

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G50.705.6
Issue 1, October, 1956
AT&T Co Standard

SPLICE CASE AND T TYPE CABLE TERMINALS INSTALLATION

Contents	Page
1. General	1
2. Assembly of the Splice or Terminal Case.....	2
3. Flash Testing	7
4. Opening and Reassembling the Case	7
5. 129A Adapter	8
6. 128A Adapter	9
7. Terminal Case at End of Cable	10

1. GENERAL

1.01 This section describes the installation of Splice Cases and T Type Cable Terminals on aerial alpepeth, stalpepeth, or lead sheath cable. This section includes a change in the method of clamping the sheath in the 1B and 2A Splice Cases and the TC, TD, TE, and TF Cable Terminals.

1.02 This section replaces Section G52.623.2.

1.03 The installation of the superseded 1A Splice Case and the TA and TB Cable Terminals is covered in another section of the Practices.

1.04 Check the contents of the cartons and ensure that the two cases and the necessary small hardware and sealing material are on the job.

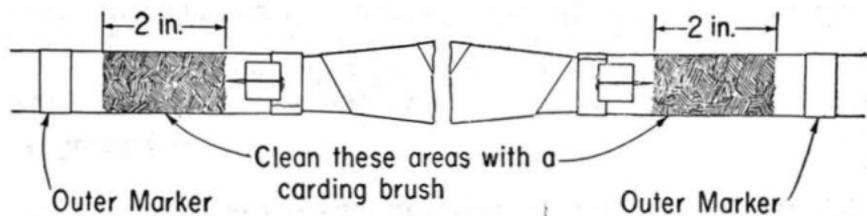
1.05 If the installation is to be made from a ladder, an installer's apron or a canvas pocket or other container can be used to hold the small parts and tools.

2. ASSEMBLY OF THE SPLICE OR TERMINAL CASE

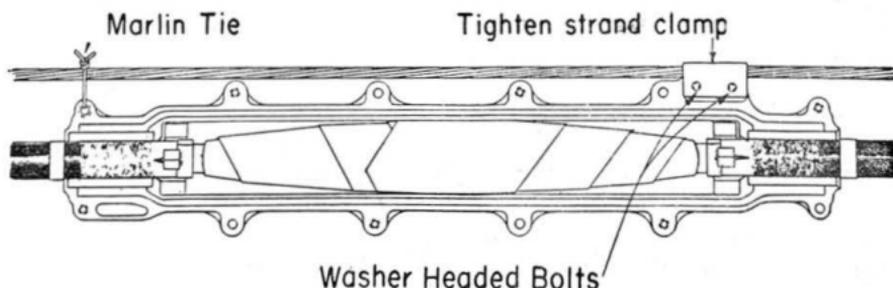
2.01 The preparation of the cable sheath is covered in Section G50.705.3. After preparing the cable sheath, the cable is ready for splicing. It is not necessary to fasten a splice case to the strand until the splicing is completed.

2.02 If a terminal case is being cut in, refer to Bell System Practice G50.705.8 for the splicing procedure. The terminal case will have to be placed in position on the strand before splicing begins.

2.03 At each end of the cable remove the inner B paper tape marker. With the carding brush, clean around the polyethylene sheath with a circular motion as shown. Remove with a cable file any scratches made during the operation of placing the cable.



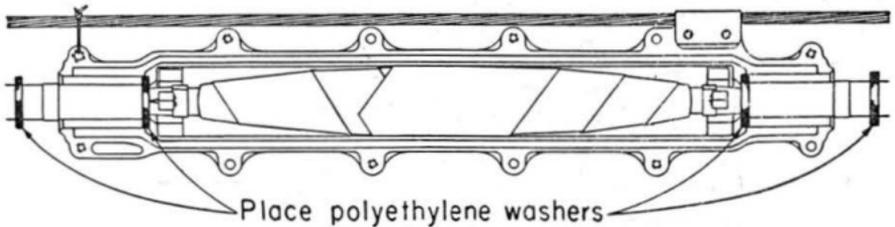
2.04 At a splice where no terminal is involved, place one-half of the splice case on the strand with the inside of the case facing the workman and centered on the B paper tape markers. Secure the case on the strand by tightening the strand clamp. Support the loose end with a temporary marlin (houseline) tie.



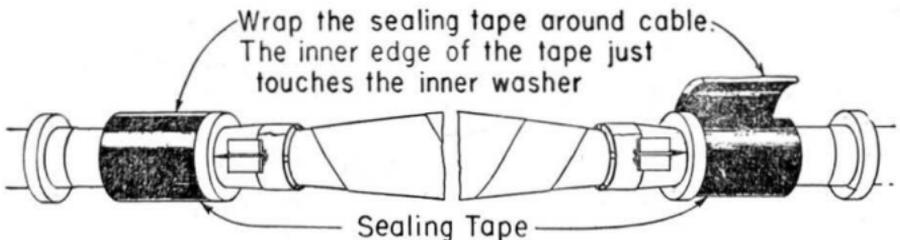
2.05 Polyethylene sealing washers are available for the various diameters of cable as covered in Section G50.702.5. Ensure that four washers of the correct size are available for each installation.

2.06 **The following operations are common to both splice case and terminal case.**

2.07 Place the polyethylene washers over the cable and position them as shown using the terminal case or splice case as a guide. Make sure that the sheath clamps are aligned with the grooved seats in the terminal or splice case, then move the inner polyethylene washers so that they will butt against the projecting ring on the castings.

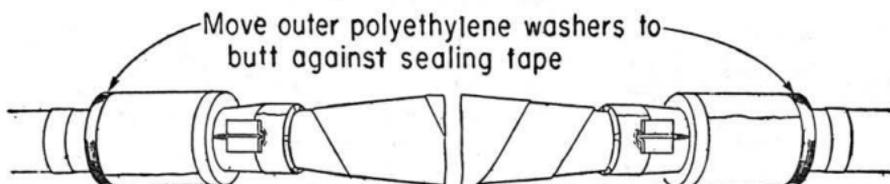


2.08 The splice is ready for the application of the sealing tape at each end of the splice. Open the package containing the tape and inspect it; it should be dry and free from any dust or dirt. The sealing tape is a combination of several materials which do not harden and can be handled during hot or cold weather. Peel off the treated paper wrapper from the 1-1/2-inch wide sealing tape. Swing the case out of the way and place the tape on the cable next to the inside washer. Lay the tape around the cable without stretching until a collar is built up just equal to the diameter of the polyethylene washer. A slight excess is all right, but too much tape will make it difficult to close the two cases around it. Similarly too little tape may not furnish a good seal. Use as many pieces of the sealing tape as may be necessary. Cut off the excess tape.



Note - Splice or terminal case removed for clarity

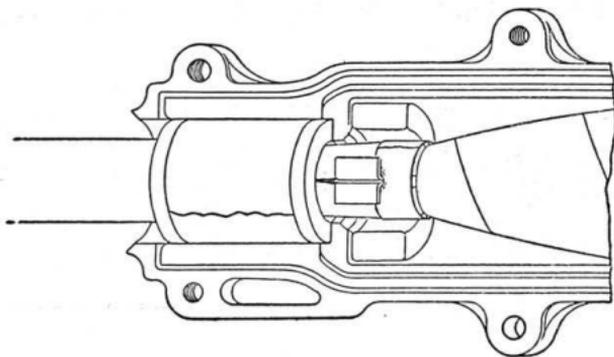
- 2.09 Move the outer polyethylene washers inward until they butt against the sealing tape.



- 2.10 Swing the splice or terminal case down into position and make sure of the following before proceeding with the assembly:

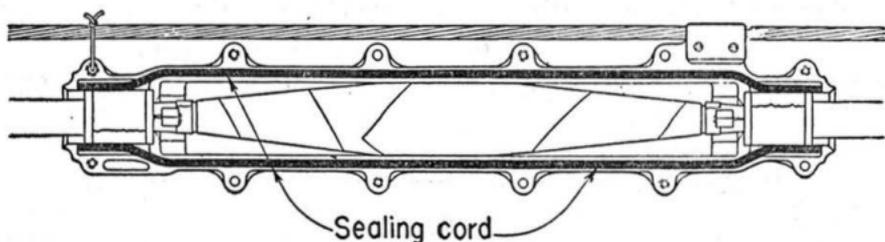
- (a) The prepared cable ends and the enclosed sheath clamp line up with the grooved seats in the casting.
- (b) That electrical continuity (metal to metal contact) will be obtained between the projecting ears of the sheath tabs and the metal of the grooved seats when the cases are assembled.

- 2.11 Then work the end seals into their seats in the splice case. The sealing tape will hold the assembly in position.

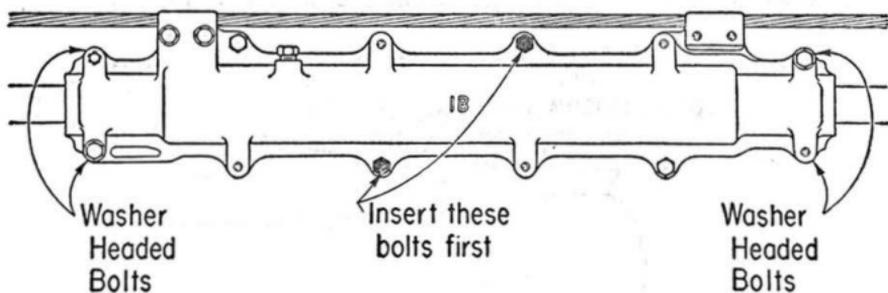


- 2.12 Remove the temporary bonding across the sheath opening. Remove the outer B paper tape marker. The splice or terminal case is ready to be closed. Examine the grooves and sealing surfaces which will receive the sealing cord. They should be clean and free from oil, grease, water, etc.

2.13 Tilt the case attached to the strand to keep the sealing cord from falling out. Lay the lengths of sealing cord in the grooves. Take care not to stretch the cords and avoid making flat spots or dents that might prevent a good seal. Do not allow perspiration or moisture to remain on the seal.



2.14 Hold the second case with the strand lug on top and carefully bring the two cases together so that the bolt holes on opposite sides are aligned. Make sure that the sealing cords are in position then insert the two short bolts as shown and turn them in until the cases close enough to prevent the sealing cords from shifting. Then insert the remaining short bolts. Insert washer headed bolts in the four end holes.

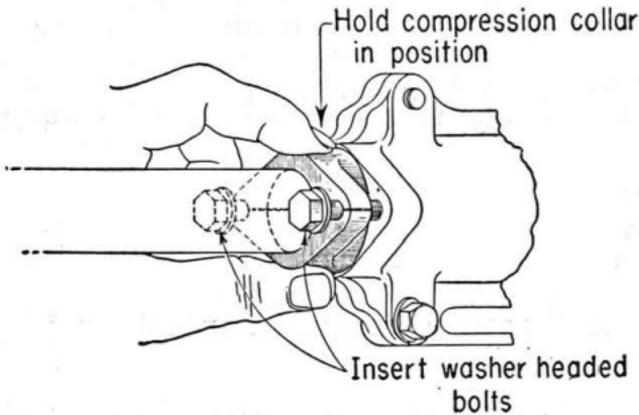


2.15 Tighten the bolts with the ratchet wrench. To apply compression evenly tighten a top and bottom bolt alternately working across the case. The ratchet wrench should be used as it has been designed to apply a limited torque to the bolts. Too much torque will shear off the bolt head. The two cases should be drawn together evenly until the lugs at opposite sides are in metal-to-metal contact. A fin of sealing compound may project around the sealed edge.

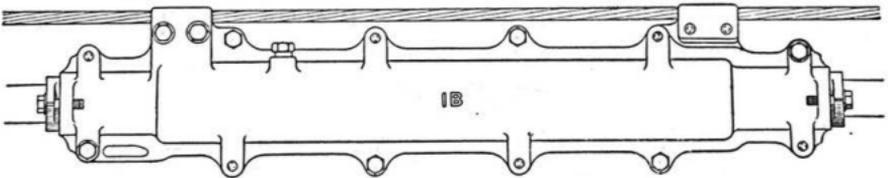
2.16 Tightening the bolts until the opposite sides come together supplies the clamping action which binds the tabs of the cable sheath end securely between the sheath clamp and the grooved seats in the castings.

2.17 Fasten the remaining strand lug to the strand with washer headed bolts.

2.18 Place the two halves of the compression collar on the cable and slide them between the ends of the case and the cable. Hold them in position with one hand while inserting the washer-headed bolts in the holes on the end of the case as shown.



2.19 Tighten each bolt several turns alternately to keep the collar moving evenly until the lugs on the compression collar contact the end flange of the castings. However, if considerable tape flows out, it is not necessary to turn the collar down until it contacts the end flanges of the castings. On the smaller cables where more tape is used, the collar can be stopped 1/8-inch away from lug contact.



2.20 Excessive sealing compound protruding from the sides or ends may be trimmed off.

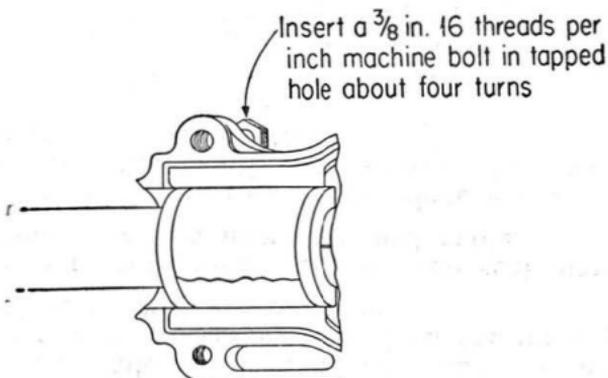
2.21 The completed splice case or two terminal cases placed back to back forms a balanced weight on the strand. Where a terminal case and a splice case are used, the terminal is heavier than the splice case. This condition should be compensated by loosening the strand clamp bolts and tilting it slightly forward so that the terminal will be vertical when the bolts are tightened.

3. FLASH TESTING

- 3.01 Each terminal and splice case has a pressure testing plug for use in flash testing.
- 3.02 Flash testing is done in the usual manner, after closing and sealing the terminal or splice case, using the flash testing material approved for use with the type of cable sheath involved.

4. OPENING AND REASSEMBLING THE CASE

- 4.01 The terminal or splice case may be opened and re-assembled at any time as follows:
- 4.02 Remove the side bolts from the housing. The bolts are made of corrosion resistant steel and should start easily. However, if they do not start easily be careful not to shear off the heads. Then remove the bolts holding the compression collar and the bolts holding the strand lug of the case to be removed.
- 4.03 Insert a $\frac{3}{8}$ -inch 16 threads per inch machine screw, such as used on the large size splice case, about four turns in the large hole at the end of the case as shown.



Note:-Front case removed for clarity

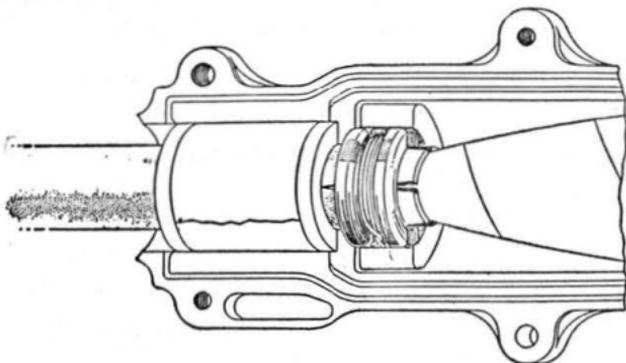
- 4.04 Then insert one of the side bolts through the $\frac{1}{4}$ -inch tapped hole, and with the ratchet wrench, separate the two cases by turning the bolts clockwise to provide a powerful jacking action.
- 4.05 Remove the loose case. Remove enough of the cord from the sealing grooves of both cases to permit new cords to be placed. It is not necessary to remove all the cord. Discard the sealing cord removed. The sealing tape in the end

seals may be left if most of it adheres in one solid piece around the cable.

- 4.06 Place a temporary bond across the splice as covered in the section of practices dealing with temporary bonds.
- 4.07 Complete the work on the splice and wrap it.
- 4.08 In building up the end seals, keep in mind that the equivalent of a new seal is desired. That is, the built-up seal should have the same width, diameter and quantity of sealing tape as in a new seal. With this in mind, shape the old seal by hand into a cylindrical form of the same width as the new tape. Then add new sealing tape until the desired size is reached. It may be necessary to pull off the outer polyethylene washer before shaping the old tape.
- 4.09 If more convenient the old tape seal may be entirely removed and a new tape seal made.
- 4.10 Be sure that all four polyethylene washers are in place and that the sheath clamps are in their correct position before completing the closure.

5. 129A ADAPTER

- 5.01 The 2A Splice Case or TC and TD Cable Terminals may be installed on cable of less than 1-inch outside diameter with the use of the **129A Adapter**.
- 5.02 Prepare the sheath ends and place the P18A727 Clamp, supplied with the adapter, under the tabs with the projecting ears extending over the tabs.
- 5.03 On **lead sheath** cable form the tabs to hold the clamp in position.
- 5.04 Place the two halves of the 129A Adapter over the prepared tabs, as shown, holding the 129A Adapter in position with several turns of the lead lashing wire supplied with the adapter.

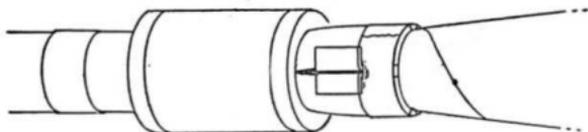


5.05 Assemble the two castings as previously described in Part 2 using extra sealing tape for the end seal on the small diameter cable if needed.

6. 128A ADAPTER

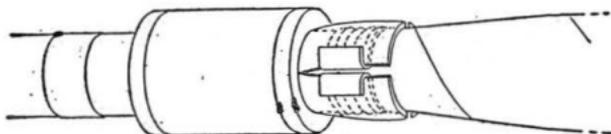
6.01 The 1B Splice Case or the TE or TF Cable Terminals may be combined with any of the superseded 1A Splice Case or TA or TB Cable Terminals at an existing installation of these units by means of the 128A Adapters.

6.02 At an existing installation **on alpeth or stalpeth** sheath cable, after opening the case remove the outer sheath clamps and free the cable and the end seals from the case. Change to the inner sheath clamp with the projecting ears, if the old clamp which fastened to the housing is in place.

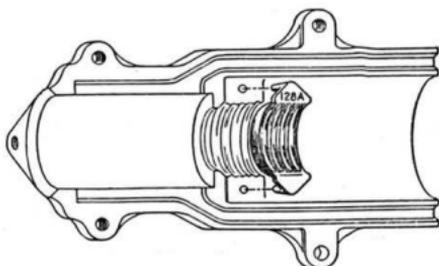


Leave the inner sheath clamp in place.

6.03 At an existing installation **on lead sheath cable** remove the soldered clamp, and cut the four 1-1/4-inch long tabs in the sheath end as shown in the Practices on sheath preparation. Place a P18A727 Clamp under the tabs, with the ears on top of the tabs, and through the side slit.



6.04 Then on the 1A Splice Case or the TA or TB Cable Terminal, insert the 128A Adapter at each end of the case, by engaging the pins at the back of the adapter in the threaded holes beside the serrated grooves in the case as shown.

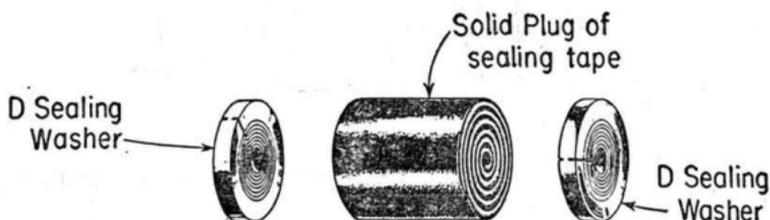


6.05 Assemble the two castings as described in Part 2.

7. TERMINAL CASE AT END OF CABLE

7.01 At the end of a cable, the empty end of the terminal case can be filled by a solid plug of sealing tape.

7.02 Prepare the solid plug to fit the end cavity of the cases. Place a D Sealing Washer of the correct size at each end of the plug, as shown.



7.03 In compressing this end seal, the compression collar can be stopped 1/8 inch away from lug contact if the outer polyethylene washer starts to bulge outward.