

**Termination Procedure for Triaxial Bayonet Connectors
D-621-0045 Through D-621-0052 and Triaxial Bayonet Connector Kits
DK-621-0045-#P/-#S Through DK-621-0052-#P/-#S
D-621-0546, D-621-0548, D-621-0550, D-621-0551 and
Triaxial Bayonet Connector, In-Line Jacks D-621-0087 Through D-621-0090**

1. Scope

This procedure outlines the method of terminating triaxial bayonet connectors to triaxial, twinaxial, coaxial, twisted pair, and single conductor cable.

2. Applicable Documents

2.1 Specifications and Standards. The following documents form a part of this standard to the extent specified herein. In the event of a conflict between this document and component drawing, the latter shall govern.

2.1.1 Raychem Specification Control Drawings

D-621-0045, D-621-0047, D-621-0049, D-621-0052	Connector, Triaxial Plug, Subminiature, Bayonet Coupled
D-621-0046, D-621-0048, D-621-0050, D-621-0051	Connector, Triaxial Jack, Subminiature, Bayonet Coupled
DK-621-0045-3P, DK-621-0047-2P DK-621-0049-1P, DK-621-0052-1P	Connector Kit, Triaxial Plug, Subminiature, Bayonet Coupled With D-602-0126 Pin Contact
DK-621-0045-3S, DK-621-0047-2S DK-621-0049-1S, DK-621-0052-1S	Connector Kit, Triaxial Plug, Subminiature, Bayonet Coupled With D-602-0127 Socket Contact
DK-621-0046-3P, DK-621-0048-2P DK-621-0050-1P, DK-621-0051-1P	Connector Kit, Triaxial Jack, Subminiature, Bayonet Coupled With D-602-0126 Pin Contact
DK-621-0046-3S, DK-621-0048,2S DK-621-0050-1S, DK-621-0051-1S	Connector Kit, Triaxial Jack, Subminiature, Bayonet Coupled With D-602-0127 Socket Contact
D-621-0546, D-621-0548, D-621-0550, D-621-0551 D-621-0087, D-621-0088 D-621-0089, D-621-0090	Connector, Triaxial, Long Reach, Jack, Subminiature, Bayonet Coupled Connector, Triaxial In-line Jack, Subminiature, Bayonet Coupled

2.1.2 Raychem Engineering Standards

- ES-61199 Termination Procedure for SolderTacts® Contacts D-602-0126/0127 and the kits containing these contacts
- ES-61133 Termination Procedure for SolderTacts® Contacts D-602-44/45
- ES 61187 Termination Procedure for SolderTacts® Contacts D-610-9/10

3. **Tools and Equipment**

- 3.1 AA-400 Super Heater with No. 979663 mini-SolderSleeve® terminator reflector, or CV-5300 MiniGun® heater with MG-1 SolderSleeve® terminator reflector.
- 3.2 AD-1564 Slotted Triaxial connector termination support tool.
- 3.3 AD-1447 or AD-1464 contact removal tool.
- 3.4 HT-900A compressed air/nitrogen heating tool for field application.

4. **Description**

- 4.1 The D-621 triaxial connectors covered by this standard are used with No. 748 SolderTacts® or PowerTacts® contacts to interconnect triaxial, twinaxial, coaxial, twisted pair or single conductor cable. Table 1 gives the designed** combinations of connectors, contacts and cable types.

Table 1

Cable Plug Connector Side			Jack Connector Side		
Plug Connector No.	Contact** No.	Cable Type	Jack Connector No.	Contact** No.	Cable Type
D-6210045	D-602-44	Triaxial	D-621-0046	D-602-45	Triaxial
D-6210047	D-602-0126	Twinaxial 24 through 26 AWG	D-621-0048	D-602-0127	Twinaxial 24 through 26 AWG
D-6210049			D-621-0050		
D-6210052			D-621-0051		
	D-610-09	Coaxial	D-621-0087	D-610-10	Coaxial
			D-621-0088		
			D-621-0089		
			D-621-0090		
			D-621-0546		
			D-621-0548		
			D-621-0550		
			D-621-0551		

**The D-621-triax/twinax connector is designed such that either pin or socket contact may be mounted in either plug or jack connector housing. Table 1 gives the preferred combinations.

4.2 DK-621 Series Connector Kits

4.2.1 The DK-621 series triaxial connector kits are provided with the inner contacts (see paragraph 2.1.1). The kit is prepared for the use of twinaxial type of cable as in Table 1.

4.2.2 For the rest of this document follow, the procedures for the twinaxial cable.

5. Procedures

5.1 Cable Accommodation

5.1.1 Triaxial Cable

5.1.1.1 The connectors described in this document will accommodate triaxial cables with the following dimensions:

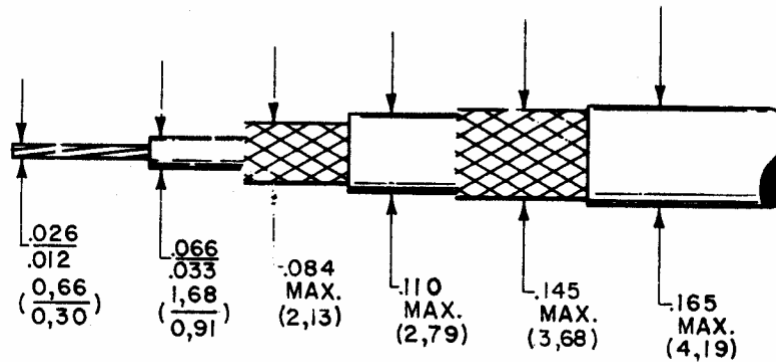
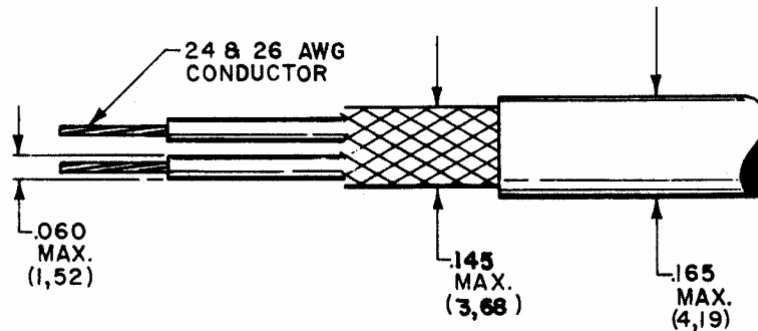


Figure 1

5.1.1.2 Consult Raychem for triaxial cables that meet these dimensions.

5.1.2 Twinaxial Cable

5.1.2.1 The connectors described in this document will accommodate twinaxial cable with the following dimensions:



*This dimension includes secondary shield and/or filler material when applicable.

Figure 2

5.1.2.2 Consult Raychem for twinaxial cables that meet these dimensions.

5.1.3 Coaxial Cable

5.1.3.1 The connectors described in this document with D-610-09/-10 contacts will accommodate coaxial cable with the following dimensions:

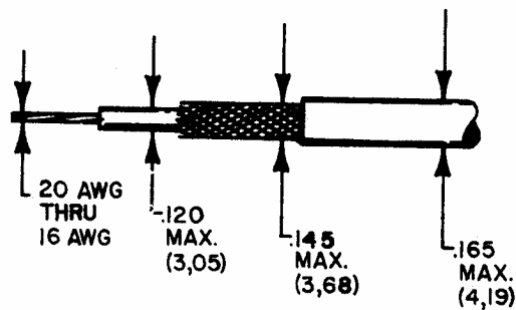


Figure 3

5.1.3.2 Consult Raychem for coaxial cables that meet these dimensions.

5.2 Cable Preparation

5.2.1 Triaxial Cable Preparation

5.2.1.1 For 24 and 26 AWG Center Conductors.

- A. Slip strain relief sleeve and braid terminator over cable; then strip outer cable jacket from cable for a distance of 0.150 ± 0.015 (3,81 \pm 0,38) from end of cable.

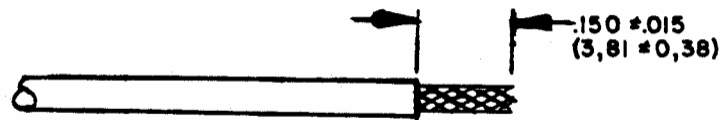


Figure 4

- B. Trim exposed braid away from cable.

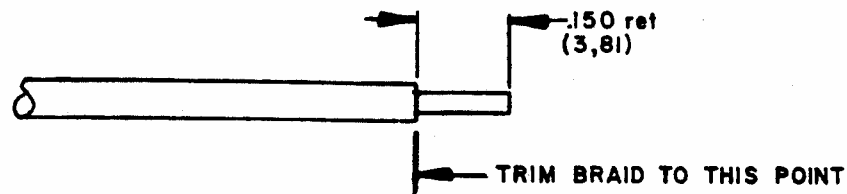


Figure 5

- C. Strip outer cable jacket from cable for a distance of 0.550 ± 0.015 (13,97 \pm 0,38) from end of cable.

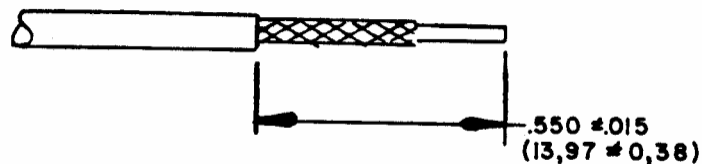


Figure 6

- D. Comb out braid and fold it back over outer cable jacket.

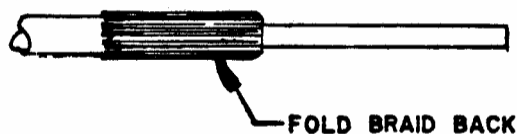


Figure 7

- E. Proceed to Section 5.3 for termination procedures.

5.2.1.2 For 28, 30, and 32 AWG Center Conductors (fold back method).

- A. Slip strain relief sleeve and braid terminator over cable; then strip outer cable jacket from cable for a distance of 0.240 ± 0.015 (6,10 \pm 0,38) from end of cable.

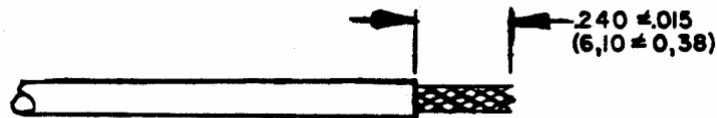


Figure 8

- B. Trim exposed braid away from cable.

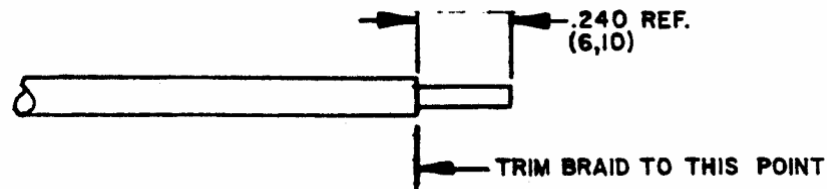


Figure 9

- C. Strip outer cable jacket from cable for a distance of 0.640 ± 0.015 (6,10 \pm 0,38) from end of cable.

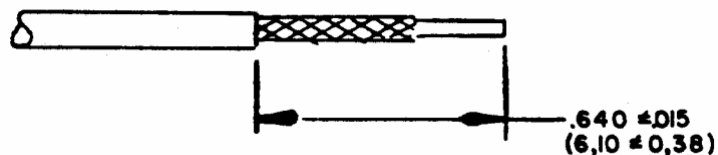


Figure 10

- D. Comb out braid and fold it back over outer cable jacket.

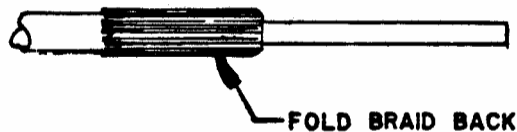
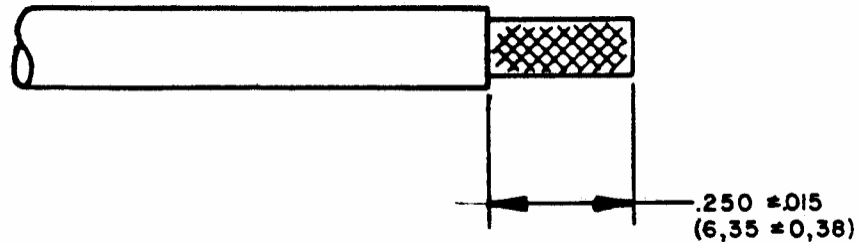


Figure 11

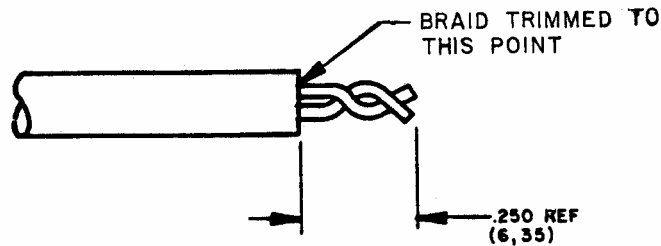
- E. Proceed to Section 5.3 for termination procedures.

5.2.2 Twinaxial Cable Preparation

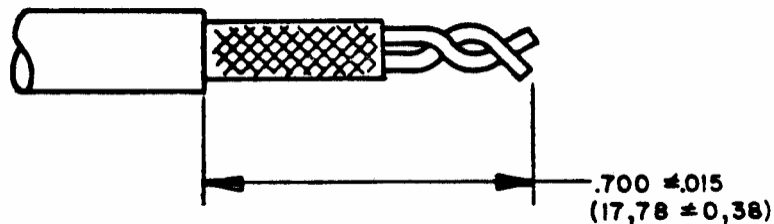
- 5.2.2.1 Slip strain relief sleeve and braid terminator over cable; then strip outer cable jacket from cable per Figure.12.

**Figure 12**

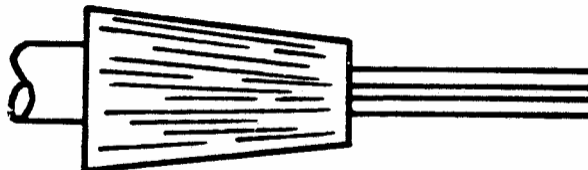
- 5.2.2.2 Trim exposed braid away from cable per Figure 13.

**Figure 13**

- 5.2.2.3 Strip outer cable jacket from cable per Figure 14.

**Figure 14**

- 5.2.2.4 Comb out braid and fold it back over jacket; then straighten exposed twisted pair.wires per Figure 15.

**Figure 15****Note**

For ease in straightening the exposed twisted pair wires, warm both wires slightly in the reflector of the CV5300 MiniGun® and straighten while warm

- 5.2.2.5 Proceed to Section 5.3 for termination procedures.

5.2.3 Twinaxial Cable Preparation - EMP Hardened and/or Double Shielded Data Bus Cable.

- A. Strip outer cable jacket from cable for a distance of 0.250 ± 0.015 (6,35 \pm 0,38) from end of cable.

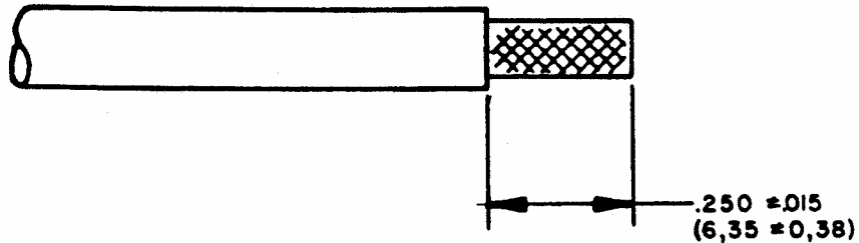


Figure 16

- B. Trim exposed outer braid, Mu-metal tape or inner jacket, inner braid and filler material away from cable.

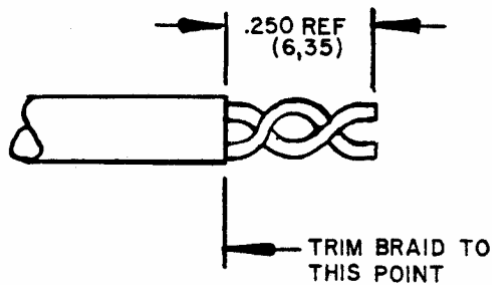


Figure 17

- C. Strip outer cable jacket from cable for a distance of 0.800 ± 0.015 (20,3 \pm 0,38) from end of cable.

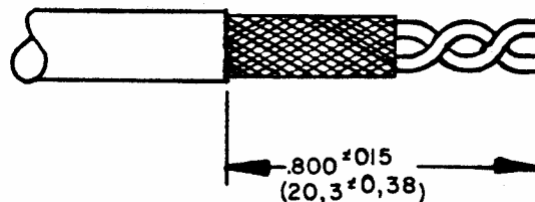


Figure 18

- D. Comb out outer braid and fold it back over outer cable jacket.

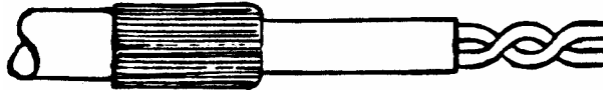


Figure 19

- E. Remove Mu-metal tape or cable inner jacket to within $.050 \pm .015$ (1,27 \pm 0,38) of the folded back outer braid. If cable has no Mumetal tape wrap or inner jacket, proceed to step G.

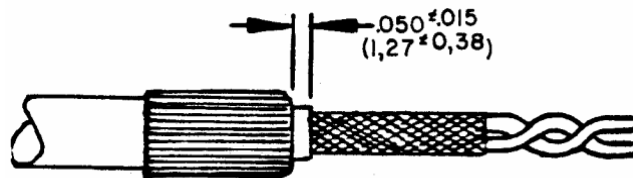


Figure 20

- F. Comb out inner braid and fold it back over the outer braid.



Figure 21

- G. Straighten out exposed twisted pair wires, and cut away any filler material to a maximum of 0.050 inch (1,27 mm) of the inner braid to prepare the cable for termination per paragraph 5.3.1.

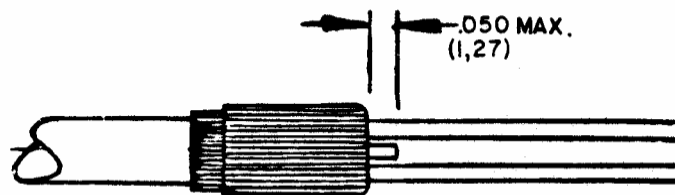


Figure 22

- H. Proceed to Section 5.3 for termination procedures. Treat this cable as same as twinaxial cable for the rest of the process.

5.2.4 Coaxial Cable Preparation for the Use of D-610-09/10 Contacts.

- A. Slip strain relief sleeve and braid terminator over cable; then strip outer cable jacket from cable for a distance of 0.425 ± 0.015 (10,80 \pm 0,38) from end of cable.



Figure 23

- B. Trim exposed braid away from cable.

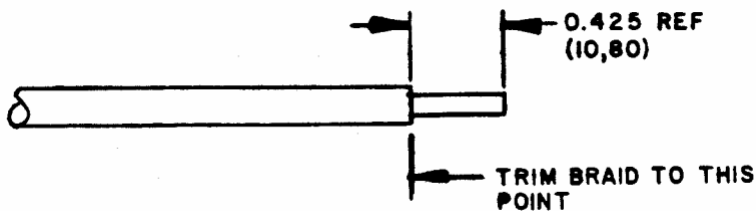


Figure 24

- C. Strip outer jacket from cable for a distance of 0.800 ± 0.015 (20,32 \pm 0,38) from end of cable.

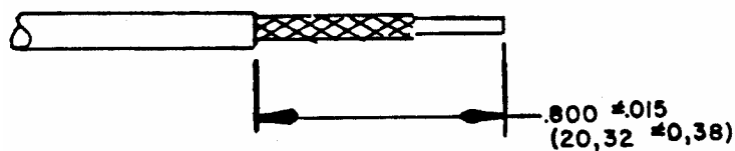


Figure 25

- D. Comb out braid and fold it back over outer cable jacket.



Figure 26

- E. Proceed to Section 5.3 for termination procedures.

- 5.3 Termination Procedure.
5.3.1 Termination to Inner Contacts.

NOTE

Strain Relief, Braid Terminator, and any other components that may be impractical to install once the inner contacts are in place should carefully be placed over the cable without damaging the prepared ends of the cable.

Use the proper termination procedure paragraph of the ES listed in Table 2 for the different types of contacts.

TABLE 2

Type of Contact	Cable Type (REF)	Termination Per
D-602-44/-45	Triaxial	ES 61133
D-602-0126/-0127	Twinaxial	ES 61199
D-602-09/-10	Coaxial	ES 61187

- 5.3.2 Termination of Cable Braid to D-621-0045 through D-621-0052 and D-621-0087 through D-621-0090, D-621-0546, D-621-0548, D-621-0550, D-621-0551 Triaxial Connectors and Related Kits.

- 5.3.2.1 Insert inner contact into rear of triaxial connector. Continue insertion until retention clip locks into insulator.

**Figure 27**

- 5.3.2.2 Brush cable braid forward over rear barrel section of triaxial connector. Trim braid strands to yield spacing shown in Figure 28.

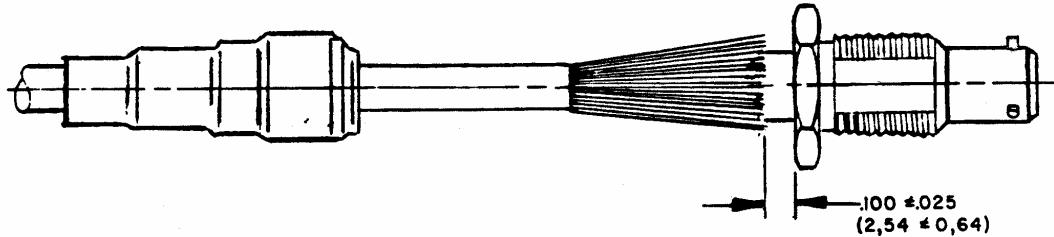


Figure 28

- 5.3.2.3 Slip braid terminator assembly over cable braid and triaxial connector barrel section, capturing cable braid between barrel section and braid terminator. Push braid terminator assembly until it bottoms.

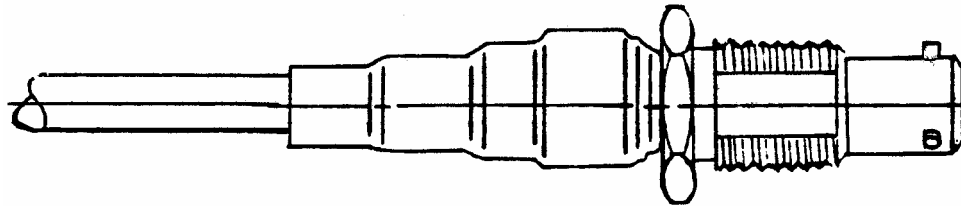


Figure 29

- 5.3.2.4 Position connector assembly into either AA-400 Super Heater or CV-5300 MiniGun® fitted with proper reflector (paragraph 3).

- 5.3.2.5 Heat terminator assembly until solder melts and flows. Heating of terminator assembly should begin on end of terminator butted against larger diameter of connector body. After solder flow occurs in this area, proceed slowly to other end of terminator which recovers down on cable jacket. Entire connector assembly should be slowly rotated in reflector during termination to assure even heating. It is recommended that connector body be supported during termination with a triaxial connector termination support tool or equivalent.

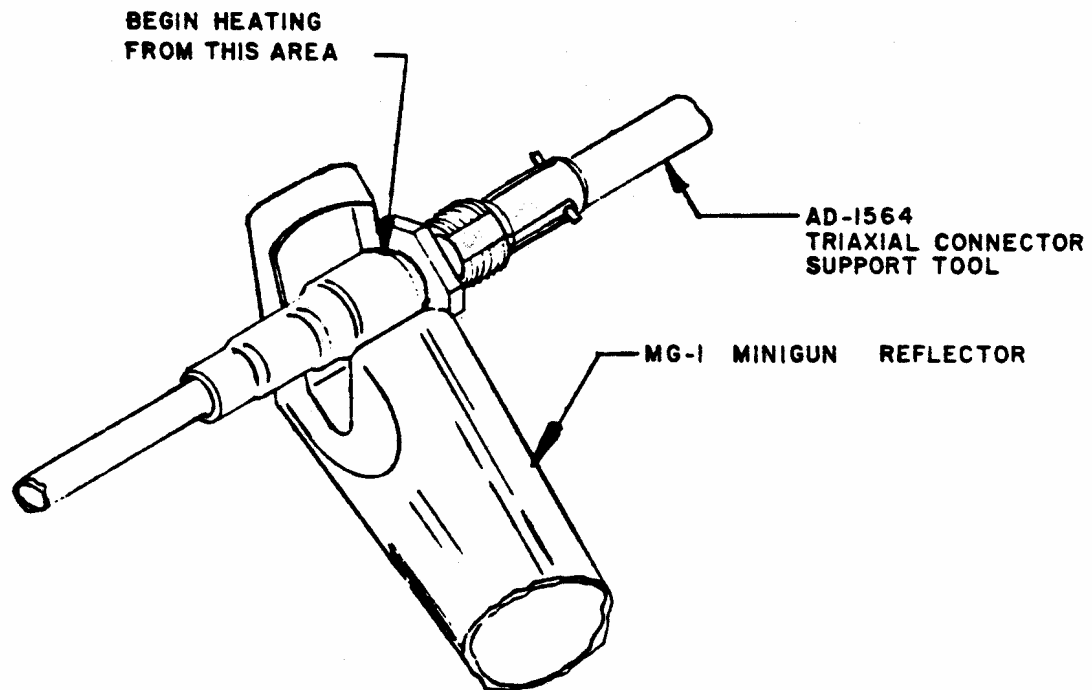


Figure 30

- 5.3.2.6 Following termination, slide D-600-0019 strain-relief tubing over terminator assembly and shrink in place.

CAUTION

The connectors and tools are hot after the termination. Allow the connectors to cool before handling.

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