

REDDI™ CLOSURE FOR FREE BREATHING AERIAL USE

Completely read and understand this procedure before applying this product. Be sure to select the proper size PREFORMED™ product before application.

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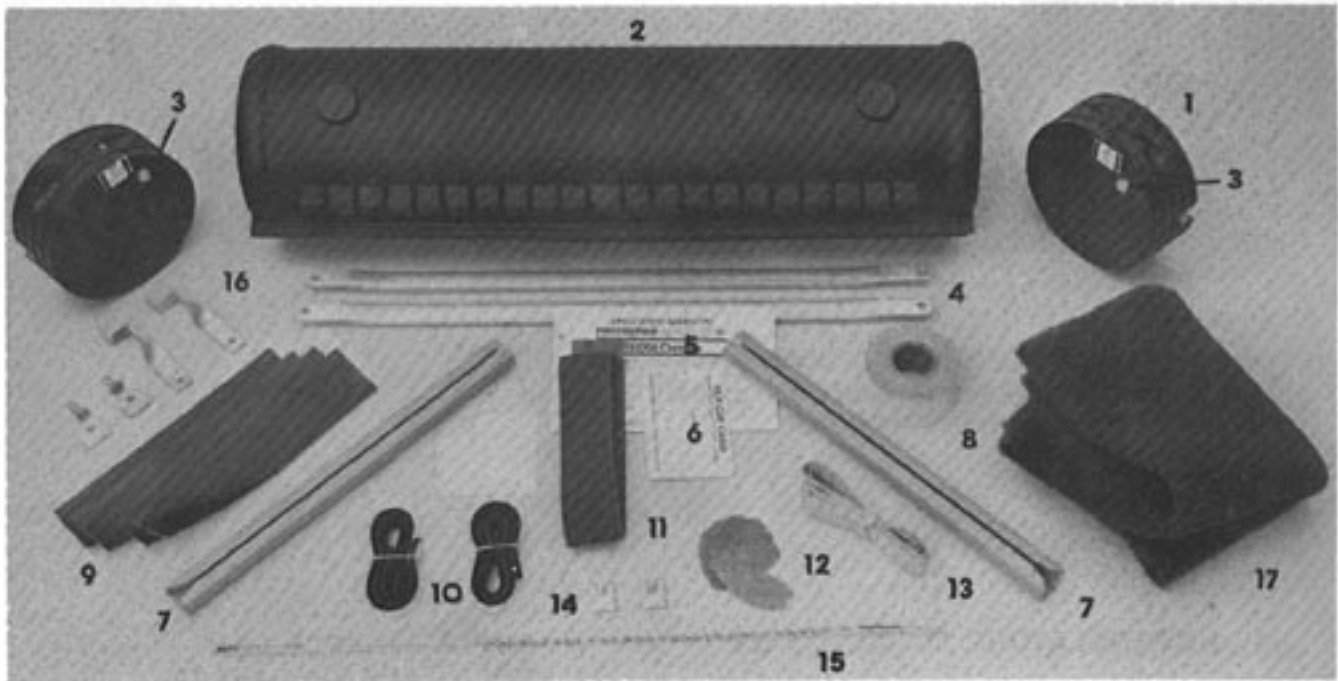


FIGURE 1 - REDDI CLOSURE KIT

1.00 NOMENCLATURE

1. Standard Two-Section End Plates
2. Shell
3. End Plate Insert (Grounding)
4. Torque Bars
5. Application Procedure
6. Cue Card
7. Closing Clamps
8. LOCK-TAPE™ roll
9. End Plate LOCK-TAPE strips
10. End Seals
11. Emery Cloth for Scuffing Sheath
12. Pair Protectors
13. Cable Bonding Braid
14. SURE-GRIP™ Shield Connectors
15. Cable Mea-SURE™ Tape
16. Aerial Hanger Assembly
17. Spacer Mat

1.01 PREFORMED™ plastic re-enterable closure kit contains everything needed for installation except tools, vinyl tape, and lashing clamps.

1.02 Tools Needed

- Snips
- Tabbing Shears
- Common Screwdriver
- 3/8" Nut Driver
- 1/2" Socket
- 7/16" Deep Well Socket
- End Plate Cutter

2.00 DESCRIPTION

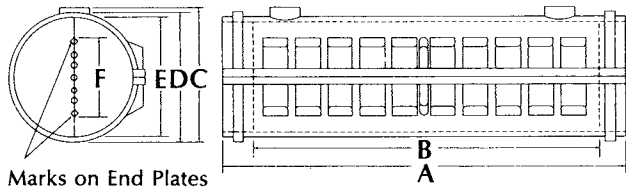
2.01 The REDDI Closure is a new product similar to PREFORMED LINE PRODUCTS' REDDI Seal. It is offered and recommended as a free-breathing, unfilled closure for enclosing splices on Aerial PIC and Air Core Cable.

2.02 CAUTION - REDDI Closure End Plates are not interchangeable with the pressurized PREFORMED Splice Case.

3.00 SELECTING PROPER MODEL

3.01 Use the following charts to select proper size closure for splice bundle diameter, cable opening, and End Plate cable capacity (Figure 2).

Use the charts on the next page to select proper size REDDI Seal and REDDI Closure for splice bundle diameter, cable opening, and End Plate cable capacity.



Marks on End Plates denoting area for cable entrance holes.

CABLE OPENING CHART (CM)	
REDDI Seal/Closure Diameters	*Maximum Cable Opening
3.0" x 25.8" (7.62x65.53)	16.5" (41.91)
4.0" x 25.8" (10.16x65.53)	16.5" (41.91)
6.5" x 28.4" (16.51x72.14)	19.0" (48.26)
9.5" x 28.4" (24.13x72.14)	18.0" (45.72)
6.5" x 38.5" (16.51x97.79)	29.0" (73.66)
9.5" x 38.5" (24.13x97.79)	28.0" (71.12)

MAXIMUM END PLATE CABLE CAPACITY* (CM)				
REDDI Seal/Closure Diameters	1 Cable	2 Cables	3 Cables	4 Cables
3.0" x 25.8" (7.62x65.53)	1.06" (2.69)	—	—	—
4.0" x 25.8" (10.16x65.53)	2.2" (5.59)	1.95" (4.95)	1.70" (4.32)	1.45" (3.68)
6.5" x 28.4" (16.51x72.14)	4.1" (10.41)	3.85" (9.78)	3.60" (9.14)	3.35" (8.51)
9.5" x 28.4" (24.13x72.14)	7.1" (18.03)	6.85" (17.40)	6.60" (16.76)	6.35" (16.13)
6.5" x 38.5" (16.51x97.79)	4.1" (10.41)	3.85" (9.78)	3.60" (9.14)	3.35" (8.51)
9.5" x 38.5" (24.13x97.79)	7.1" (18.03)	6.85" (17.40)	6.60" (16.76)	6.35" (16.13)

*Always allow 1/4" (0.64cm) clearance between cable holes. This clearance is allowed for in the above chart. These dimensions indicate the maximum combined cable diameters that can be accommodated in one end of the entire splice closure.

CASE DIMENSIONS (CM)						
REDDI Seal/Closure Diameters	A	B	C	D	E	F
3.0" x 25.8" (7.62x65.53)	25.8" (65.53)	20.3" (51.56)	3.6" (9.14)	3.5" (8.89)	3.0" (7.62)	1.06" (2.69)
4.0" x 25.8" (10.16x65.53)	25.8" (65.53)	20.3" (51.56)	4.6" (11.68)	4.4" (11.18)	4.0" (10.16)	2.2" (5.59)
6.5" x 28.4" (16.51x72.14)	28.4" (72.14)	22.7" (56.66)	7.1" (18.03)	6.8" (17.27)	6.5" (16.51)	4.1" (10.41)
9.5" x 28.4" (24.13x72.14)	28.4" (72.14)	21.7" (55.12)	10.1" (25.65)	9.8" (24.89)	9.5" (24.13)	7.1" (18.03)
6.5" x 38.5" (16.51x97.79)	38.5" (97.79)	32.8" (83.31)	7.1" (18.03)	6.8" (17.27)	6.5" (16.51)	4.1" (10.41)
9.5" x 38.5" (24.13x97.79)	38.5" (97.79)	31.8" (80.77)	10.1" (25.65)	9.8" (24.89)	9.5" (24.13)	7.1" (18.03)

REDDI SEAL RESIN CAPACITY (CM)		
REDDI Seal Diameters	Resin	
	Grams ¹	Grams ²
3.0" x 25.8" (7.62x65.53)	2,350	2,115
4.0" x 25.8" (10.16x65.53)	4,200	3,780
6.5" x 28.4" (16.51x72.14)	12,300	11,070
9.5" x 28.4" (24.13x72.14)	25,000	22,500
6.5" x 38.5" (16.51x97.79)	17,800	16,020
9.5" x 38.5" (24.13x97.79)	36,800	33,120

¹Amount of resin required to fill entire closure without splice.

²Recommended amount of resin assuming 10% of closure is occupied by splice.

FIGURE 2 - REDDI CLOSURE DIMENSIONAL CHARTS

4.00 MEASURING CABLE FOR POWER END PLATE CUTTER BLADE SELECTION AND LOCK-TAPE™ SEALANT APPLICATION

- 4.01 Measure the cable. The cable measuring tape serves two purposes:
- It designates the proper blade to use for cutting holes in the End Plates.
 - It designates either one or two half-lapped layers of 1-1/2" LOCK-TAPE Sealant to be wrapped around the cable. (Figure 3, Figure 4).

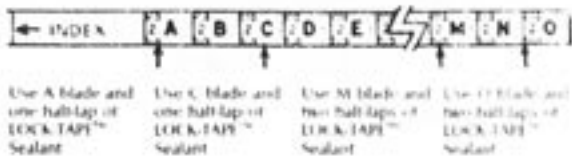


FIGURE 3 - CABLE MEA-SURE™ TAPE

PLP TIP: If the index falls on the line between areas, proceed as if the index line had fallen immediately to the right of the indexed line. (Refer to Figure 4).

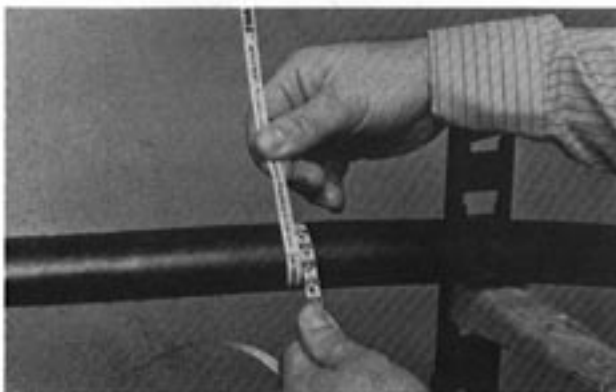


FIGURE 4 - MEASURING CABLE WITH MEASURING TAPE

PLP TIP: Cable will vary in diameter from place to place along its length so be sure to measure each cable at the area where the End Plate will be placed.

Be sure to use the PLP* CUE CARD, found in each splice closure, when measuring cables. This field worksheet will assure correct cutter blade size, proper hole cutting locations, and correct amount of LOCK-TAPE Sealant to be wrapped around cable(s). (Figure 4a)

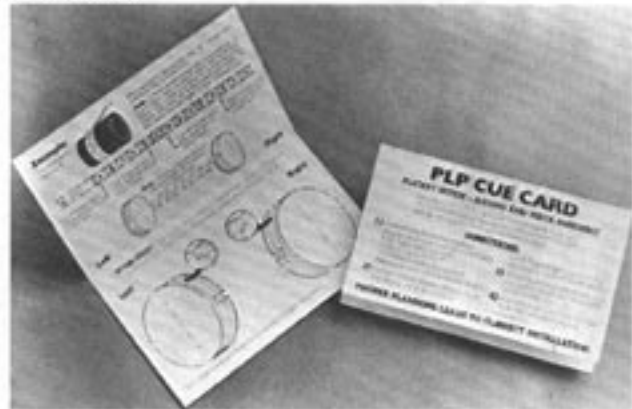


FIGURE 4A - CUE CARD

5.00 CUTTING END PLATE WITH POWER END PLATE CUTTER

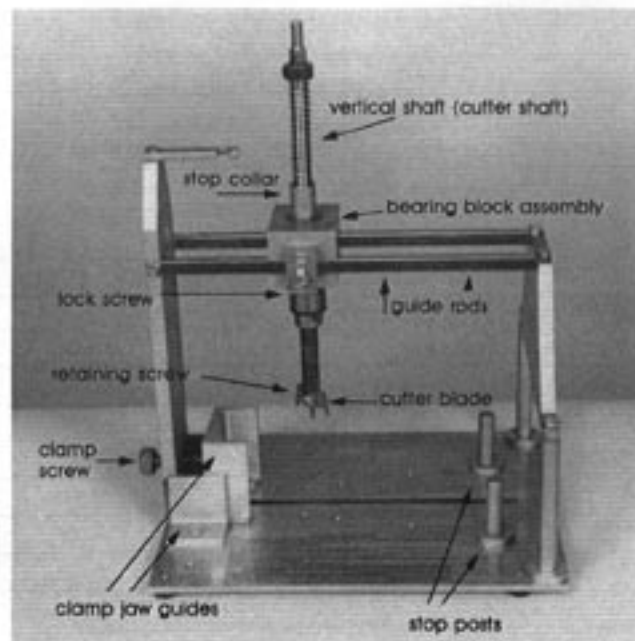


FIGURE 5 - POWER END PLATE CUTTER

- 5.01 Choose the correct size blade from the Power End Plate Cutter Blade Kit according to the reading acquired from CABLE Mea-SURE Tape.

- 5.02 Slide blade into slot in lower end of vertical shaft, and tighten retaining screw (Figure 6).

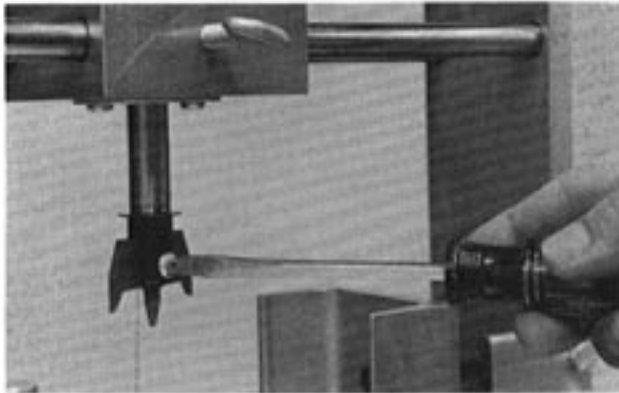


FIGURE 6 - TIGHTENING RETAINING SCREW

PLP TIP: If retaining screw is difficult to tighten, be sure that it is not clogged with dust from previous cuttings.

- 5.03 Insert stop-posts in tapped holes in base of cutter corresponding to End Plate diameter and hand tighten firmly (Figure 7).



FIGURE 7 - INSERTING STOP-POSTS

- 5.04 Back off clamp screw until End Plate can be placed in cutter. End Plate should lie on top of flanges of stop-posts and clamp-jaw guides (Figure 8).



FIGURE 8 - PLACING END PLATE IN CUTTER

PLP TIP: Make sure outer edges of End Plate sections are mated. If not, loosen clamp screw and adjust.

- 5.05 Place End Plate with seam (Figure 9), parallel to guide rods and hand tighten screws.

NOTE: The holes must cut along the seam of the End Plate halves and within the outer dimensional marks indicated by the arrows (Figures 9, 9a).

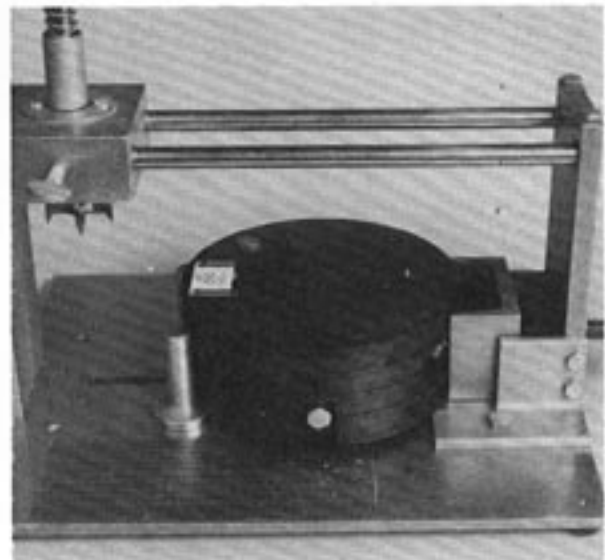


FIGURE 9 - POSITIONING END PLATE

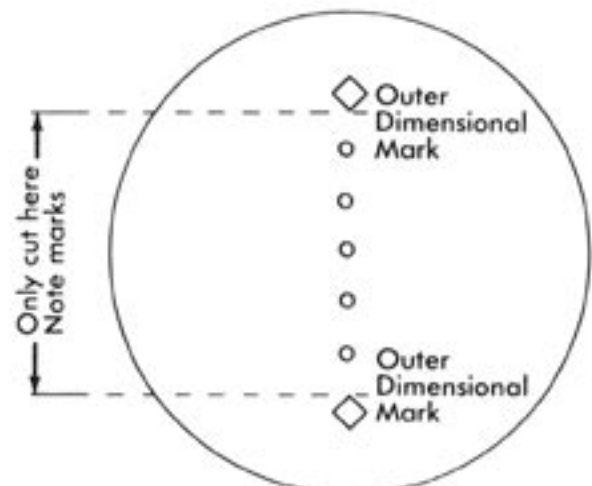


FIGURE 9A - POSITIONING END PLATE

NOTE: Always allow 1/4" (0.64 cm) clearance between cable holes for Two-Section End Plates. This clearance is allowed for in the dimensional chart (Figure 2). These dimensions indicate the maximum combined cable diameters that can be accommodated in one end of the splice closure.

5.06 Loosen lock screw in bearing block. Lower shaft until center point of cutter blade is on desired position for center of hole. Hand tighten lock screw in bearing block (Figure 10).

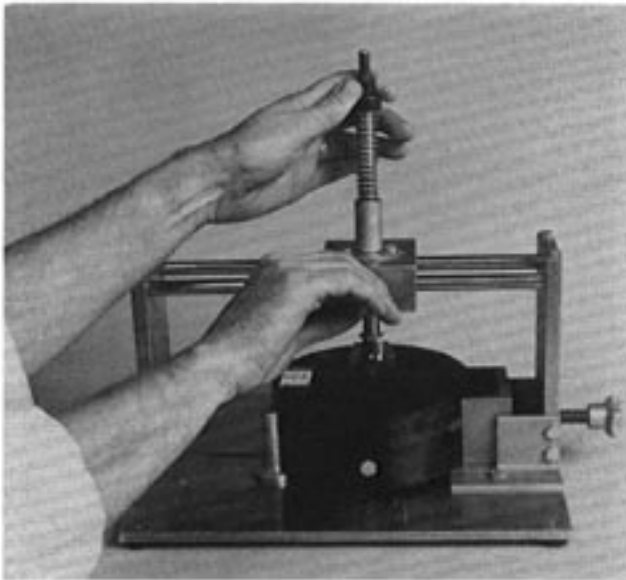


FIGURE 10 - CENTERING THE CUTTER BLADE

PLP TIP: The lock screw in the bearing block is backed up by a small nylon pellet. If undue pressure is necessary to hold the bearing block in place, this pellet may be missing. Do not force the lock screw. This can scar the guide rails and render the cutter unusable. Remove the screw and insert a small piece of cable sheath. This will serve the same purpose as the nylon pellet. Additional nylon pellets are available from PLP.

5.07 Mount a 3/8" electric drill (Drill Part #80851659) with a 1/2" deep well socket to upper end of the cutter shaft.

PLP TIP: A special drill motor is available from PLP. No matter what type of electric drill you use, be sure to press down on the body of the drill so the pressure is not exerted sideways on the shaft. This will result in a much longer life of the bearing blocks. Drill through the End Plates slowly.

5.08 Cut through the black plastic of End Plate, until foam is just visible in ring (Figure 11). Use screwdriver to pop out plastic disc (not necessary for A, B, C and D blades). (Figure 12) Continue cutting through foam and lower black plastic until stop collar on shaft bottoms on bearing block. Never bring blade back up through the End Plate while it is turning.

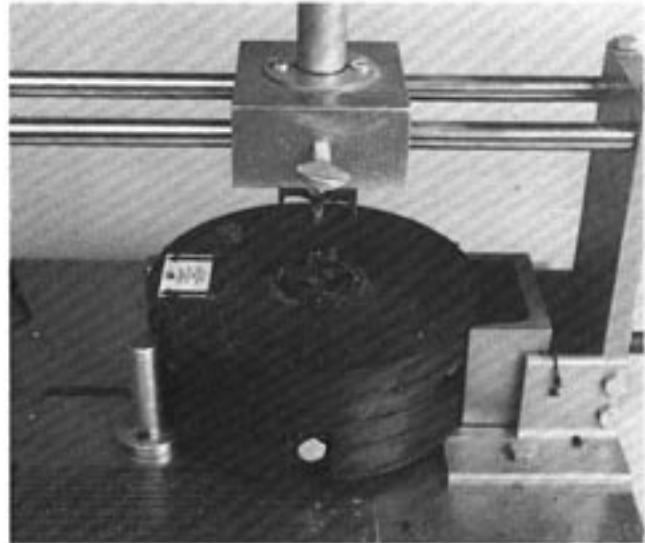


FIGURE 11 - CUTTING THROUGH PLASTIC SHELL

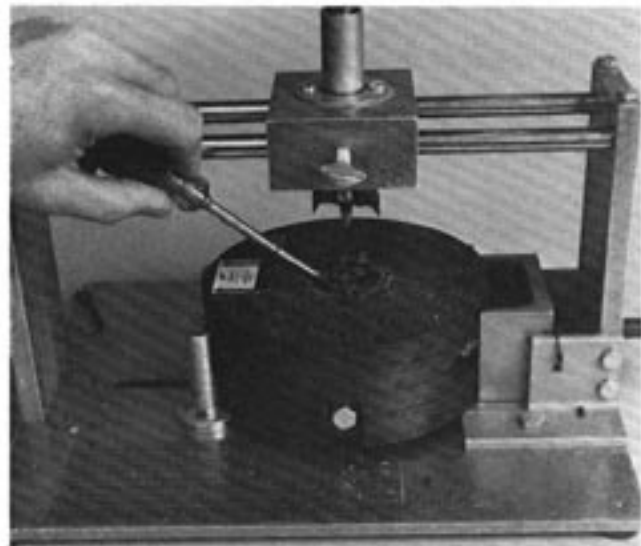


FIGURE 12 - REMOVING PLASTIC DISC

5.09 Remove drill motor. If another hole of same or different diameter is required in End Plate, follow appropriate steps above to change cutter blades or to move bearing block to new position.

5.10 Disassemble End Plates by removing the two bolts.

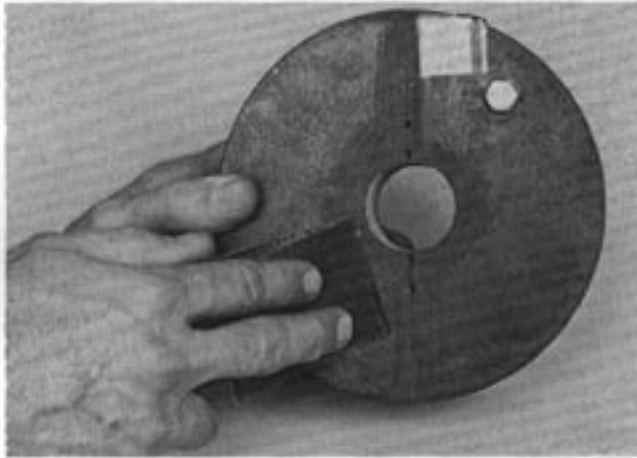


FIGURE 13 - SCUFFING OUTSIDE END PLATE SURFACE

5.11 Use emery cloth provided to remove sharp edges on plastic and foam in area of opening (Figure 13). Scuff lightly. **DO NOT REMOVE TOO MUCH MATERIAL.**

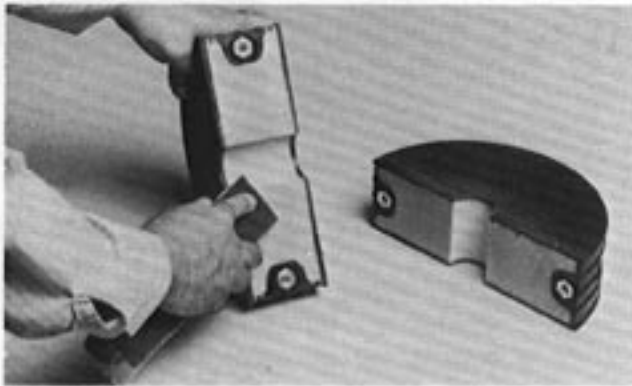


FIGURE 14 - SCUFFING CABLE OPENING AREA

PLP TIP: This simple operation will help prevent catching the sheath and pinching it when drawing the End Plates together. **ONLY USE EMERY CLOTH PROVIDED FOR THIS PROCEDURE.**

6.00 CABLE PREPARATION

6.01 General information about cable preparation:

1. Refer to REDDI Seal Closure dimensional charts for maximum cable opening (Figure 2).
2. Apply 1-1/2" LOCK-TAPE™ Sealant to the cable(s) only if the End Plates are to be installed immediately. This will help prevent the LOCK-TAPE Sealant from getting dirty.
3. Do not attach splicing tools on the cable sheath where End Plates will be placed.
4. Always try to place the End Plate on cable sheath that is in good condition.
5. Since the cable is locked into place with the LOCK-TAPE Sealant, it makes no difference where the Shield Bond Connectors are placed, but the tab slit for the connector must not extend under the End Plate.
6. If Jelly Filled Cable is opened (prior to installing the End Plates), mask the cable with vinyl tape to protect the cable sheath. This simple procedure prevents any cable compounds from affecting the adhesion of LOCK-TAPE Sealant to the cable sheath. Make certain that the vinyl tape is removed prior to application of LOCK-TAPE Sealant.
7. If splicing methods permit, it is preferable to apply the End Plates prior to the bonding and splicing operation. This will assure a good clean seal.

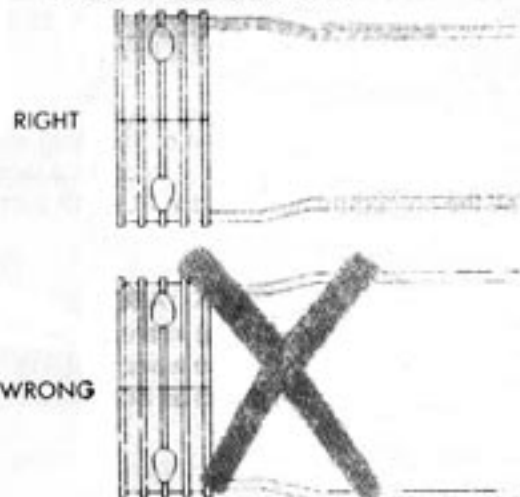


FIGURE 15 - TORQUE BAR PLACEMENT 7

6.02 Select End Plate halves with threaded bolt holes in the metal reinforcing collar. Bolt these halves to a torque bar. The offset in the torque bar should face the splice bundle (Figure 15). Use this assembly to mark area to be cleaned, scuffed, and the cable opening (Figure 15a).

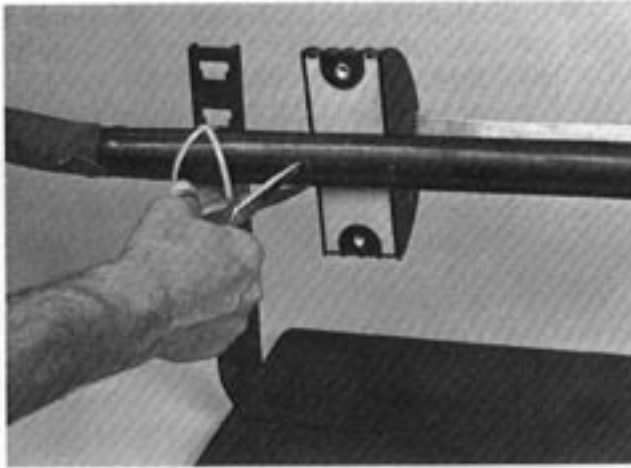


FIGURE 15A - MARKING SHEATH AREA TO BE CLEANED

6.03 Remove all grease, cable lubricant, mud, etc. from cable. Thoroughly scuff cable for 6" (15.24 cm) to 8" (20.32 cm) in the area marked.

PLP TIP: Use emery cloth provided with closure. Always scuff around the cable, never lengthwise along it. Be sure all deep grooves are removed.

6.04 Re-mark End Plate location using torque bar/ End Plate assembly as in Step 6.02.

7.00 APPLICATION OF 1-1/2" (3.81 CM) LOCK-TAPE™ SEALANT TO CABLE

7.01 Coat the scuffed area of the cable with C-Cement and allow it to dry to a tacky base. Use the procedure described in **PLP TIP 9.01** to help C-Cement dry fast.

7.02 Half lap 1-1/2" LOCK-TAPE Sealant around cable (black side up) in area of cable coated with C-Cement. Stretch tape while applying. Use one or two half lapped layers as determined by the measurement (Figure 16).

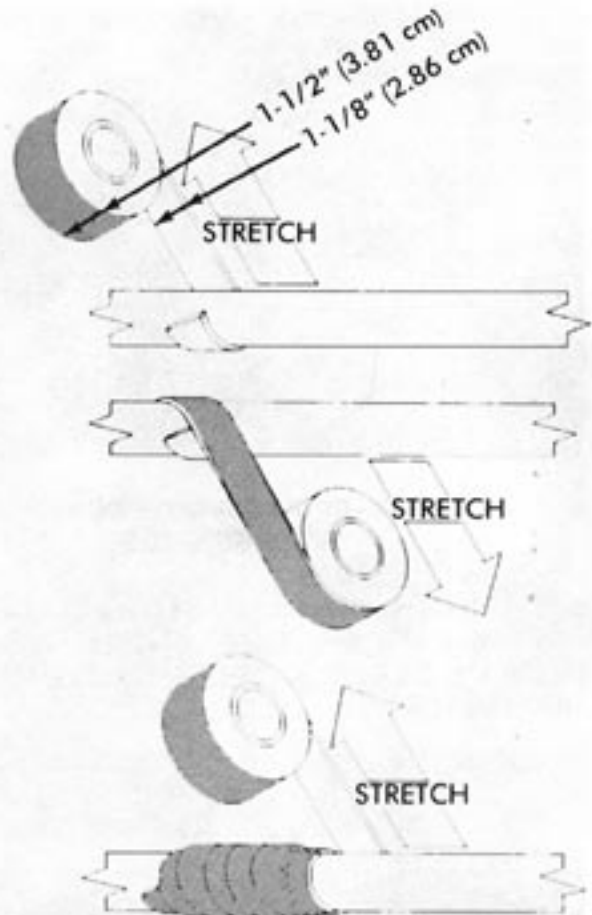


FIGURE 16 - APPLYING LOCK-TAPE™ SEALANT

PLP TIP: Stretch tape enough to reduce its width to 1-1/8". Be sure to remove backing from white side while applying tape. The white side is the sticky side, and should be applied toward the cable. Figure 17 shows the completed application of one half-lap of LOCK-TAPE Sealant.

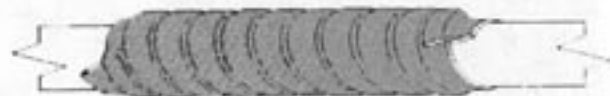


FIGURE 17 - LOCK-TAPE™ SEALANT APPLIED TO SHEATH

7.03 Be sure to keep the LOCK-TAPE Sealant wrap dry, free from grease and dirt.

8.00 APPLYING END PLATES TO CABLE

8.01 Apply a thin coat of C-Cement to each inside surface of End Plates as shown in Figure 18.

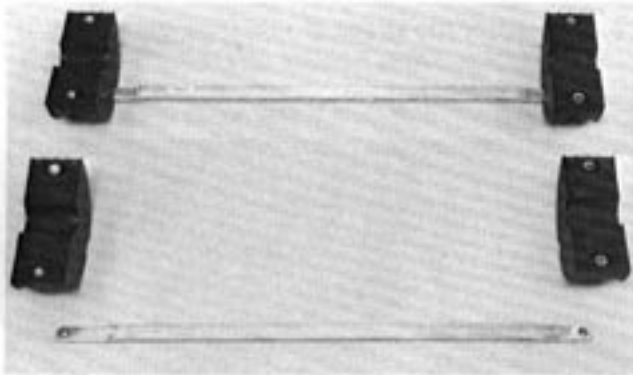


FIGURE 18 - APPLICATION OF C-CEMENT TO END PLATE SURFACES

PLP TIP: Use removed backing from LOCK-TAPE Sealant to dry C-Cement to End Plate (Figure 19).



FIGURE 19 - DRYING C-CEMENT

8.02 When C-Cement becomes tacky, remove protective backing and apply the LOCK-TAPE Sealant, white side down and without stretching tape, to each End Plate half, following the contour of the cables holes. Square cut the tape away from the bolt hole area just beyond metal insert (Figure 20).

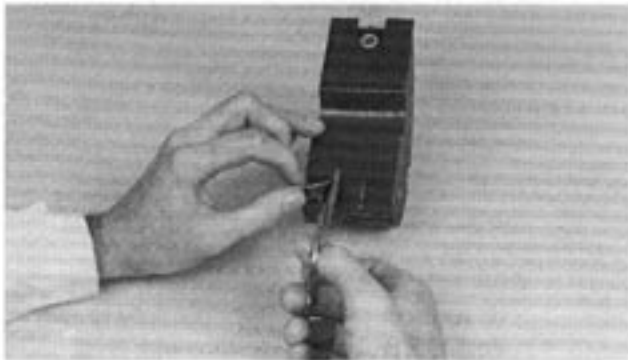


FIGURE 20 - LOCK-TAPE SEALANT APPLICATION TO END PLATE HALF

8.03 Before applying the prepared End Plate halves to cable, apply the C-Cement 1/2" (1.27 cm) wide adjacent to the hole and 1/2" wide into the hole for the total width of the End Plate (Figure 21).

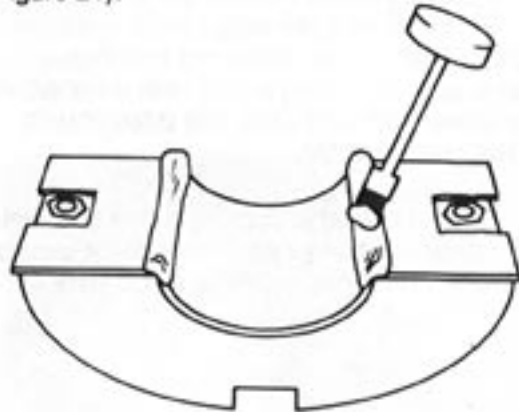


FIGURE 21 - APPLYING C-CEMENT TO END PLATE HALF

8.04 Figure 22 shows the completed LOCK-TAPE Sealant application to the End Plate halves.

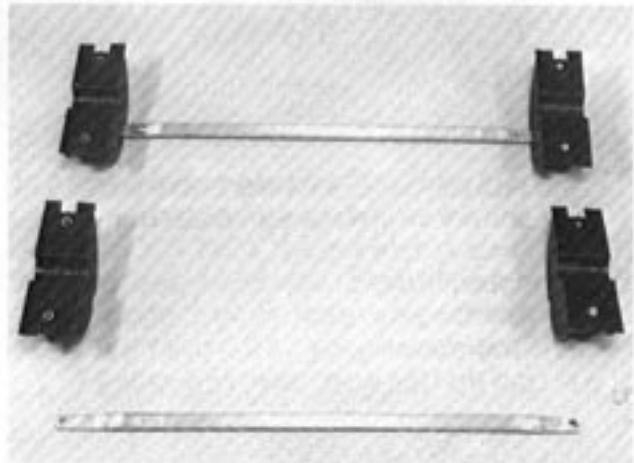


FIGURE 22 - COMPLETED PREPARATION OF END PLATE HALVES

8.05 Before applying End Plates, oval cable slightly to prevent pinching sheath and apply End Plates over oval as shown in Figure 23.

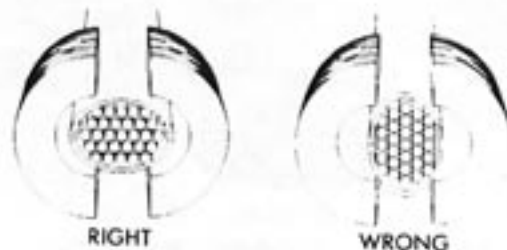


FIGURE 23 - SHAPING CABLE

NOTE: Lead cable must be rounded, layered with LOCK-TAPE Sealant, and then proceed with installation.

8.06 Position the End Plate torque bar assembly on the cable at the proper point and apply mating End Plate halves. Bring the End Plates together evenly, tightening each bolt in rotation 2 or 3 turns at a time. **DO NOT USE AIR WRENCHES FOR THIS OPERATION.**

8.07 Using a ratchet wrench, draw the End Plate halves completely together until the excess LOCK-TAPE Sealant separates and lays back as illustrated in Figure 24.

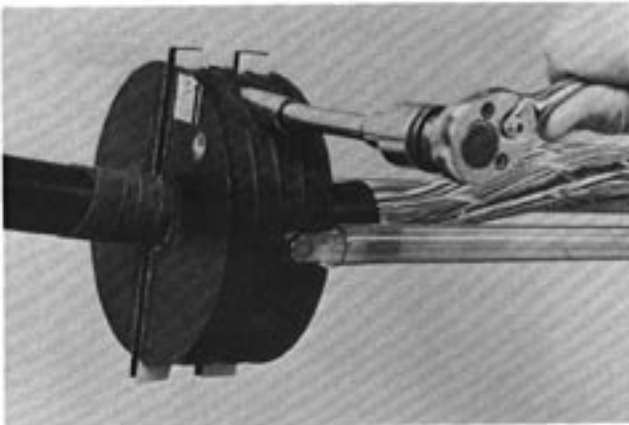


FIGURE 24 - DRAWING END PLATE HALVES TOGETHER

8.08 When End Plates are completely together, trim the excess LOCK-TAPE Sealant with snips to approximately 1/4" (.62 cm) of the End Plate. Do not pull the tape when trimming (Figure 25).

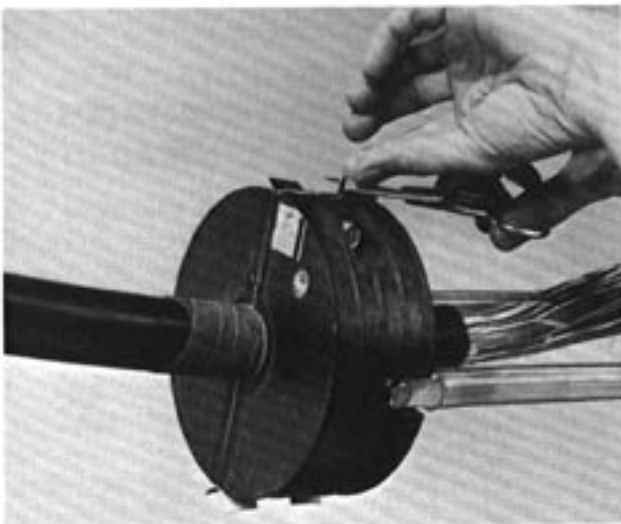


FIGURE 25 - TRIMMING THE LOCK-TAPE™ SEALANT

8.09 Apply two wraps of vinyl tape over exposed LOCK-TAPE Sealant on cables (Figure 26).

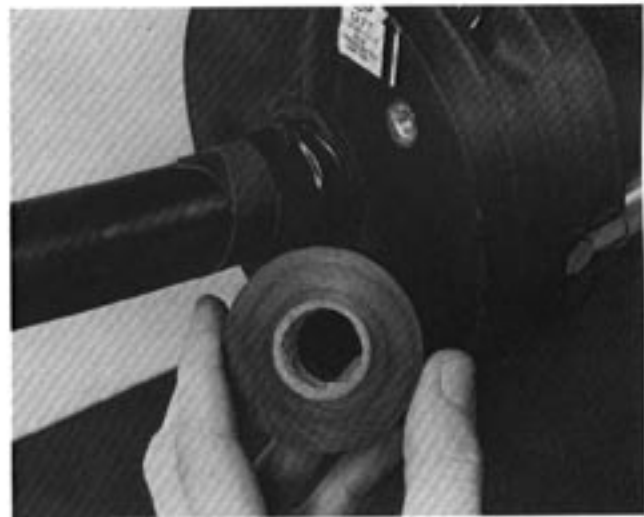


FIGURE 26 - APPLICATION OF VINYL TAPE TO CABLE

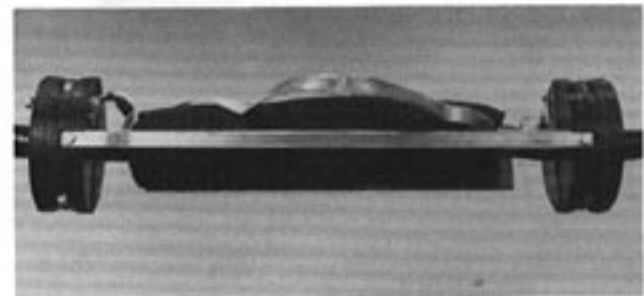


FIGURE 27 - SPACER MAT APPLICATION OVER SPLICE BUNDLE

8.10 Wrap the complete splice bundle with the open cell spacer mat supplied. This will prevent any part of the splice bundle from contacting the wall of the closure (Figure 27).

PLP TIP: Front torque bar may be removed for ease of application of spacer mat. Do not wrap too tightly. A tight wrap will constrict the flow of resin into the core of the splice.

8.11 After the splice is wrapped, re-install the torque bar.

PLP TIP: After torque bars have been re-applied, be sure bolts are fully drawn down so as not to interfere with shell placement.

9.00 BONDING

9.01 If the cable shield is to be externally grounded, continue the bonding braid through the shield connector and insert the end of the braid into the bonding clip. Bolt the clip and the braid to the bonding insert (Figure 28).



FIGURE 28 - INSERTION OF BONDING BRAID INTO BONDING CLIP - END PLATE INTERIOR

9.02 Bolt the bonding ribbon and clip to the outside face of the End Plate in a similar manner (Figure 29).

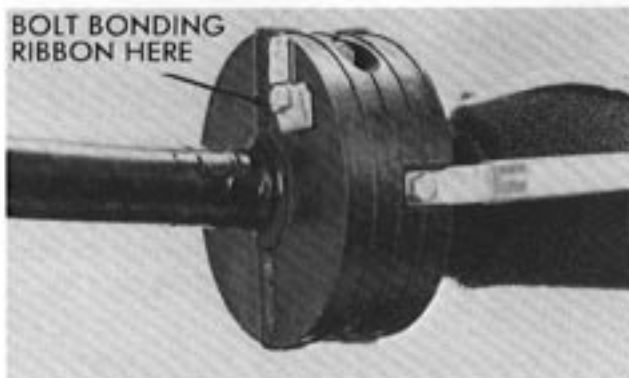


FIGURE 29 - INSERTION OF BONDING RIBBON ONTO BONDING CLIP - END PLATE EXTERIOR

10.00 END SEAL APPLICATION

10.01 Apply one 1-1/2" (3.81 cm) LOCK-TAPE™ Sealant wrap over the End Plates, around the outside three rings. Stretch LOCK-TAPE Sealant strip as you apply it around the End Plates (Figure 30). See PLP TIP 7.02.

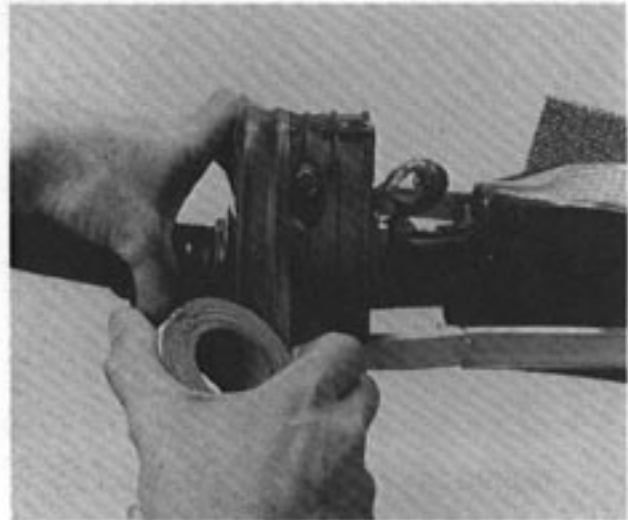


FIGURE 30 - LOCK-TAPE SEALANT APPLICATION OVER END PLATES

10.02 Remove the backing and apply the neoprene end seals around the End Plates over the LOCK-TAPE Sealant wrap (Figure 31). Overlap the ends of the end seal. Make sure the overlap is where the flange opening will be located.



FIGURE 31 - APPLICATION OF END SEALS

PLP TIP: When overlapping the end seal, press the overlap down onto the bevel so that the upper portion of the seal fills any void at the overlap junction.

11.00 INSTALLING THE SHELL

11.01 Attach the hangers to the messenger wire using a lashing wire clamp (Figure 32). Do not tighten nuts at this time.

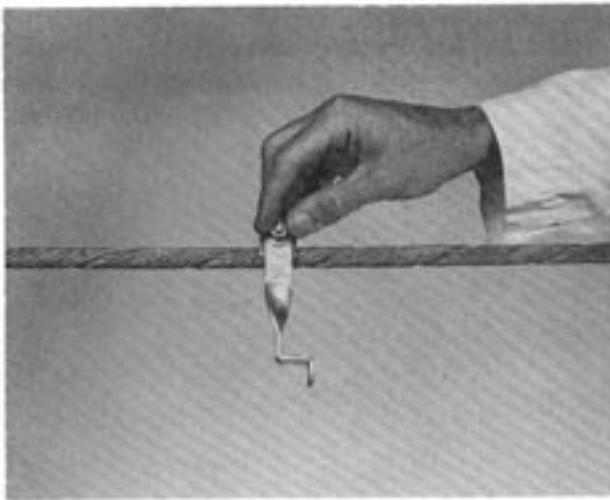


FIGURE 32 - ATTACHING HANGERS TO MESSENGER

11.02 Attach the hangers to the outside surface of each End Plate using the bolts supplied (Figure 33). Do not tighten the bolts at this time.

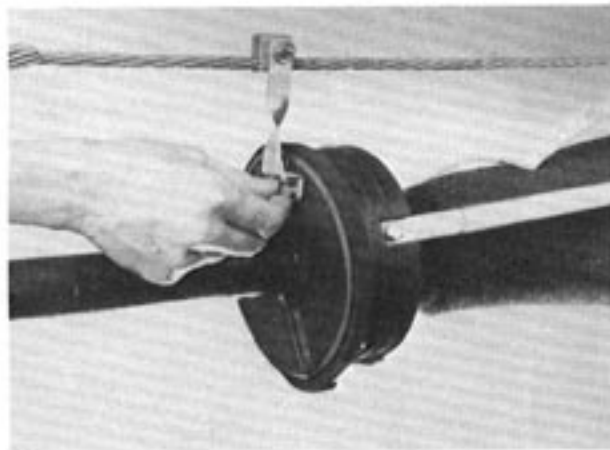


FIGURE 33 - ATTACHING HANGERS TO END PLATE

11.03 Position the splice and End Plate assembly so that it hangs freely beneath the messenger wire. Now tighten all nuts and bolts (Figures 34-35).

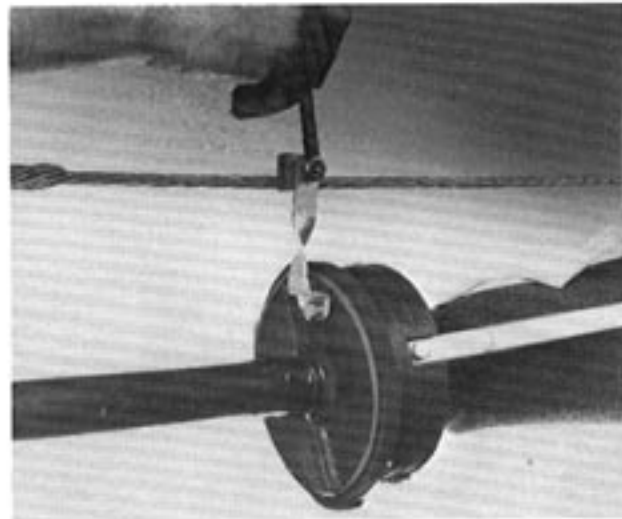


FIGURE 34 - TIGHTENING NUTS AND BOLTS

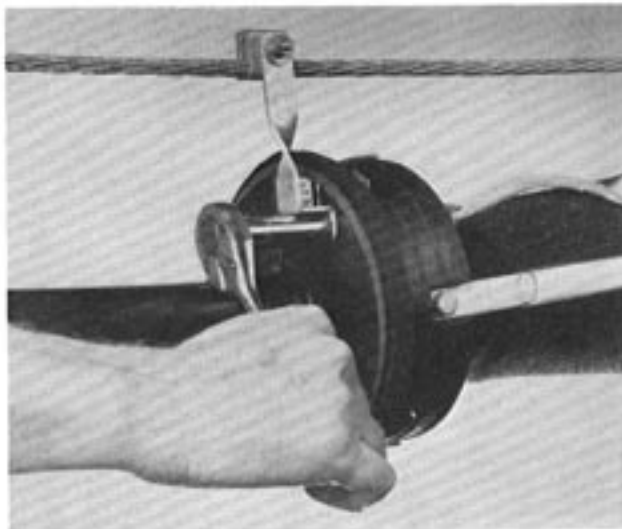


FIGURE 35 - TIGHTENING NUTS AND BOLTS

11.04 Apply the shell over the End Plates by reaching one hand over the messenger wire and spreading the shell opening until the shell fits over the End Plates (Figure 36).

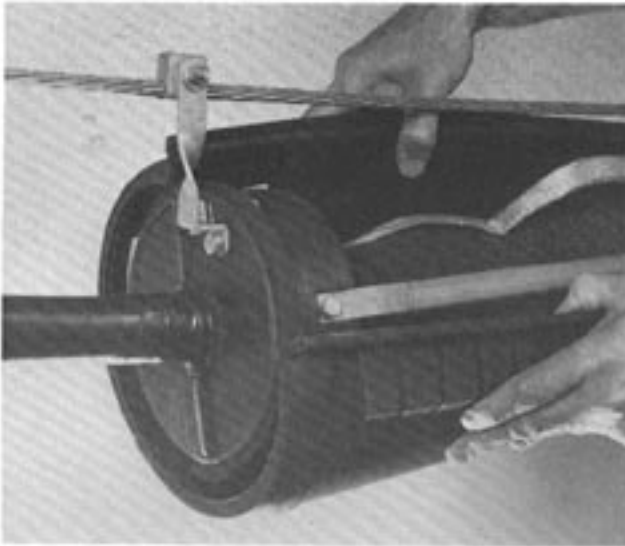


FIGURE 36 - APPLYING THE SHELL

11.05 Position the shell over the End Plate assembly so that the flange is in the down position. Then squeeze the flanges together and fully apply the closing clamps (Figure 37).

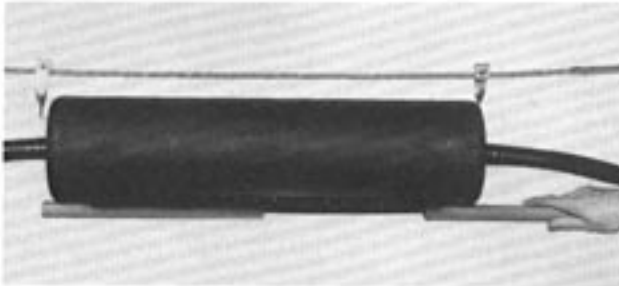


FIGURE 37 - APPLYING CLOSING CLAMPS

11.06 The completed closure installation (Figure 38).

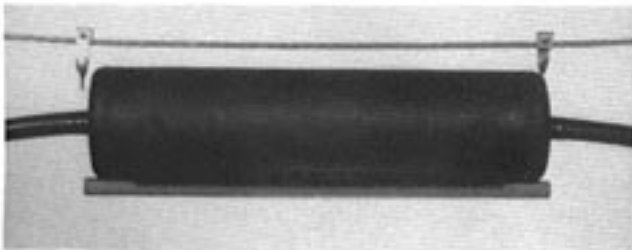


FIGURE 38 - COMPLETED APPLICATION

12.00 RE-ENTRY

12.01 Remove the plastic closing clamps.

12.02 Spread the shell opening and remove the shell completely.

12.03 To re-install the shell, repeat steps 11.04 through 11.06

12.04 If additional cables are to be added, a new End Plate(s) must be used. Install according to this practice. Remove all old sealing tape and LOCK-TAPE Sealant from the cable and shell.

13.00 SAFETY CONSIDERATIONS

13.01 This product is intended for use by trained craftspeople only. This product **should not be used** by anyone who is not familiar with and trained in the used of it.

13.02 For proper performance and personal safety, be sure to select the proper size PREFORMED product before application.

13.03 This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures and restrictions may result in personal injury.

13.04 When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.



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