

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G32.102.1
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AT&T Co Standard

DROP AND BLOCK WIRING

PRESSED SLEEVE SPLICES

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1. GENERAL

1.01 This section replaces Section G32.102, Issue 2. It covers methods for splicing drop and block wires utilizing single tube brass sleeves pressed on by sleeve pressers.

1.02 Observe the following general rules when splicing insulated drop and block wires.

- (1) Exercise care to avoid nicking the conductors when removing the insulation.
- (2) Thoroughly clean the skinned conductor ends before inserting into the brass sleeves.
- (3) Splice tracer conductor to tracer conductor and plain conductor to plain conductor.
- (4) Where a splice is to be placed in a wire span, exercise care in splicing so as to equalize the tension in the conductors as near as practicable.
- (5) Thoroughly tape all splices.

1.03 For convenience in describing splicing procedures covered in these instructions, the wires to be spliced shall be referred to as Pair No. 1 and Pair No. 2.

2. DESCRIPTION OF SINGLE TUBE BRASS SLEEVES

2.01 **S Brass Sleeves.** These sleeves are straight brass tubes indented midway in their lengths to insure insertions of the proper length of conductor ends. The available sleeve sizes and the types of wires for which they are intended in drop and block wiring are indicated in the following tabulation:

<u>S Brass Sleeves</u>		
<u>Size</u>	<u>Length</u>	<u>Type of Wire</u>
032-025	1 in.	Block Wire
045-040	1-7/8 in.	Drop Wire
*064	1-7/8 in.	HD Wire

* This sleeve has two indentations at midpoint to distinguish it from the 045-040 size which has only one indentation.

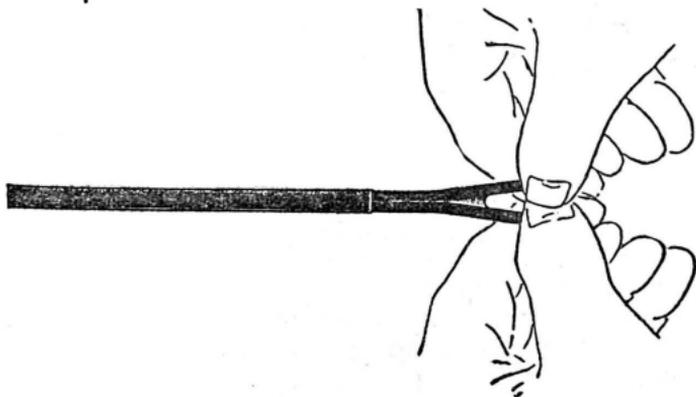
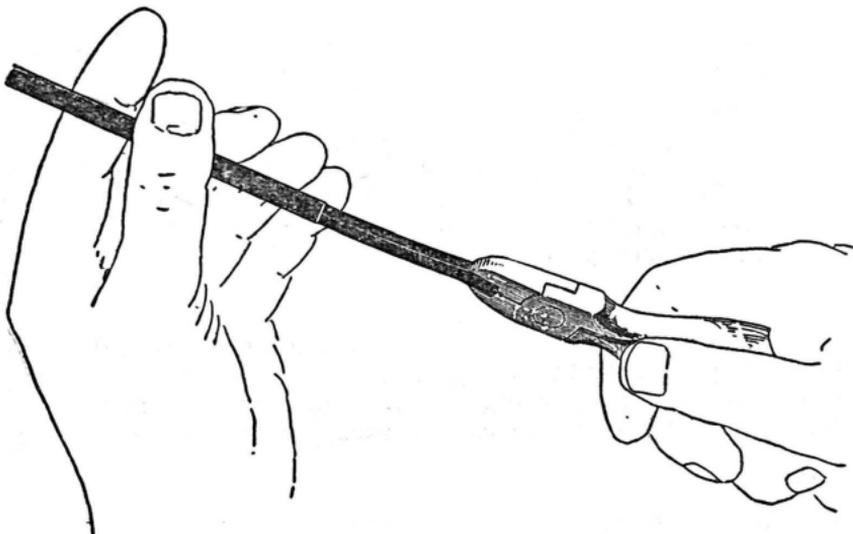
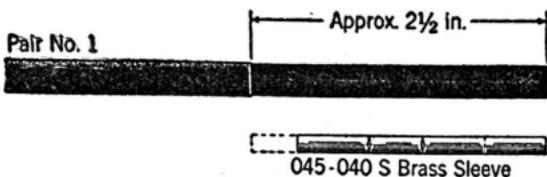
2.02 **Combination S Brass Sleeve.** This sleeve is also of the single tube type. It has two different bore diameters each of which extends through half the sleeve length. The size and use of combination sleeve are indicated below:

<u>Size</u>	<u>Length</u>	<u>Type of Wire</u>	
		<u>Large Bore</u>	<u>Small Bore</u>
045-040 x 032	1 in.	Drop Wire	Block Wire

3. SPLICING DROP WIRE TO DROP WIRE

3.01 Splice drop wire as follows:

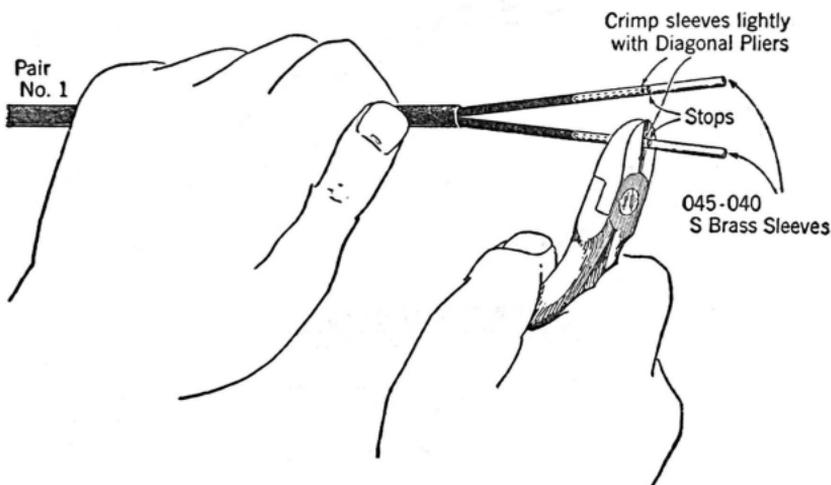
- (1) Strip the outside covering from the end of Pair No. 1 for a length of about 2-1/2 inches, and separate the insulated conductors as illustrated below.



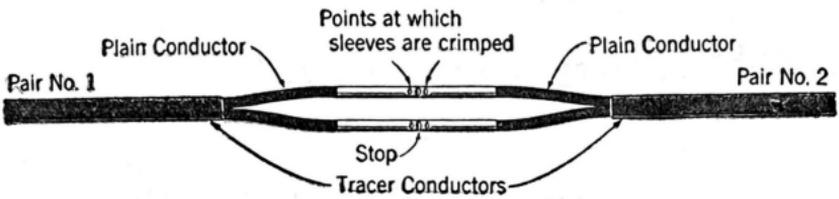
- (2) Remove insulation from both conductors of Pair No. 1 for a distance of half the length of a 045-040 S Brass Sleeve as illustrated, exercising care not to nick the conductors. Make sure that the ends of the insulation on the conductors are even. Clean the skinned conductors with either diagonal or longnose pliers.



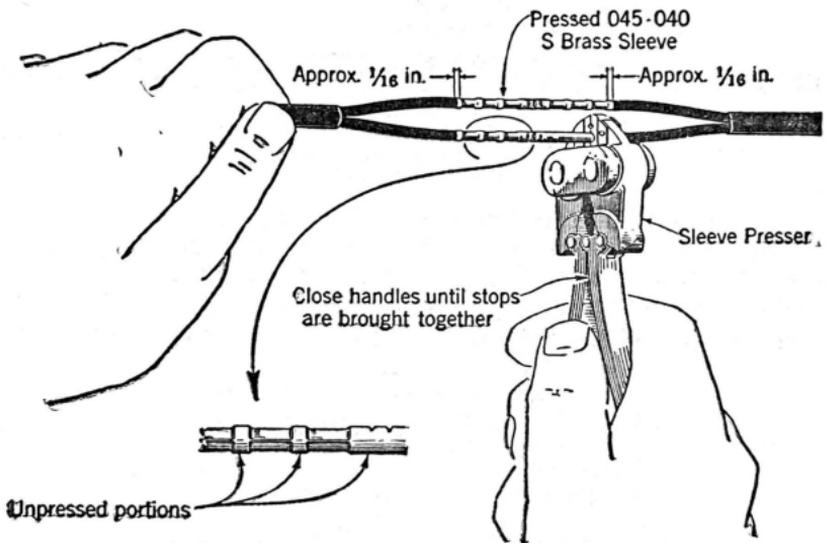
- (3) Slip a 045-040 S Brass Sleeve over each skinned conductor of Pair No. 1 up to the end of the insulation. Crimp each sleeve lightly with diagonal pliers, as illustrated, to keep it from slipping off.



- (4) Treat the conductors of Pair No. 2 as described for Pair No. 1 in (1) and (2) above.
- (5) Match tracer conductors and insert conductors of Pair No. 2 into the sleeves on conductors of Pair No. 1 up to the ends of the insulation. Crimp the sleeves lightly with diagonal pliers over the conductors of Pair No. 2.

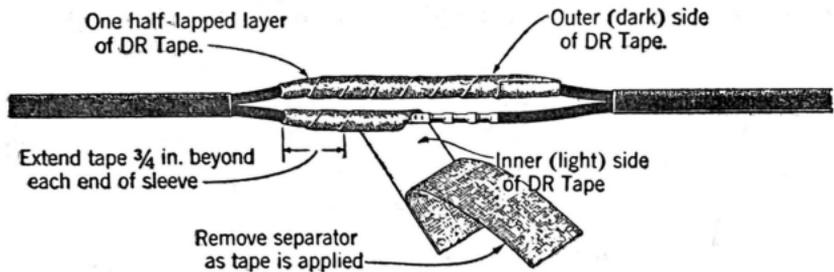


(6) Starting approximately $\frac{1}{16}$ in. from one end of a sleeve, press each sleeve six times with the B Sleeve Presser, three presses on each side of the midpoint indentation. The pressing operation is facilitated if, after each press, the handles of the sleeve presser are opened sufficiently to permit sliding the tool to the location of the next press.

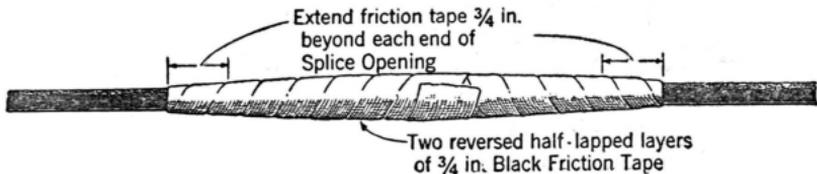


(7) Where the drop wire splice will fall in a drop wire span, it is desirable that the spliced conductors be of equal length so as to equalize the tension between the conductors. Pull and straighten the spliced conductors and if one conductor is found shorter than the other, lengthen it by pressing one or more of the unpressed portions of the sleeve until equalization is obtained.

(8) Wrap each joint with a single half-lapped layer of 3/4-inch DR type tape as illustrated below. Apply the tape under slight tension and remove the separator as taping progresses. Press taping firmly between the fingers to cement the tape layers together.



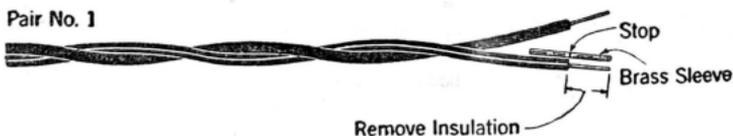
(9) Wrap the entire splice with two reversed half-lapped layers of 3/4-inch black friction tape as illustrated below. Starting at the center of the splice, wrap to the one end of the opening, then reverse and wrap to the other end, reverse again and end the wrapping at the center.



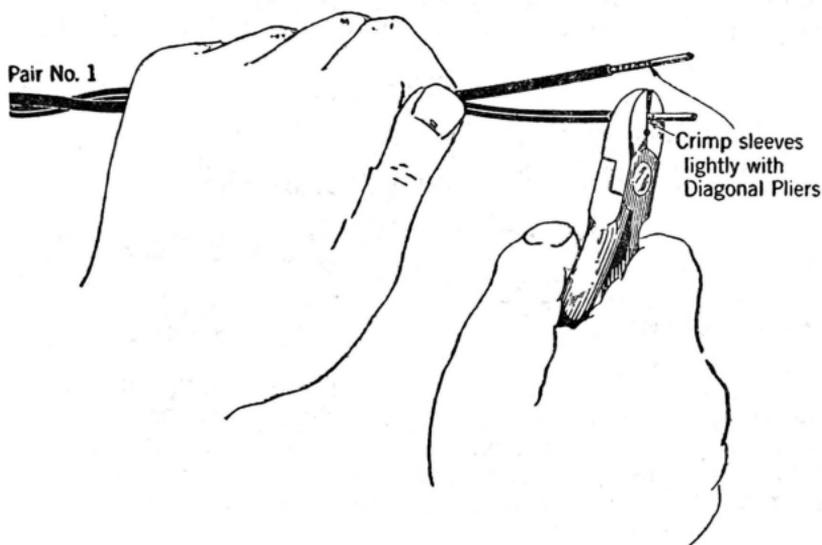
4. SPLICING BLOCK WIRE TO BLOCK WIRE AND HD WIRE TO HD WIRE

4.01 Splice these twisted pair wires as follows:

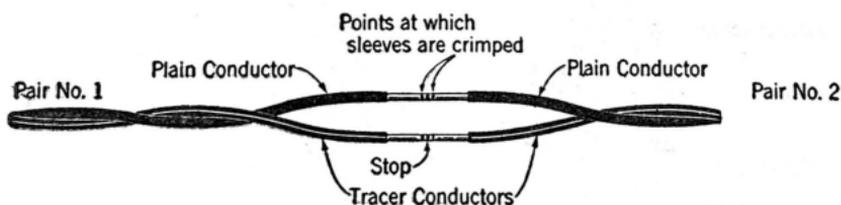
(1) Remove insulation from both conductors' ends of Pair No. 1 for a distance equal to about one-half the length of proper size S sleeve, exercising care not to nick the conductors. Clean the skinned conductors thoroughly with diagonal or longnose pliers. Make the end of the insulation and of the conductor of one wire even with those of the other wire.



- (2) Slip proper size sleeve over each conductor of Pair No. 1 and stop it at the end of the insulation. Crimp sleeve lightly near midpoint with diagonal pliers to hold in place.

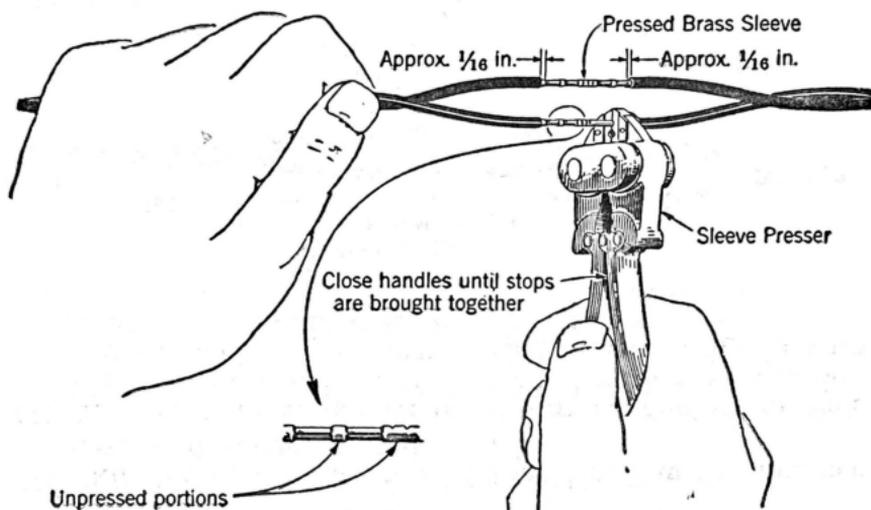


- (3) Skin the conductor ends of Pair No. 2 in the manner described above for Pair No. 1.
- (4) Matching tracer conductors, insert conductors of Pair No. 2 into the sleeves of Pair No. 1 until the insulation touches the ends of the sleeves. Crimp sleeves lightly with diagonal pliers to hold Pair No. 2 in place.

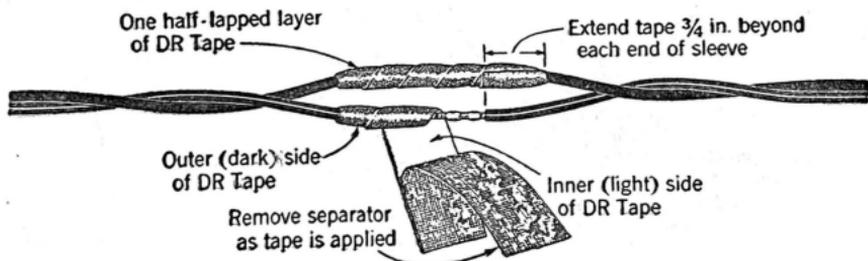


- (5) Starting approximately 1/16 inch from one end of a sleeve, press each sleeve the number of times indicated in the following table. Locate half the number of presses on each side of the midpoint indentation on each sleeve. The pressing operation is facilitated if, after each press, the handles of the sleeve presser are opened sufficiently, to slide the tool along to the next press location.

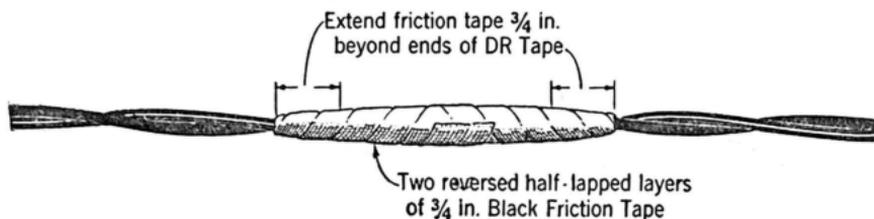
<u>Wire</u>	<u>Size of S Sleeve</u>	<u>Size of Groove in Sleeve Presser</u>	<u>No. of Presses per Sleeve</u>
Block	032-025	small	4
HD Wire	064	large	6



(6) Wrap each joint with a single half-lapped layer of 3/4-inch DR type tape as illustrated. Wrap the tape under slight tension and remove the separator as taping progresses. Press the taping firmly between the fingers to cement the tape layers together.



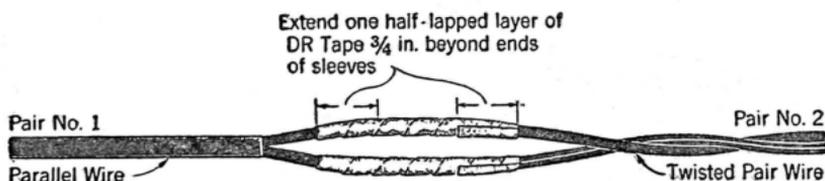
(7) Wrap the entire splice with two reversed half-lapped layers of 3/4-inch black friction tape as illustrated. Start taping at the center of splice, wrap to 3/4 inch beyond the end of the DR tape, reverse wrapping to a point 3/4 inch beyond other end of DR tape, reverse again and conclude wrapping at the center of the splice.



5. SPLICING DROP WIRE TO BLOCK WIRE

5.01 Splice these two types of wires as follows:

- (1) Prepare the ends of drop wire (Pair No. 1) and the ends of block wire (Pair No. 2) as described in Parts 3 and 4.
- (2) Match tracer conductors and insert skinned ends of Pairs 1 and 2 into the proper bores of 045-040 x 032 Combination S Brass Sleeves. Pinch the sleeves slightly with diagonal pliers to restrain the conductors from slipping out.
- (3) Starting 1/16 inch from one end of a sleeve, press each sleeve four times with the sleeve presser.
- (4) Wrap each joint with a single half-lapped layer of 3/4-inch DR type tape as illustrated below.



- (5) Wrap the entire splice with two reversed half-lapped layers of 3/4-inch friction tape. Start the wrapping at the center of the splice, proceed to one end, then to the other end and back again to the center. The completed splice is shown below.

