

16AA2 CLOSURE DESCRIPTION AND USE

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1. GENERAL

- 1.01 This section covers the description and installation of the 16AA2 closure used to:
- Encapsulate the connection between buried waterproof distribution cable (up to 200 pair) and up to eight 2-pair or two 5-pair filled service wires
 - Enclose splice (50-pair cable is maximum using 710 connector or 25 pair using 700 connectors).

- 1.02 When this section is reissued, the reason for reissue will be listed in this paragraph.
- 1.03 Splicing service wire to the distribution cable must be made with 700-type connectors as outlined in Section 632-205-215.

2. DESCRIPTION

- 2.01 The 16AA2 closure is illustrated in Fig. 1.
- 2.02 In addition to the 16AA2 closure, it will be necessary to have the following materials for a complete installation:
- (a) DR tape—3/4 inch wide
 - (b) 700 or 710 connectors
 - (c) Vinyl tape
 - (d) D encapsulant—1850 grams.
- 2.03 Since this closure is not watertight, the splice must be totally encapsulated with D encapsulant to guarantee its integrity.

NOTICE

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

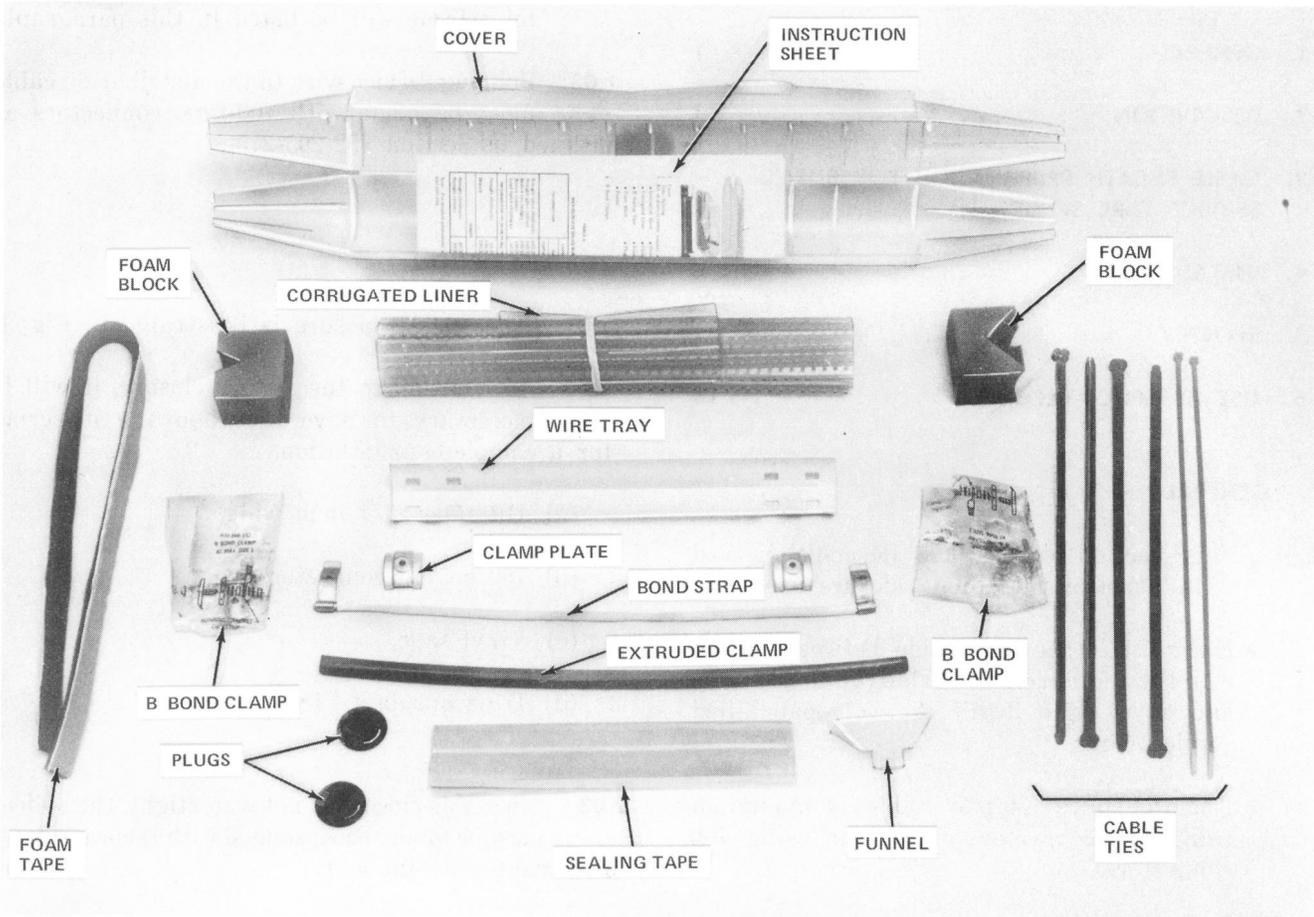
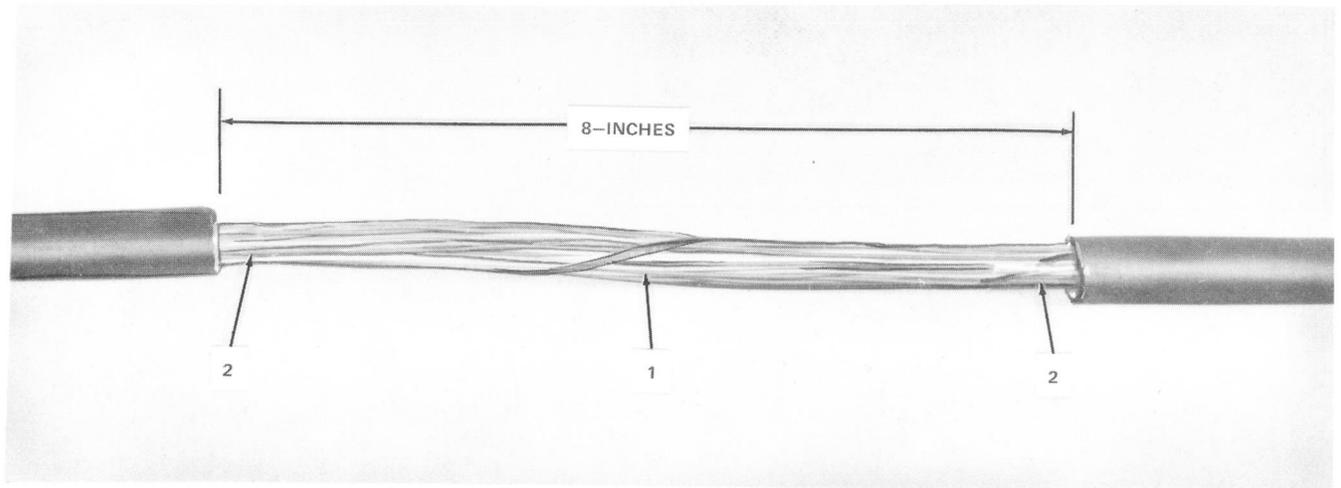


Fig. 1—16AA2 Closure

3. CABLE SHEATH PREPARATION FOR BURIED SERVICE WIRE SPLICE

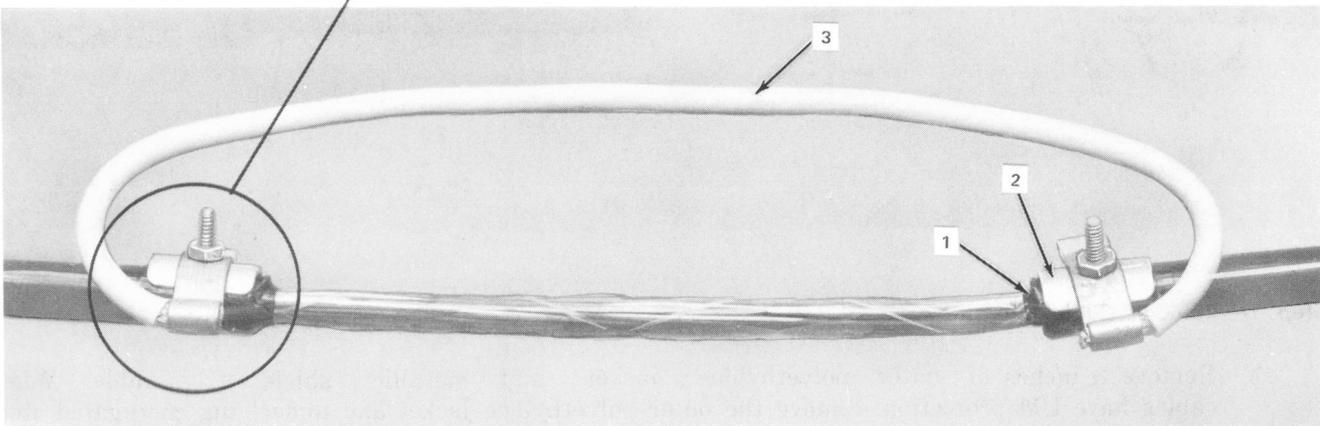
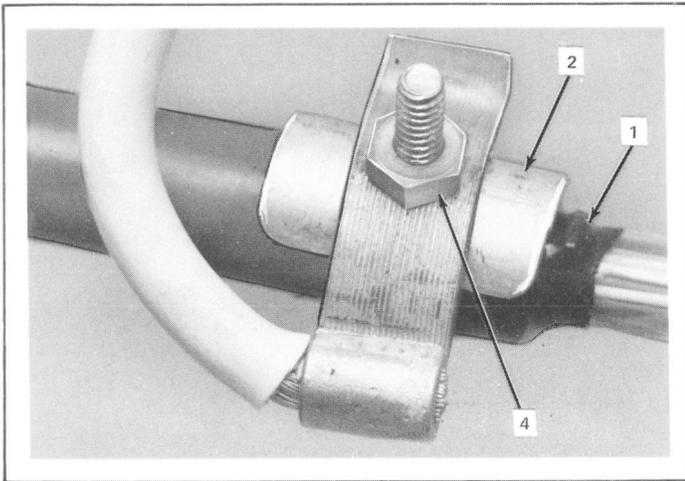
- 3.01 Determine location for buried service wire splice, prepare cable sheath, and locate assigned cable pair as outlined in Steps 1 through 3.



Step 1—Remove Cable Sheath

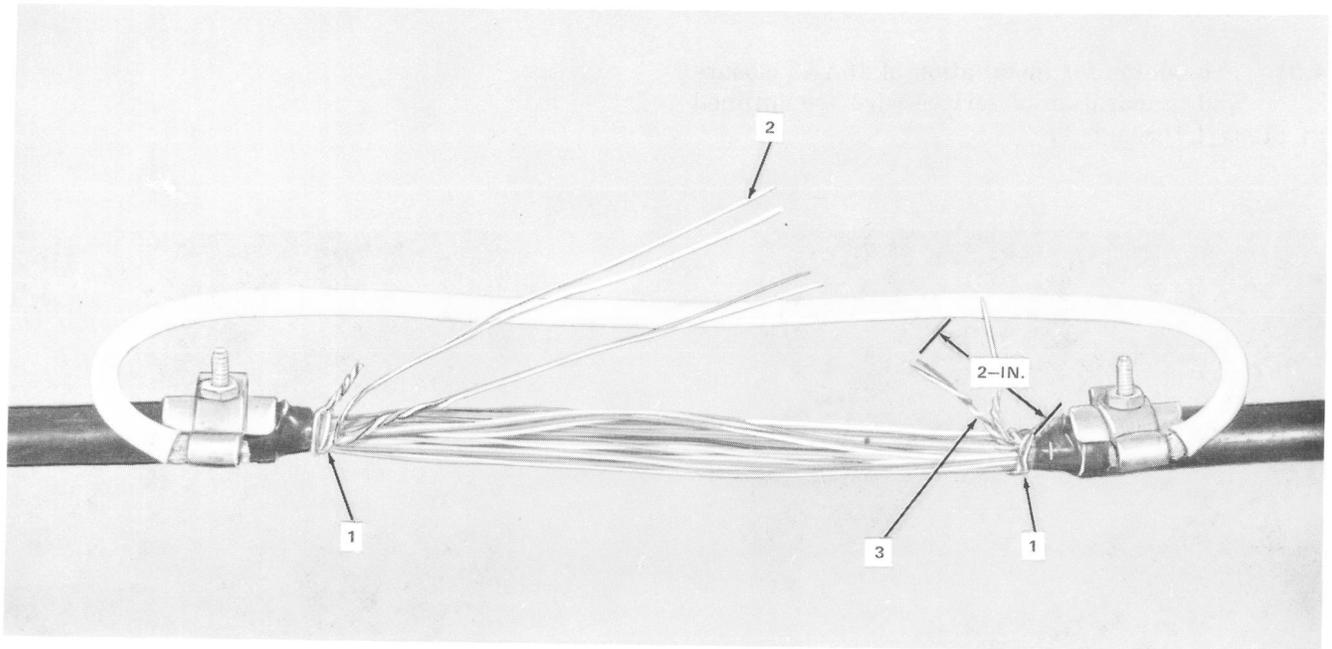
1. Remove 8 inches of outer polyethylene jacket and metallic shield from cable. When cables have UM protection, remove the outer polyethylene jacket and underlying corrugated steel back approximately 14 inches on each side of sheath opening (Step 15).
2. Remove core wrap leaving 1/2 inch at each end.

CAUTION: Exercise care when cutting the jacket to prevent damage to conductors.



Step 2—Providing Cable Sheath Continuity

1. Slit cable sheath, then place two turns of vinyl tape, with adhesive side out, around the core wrap and slide underneath the metallic shield. Then position inner plate of B bond clamp between vinyl tape collar and metallic shield. Wrap the cable with two or three turns of vinyl tape.
2. Position outer plate on stud of inner plate.
3. Place bond strap across sheath opening.
4. Secure outer plate and bond strap with hex nut furnished with B bond clamp, and using 216-type tool tighten nut.

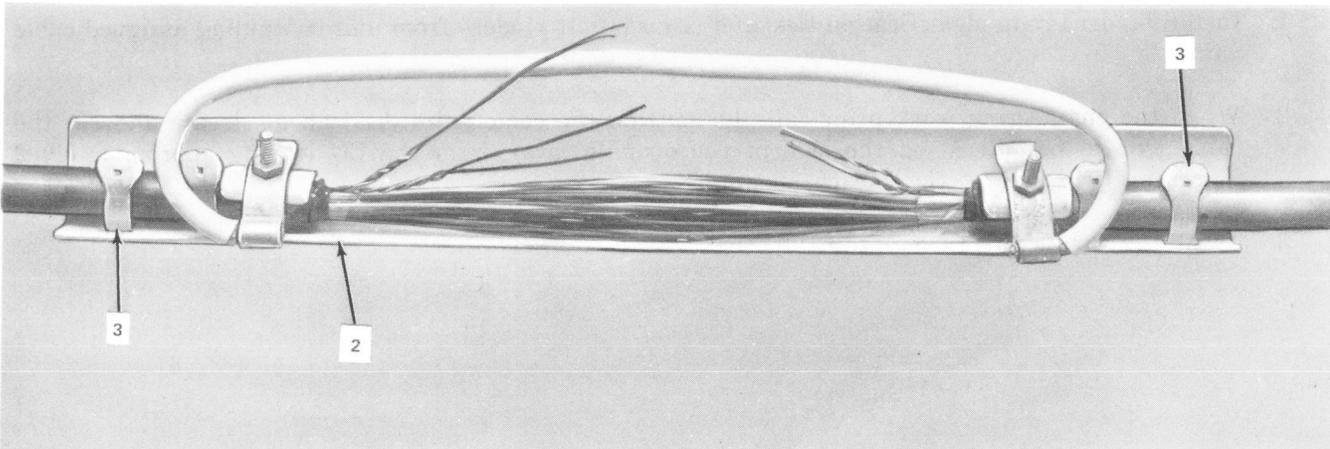
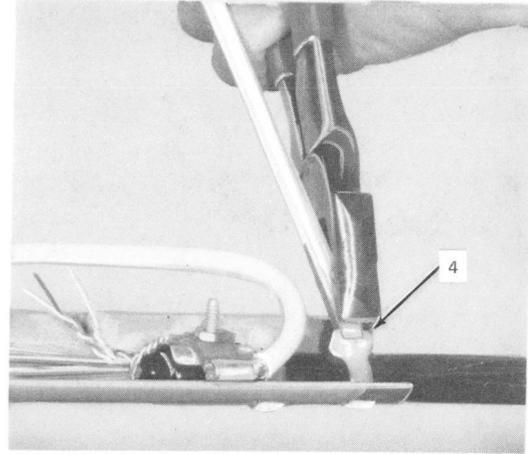
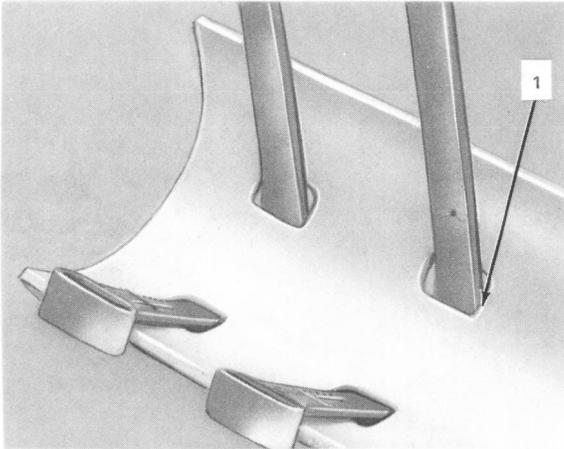


Step 3—Selecting Assigned Cable Pairs

1. Install binder group identification ties, and remove unit binders from unit containing assigned cable pairs.
2. When the engineering work print calls for cutting the cable pairs dead ahead, locate and cut the cable pair to be spliced on the side of the opening away from the CO leaving approximately 2 inches on field side of the sheath opening.
3. Twist the conductors to maintain identity.

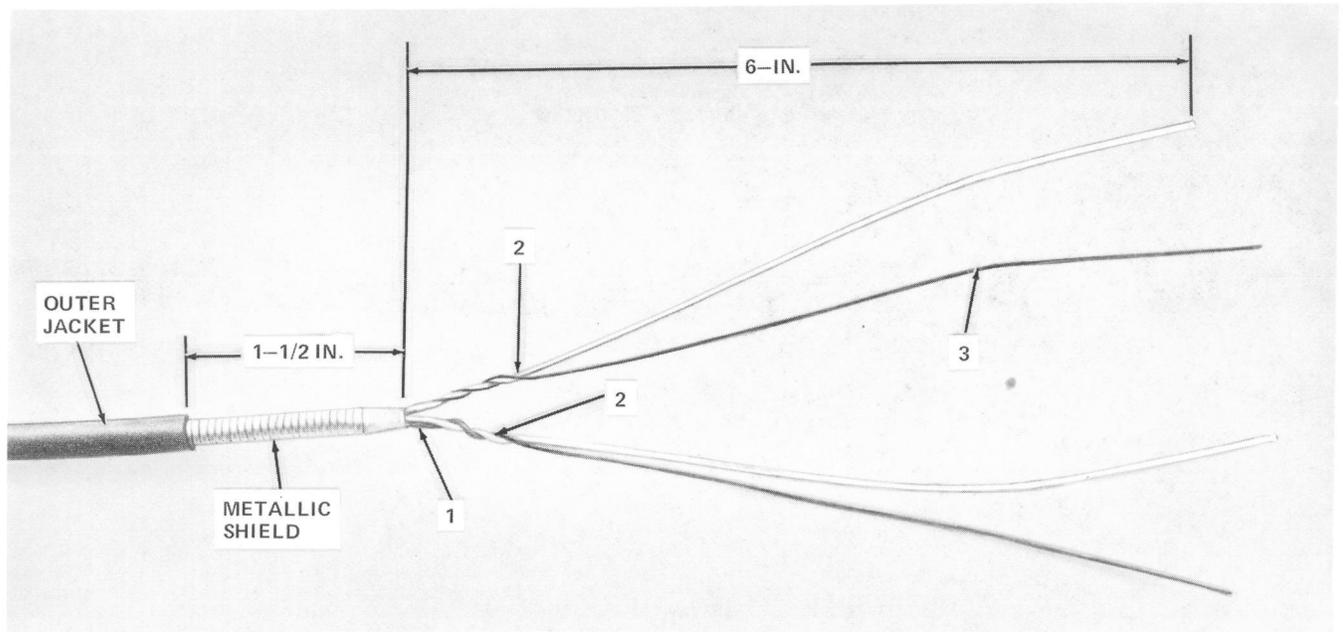
4. INSTALLATION

4.01 Procedures for installation of 16AA2 closure and preparation of service wire are outlined in Steps 4 through 14.



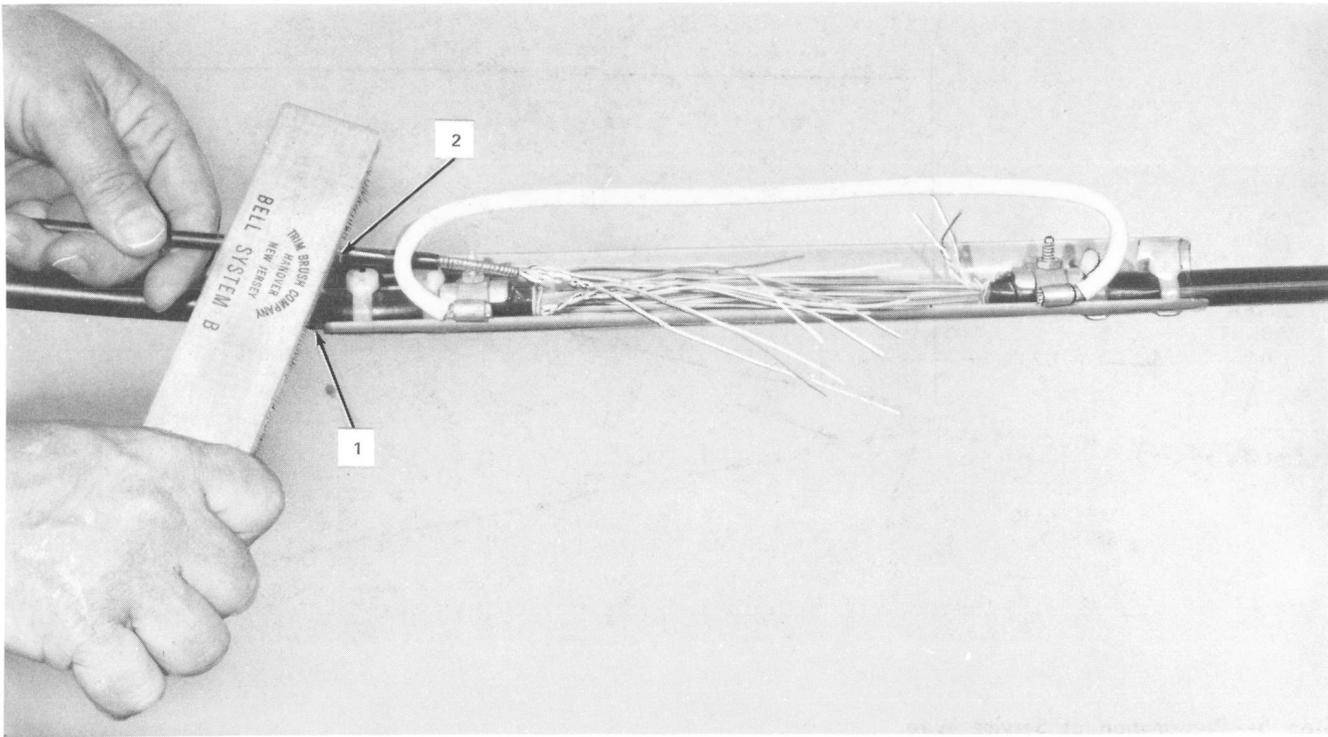
Step 4—Installation of Wire Tray

1. Install cable ties in slots of wire tray.
2. Position and center wire tray underneath sheath opening.
3. Secure tray to cable with cable tie.
4. Grip cable tie near the buckle with pliers and twist to tighten. Cut off excess cable tie.



Step 5—Preparation of Service Wire

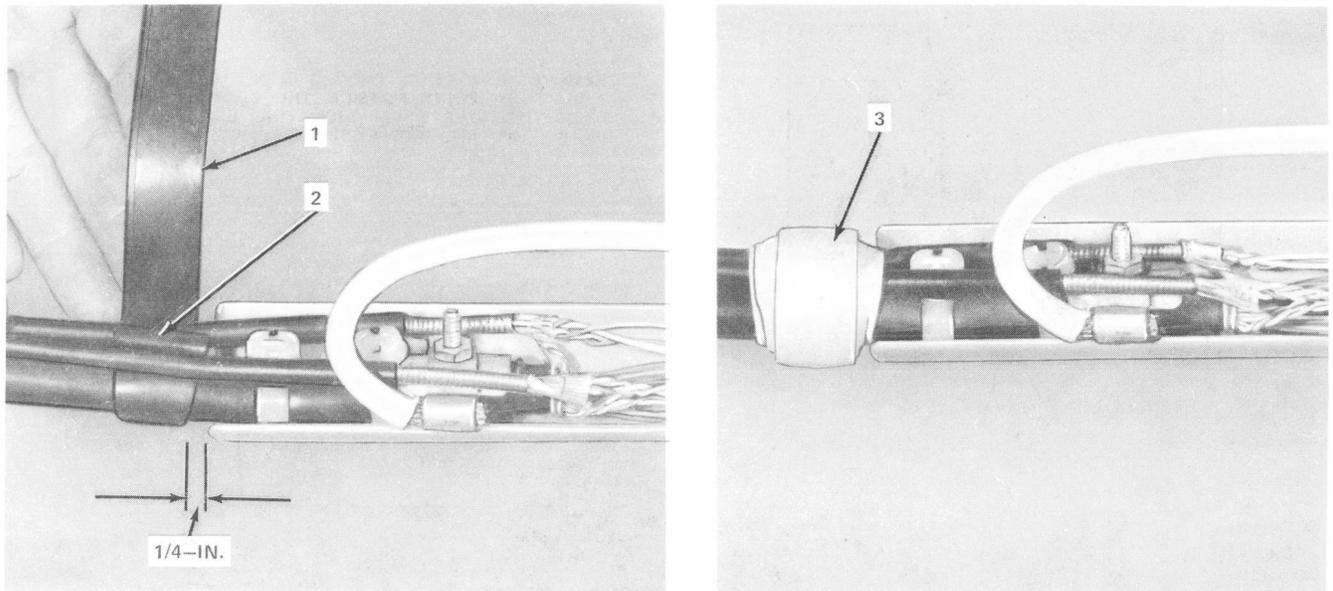
1. Prepare service wire as shown.
2. Twist pairs to maintain identity.
3. Remove all filling compound from conductors. Use solvent if necessary to get conductors “squeaky clean.”



Step 6—Clean and Scuff Cable and Service Wire Jacket

1. Using B cleaning fluid, clean the cable and service wire jacket adjacent to the wire tray on each side of sheath opening to remove any residue from jacket.
2. Using a carding brush, scuff the cleaned jackets around the entire circumference of the cable and service wire.

CAUTION: *Do not scuff the jacket longitudinally as this could cause leaking channels.*



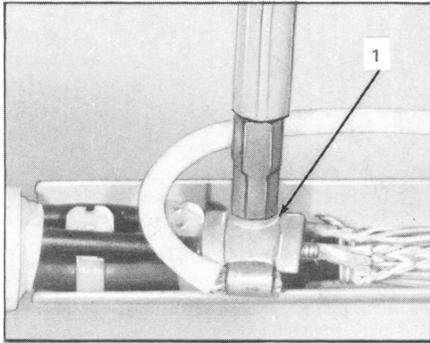
Step 7—Forming Collars

- Using 3/4 inch wide sealing tape, form a collar approximately 1/4 inch from each end of wire tray. Place service wires between layers of sealing tape. If a No. 6 ground wire is required for bonding cable sheath to power company ground, remove insulation to a point outside of closure to prevent water from migrating between insulation and copper into splices and place between layers of tape. The number of service wires entering each end of the closure shall not exceed:

- Four 2-pair or three 2-pair and ground wire
- One 5-pair or one 5-pair and ground wire.

CAUTION: Do not heat sealing tape directly in the airflow of a heater. If heating is required in cold weather, place in a warm area prior to use. Heating in the airflow of a heater reduces the adhesion to the cable jacket.

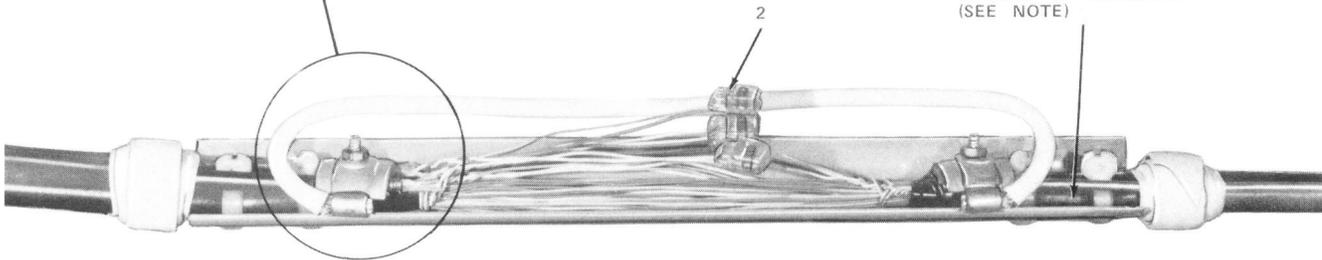
- If more than one service wire enters one end of closure, place a length of sealing tape between wires to fill void(s).
- Wrap sealing tape collar with several fully stretched turns of DR tape (white side out). Wrap last layer loosely. DR tape has a tendency to unwrap itself while encapsulant is setting up; therefore, it is necessary to wrap last layer loosely.



NOTE:

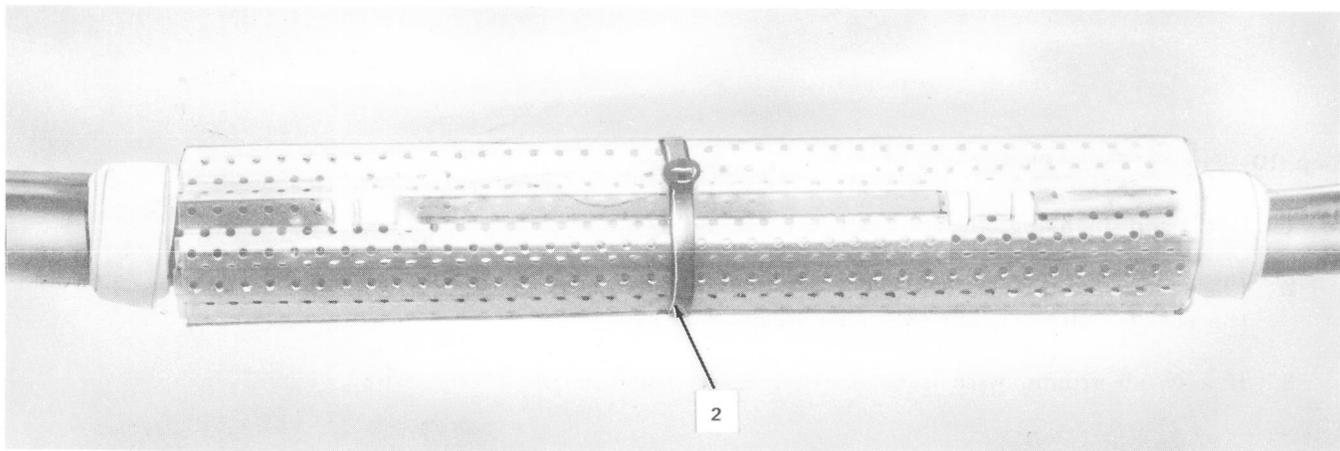
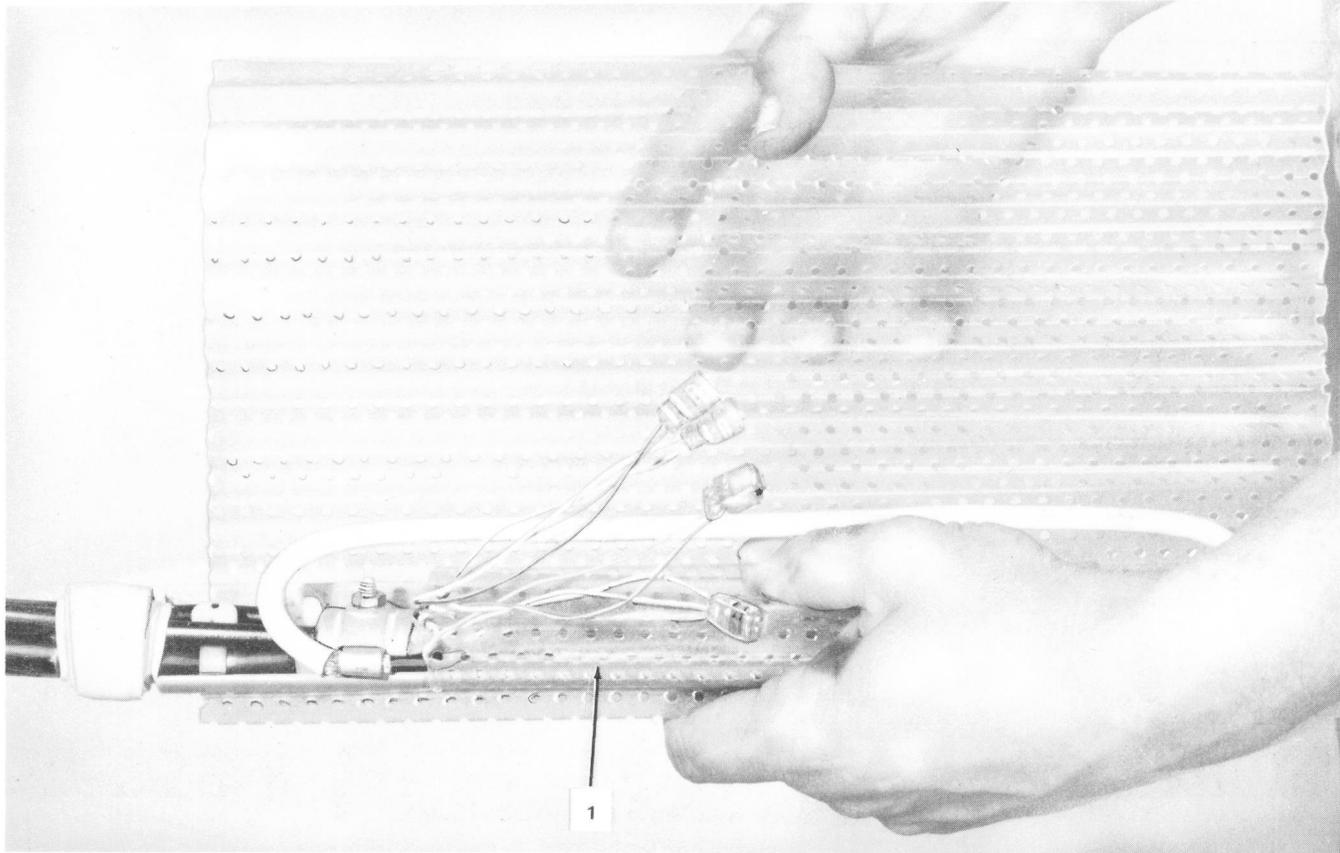
REMOVE INSULATION FROM THE NO. 6 GROUND WIRE TO A POINT OUTSIDE THE CLOSURE TO PREVENT WATER FROM MIGRATING BETWEEN INSULATION AND COPPER INTO SPLICE.

NO. 6 GROUND WIRE BONDING CABLE SHEATH TO POWER COMPANY GROUND IF REQUIRED (SEE NOTE)



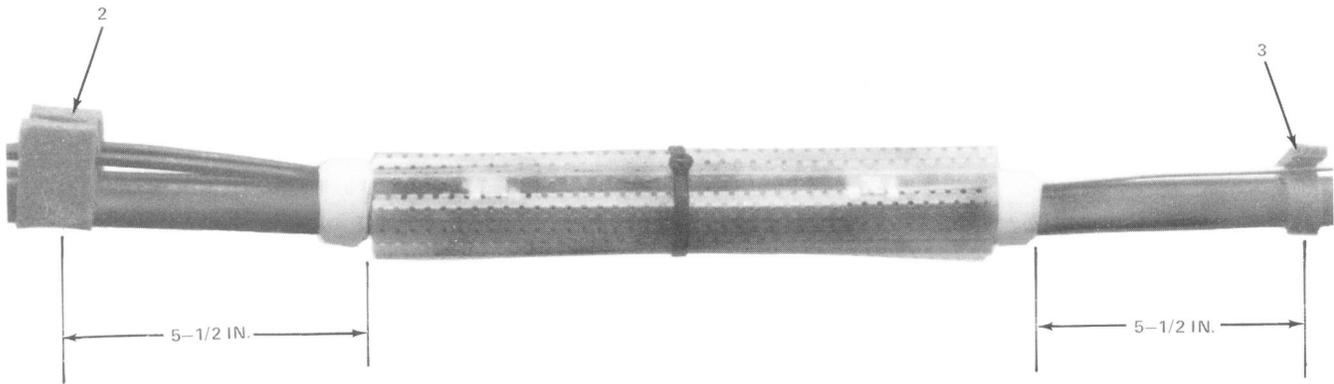
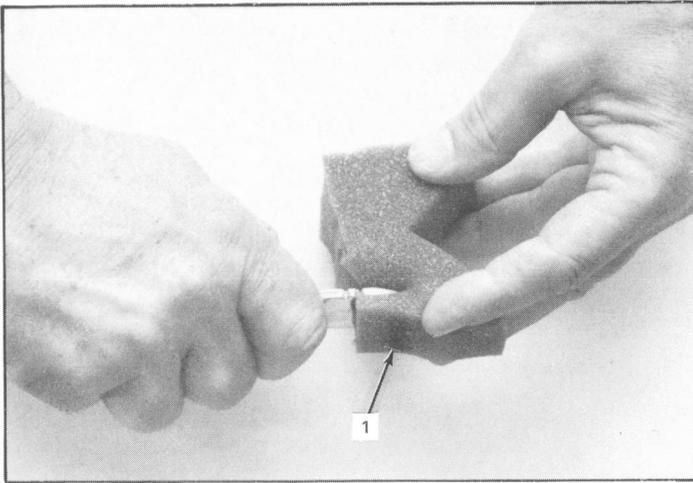
Step 8—Bonding and Splicing Service Wire

1. Install clamp plate over shield of service wire and secure with nut from bond clamp. Tighten nut with 216-type tool.
2. Splice service wire pairs to assigned cable pair using 700-type connector as outlined in Section 632-205-215. **Do not use B wire connectors.**



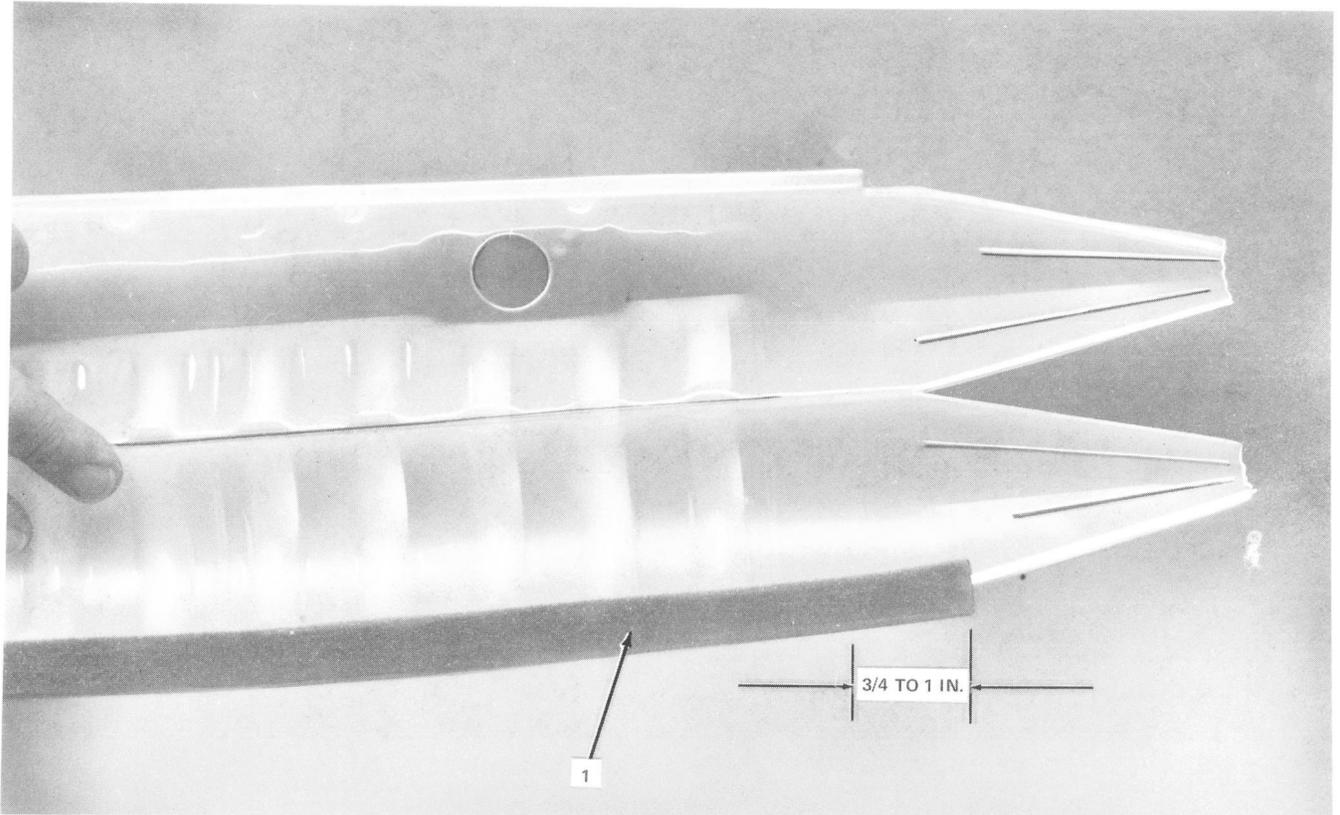
Step 9—Wrapping Sheath Opening With Corrugated Liner

1. Fold the spliced service wires back over the cable sheath, place the notched end of the corrugated liner over the sheath opening, then relocate the service wire on top of the liner and complete the wrap. ***Assure spliced conductors are sandwiched between layers of liner.***
2. Secure liner using cable tie.

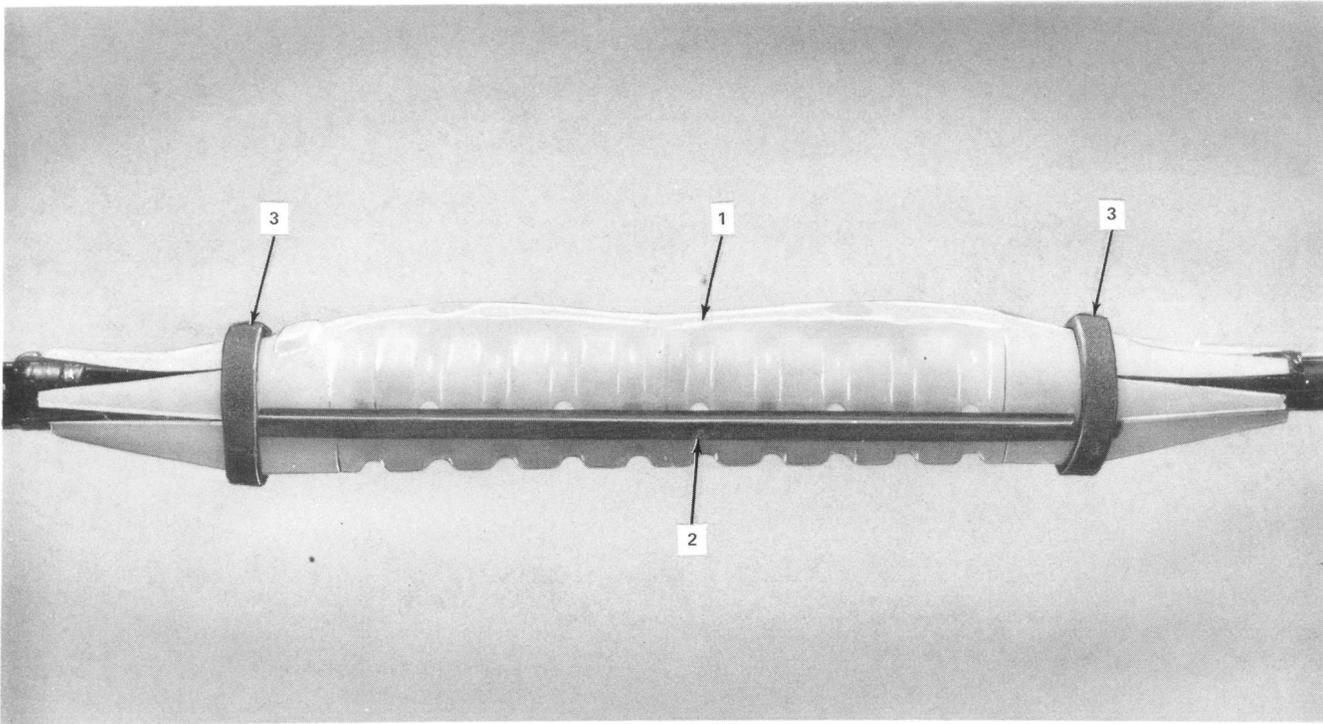


Step 10—Placing Foam Block

1. Cut a slit in foam block for each service wire.
2. Place one foam block between cable and service wires with the notched side on the cable and the service wires fitting into slits made in 1 above.
3. If a No. 6 ground wire is used, treat it the same as the service wire.

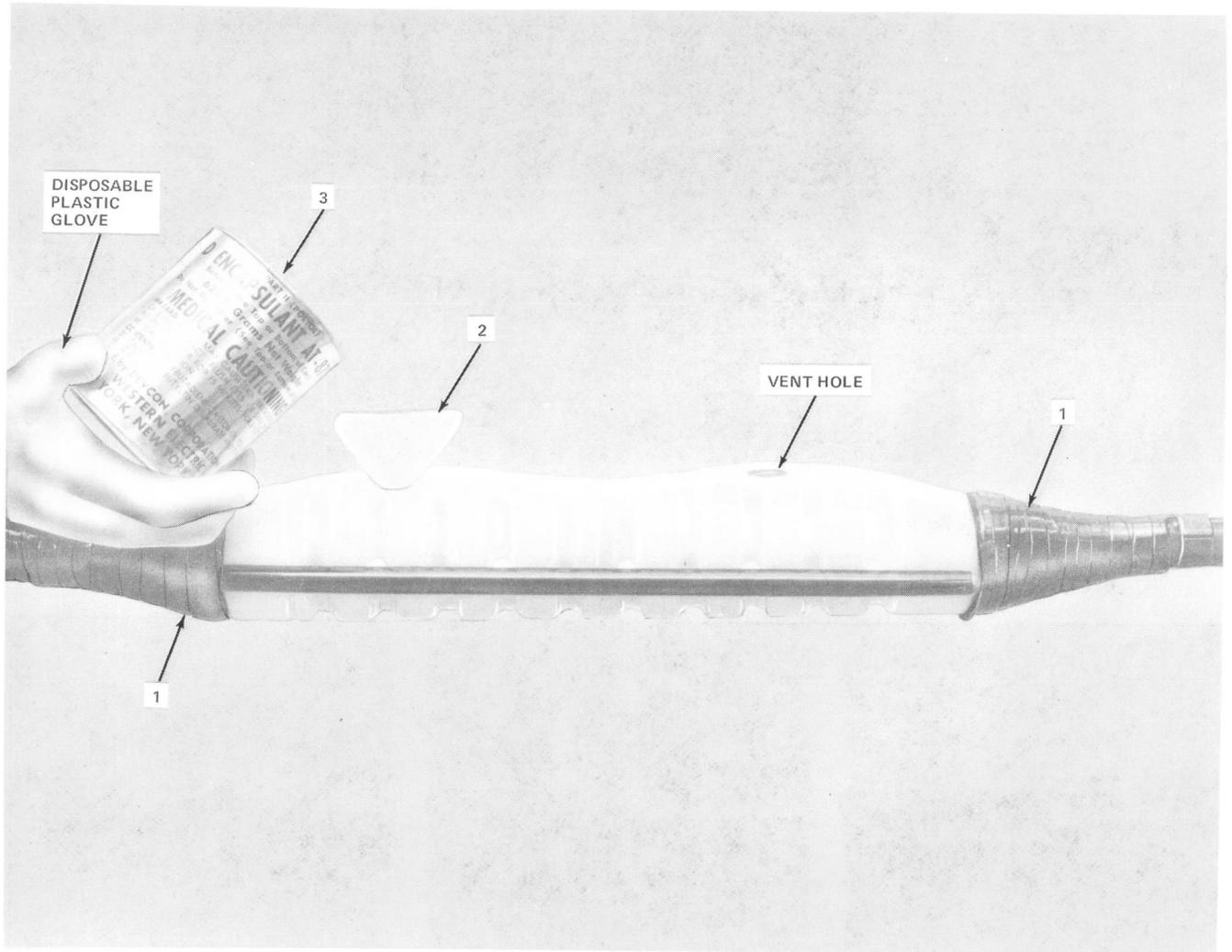
**Step 11—Applying Foam Tape to Cover**

1. Remove the backing from one strip of foam tape and place flush with the inner edge of the closure opposite the hinge and extending about 3/4 to 1 inch past the flange area on each end.



Step 12—Placing Cover Over Splice

1. Place and center cover over completed splice.
2. Slide extruded plastic clamp on seam of closure to secure in place.
3. Place a length of foam tape around each end of cover at edge of extruded plastic clamp.

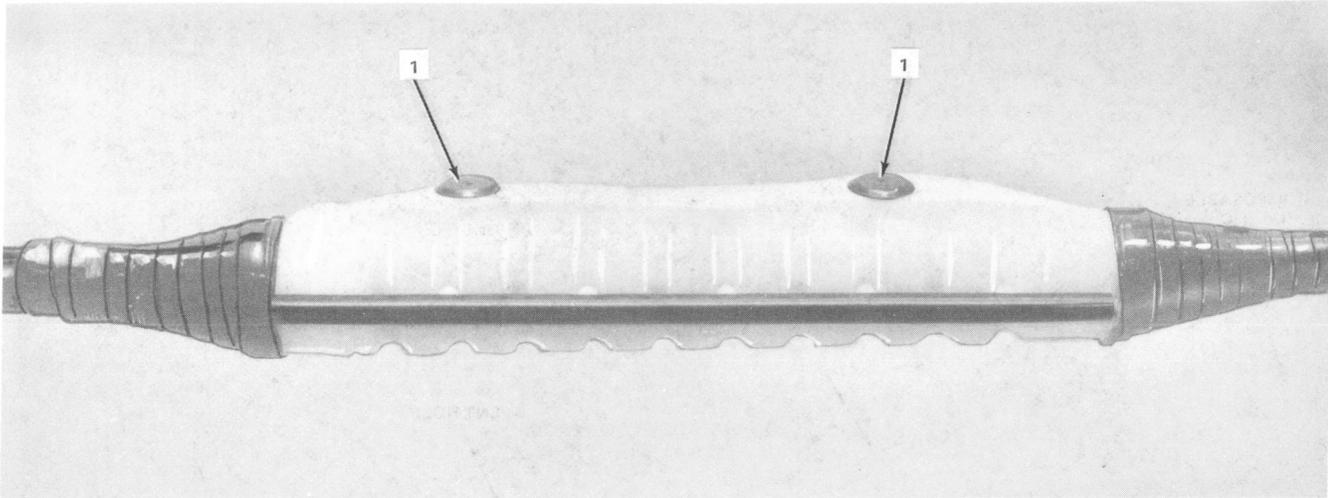


Step 13—Filling Splice With Encapsulant

1. Assure filling holes are on top of closure, then wrap each nozzle with vinyl tape extending from edge of extruded clamp to cable sheath. Hold cover while wrapping to prevent movement and rotation about the splice.
2. Snap funnel in filling pole.

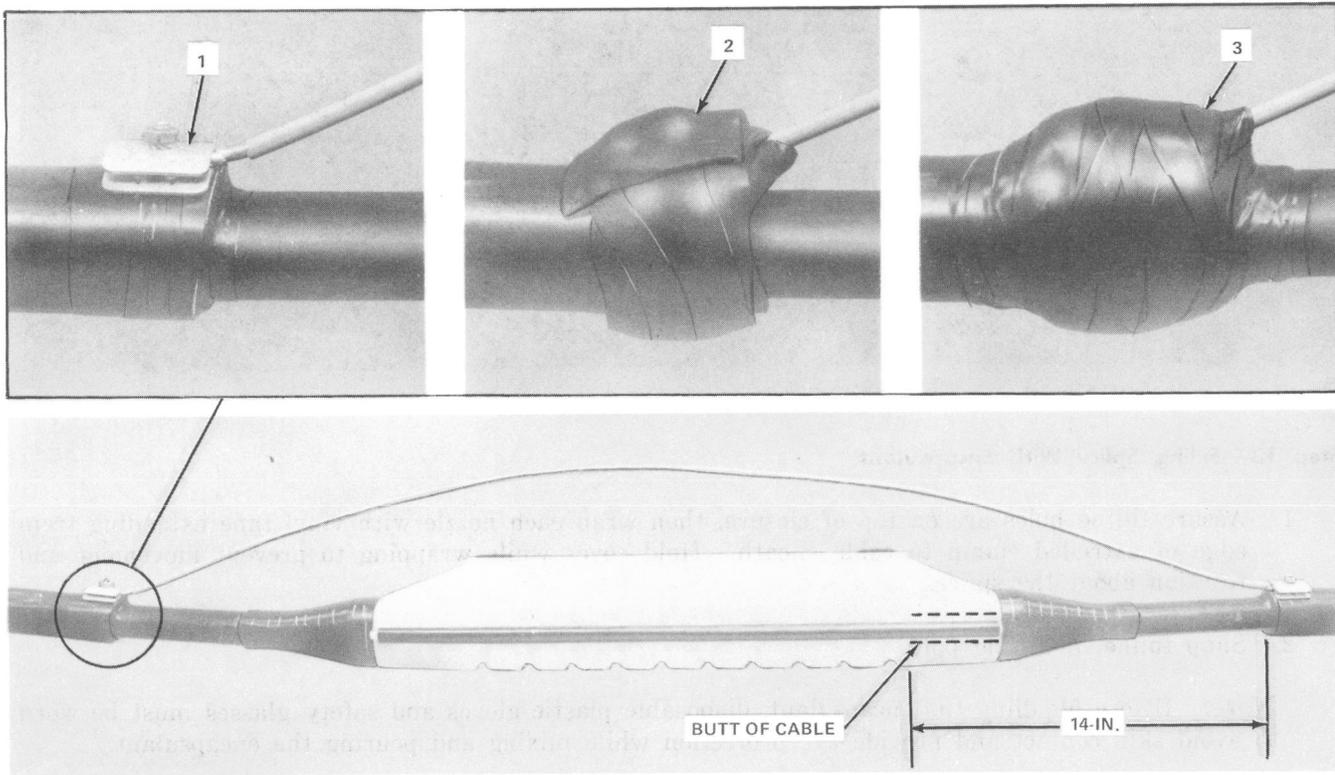
Note: Before handling the encapsulant, disposable plastic gloves and safety glasses must be worn to avoid skin contact and provide eye protection while mixing and pouring the encapsulant.

3. Mix encapsulant per instruction on container and pour into funnel until encapsulant runs from vent hole. Plug vent and complete pour.



Step 14—Completed Installation

1. Insert plugs in holes.

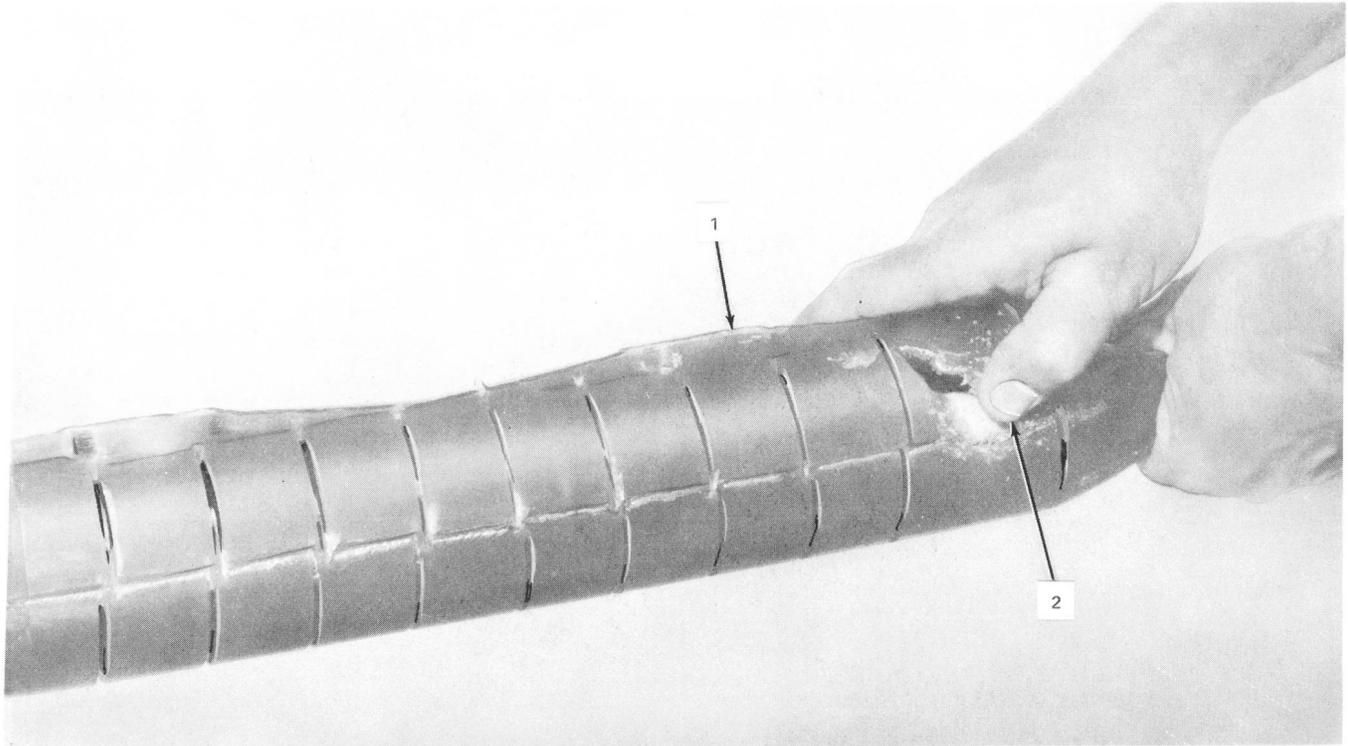


Step 15—Providing Continuity for UM-Type Protection

1. Install B bond clamps and No. 6 ground wire to provide continuity across UM-type protection as outlined in Section 081-852-118.
2. Wrap bond clamps with sealing tape.
3. Wrap sealing tape with DR tape and vinyl tape. This provides corrosion protection.

5. REENTRY

5.01 *Planned reentry is not recommended, but if for some reason* the closure is reentered (Step 16) it will be necessary to have a new closure for enclosing splice.



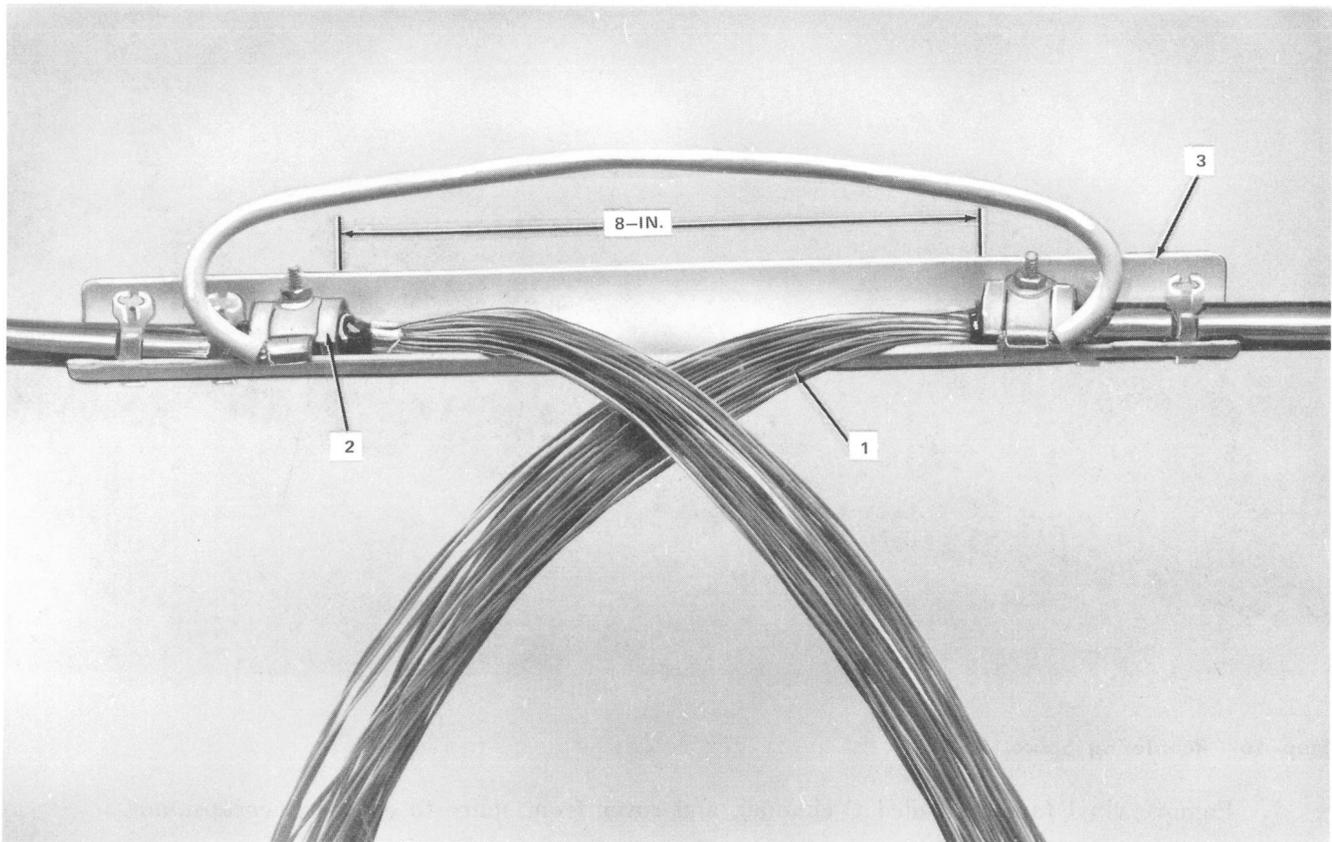
Step 16—Reentering Splice

1. Remove vinyl tape, extruded C channel, and cover from splice to expose D encapsulant.
2. Tear encapsulant with fingers to expose seam of corrugated liner; peel off liner to expose connectors. Work from the ends of the splice and handle units carefully to prevent damage to wire work. Complete removal of encapsulant is not necessary.

5.02 Perform the necessary wire work, then install new closure as outlined herein.

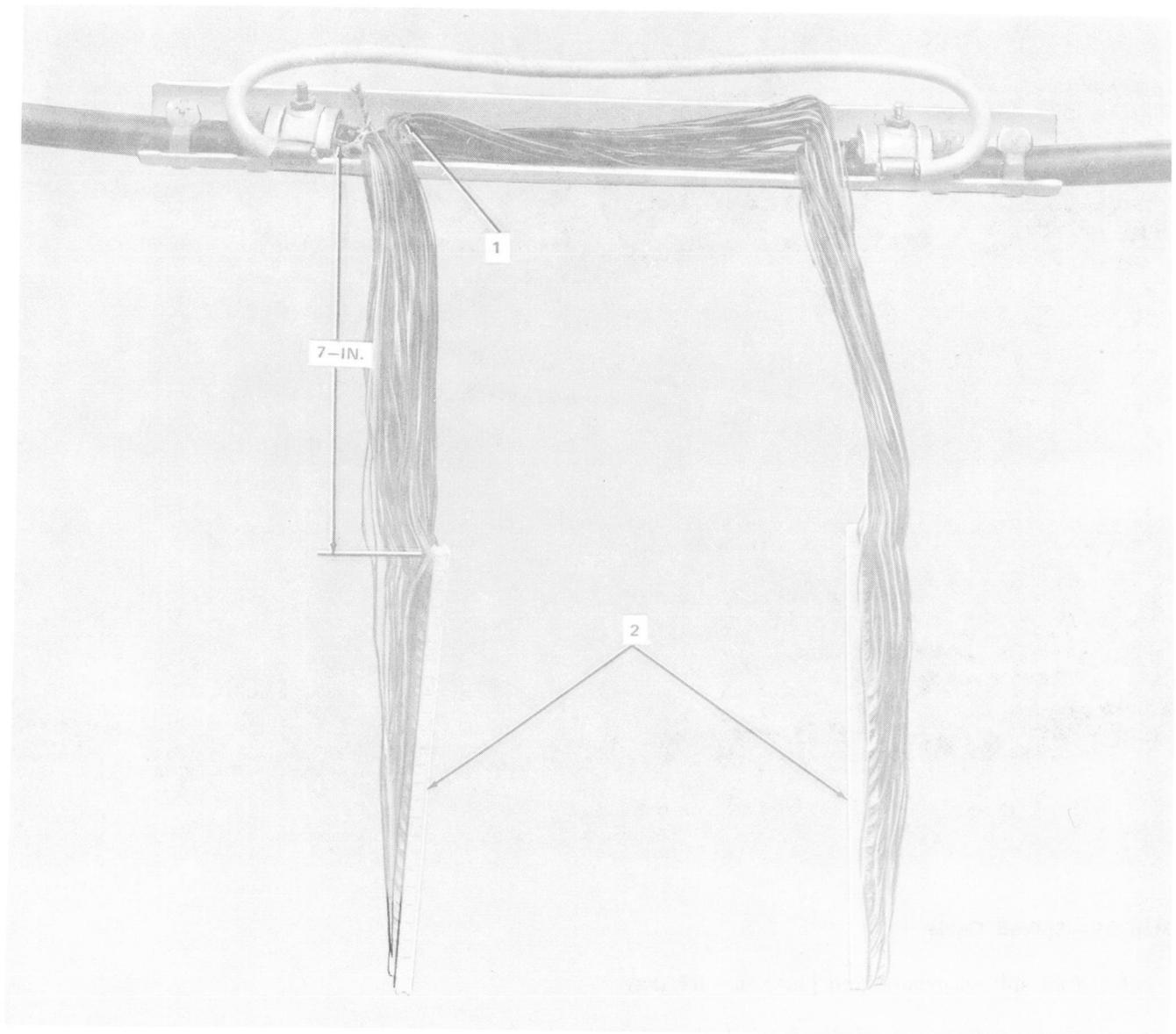
6. USE AS SPLICE CLOSURE

6.01 Steps 17, 18, and 19 illustrate the cable preparation for splicing a 50-pair cable (maximum size) using 710 connectors.

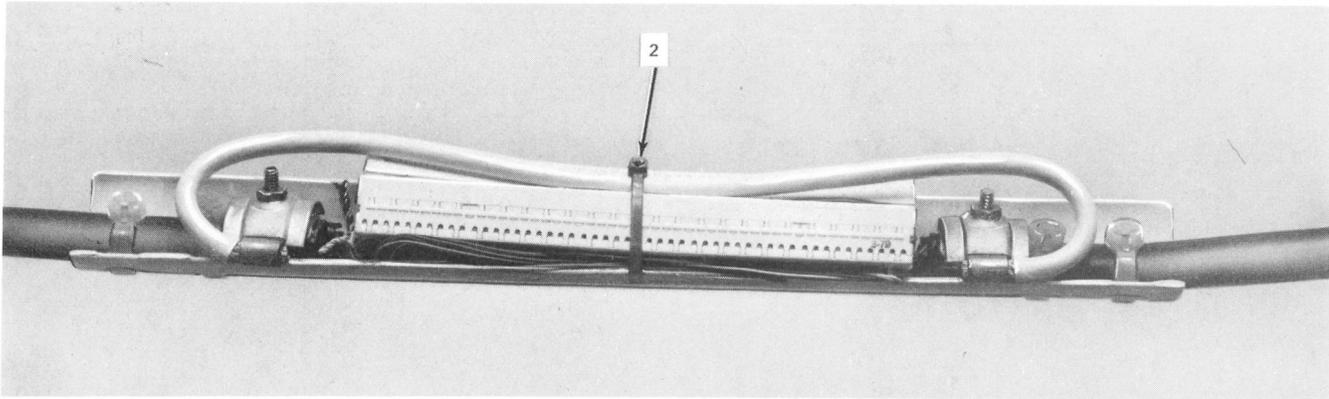
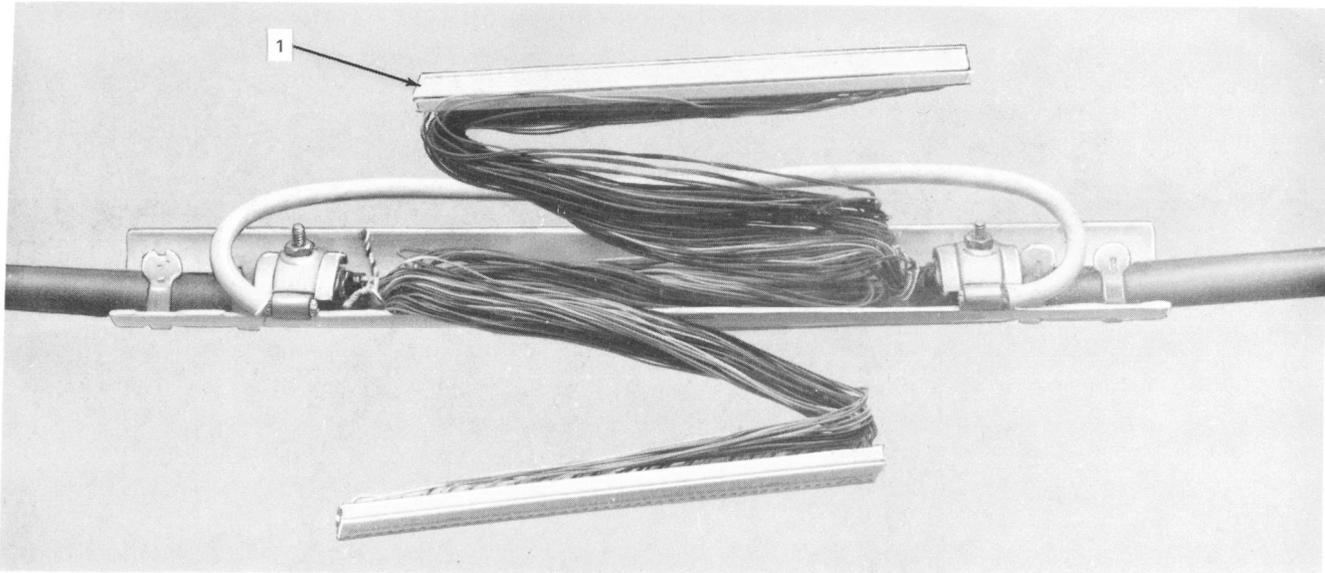


Step 17—Cable Sheath Preparation

1. Prepare cable for 8-inch sheath opening.
2. Install B bond clamp and bond strap as outlined in Step 2.
3. Install wire tray as outlined in Step 4.

**Step 18—Cable Prepared for Splicing**

1. Prepare cable for splicing using foldback method as outlined in Section 632-115-101.
2. Provide approximately 7 inches of slack and splice cable pairs using 710 connectors as outlined in Section 632-205-220.



Step 19—Spliced Cable

1. Fold spliced groups and place in wire tray.
2. Secure splice with cable tie, and close splice as outlined in Steps 9 through 14.