

SUSPENSION STRAND B STRAND REDUCER

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1. GENERAL

- 1.01 This section describes and outlines the use of the B Strand Reducer.
- 1.02 The B Strand Reducer is a wrap-type device which is used to splice closely related different sizes of suspension strand together. It may only be used on galvanized strand and may not be used for joining CR Strand.
- 1.03 The B Strand Reducer is designed for joining closely related different sizes of strand, ie, 6M to the 6.6M Strand associated with self-supporting cable, 6M to 10M Strand, or 10M to 16M Strand. ***Under no circumstances should the B Strand Reducer be used for joining 6.6M Strand to 10M or 16M Strand, or 6M to 16M Strand.*** There is no strand reducer available for joining 16M Strand to 25M Strand.

- 1.04 A properly applied splice using a B Strand Reducer will withstand tensions equal to the rated breaking strength of the smaller size strand in the splice.
- 1.05 Electrical continuity of the strand is maintained through the B Strand Reducer.
- 1.06 Refer to Section 627-230-208 for joining strands of equal sizes.

2. DESCRIPTION

- 2.01 The B Strand Reducer consists of two subsets of spirally-formed, class C galvanized, high strength steel wires. Half the length of each subset is designed to accommodate the smaller size strand, while the other half accommodates the next closely related, larger size strand.
- 2.02 The inner surface of each preformed subset of wires is coated with aluminum oxide grit to increase its holding power.
- 2.03 The center color marking on each subset indicates the smaller size of strand to be joined. Additional markings of the same color on half the length of each set indicate that this section is to be applied on the smaller diameter strand. The unmarked half portion should be installed on the closely related larger size strand in the splice. Fig. 1 illustrates the two subsets that comprise the B Strand Reducer.

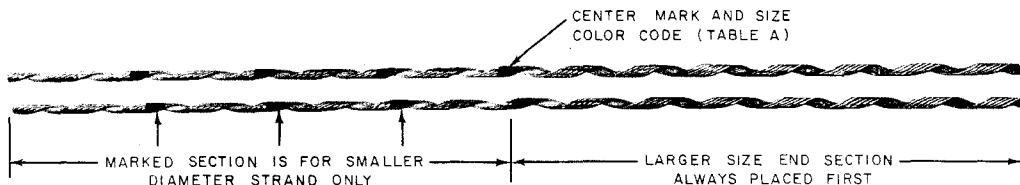


Fig. 1—B Strand Reducer

2.04 The color code designations for use with the various sizes of strand are shown in Table A.

TABLE A

B STRAND REDUCER FOR GALVANIZED STRAND

JOINING STRAND SIZES	STRAND DIA. (INCHES)	COLOR CODE	LENGTH (INCHES)
6.6M to 6M	1/4 to 5/16	Yellow	35
6M to 10M	5/16 to 3/8	Black	42
10M to 16M	3/8 to 7/16	Orange	50

Note: Do not deviate from the designated color codes for the sizes of strand involved.

3. PRECAUTIONS

3.01 B Strand Reducers are not to be reused after the initial installation.

3.02 Do not attempt to pull equipment (cable lashers, cable blocks, cable block pushers, cable guides, etc) across a splice made with a strand reducer except as noted in 4.02(6) and (7). These items may catch the ends of the strand reducer and permanently distort one or more individual wires, thereby weakening the splice.

3.03 *B Strand Reducers should not be used for joining the ends of equal size strands.*

3.04 Select the proper size strand reducer from Table A for the sizes of strand to be joined.

Do not use the B Strand Reducer for other sizes than those indicated in Table A.

3.05 Always start the splice by installing the *unmarked* portion of the strand reducer on the *larger size strand* in the splice.

3.06 *Do not butt* the strands together in the splice. Leave a 1/8-inch gap between the ends of the strands.

4. INSTALLATION

4.01 Before installing a B Strand Reducer, check the ends of the suspension strands to be joined. If the strand ends are not straight or cut off reasonably square, or if they are deformed or out of normal lay, cut off a length sufficient to ensure that strand in good condition will be placed under the strand reducer. Before cutting, straighten the strand to remove coil curvature and apply a maximum of two half-lapped layers of vinyl tape over the area to be cut. The tape prevents the strand from ravelling after cutting.

4.02 To install a B Strand Reducer for a strand splice, proceed as follows:

(1) Select the proper size B Strand Reducer from Table A.

(2) Starting at the center mark of the subset, apply the unmarked section of the subset on the larger size strand by rotating around and pulling slightly away from the strand as shown in Fig. 2. For ease in applying the end of the subset, split the ends and apply separately as shown in Fig. 3.

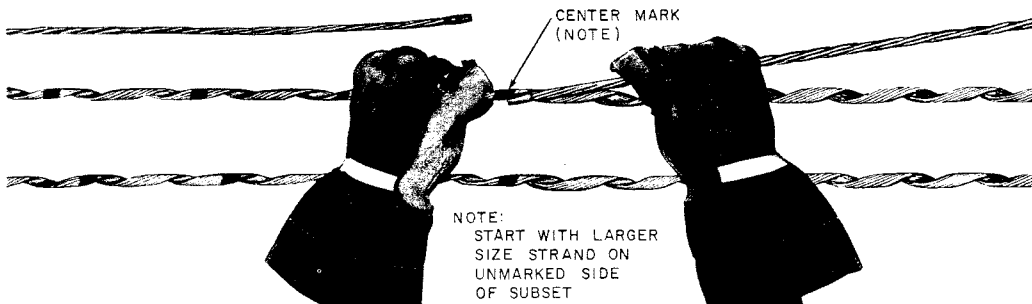


Fig. 2—Placing Larger Size Strand in First Subset

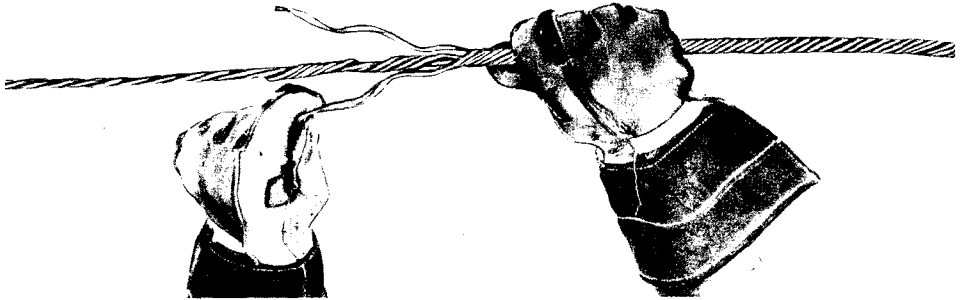


Fig. 3—Split Ends For Ease of Application

(3) Position the smaller size strand about 1/8 inch from the end of the larger strand as shown in Fig. 4. Do not butt the strand ends together. Hold the smaller strand end in place with thumb pressure and apply the marked half

section by rotating and pulling slightly as described in (2). Split the ends for ease in completion of application. Fig. 5 illustrates the first subset completely installed.

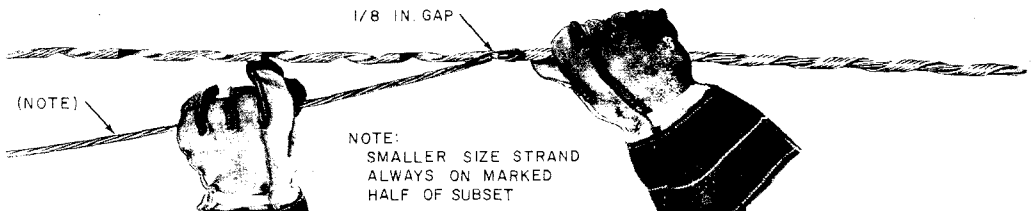


Fig. 4—Placing Smaller Size Strand in First Subset



Fig. 5—First Subset Completely Applied

(4) To install the second subset, match the center mark as shown in Fig. 6 and apply completely as described in (2) and (3) starting with the larger size strand and finishing with the smaller size strand in the splice. Take precaution to ensure that the individual wires of the butt ends of both sizes of strand are contained within the subsets. Splitting the ends facilitates the completion of application. Fig. 7 shows the application of the second subset.

(5) Make sure that ends of individual wires of the B Strand Reducer are in lay when completing the splice.

(6) Apply three half-lapped layers of vinyl tape at each end of the completed splice as illustrated in Fig. 8 to prevent disruption of the ends of the splice during cable lashing operations (3.02).

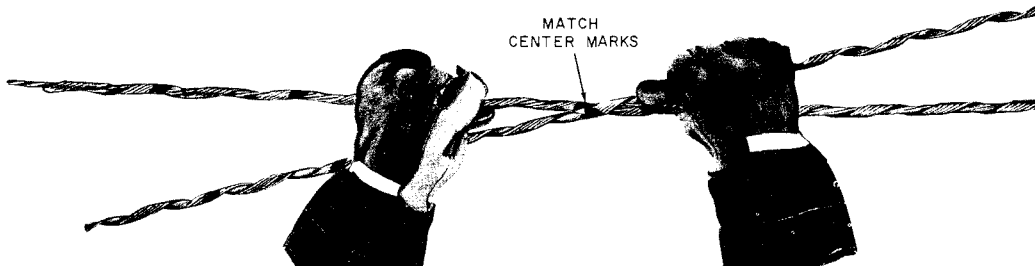


Fig. 6—Start of Second Subset

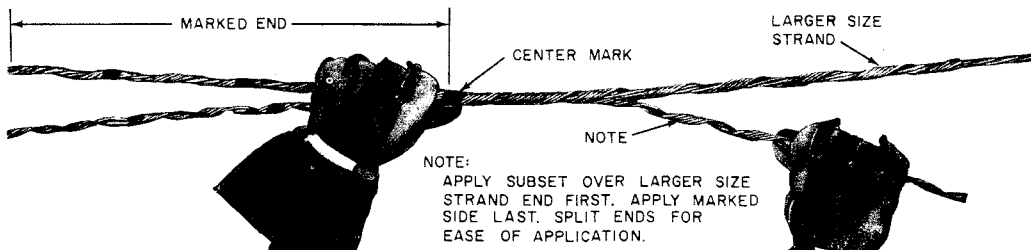


Fig. 7—Applying Second Subset



Fig. 8—Completed Application

(7) When placing cable by the moving reel method and using an F Cable Lasher and D Cable Guide, the equipment can be pulled over the splice made with a B Strand Reducer where the ends have been taped. In all other cases, observe the precautions that are outlined in 3.02.

(8) Where the strand reducer splice is located at or very close to the pole, a cable suspension clamp should be positioned *only* in the areas indicated in Fig. 9.

Self-Supporting Cable

4.03 Where the B Strand Reducer is to be used for joining the 6.6M Strand of self-supporting cable to 6M Strand proceed as follows:

- (1) Slit the web of self-supporting cable 24 inches.
- (2) Remove 18 inches of the plastic sheath from the strand.
- (3) Prepare and tape the end of the strand as described in 4.01. It is not necessary to remove the flooding compound from the strand.

(4) Place the larger unmarked length of the strand reducer subset on the 6M Strand as described in 4.02(2). Split the ends for ease of application.

(5) Continue by wrapping the marked or smaller size length of the subset on the 6.6M Strand of the self-supporting cable. Make certain that there is a 1/8-inch gap between the ends of the strands.

(6) Apply the second subset as described in 4.02(4) to complete the reducing splice. The use of vinyl tape is not required on the 6.6M end of the strand reducer when joining self-supporting cable to 6M Strand. Tape is required on the 6M end.

4.04 Fig. 10 illustrates the use of the B Strand Reducer in a strand crossover attachment. Place the Cable Suspension Clamps in the areas indicated and place lashed cable supports to support the self-supporting cable where the strand is separated from the cable.

4.05 At pole locations, do not use the C Cable Clamp with serpentine grooves for supporting cable at a reducing splice. A cable suspension clamp should be used at such points.

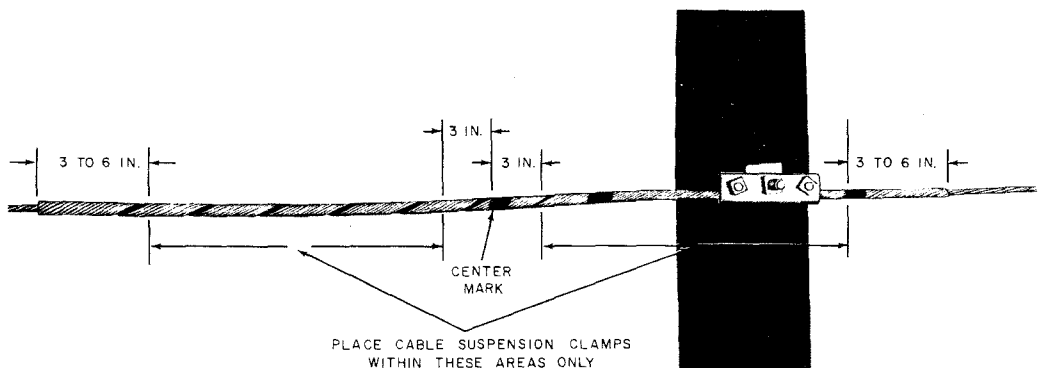


Fig. 9—Placing Suspension Clamp on B Strand Reducer

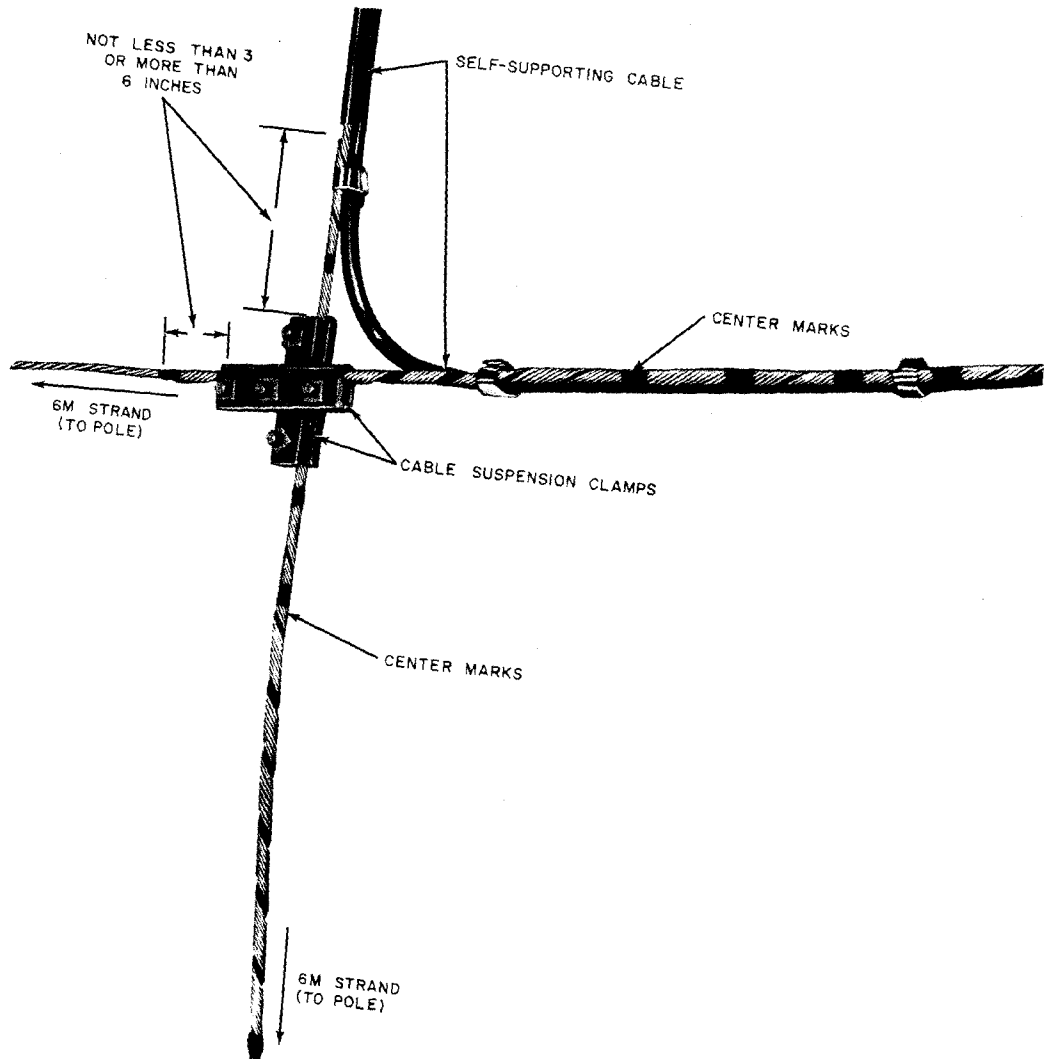


Fig. 10—Strand Crossover Application