

TRANSMISSION LINES  
COAXIAL TRANSMISSION LINES AND CONNECTORS  
INSTALLATION

1. GENERAL

1.001 This addendum supplements Section 402-100-200, Issue 1.

1.002 It is reissued to :

- Update the format.
- Include the appropriate legend on Page 1 in accordance with AT&T's "Guidelines and Procedures for Safeguarding Information" and Pacific Company's System Instruction (SI) 178.

**Note:** Marginal arrows used to denote changes are omitted.

1.003 It provides additional information for the installation and termination of coaxial connectors, Types N and HN, and Types N and HN with captivated contacts. (See Figs. 66 through 72.)

NOTICE

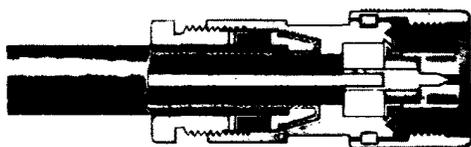
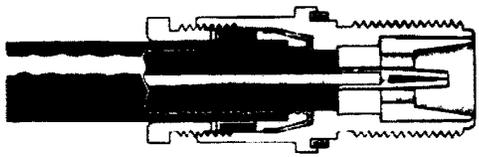
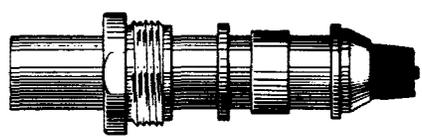
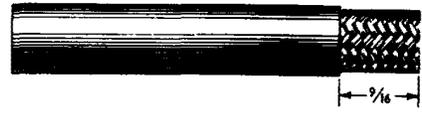
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**SERIES N**



CROSS SECTION VIEWS

\*REPLACE WASHER AND GASKET IN:  
 UG-21C,U (82-96)  
 UG-22C,U (82-95)  
 UG-23C,U (82-94)  
 UG-160B,U (82-93)



Remove 9/16" of vinyl jacket. When using double shielded cable, remove 5/8".

Comb out copper braid as shown. Cut off dielectric 7/32" from end. Tin center conductor.

Taper braid as shown. Slide nut, washer and gasket over vinyl jacket. Slide clamp over braid with internal shoulder of clamp flush against end of vinyl jacket. When assembling connectors with gland, be sure knife-edge is toward end of cable and groove in gasket is toward the gland.

Smooth braid back over clamp and trim. Soft solder contact to center conductor. Avoid use of excessive heat and solder. See that end of dielectric is clean. Contact must be flush against dielectric. Outside of contact must be free of solder.

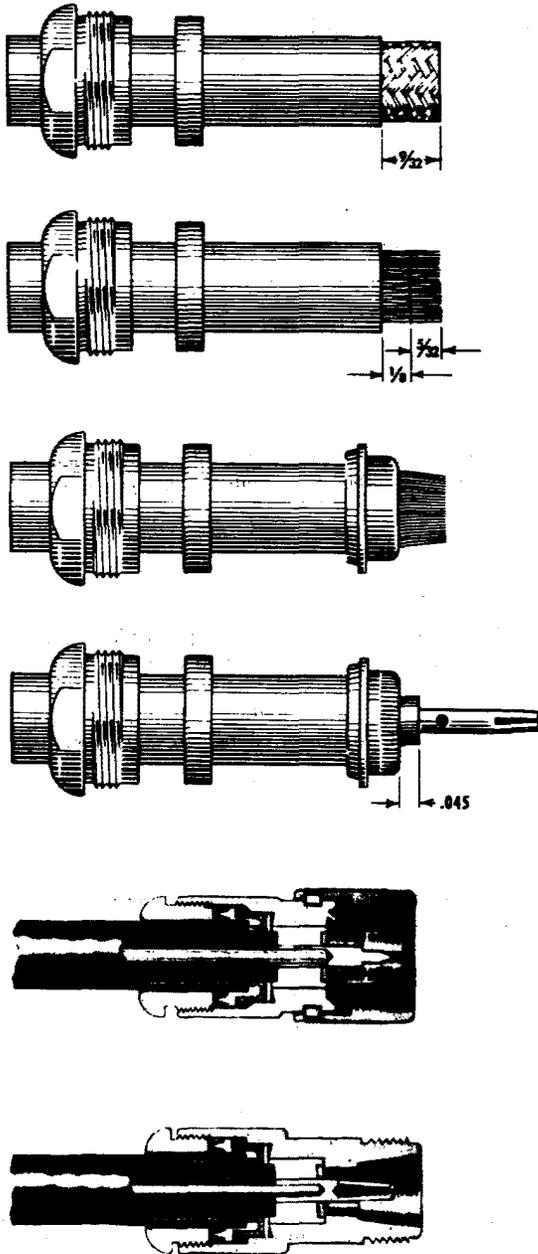
Slide body into place carefully so that contact enters hole in insulator. Face of dielectric must be flush against insulator. Slide completed assembly into body by pushing nut. When nut is in place, tighten with wrenches. In connectors with gland, knife-edge should cut gasket in half by tightening sufficiently.

Fig. 66

SERIES N Improved



CROSS SECTION VIEWS



Place nut and gasket, with "V" groove toward clamp, over cable and cut off jacket  $9/32$ " from end.

Comb out braid and fold out. Cut off cable dielectric flush  $1/8$ " from end of jacket.

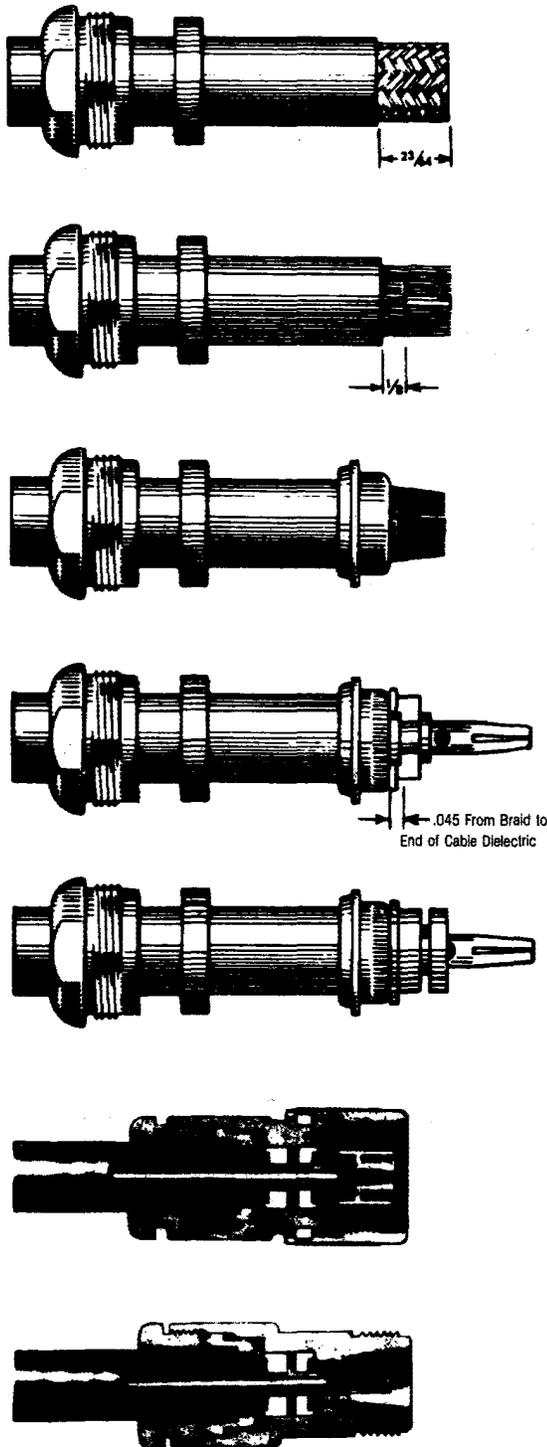
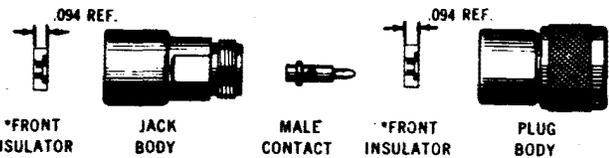
Pull braid wires forward and taper toward center conductor. Place clamp over braid and push back against cable jacket.

Fold back braid wires as shown, trim to proper length and form over clamp as shown. Solder contact to center conductor.

Insert cable and parts into connector body. Make sure sharp edge of clamp seats properly in gasket. Tighten nut.

Fig. 67

# SERIES N with Captivated Contacts



Cut end of cable even. Place nut and gasket, with "V" groove toward clamp, over cable and cut off jacket 23/64" from end.

Comb out braid as shown. Cut off cable dielectric 1/8" from end of jacket.

Pull braid wires forward and taper toward center conductor. Place clamp over braid and push back against cable jacket.

Fold back braid wires as shown, trim to proper length and form over clamp as shown. Tin exposed center conductor using minimum amount of heat. Slide on washer, rear insulator and contact. Contact shoulder, insulator, and cable core must butt as shown. Solder contact to center conductor.†

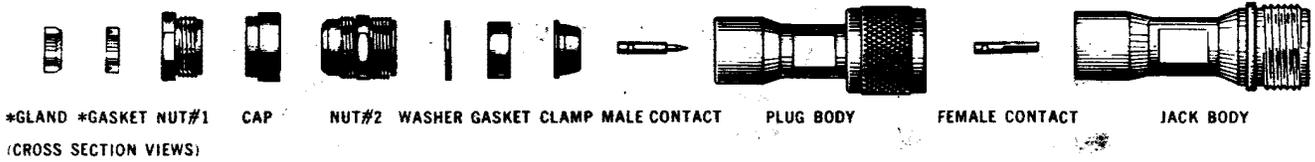
Slide front insulator over contact. Be sure to place counter bore end of insulator toward mating end of contact.

Insert prepared cable termination into connector body. Make sure sharp edge of clamp seats properly in gasket. Tighten nut, holding body stationary.

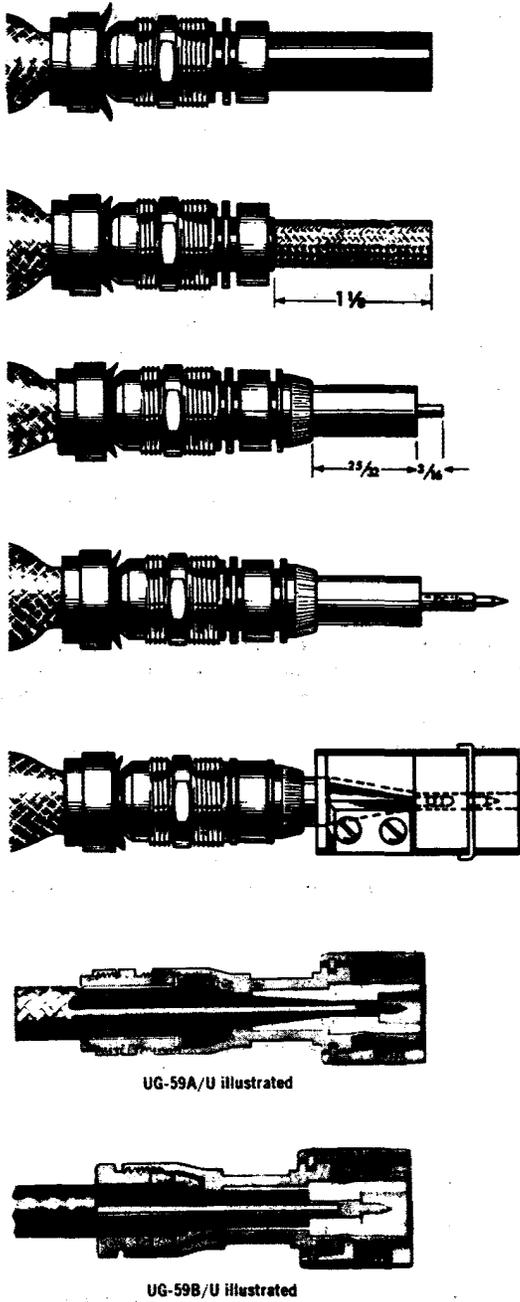
†Use Divco #276 (or other high temp. alloy) solder for high temp. applications.

Fig. 68

**SERIES HN**



\*REPLACE WASHER AND GASKET IN:  
 UG-59B U (82-804)  
 UG-60B U (82-814)  
 UG-61B U (82-815)



Cut end of cable even. Insert cap over cable armor. Bulge armor braid by pushing armor back on cable 6". Push nut #2, washer and gasket over cable jacket. When assembling connectors with gland, be sure knife-edge is toward end of cable and groove in gasket is toward the gland.

Remove vinyl jacket 1-1/8" from end of cable. For double shield cables, remove vinyl jacket 1-3/16" from end of cable.

Push clamp over copper braid, flush against cable jacket. Cut exposed copper braid so that approximately 3/16" remains and fan over clamp. Trim braid even with end of taper. Cut cable dielectric 25/32" from braid. Tin exposed conductor.

Solder contact pin to conductor. Do not overheat dielectric. Do not use excess solder. Wipe clean; see that dielectric is free from solder, resin and foreign material.

Taper dielectric with AMPHENOL 103-301 (MX-103/U) trimming tool. When tapering dielectric of cable for plug assembly, push contact stop of tool to bottom of slot. Tool will stop cutting when shoulder of contact butts against stop. For jack assembly see that stop is at top of slot. Cable will be properly tapered when end of center contact is flush with end of trimmer body. (Omit this operation for UG-59B, -60B, -61B/U.)

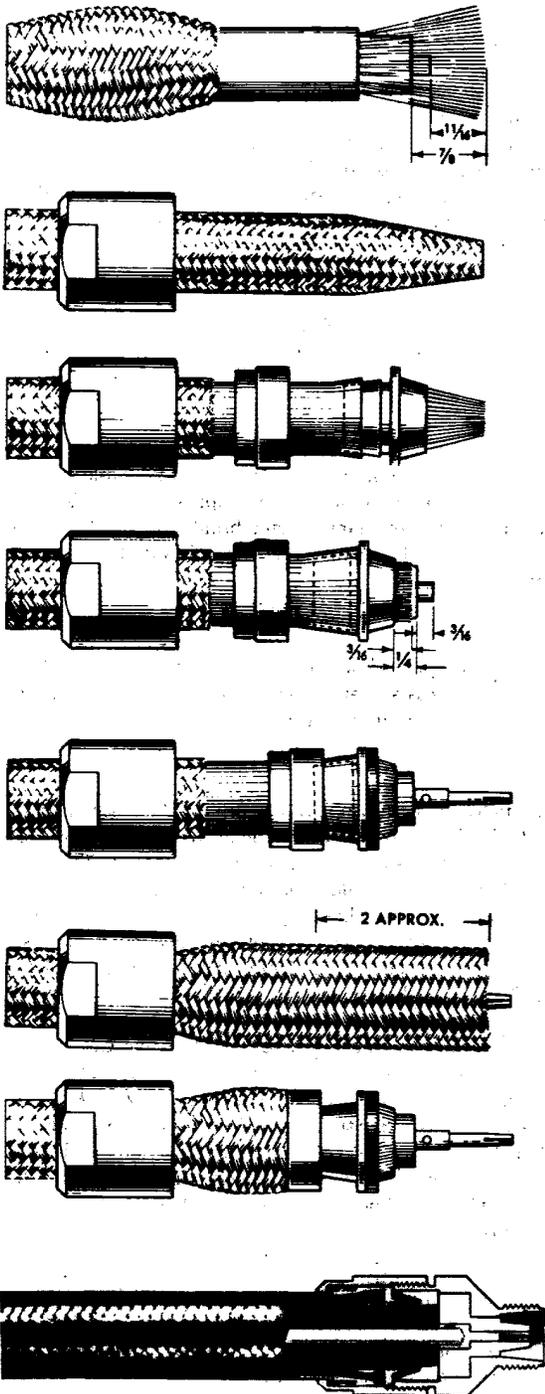
Apply small amount of AMPHENOL 307 Silicone Compound on tapered surface of dielectric. Insert assembly into connector body. Tighten nut #1 (or nut #2 if cable is armored) securely with wrench. Straighten bulge in armor. Cut armor so that it can be clamped between nut #2 and cap. Tighten cap securely on nut #2 with wrench. In connectors with gland, knife-edge should cut gasket in half by tightening sufficiently.

**Note:** When cable without armor is used, the cap and nut #2 (Armor Clamps MX-564/U and MX-564A/U, AMPHENOL 82-48 and 82-109 respectively) are not required. Instead nut #1 as supplied with connector is used and instructions pertaining to armor disregarded.

Fig. 69

SERIES HN

Adapters 82-56 (UG-333/U) & 82-57 (UG-334/U)



Cut end of cable even. Push armor back out of way. Cut off vinyl jacket 1-1/2" from end of cable. Fan copper braid out. Cut off dielectric 7/8" from end. Cut off center conductor 11/16" from end.

Push armor toward end and taper end of braid and armor as shown. Slide nut on over the armor.

Push armor and nut back. Slide outer sleeve on over the vinyl jacket. Slide inner sleeve over braid and under vinyl jacket until vinyl jacket touches large rim of inner sleeve.

With inner sleeve in place, trim copper braid leaving 3/16" exposed as shown.

Fold copper braid back over inner sleeve and smooth. Tin center conductor using minimum heat. Holding contact with pliers, soft solder contact to center conductor. Wipe contact and dielectric clean. Slip gasket over inner sleeve as shown. Slide outer sleeve as close as possible to inner sleeve.

Pull armor up as far as possible. Cut off armor approximately 2" from end.

Push armor back and place end of armor on the shoulder portion of outer sleeve as shown. Slide nut over outer sleeve.

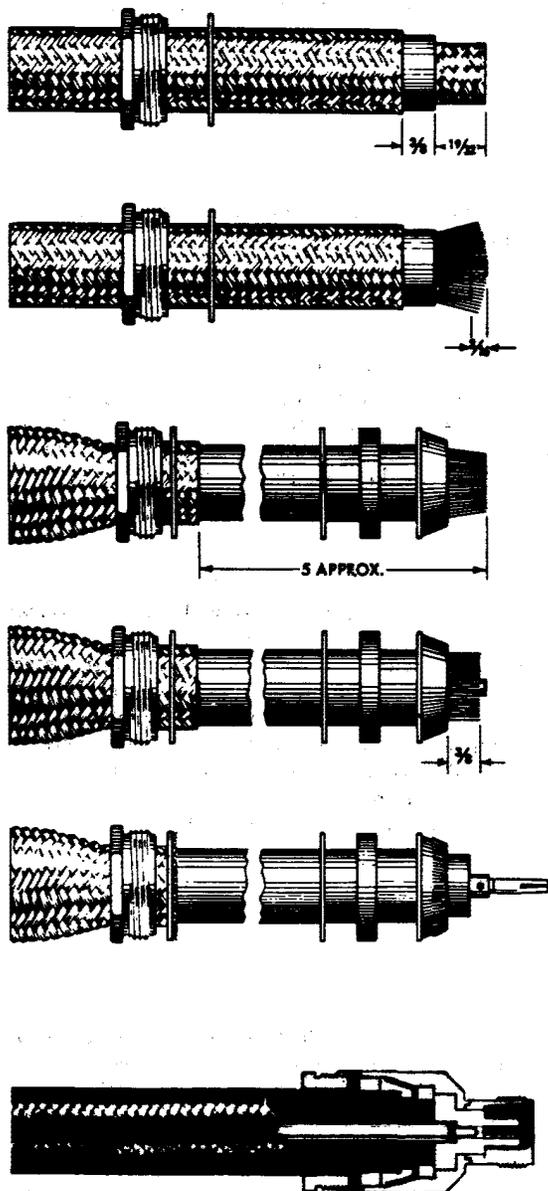
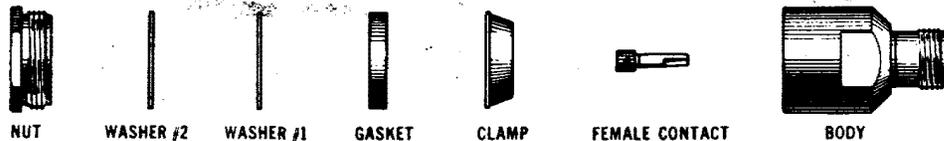
Apply small amount of AMPHENOL 53-307 silicone compound to cable dielectric. Slide body into place carefully so that center conductor contact enters hole in insulator. Face of cable dielectric must fit flush against insulator. Tighten body and nut with wrench.

**Note:** When cable without armor is used, disregard all instructions pertaining to armor.

Fig. 70

**SERIES HN**

**Adapters 82-107 (UG-333A/U) & 82-108 (UG-334A/U)**



Cut end of cable even. Slide nut and washer #2 over armor. Cut off armor  $31/32$ " from end. Cut vinyl jacket  $19/32$ " from end.

Comb out braid as shown. Cut off dielectric  $3/16$ " from end.

Push armor back approximately 5" from end. Taper braid as shown. Slide washer #1 on jacket. Slide gasket on jacket. Slide clamp on braid. Shoulder of clamp should seat against jacket.

Trim braid  $3/8$ " from clamp as shown.

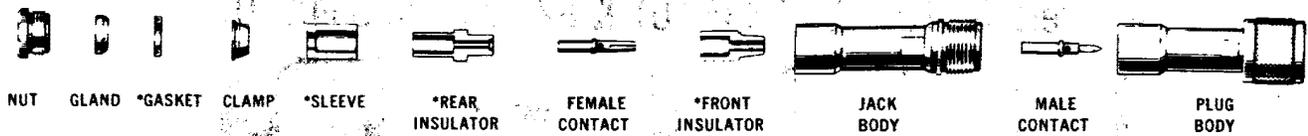
Turn up armor radially, and press flat against washer #2. Trim off excess armor which extends beyond washer #2. Fold copper braid back on clamp. Tin center conductor using minimum heat. Soft solder contact to center conductor. Contact must be tight against cable dielectric. Wipe dielectric and contact clean.

Slide body into place carefully so that contact enters hole in insulator. Face of cable dielectric must fit flush against insulator. Slide gasket and washer #1 into body. Push armor into body by straightening out bulge. Screw nut into body, then tighten body and nut with wrenches.

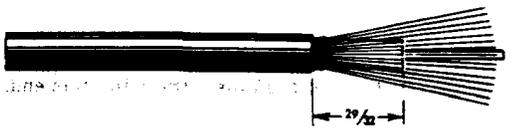
*Note:* When cable without armor is used, disregard all instructions pertaining to armor.

Fig. 71

# SERIES HN with Captivated Contacts



\*CROSS SECTION VIEWS



Cut end of cable even. Strip off vinyl jacket 1-5/8" as shown.

Comb out braid as shown. Cut off dielectric 29/32" from end of jacket.

Taper braid wires forward and slide nut and gland onto jacket. Make certain knife edge of gland is toward end of cable. Then slide gasket onto jacket with "V" groove toward gland. Clamp is now pushed over braid so that internal shoulder butts flush against cable jacket.

Fold braid back over clamp and trim. Tin exposed center conductor using minimum amount of heat.† Slide sleeve and rear insulator over cable dielectric. Soft solder contact to center conductor.† Rear insulator must seat against cable dielectric and contact shoulder must be flush with insulator face as shown. Coat cable dielectric and insulator mating surfaces with AMPHENOL 53-307 Silicone Compound to achieve 5KV peak rating under operating conditions. For jacks only, install front insulator (dotted outline).

Slide prepared cable termination carefully into body. Be sure knife edge of gland remains in groove of gasket. Tighten nut with wrench holding body stationary. Gasket should be cut in half during tightening.

†Use Divco #276 (or other high temp. alloy) solder for high temp. applications.

Fig. 72