**BELL SYSTEM PRACTICES**
**Outside Plant Construction and Maintenance**

**SECTION G50.681.2**
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**AT&T Co Standard**

# INSULATING JOINTS
## LEAD SHEATH CABLE — INSTALLING CONDENSERS

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## 1. GENERAL

1.01 This section describes the method of installing condensers across insulating joints in lead sheath cables.

1.02 Whenever glass-cloth tape is mentioned in this section it refers to the 1 inch wide No. 27 Scotch Electrical Tape.

## 2. INSTALLING CONDENSERS

2.01 **304A Condensers:** The 304A condensers or condensers of similar type are installed across insulating joints in cables designed for carrier operation, to reduce carrier frequency noise. The condenser is installed as outlined below:

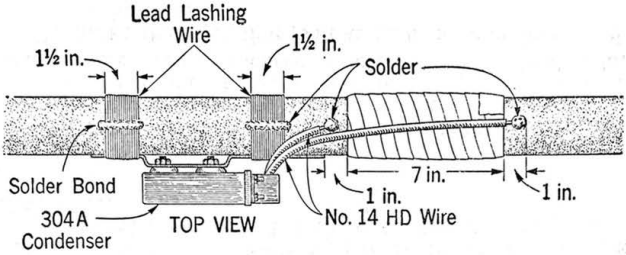
(1) Make the insulating joint as outlined in another section of the Practices.

(2) Apply two coats of No. 2 asphalt paint to the bracket, terminal guard, and entire surface of the condenser, except the terminal lugs.

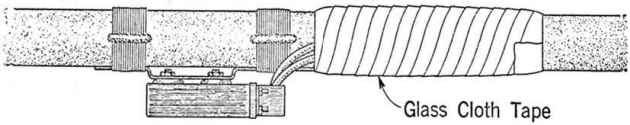
(3) When the insulating joint is made in a horizontal section of the cable, attach the condenser to the side of the cable with lead lashing wire, as shown in the sketch. The lashings should be soldered together to prevent spreading. When the joint is made in a vertical run of cable on a pole, attach the condenser to the pole with two 1-1/2-inch

No. 14 R.H. galvanized wood screws. Locate the condenser on the pole so that the combined length of the two wire leads is as short as possible.

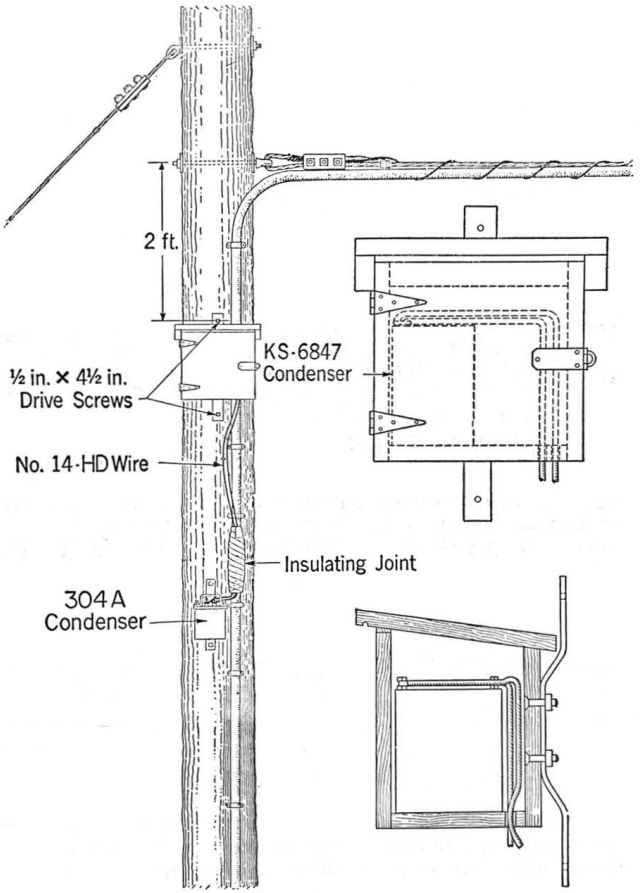
(4) Prepare the wire leads by removing 5/8-inch insulation from each end. With one end form an eye around the terminal post of the condenser. Place the flat washer on top of the eye, followed by the lock washer and nut. Tighten the nut securely. Solder the other end of each wire to the sheath.




(5) Apply one half-lapped layer of glass-cloth tape over the insulating joint covering the soldered connections to the sheath, as shown below.




2.02 **KS-6847 Condensers:** KS-6847 condensers or condensers of a similar type which are used in aerial cable to reduce voice frequency noise will usually be mounted in a small wood box on the pole, as illustrated on the following page. The condenser is connected across the joint, using No. 14 HD wire, in a similar manner to that covered in Paragraph 2.01 (4). The leads must be soldered to the sheath. Where a 304A condenser, as well as a KS-6847 condenser, is required, the two condensers are arranged as illustrated. The leads from each condenser are soldered to the sheath at opposite sides of the joint.

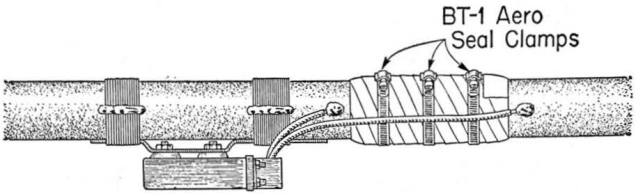



2.03 In a cable vault, the shelf on which the KS-6847 condenser is to be placed should be attached to an inside wall of the cable vault or to the top of the ironwork near the insulating joints. One lead should be connected to the office ground bus at the second vertical and the other to the common bond on the street side of the insulating joint.

## 3. INSTALLING CONDENSERS—CABLE UNDER CONTINUOUS PRESSURE

3.01 If the cable is to be placed under continuous pressure, make the insulating joint and place BT-1 Aero Seal Clamps over the glass-cloth tape wrapping, as covered in another section of the Practices.

3.02 If the condenser is to be mounted on the cable attach the condenser as outlined in Paragraph 2.01. The installation is shown below.




3.03 Apply one half-lapped layer of glass-cloth tape over the insulating joint covering the soldered connections to the sheath as well as the leads and clamps, as shown below.