FOSC 450 C6 and D6 Closures

INSTALLATION INSTRUCTION

Fiber Optic Splice Closure

1. General Product Information

The FOSC 450 C6 and D6 fiber optic splice closures use compressed gel cable seals to environmentally seal fiber cable splice points. The maximum single splice capacity of the FOSC 450 C6 closure is 192 with 24 splices stored on eight trays and no slack basket present. The maximum mass fusion splice capacity is 864, requiring six trays. The larger FOSC 450 D6 closure features splice capacities of 576 single or 1152 mass fusion splices.

Note: Cable blocking is not recommended in this closure due to space constraints.

2. Kit Components

- Dome and clamp
- Base and o-ring
- Tray bracket support or metal slack basket
- Gel end-piece
- hook and loop fastener straps
- 4 Gel end-piece plugs
- 6 Cable strain relief holders and clips/6 hose clamps
- 6 Small strength member attachment brackets
- 2 Large strength member attachment brackets
- 6 Bond clamps (3" long)
- 2 Braided grounding straps
- 12 Small tie wraps
- 1/4" Nut driver to install hose clamps
- Transportation tubes/spiral wrap
- Ribbon buffer tube storage "sock"
- LBT (loose buffer tube) wrap
- Installation instructions

Other Accessory Kits:

- FOSC ACC C Tray 12 and 24 (Extra tray kits)
- FOSC ACC C/Gel Cable kit (Replacement cable termination components)
- FOSC ACC C/Basket
- FOSC ACC D Tray 36, 48 or 72 (Extra tray kits)
- FOSC ACC D/Ribbon - 24
- FOSC 450 Cable Term kit (Replacement cable termination components)
- FOSC ACC D/Basket

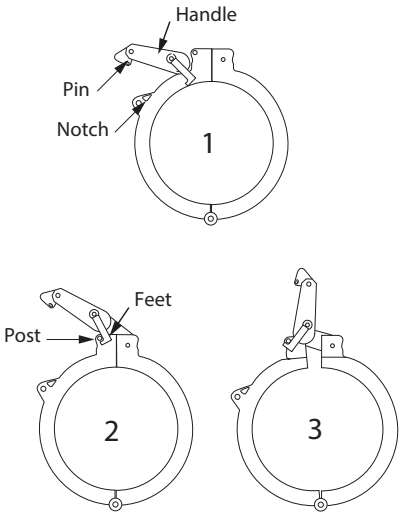


Figure 1

3. Closure Entry

To remove the dome from the closure, release the clamp handle. Slight pressure applied to the side of the handle will dis-engage the locking tab. Hook the handle on the two posts, and pull back until the clamp releases from the closure. Keep the o-ring, clamp, and dome clean and dry. (Figure 1)

IMPORTANT: Leave unused components and installation instructions in bag inside closure for future cable terminations. If these parts are lost, you will need to order the above 450 C or D cable kit to terminate future cables.

4. Base Removal

1. Loosen the four bolts to remove the metal frame from the FOSC 450 closure base. (Figure 2).
2. **Slide the base (narrow end first) up and out of the way, over all cables that are to be spliced.**

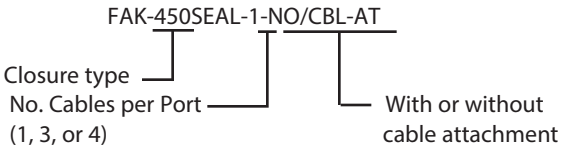
Figure 2

5. Cable Preparation

IMPORTANT: Small round or flat cable installations – If cables are less than 0.35″ in diameter or flat drop style, an additional step is required for cable sealing in the port. In this case the cable diameter must be built up to the minimum 0.35″ diameter. In addition, if multiple small cables like these are to be installed in a single port, it is imperative that gel is applied between the cables before installing them into the gel port. See FOSC 450 Small/Seal-3 or -4 Cable Kit installation instructions or FOSC 450 Single Small Cable Kit installation instructions for further details.

Cable combinations in multi-drop kits and single cables are not to exceed 1″ in diameter.

Use these accessory kits to seal multiple small cables in a single port:



Note: The maximum slack storage lengths listed below will be reduced when working with LBT cable containing more than 144 fibers.

Note: When using the standard tray to store ribbon splices, the ribbons must be routed to the slack basket first. Do not route ribbons directly to the tray unless they will be de-ribbonized for single splicing. See accessory list for ribbon tray description.

Table 1: Cable Type	Opening Location	*FOSC 450 C6 Closure* Min. & Max. Suggested Storage Length ***	*FOSC 450 D6 Closure* Min. & Max. Suggested Storage Length ***	*Strength Member Lengths* Small Bracket	Large Bracket
Loose Buffer Tube*	Midspan	52″ - 112″ in Tall basket 52″ - 90″ in Standard basket	102″ - 140″ in Tall basket 102″ - 120″ in Standard basket	2″	2.5″
	End	43″ - 72″	55″ - 75″		
Loose Buffer Tube Ribbon	Midspan	60″ - 86″	70″ - 140″		
	End	30″ - 45″	70″ - 90″		
Central Core Tube Ribbon**	Midspan	60″ - 86″	70″ - 140″		
	End	30″ - 45″	70″ - 90″		

* LBT: 52″ goes directly to tray. 90″ cut in center makes one small loop in basket and approx. 22″ on tray.

** Ribbon: 60″ small loop in basket in front of tower and onto the tray. 86″ loop to the end of the basket and onto the tray .

*** The Minimum cut length is based on cutting dead-to-the-field side going directly to the tray. The Maximum cut length isbased on entry into the basket to tray.

5.1 Loose Buffer Tube Cable

For loose buffer tube cable midspan applications, remove cable sheath for a length identified in the table above. Store any uncut buffer tubes in the slack basket. If shield is present, tab 1″ and attach bond wire. Wrap the installed bond wire tightly with two or three wraps of vinyl tape.

Warning: Do not use a braided or stranded ground wire when installing a ground through a port on the FOSC 450 closures. CommScope requires that a bonded solid ground wire be used to prevent a leak path and make a proper seal.

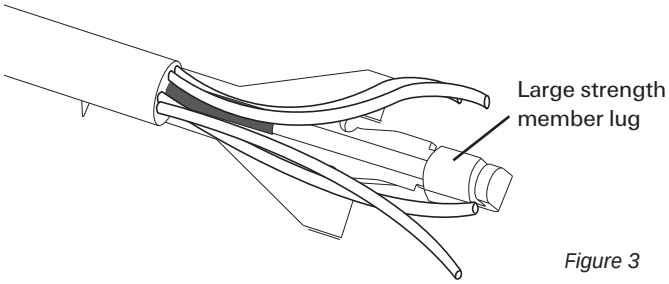


Figure 3

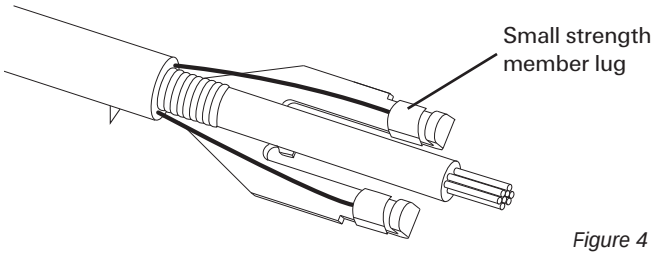


Figure 4

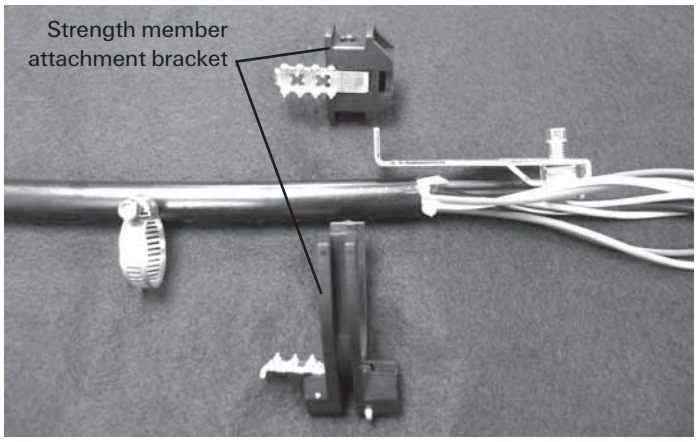


Figure 5

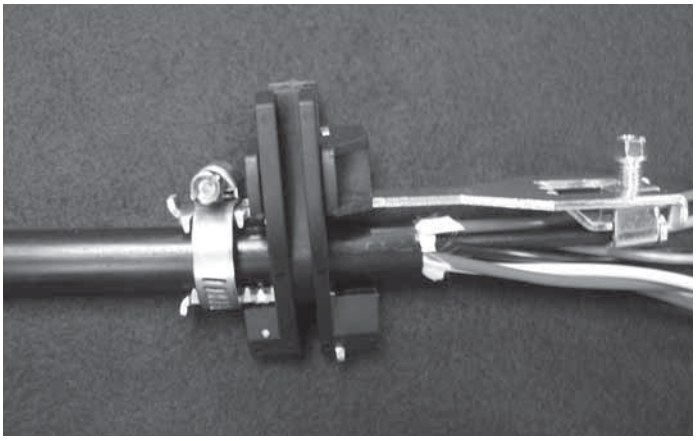


Figure 6

5.2 Loose Buffer Tube Cable: Ribbon/Central Core

For loose buffer tube ribbon cable midspan applications, remove cable sheath for a length identified in the table above. To splice the ribbons, remove all but 9″ of tube(s) and attach to the inside of the slack basket. Route the ribbons through the slack basket and up to the splice trays using spiral wrap or ribbon transportation tubes.

Note: The FOSC ACC D/Ribbon-24 trays are recommended when storing ribbon slack on the tray is desired.

6. Cable Installation

1. Insert strength member(s) into the strength member lug and tighten screw. For central strength members, use the center prong. For dual strength members, bend the middle prong out of the way and use the two outer prongs. (Figures 3 and 4)

   Two sizes of strength member lugs are available. Use is determined by strength member diameter.

2. Place cable assembly into cable attachment bracket as shown in Figures 5 and 6.
3. Install the hose clamp and tighten such that the teeth fully seat into the cable assembly. Don't overtighten the clamp to the point that it deforms. Use the 1/4″ nut driver supplied in the kit to tighten the hose clamp.

Note: Use bottom entry ports for main cables.

4. Slide cable attachment bracket and cable into the appropriate metal slot of the closure until it locks in place. (Figure 7)

Note: To remove the cable attachment bracket, tilt the bracket over the retention tabs and pull firmly.

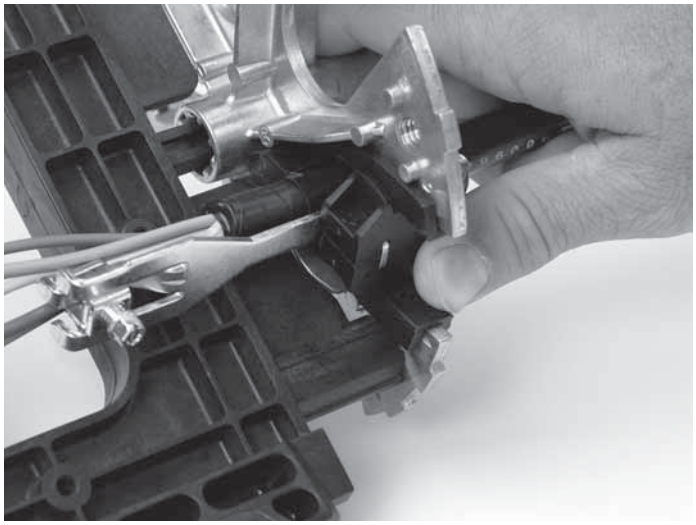


Figure 7

7. Routing Fibers to the Tray

1. Route cables to the basket or directly to the tray according to the cut length selected in Table 1.
2. Place a mark on the buffer or transportation tube one inch past the edge of the tray. (Figure 8)
3. Cut and remove the buffer tube(s) and clean fibers with an approved degreaser cleaner.
4. Wrap the end of the tubes with loose buffer tube (LBT) wrap and attach them to the tray with two tie wraps. (Figure 9)

   Figures 10 and 11 show routing of LBT fibers and ribbon fibers (respectively) on the splice trays.

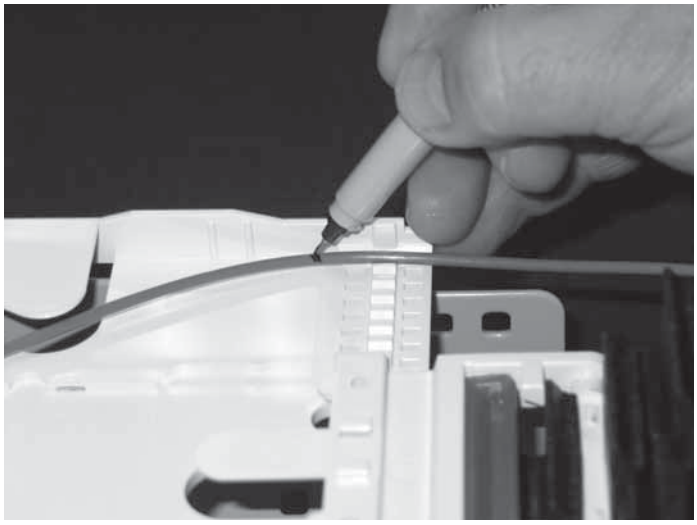


Figure 8

Tip: It is helpful to arrange ribbons in order or organize ribbons prior to inserting them into the transportation tube (basket location). This will improve organization on the tray.

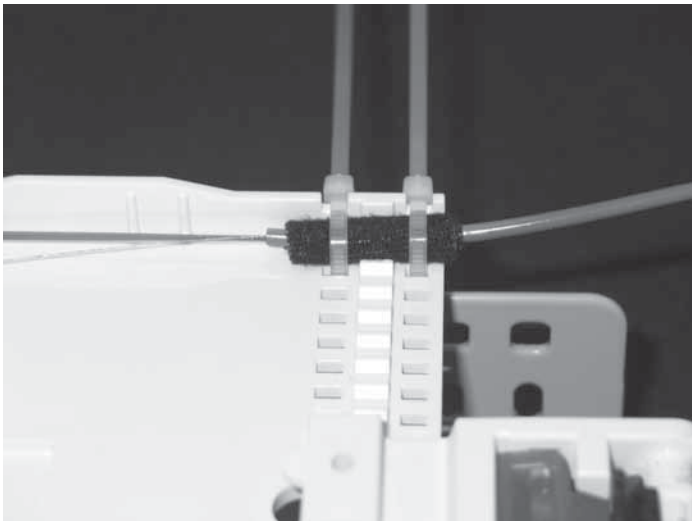


Figure 9

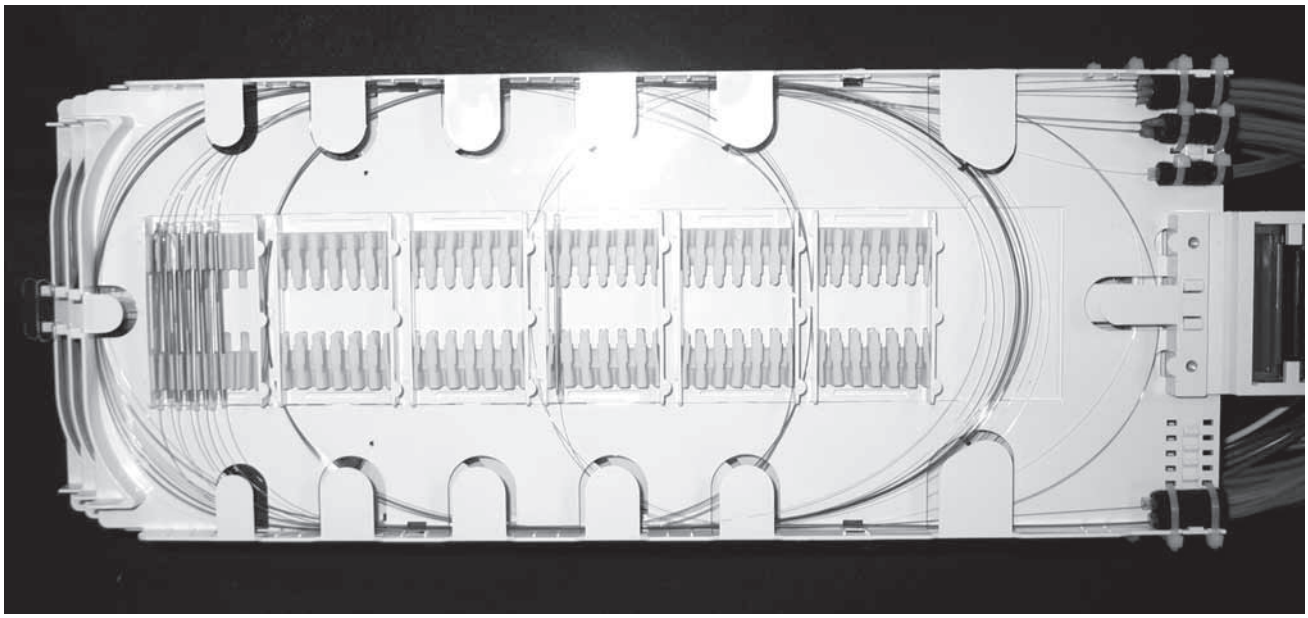


Figure 10

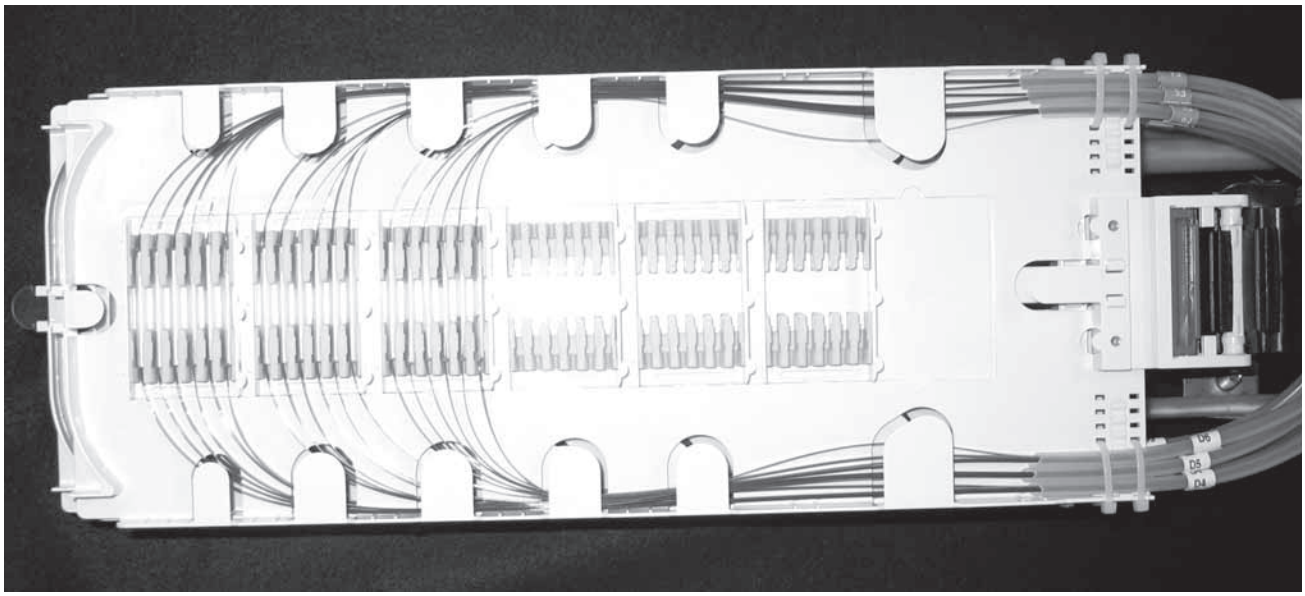


Figure 11

8. Gel End-Piece Installation

Note: If cable diameter is between 1" (25.4mm) and 1.04" (26.4mm), the gel end-piece has to be modified. For specific instructions please contact CommScope.

1. First, turn the "tail" of the gel end-piece counter clockwise until it stops to ensure that the cable openings are in the open position. Squeeze the gel end-piece to open it. (Figure 12)

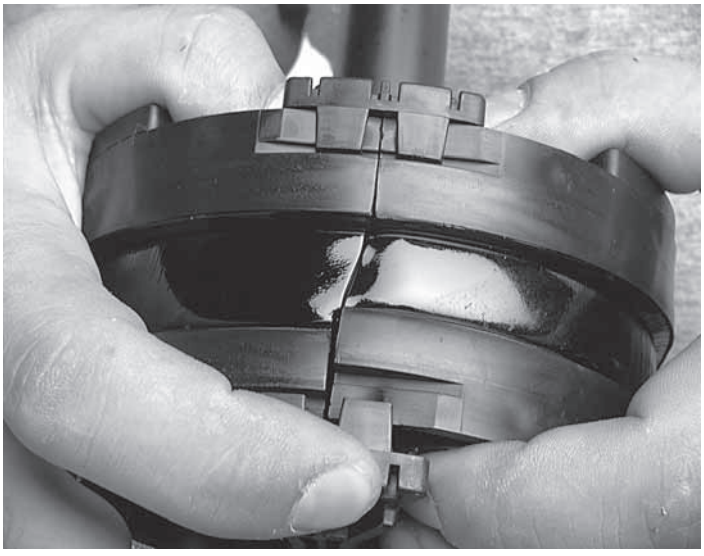


Figure 12

2. Position the gel end piece against the spacer on the metal frame. Position the cables and snap the gel end piece closed. (Figure 13)

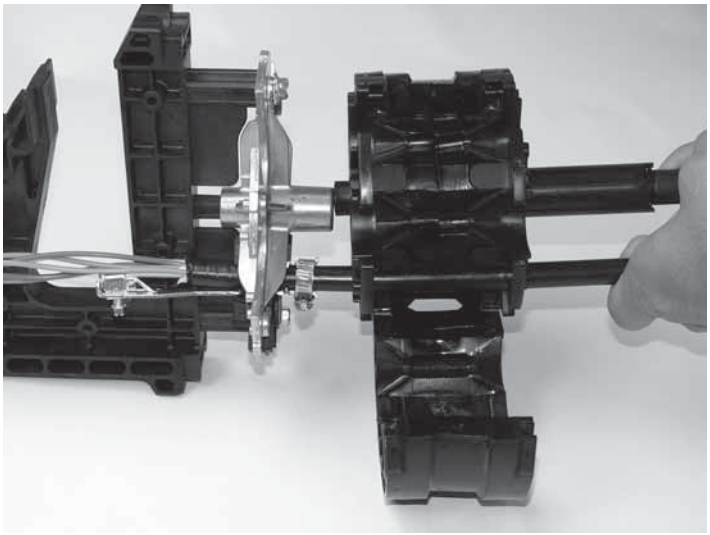


Figure 13

3. Important: Insert one port plug in each unused port. (Figure 14)

4. Slide the base up and over the gel end-piece. The arrow on the base must be at the top of the closure.

5. Inside the base, loosen and turn the four metal clips to secure the base to the metal bracket Then tighten the clips securely. Make sure the arrow is on top of the base.

6. Pull the gel end piece "tail" away from the closure to seat the gel end-piece to the end of the base. Turn the "tail" clockwise until it dead ends at the physical stop to seal cables and plugs. (Figure 15)

Note: If more than three cables are installed, the physical stop may not be reached. Turn the tail until it stops.

WARNING: Do not use drill to turn gel end piece tail as this will damage gel end piece.

IMPORTANT: Make sure the rubber seal is in the correct position.

7. Place a large tie wrap around all the cables near the end of the tail.

Note: If gel end piece collects dirt, it should be washed off with water only.

8. Once the splicing is complete, wrap hook and loop fastener straps around the splice trays and basket.

9. If desiccant is to be used (optional - not supplied) install 150 grams of desiccant on top of the uppermost splice tray. Secure trays and desiccant in place with hook and loop fastener strap.

10. Important: Place all unused cable termination hardware in bag in closure to be used with future cable terminations.

11. Mount dome onto base, aligning arrow on base with arrow on dome.

12. Install clamp around dome/base interface. Position feet of handle in front of the two posts and push down on the handle to pull the two halves of the clamp together. (Figure 16)

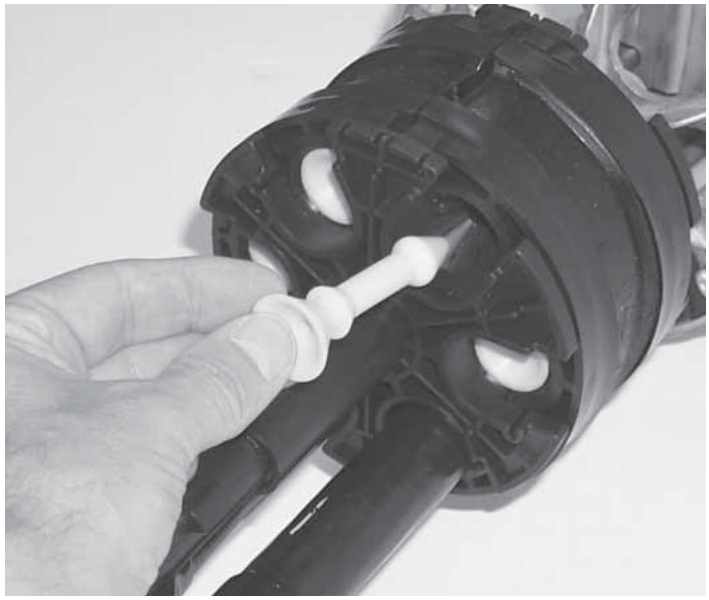


Figure 14

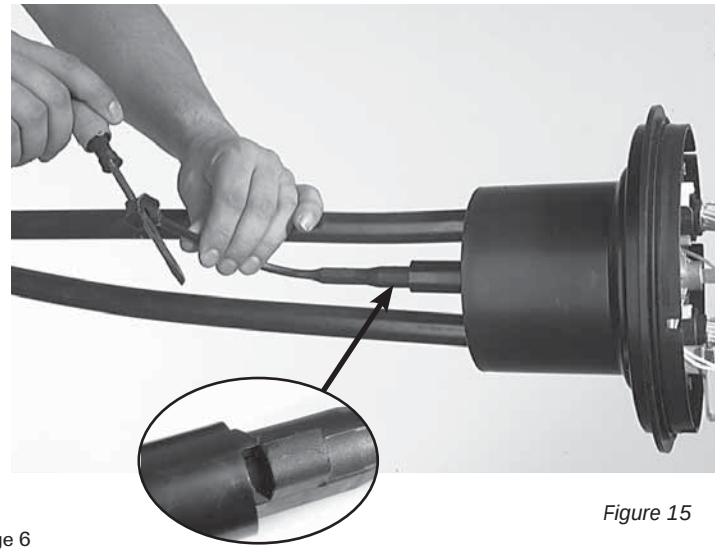


Figure 15

13. Continue to push handle down until the small pin on the handle snaps into the triangular hole in the clamp.

14. A security lock or tie wrap may be inserted through the round holes in the handle and clamp to lock the closure.

8.1 Test Seals

Flash test the closure to 5 psi. Thoroughly soap seals to check for integrity.

Important: After flash testing, bleed all pressure from the closure through the valve.

8.2 Re-entry

Make sure all air is bled from closure. To remove the dome from the closure, release the clamp handle, hook the handle on the two posts, and pull back until the clamp releases from the closure. Keep the o-ring, clamp, and dome clean and dry.

8.3 Adding Cables

1. Turn the "tail" of the gel end piece counterclockwise to loosen the seal between the gel end piece and the base. (See Figure 13)

2. Loosen the four metal bolts and turn the clips inside the base to release the metal bracket from the base. (See Figure 2)

3. Slide the base back over the cables and out of the way.

4. Refer to Sections 1 through 4 to install a new cable and re-seal the closure.

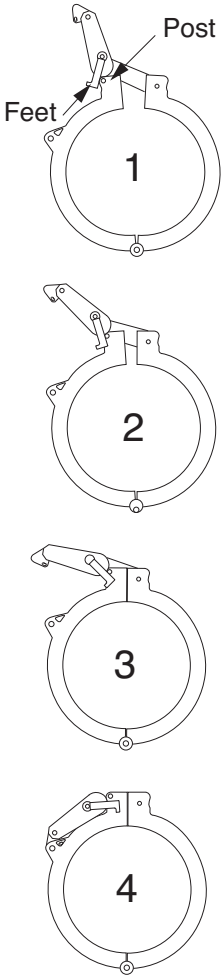


Figure 16

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