table 1
CONNECTOR PART NUMBERS

Part Number	Type	Supplier
172160-1	Receptacle	AMP
172168-1	Plug	AMP



2445948 S00061545979_V1

AMP MATE-N-LOK CONNECTORS
Figure 1

B. Contact Part Numbers

Table 2
CONTACT PART NUMBERS

Wire Size (AWG)	Contact		
	Type	Part Number	Supplier
22	Pin	170364-3	AMP
	Socket	170366-3	AMP
20	Pin	170364-3	AMP
	Socket	170366-3	AMP
18	Pin	170364-3	AMP
	Socket	170366-3	AMP

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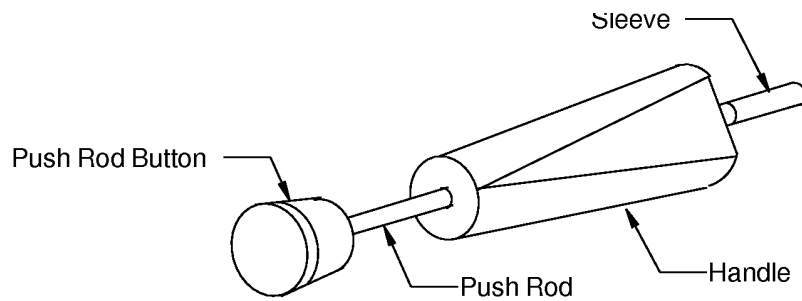
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2. CONNECTOR DISASSEMBLY

A. Contact Removal

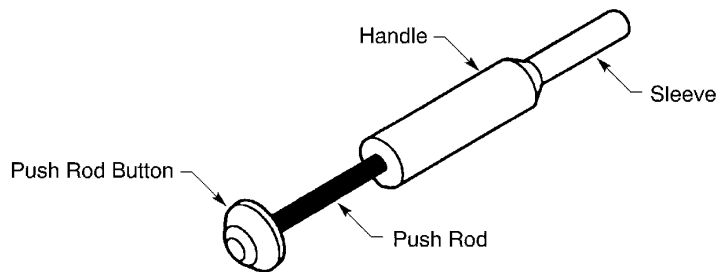
Table 3
CONTACT REMOVAL TOOLS

Removal Tool	Supplier
189727-1	AMP
724668-1	AMP



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189727-1 CONTACT REMOVAL TOOL
Figure 2



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724668-1 CONTACT REMOVAL TOOL
Figure 3

- (1) Make a selection of a contact removal tool from Table 3.

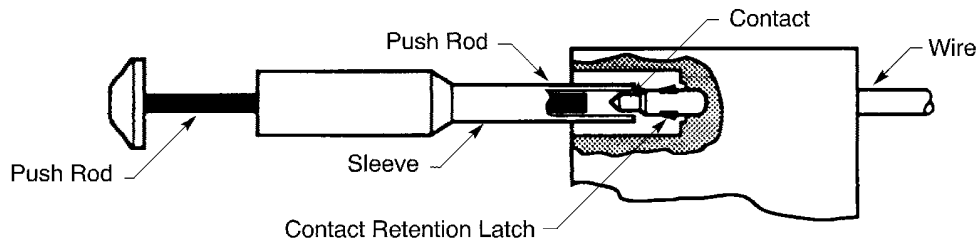
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- (2) Hold the wire of the contact.
- (3) Put the tool into the contact cavity on the side that is opposite the wire.
- (4) Push the tool into the contact cavity until the contact retention latches are opened. Refer to Figure 4.



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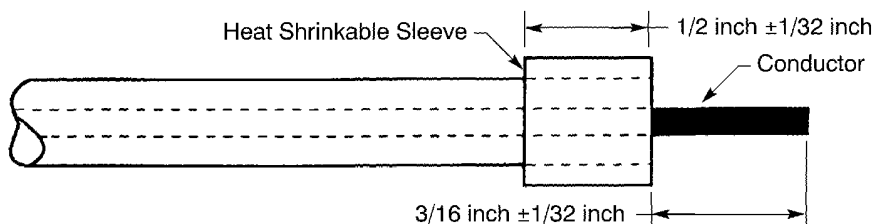
CONTACT REMOVAL

Figure 4

- (5) Turn the handle of the tool until the contact retention latches are released. Make sure that the tool stays fully inserted in the contact cavity.
- (6) Push the push rod button on the tool to eject the contact.
- (7) Pull the contact from the contact cavity.

3. CONNECTOR ASSEMBLY

A. Wire Preparation



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WIRE PREPARATION

Figure 5

- (1) Make a selection of a Grade B, Class 1 heat shrinkable sleeve from Subject 20-00-11.
- (2) Put a 1/2 inch \pm 1/32 inch length of the heat shrinkable sleeve on the wire.
- (3) Remove 3/16 inch \pm 1/32 inch of insulation from the end of the wire. Refer to Figure 5.
- (4) Move the heat shrinkable sleeve so that the end of the sleeve is aligned with the end of the wire insulation. Refer to Figure 5.

Make sure that:

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- The end of the sleeve is within 1/32 inch of the end of the insulation
- The sleeve does not make an overlap with the conductor.

(5) Shrink the sleeve into position. Refer to Subject 20-10-14.

B. Contact Assembly

**Table 4
CONTACT CRIMP TOOLS (HAND CRIMP TOOLS)**

Contact Part Number	Wire Size (AWG)	Crimp Tool			
		Basic Unit (Hand Crimp Tool)	Die	Recommended Insulation Grip Setting	Supplier
170364-3	22	90711-2	22-20	1	AMP
	20	90711-1	22-20	2	AMP
		90711-2	22-20	2	AMP
	18	90711-1	18	1	AMP
		90711-2	18	1	AMP
170366-3	22	90711-2	22-20	1	AMP
	20	90711-1	22-20	2	AMP
		90711-2	22-20	2	AMP
	18	90711-1	18	1	AMP
		90711-2	18	1	AMP

**Table 5
CONTACT CRIMP TOOLS (POWER CRIMP TOOLS)**

Contact Part Number	Wire Size (AWG)	Crimp Tool			
		Basic Unit (Power Crimp Tool)	Die	Recommended Insulation Grip Setting	Supplier
170364-3	22	1213805-3 with 91522-3 Crimp Head	22-20	3	AMP
		1213805-4 with 91522-3 Crimp Head	22-20	3	AMP
	20	1213805-3 with 91522-3 Crimp Head	22-20	3	AMP
		1213805-4 with 91522-3 Crimp Head	22-20	3	AMP
	18	1213805-3 with 91522-3 Crimp Head	18	2	AMP
		1213805-4 with 91522-3 Crimp Head	18	2	AMP
170366-3	22	1213805-3 with 91522-3 Crimp Head	22-20	3	AMP
		1213805-4 with 91522-3 Crimp Head	22-20	3	AMP
	20	1213805-3 with 91522-3 Crimp Head	22-20	3	AMP
		1213805-4 with 91522-3 Crimp Head	22-20	3	AMP
	18	1213805-3 with 91522-3 Crimp Head	18	2	AMP
		1213805-4 with 91522-3 Crimp Head	18	2	AMP

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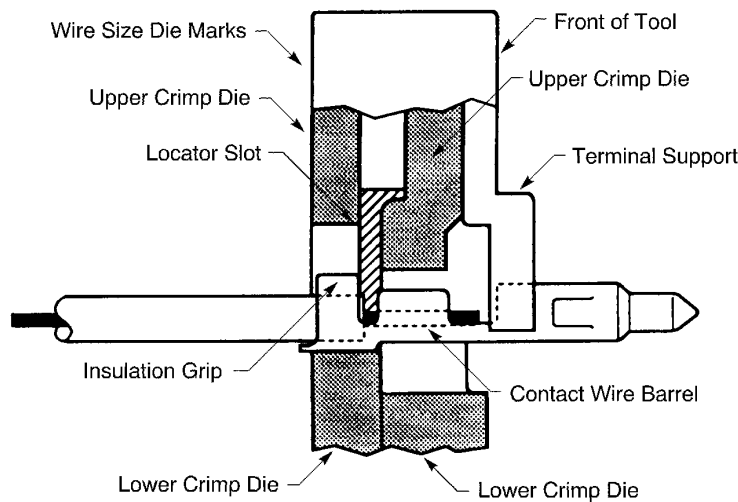
NOTE: The insulation grip settings in Table 4 and Table 5 are recommended. Due to differences in wire insulation thicknesses, the insulation grip setting can be changed to get the correct grip.

- (1) Make a selection of a contact crimp tool from Table 4 or Table 5.
- (2) Put the contact in the crimp tool.

Make sure that:

- The insulation grip of the contact is against the locator
- The end of the contact is in the locator slot of the tool.
- The contact is in the correct tool die.

Refer to Figure 6.



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POSITION OF THE CONTACT IN THE CRIMP TOOL

Figure 6

- (3) Lightly close the handles of the tool so that the contact stays in the die.
- (4) Push the wire into the crimp barrel of the contact until the wire insulation is against the contact insulation stop. Refer to Figure 7.

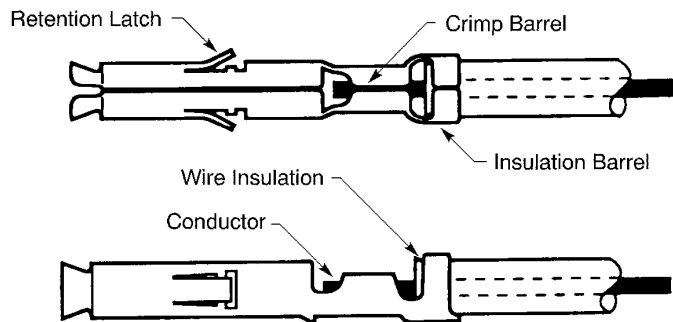
Make sure that:

- All of the strands of the conductor are in the crimp barrel
- The end of the conductor can be seen in the contact inspection hole.

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POSITION OF THE CONTACT ON THE WIRE
Figure 7

- (5) Close the handles of the tool until the ratchet is released.

C. Contact Insertion

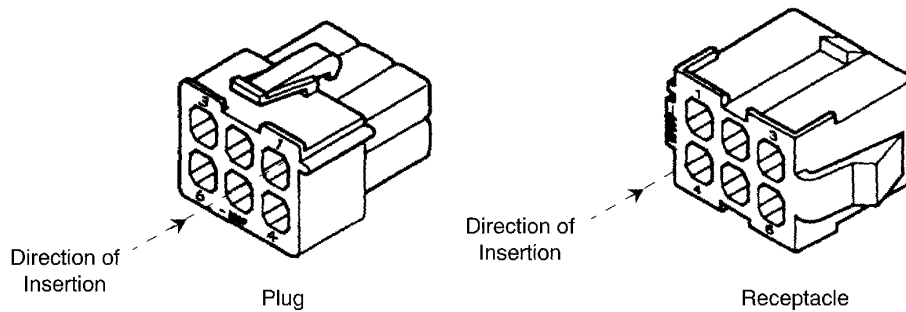
NOTE: It is not necessary to use a contact insertion tool.

- (1) Put the contact into the contact cavity from the wire side of the connector. Refer to Figure 8.

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CONTACT INSERTION

Figure 8

- (2) To make sure that the contact is fully inserted, lightly pull on the wire.

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