CABLE VENTS

DESCRIPTION AND INSTALLATION

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1. GENERAL

1.01 This section covers the cable venting maintenance method of reducing service affecting ***sheath break*** troubles in nonpressurized lead sheath aerial cables.

1.02 This section is reissued to include information on B and D cable vents, which are new items. The C cable vent is Manufacture Discontinued.

2. ▶DESCRIPTION OF STANDARD CABLE VENTS◀

2.01 ▶The ***D cable vent*** (Fig. 1), consisting of a black finish aluminum housing and a tin-plated, threaded brass adapter, is 3/4 inch in diameter and 1 1/2-inches long. Venting holes are provided at one end of the housing and a tin-plated, threaded brass adapter for soldering to the sheath or sleeve at the other end. The black finish on the aluminum housing gives the cable vent additional corrosion protection.◀

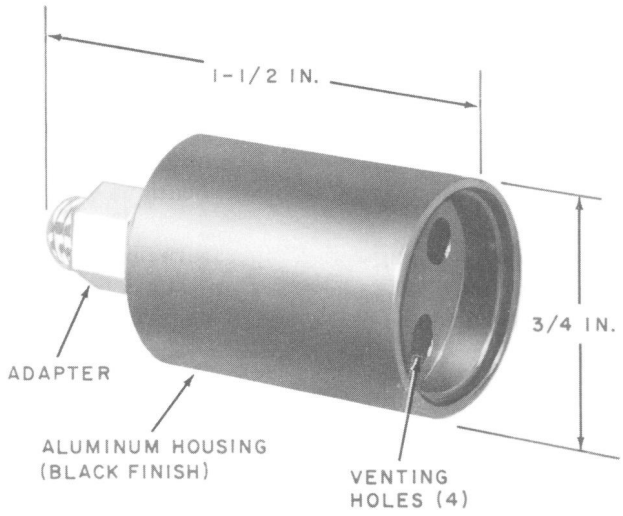

Fig. 1—▶D Cable Vent◀

2.02 ▶The ***B cable vent*** (Fig. 2) is identical to the D cable vent except it is 4 inches long instead of 1 1/2 inches long.

3. DESCRIPTION OF SUPERSEDED CABLE VENT

3.01 The C cable vent (Fig. 3) is identical to the D cable vent except the housing is screened to prevent the entry of insects. The C and D cable vents are interchangeable. The C cable vent is Manufactured Discontinued because the screen was not as effective as the venting holes in the D cable vent.

4. USE

4.01 Cable vents are designed for use on aerial lead sheath cables which cannot practicably be pressurized because of size or isolation by PIC cable from pressurized plant.

4.02 ▶***B cable vents*** are intended for use on cables unprotected by trees, buildings, terrain, etc, and in coastal areas and other locations which experience hurricanes and tornadoes. ***D cable vents*** are to be used in all other locations.◀

4.03 Sudden changes in temperature or barometric pressure cause negative pressures to develop in nonpressurized cables. This negative pressure allows water to enter the cable core at sheath breaks. By venting the cable core the internal cable pressure is quickly equalized with the atmospheric pressure.

4.04 Placing cable vents on nonpressurized aerial lead sheath cables will have the following beneficial results:

(a) Reduce the total number of troubles, because water will not enter the cable core through small hair-line cracks unless air is drawn through

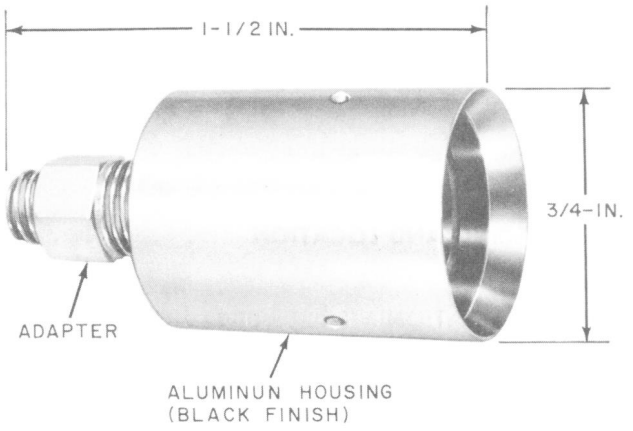

Fig. 3—C Cable Vent

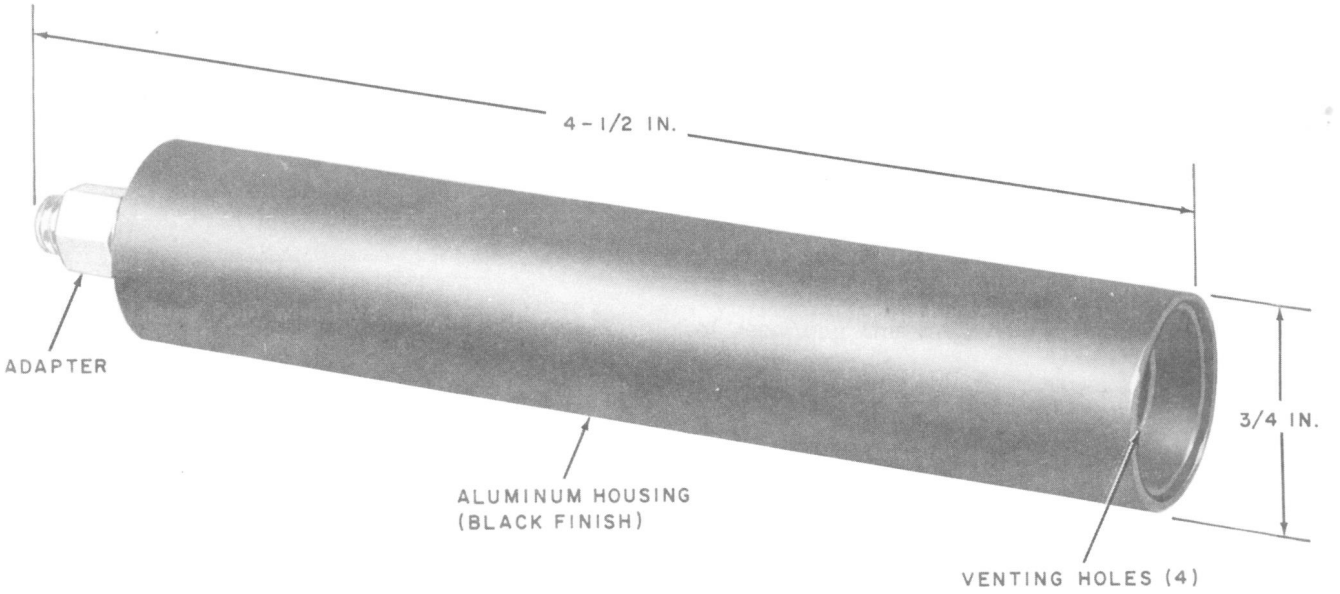

Fig. 2—▶B Cable Vent◀

because of negative pressure in the cable. Cable venting minimizes the negative pressures.

(b) Where water does enter the core through larger sheath breaks, the amount of water entering will be reduced, thereby affecting fewer conductors.

4.05 Cable vents have no adverse effect on transmission at voice frequencies or on the use of LIT which should supplement any venting program.

4.06 Cable venting is recommended for aerial lead sheath cables of less than 200 pairs. Larger size cables should only be vented when they are isolated from pressurized plant by PIC cable.

5. SPACING AND LOCATION

5.01 ▶Recommended spacing is 150 feet with 175 feet maximum between vents. Pole spans greater than 175 feet should have an additional midspan vent.◀

5.02 ▶Cable vents shall be placed next to the pressure plug at the ***beginning*** of the length being vented.◀

5.03 The preferred location of cable vents is as follows:

First Choice: Lead sleeve at T-Zone

Second Choice: Cable sheath at T-Zone

Third Choice: Lead sleeve at midspan

Fourth Choice: Cable sheath at midspan

6. INSTALLATION

6.01 The cable vent is installed as follows:

(1) Clean the surface of the sheath or sleeve where the vent is to be installed with a carding brush (Fig. 4).

(2) Drill a hole in the underside of the cable or sleeve in the cleaned area, with a cable drill (Fig. 5).

(3) Puncture the paper tape core wrapper with an orange stick (Fig. 6). This step is omitted for sleeve installations.

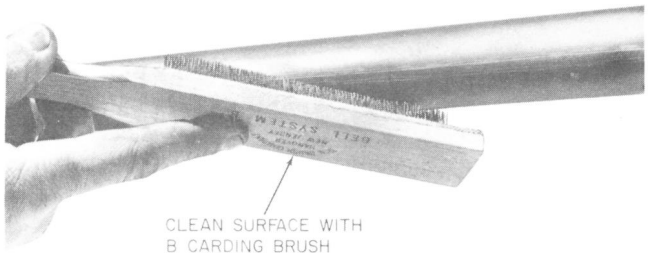

Fig. 4—Cleaning Cable

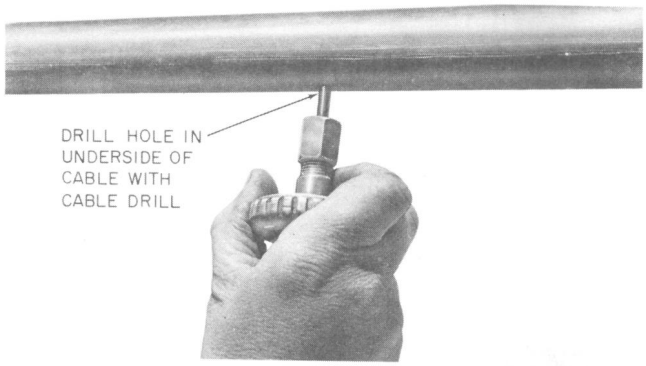

Fig. 5—Drilling Hole

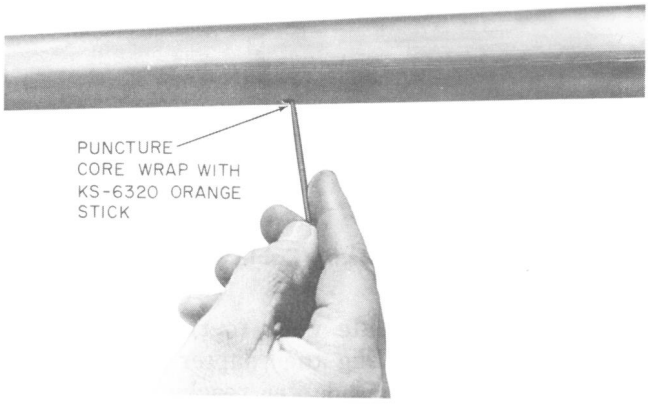

Fig. 6—Puncturing Core Wrapper

(4) Coat the cleaned surface with stearine (Fig. 7).

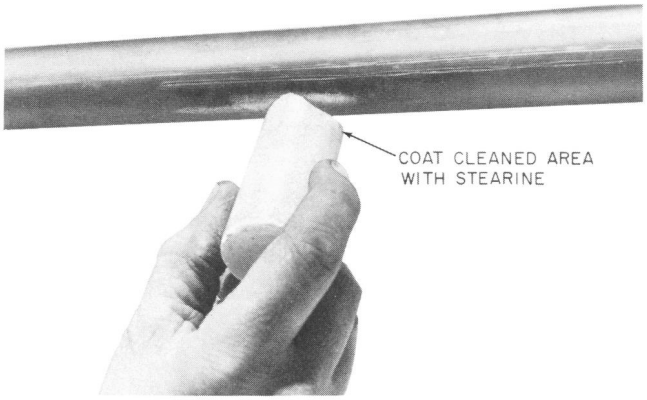

Fig. 7—Applying Stearine

(5) Screw the cable vent into the drilled hole (Fig. 8).

Caution: Do not screw to the full depth of the threads on thin sheath cable.

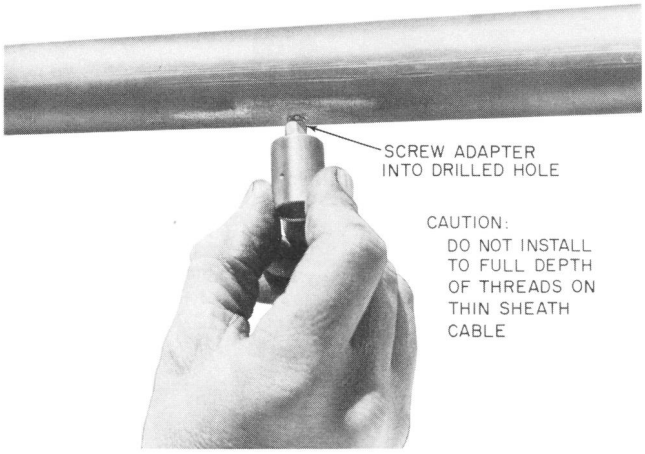

Fig. 8—Placing Cable Vent

(6) Solder the cable vent to the sheath, or sleeve, by heating the adapter with a torch (Fig. 9). When the adapter reaches the proper temperature, apply solder. The solder will melt and be drawn up into the adapter threads. It is not necessary to build a solder bead around the adapter.

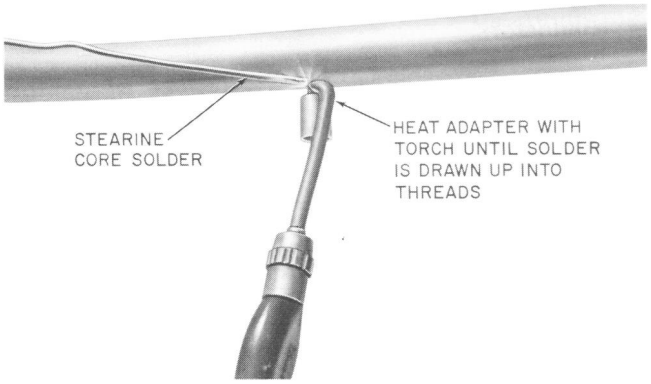

Fig. 9—Soldering Cable Vent

6.02 A typical completed installation of a cable vent is shown in Fig. 10.

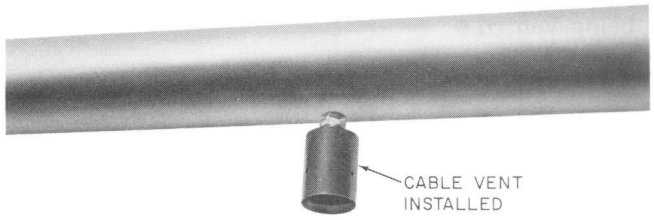

Fig. 10—Typical Completed Installation

7. RECORDS

7.01 Cable location records will indicate those cables that are vented. The accepted method of recording this information on the cable records is as follows:

_____ VT _____ 22-2 _____