

SPLICE CASES

13A and 14A

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1.03 These small size splice cases are used on polyethylene sheath aerial cable for repair sleeves, pressure testing valve points, and sheath to strand electrical bonds. Valve points and bonds should be located in a readily accessible portion of straight cable. The 13A and 14A splice cases are used also for closures over insulating joints as outlined in Section 633-320-207.

1.04 Two splice case halves of the same code are shipped in a single carton along with all the hardware required.

2. DESCRIPTION

2.01 These die-cast aluminum splice cases have dimensions as shown in Fig. 1.

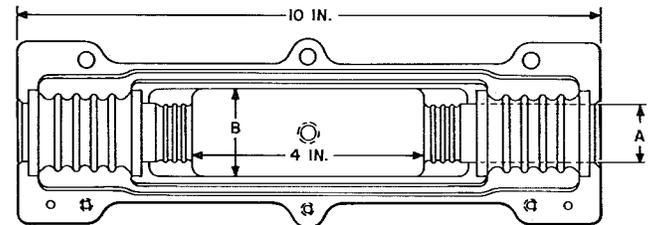
1. GENERAL

1.01 This section covers the description, installation, and pressure testing of 13A and 14A splice cases.

1.02 This section is reissued to include:

- Precautions on use of B sealing tape and B sealing cord
- New sealing washers.

Revision arrows are used to emphasize the more significant changes.



SPLICE CASE NO.	MAX. CABLE DIAMETER	INTERIOR DIAMETER
	A	B
13A	1 IN.	1.5 IN.
14A	1.6 IN.	2 IN.

Fig. 1—13A and 14A Splice Cases

NOTICE

Not for use or disclosure outside the
Bell System except under written agreement

SECTION 633-470-100

2.02 The parts furnished in each carton are shown in Fig. 2.

PART	PART NO. (SEE NOTE)	QUANTITY OF PARTS FURNISHED WITH EACH CASE		USED FOR
		CASE NUMBER		
		13A	14A	
 INNER SHEATH CLAMP	P-18E115 CLAMP	2		SLIDES UNDER SHEATH TABS FOR CLAMPING
	P-18E117 CLAMP		2	
 1/4 IN.-20 X 1 IN. WASHER HEAD CAP SCREW	P42E709 CAP SCREW	6	6	FOR JOINING SPLICE CASES
 1/8 IN. PIPE PLUG	P-13A314 PLUG	2	2	PRESSURE TESTING FITTING

NOTE:
THIS INFORMATION SHOULD BE USED WHEN ORDERING PARTS.

Fig. 2—13A and 14A Splice Case Parts

2.03 Separate orders of materials are required for each installation as follows:

- (a) Four plastic sealing washers
- (b) One package of B sealing cord consisting of two 26-1/2 inch lengths
- (c) Two packages of B sealing tape consisting of three 10-inch lengths.

2.04 Cables of 1-inch diameter and smaller can be enclosed in the 14A splice case with the addition of the 129A adapter described in Section 633-400-200.

3. SHEATH PREPARATION

3.01 For repair purposes: Minor repairs which can be made in a sheath opening not exceeding 6-1/2 inches can be closed with these splice cases. Make the sheath opening as shown in Fig. 3 through 6.

(1) Make the initial cut to get at the core (Fig. 3).

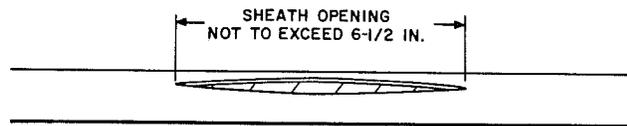


Fig. 3—Cable Sheath Opening

(2) Then remove sheath and underlying metal layers (Fig. 4).

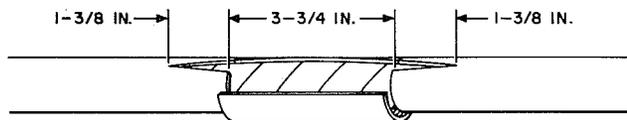


Fig. 4—Cable Sheath Removal

(3) After repairs have been made, tab each end of sheath opening, cutting through polyethylene and metal layers. Remove any slivers of metal, taking care not to damage the core (Fig. 5).

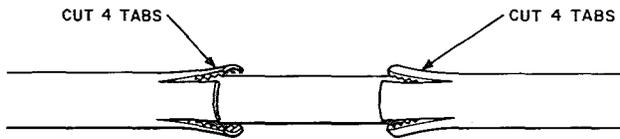


Fig. 5—Tab Cuts

(4) Wrap the core. Wrap pulp or paper insulation with two half-lapped layers of B paper tape. Wrap PIC cable with a half-lapped layer of D vinyl tape. In both cases, extend the wrappings underneath the tabs a half inch (Fig. 6).

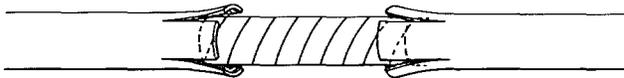


Fig. 6—Wrap Core

3.02 For pressure testing valve points on Stalpeth sheath:

(1) Remove outer polyethylene jacket from the top of the cable at the location of the desired valve point (Fig. 7).

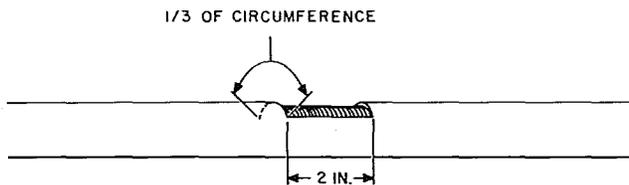


Fig. 7—Sheath Removal at Valve Point

(2) Remove the underlying metal layers, taking care not to damage the core wrap. Carefully turn the metal edges away from the core wrap and remove any slivers. Then open the core wrap slightly (Fig. 8).

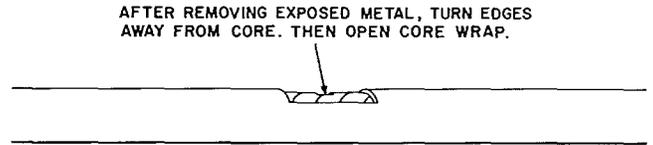


Fig. 8—Metal Removal at Valve Point

3.03 For pressure testing valve points on PAP and PASP sheath:

(1) Remove the outer polyethylene jacket and underlying metallic shields. Then with a cable drill make a hole in the center of the exposed inner polyethylene layer to expose the core wrap. Open the core wrap slightly.

(2) Prepare an insulating pad of three layers of 2-inch DR tape. Cut each piece slightly longer than the rectangular opening in the outer polyethylene and press the three pieces into a pad. In the center of the pad, cut a hole approximately 1/4 inch with the splicer's scissors (Fig. 9).

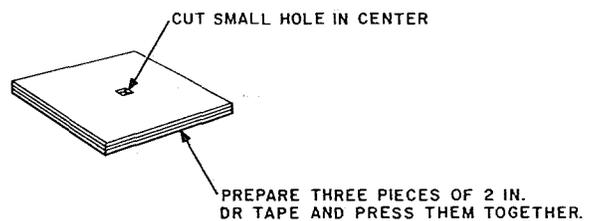


Fig. 9—Insulating Pad

(3) Carefully trim the pad to fit in the rectangular opening in the outer polyethylene jacket. The pad should butt against the cut edges of the polyethylene along all four sides.

- (4) Remove the pad from the opening and coat the exposed polyethylene opening and the cut edges of the polyethylene with C cement and allow it to dry.
- (5) Place the pad back into the opening and press firmly in position. Then coat the area of cable sheath around the opening with C cement and allow it to dry (Fig. 10).

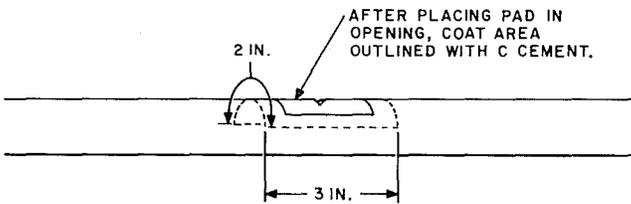
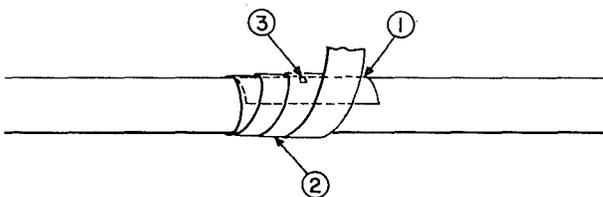


Fig. 10—Pad Fitting and Cementing

- (6) Cut a piece of 2-inch DR tape to fit over this area and press firmly in place, then wrap with a half-lapped layer of D vinyl tape (Fig. 11).



STEPS:

- ① PRESS PIECE OF 2 IN. DR TAPE FIRMLY IN PLACE.
- ② THEN WRAP WITH A HALF LAPPED LAYER OF D VINYL TAPE.
- ③ CUT A SMALL OPENING THROUGH THE D VINYL TAPE AND THE DR TAPE OVER THE HOLE IN THE PAD.

Fig. 11—Tape Over Pad

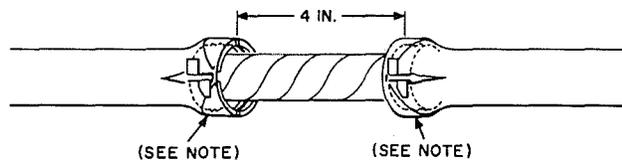
- (7) Cut a small opening through the D vinyl tape and the DR tape over the hole in the pad. Check that the core wrap is open slightly to permit the free flow of air.

3.04 **For sheath to strand electrical bonds:**

When additional sheath to strand bonds are required on polyethylene covered cables in lightning areas, the sheath shall be prepared as indicated in paragraph 3.01.

4. INSTALLATION OF THE SPLICE CASE

4.01 Place the inner sheath clamps under the polyethylene and metal tabs, working them under until they are 4 inches apart (Fig. 12). The ears should **not** be placed at the joint between the two splice cases. At pressure testing valve points, no sheath clamps are needed.

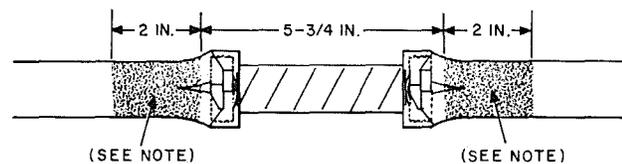


NOTE:

HOLD THE CLAMPS IN PLACE WITH TWO TURNS OF D VINYL TAPE, TAKING CARE TO LEAVE CLAMP EARS UNCOVERED.

Fig. 12—Place Inner Sheath Clamp

4.02 Using B cleaning fluid, clean the cable sheath on each side of sheath opening as shown in Fig. 13.



NOTE:

CLEAN THESE AREAS WITH B CLEANING FLUID AND A CARDING BRUSH.

Fig. 13—Cleaning of Sheath

4.03 With a carding brush, scuff the areas cleaned with B cleaning fluid (Fig. 13).

4.04 Select four sealing washers using Table A as a guide and place them over the cable and position the inner washers so they fit properly in the splice case groove. Mark the cable sheath (Fig. 14).

TABLE A
SEALING WASHERS – AT-8583 FOR USE
IN 13- AND 14-TYPE SPLICE CASES

CABLE SHEATH DIA (INCHES)	TYPE OF CASE	
	13A WASHER NO.	14A WASHER NO.
0	F-0	G-0
0.3	F-3	G-3
0.4	F-4	G-4
0.5	F-5	G-5
0.6	F-6	G-6
0.7	F-7	G-7
0.8	F-8	G-8
0.9	F-9	G-9
1.0	F-10	G-10
1.1		G-11*
1.2		G-12*
1.3		G-13*
1.4		G-14*
1.5		G-15*
1.6		G-16*

*These washers may be cut from KO sealing washer using 849A sealing washer as outlined in Section 081-020-136.

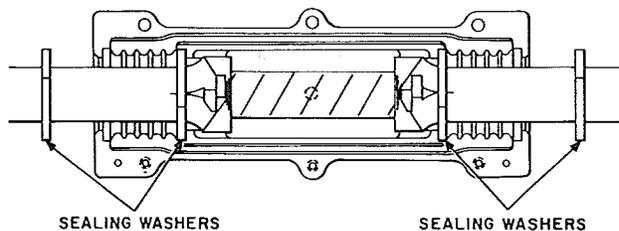


Fig. 14—Placing Sealing Washers

4.05 Build up collars of B sealing tape on the outer sheaths adjacent to the sealing washers equal to or slightly larger than the washers. Butt all joints of sealing tape. The tape should be kept clean and should not be stretched. Do not handle tape with damp or oily hands (Fig. 15).

CAUTION: Do not heat B sealing tape or cord directly in the airflow of a heater or blower. This reduces the adhesion to cable. If heating is required, place in a warm area prior to using.

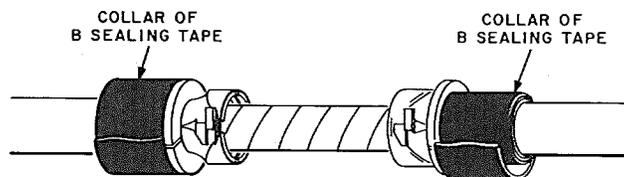


Fig. 15—Forming B Sealing Tape Collar

4.06 Move the outer sealing washers until they butt against the B sealing tape collars.

4.07 Place the back splice case so the B sealing tape collars are firmly seated and the inner sheath clamps are centered in the grooved seat of the splice case (Fig. 16).

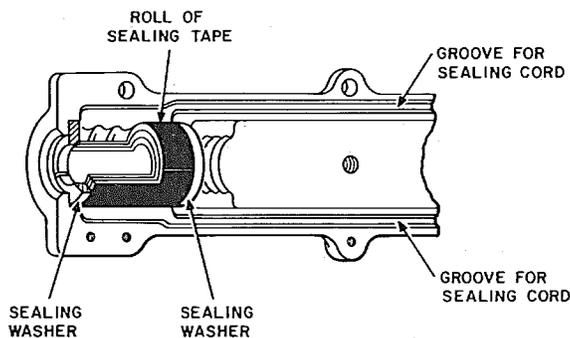


Fig. 16—Collar Placed in Splice Case

4.08 Examine the grooves which will receive the sealing cords. They should be clean and free from oil, grease, water, etc. Lay a length of B sealing cord in each groove. Take care not to stretch the cords and avoid making flat spots or dents that might prevent a good seal (Fig. 17).

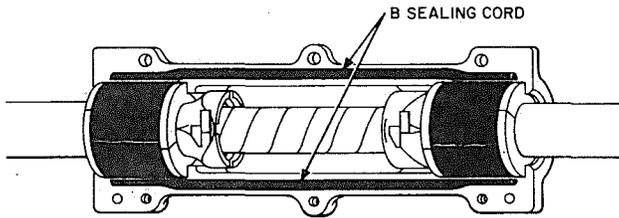


Fig. 17—B Sealing Cord Placed in Groove

4.09 Place the front splice case, taking care that the washers, sealing tape, and cords are in position, and place the bolts fingertight. It is not necessary to keep the joint between the splice cases vertical (Fig. 18).

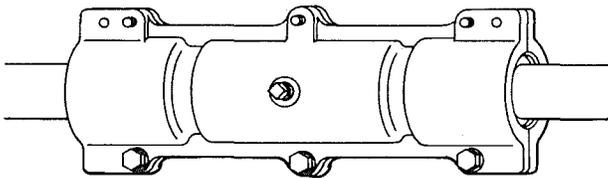


Fig. 18—Installed Splice Case

4.10 Use the ratchet drive socket wrench of the D wrench kit with moderate force on the bolts to tighten them in nonconsecutive order until the front and back splice cases are in metal-to-metal contact. Complete the tightening, using the B torque wrench, as described in Section 081-420-103. See Table B for torque limits.

TABLE B

TORQUE – MINIMUM AND MAXIMUM
IN INCH-POUNDS

APPARATUS	1/4 IN. -20X1 IN. CAP SCREW	1/8 IN. PLUG
13A, 14A Splice Cases	75-100	50-75

4.11 Check the end seals. The outer sealing washers should bulge a little, and some of the tape should be forced past the washers indicating a good seal.

5. SUPPORTING

5.01 The cable supports the 13A and 14A splice cases. There are no lugs fastening the case to the strand.

5.02 Support the cable as shown in Fig. 19.

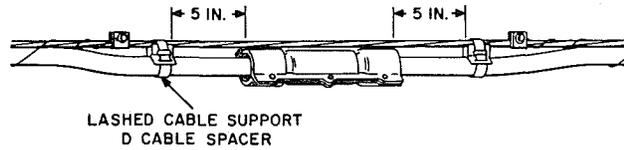


Fig. 19—Supported Splice Case

6. BONDING TO STRAND

6.01 Bond the splice closure to strand as shown in Fig. 20.

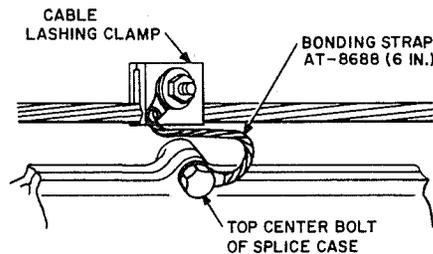


Fig. 20—Bonded Splice Case

7. PRESSURE TESTING

7.01 Each splice case has a pressure testing plug for use in flash testing.

7.02 Flash testing is done in the usual manner using the flash testing material approved for use with the type of cable sheath involved.

7.03 Retighten all bolts using the B torque wrench.