OFE-CLS-Type Outside Plant (OSP) Fiber Optic Closures

General

Uniprise® OFE-CLS-Type Outside Plant (OSP) Fiber Optic Closures are weather resistant housings which comply with Telcordia GR-20 for environmental sealing and water immersion. The closures are designed for aerial, buried, and manhole applications, and provide a termination and splicing location for outside plant fiber optic cables.

The splice closures accommodate 96 (OFE-CLS-J), 288 (OFE-CLS-K) and 384 (OFE-CLS-L) single-fusion splices, depending on the splice trays used. The OSP closures are suitable for loose tube, central tube, micro-sheath/duct, and blown fiber applications. Bonding and grounding may be set in the closure, as either common bonding/grounding, isolated cable grounding, or externally grounded. Mechanical splices and ribbon cable may also be used with optional parts.

Uniprise OSP closures are available in 5.0 inch (OFE-CLS-J), 6.5 inch (OFE-CLS-K), and 8.0 inch (OFE-CLS-L) diameters. Each closure features two express ports for midspan access to feeder cables. The ports are mechanical entry and not the drilling/B-Sealant type. Optional multi-drop grommets enable multiple drop cables from one port.

Each closure ships with one splice tray and the hardware required to splice two cables together. The J closure ships with a 12-fiber single fusion tray, the K and L closures ship with a 24-fiber single fusion tray. Other splice trays are ordered separately to accommodate higher fiber count cables. Optional splice holders are available separately for mechanical or mass fusion applications.

- Encapsulant is not recommended or required to seal closure
- O-ring sealed endcap allows for easy reentry and addition of cables after initial installation
- Security/locking tab
- Reusable and can be flash tested (air port) to prove closure integrity
- Optical Ground Wire (OPGW) compatible

OSP Closures

How to Contact Us

- To find out more about **CommScope**® **Uniprise**® solutions, visit us on the web at http://www.uniprisesolutions.com/
- For customer support regarding **Uniprise** products, contact your local account representative or call 1-800-544-1948 or (828) 459-5000.

Parts List

Table A.

QTY	Description
1	OFE-CLS-J, or OFE-CLS-K, or OFE-CLS-L OSP closure
1	Splice tray for 12, 24, or 48 mechanical or single fusion splices
3	A, B, C drop port grommets (3 sizes for cables 0.39" to 1.0") – includes splice nut, L bracket, drive piece, grommet measure tape, knockout plug, grease, and additional plugs

Ordering Information

Table B.

Catalog No.	Description
OFE-CLS-J-EMT	OSP J Closure – 20.3” (515 mm) L x 5.0” (130 mm) W, configured for 48 fibers
OFE-CLS-K-EMT	OSP K Closure – 24.5” (600 mm) L x 6.5” (165 mm) W, configured for 72 fibers
OFE-CLS-L-EMT	OSP L Closure – 28.5” (700 mm) L x 8.0” (203 mm) W, configured for 72 fibers
OFE-CLS-J-SPT-12	Splice tray for 12 mechanical or single fusion splices
OFE-CLS-K/L-SPT-24	Splice tray for 24 mechanical or single fusion splices
OFE-CLS-K/L-SPT-48	Splice tray for 48 mechanical or single fusion splices
OFE-CLS-J/K/L-G-ABC	A, B, C drop port grommets (3 sizes for cables 0.39" to 1.0")
OFE-CLS-J/K/L-G-2H	Single drop port grommet with 2 holes (0.27" to 0.47" cables) – Order Separately
OFE-CLS-J/K/L-G-4H	Single port grommet with 4 holes (0.11" to 0.27" cables) – Order Separately
OFE-CLS-L-MNT-POL/AIR	Mounting hardware for pole and aerial mounting – Order Separately

Safety Considerations

Important: This instruction sheet is not intended to supersede any company construction or safety standards, and is offered only to illustrate safe application for the individual.

WARNING: This product is only intended for the specified application, and for use by trained craftspeople only.

CAUTION:

- FAILURE TO FOLLOW THESE PROCEDURES AND RESTRICTIONS MAY RESULT IN PERSONAL INJURY OR DEATH.
- DO NOT MODIFY THIS PRODUCT UNDER ANY CIRCUMSTANCES.
- Anyone who is not familiar with and trained in the use of this product SHOULD NOT USE IT.
- EXTRA CARE should be taken to prevent accidental electrical contact with this product when working in the area of energized lines.
- For PROPER PERFORMANCE AND PERSONAL SAFETY be sure to select the proper size products before application.
- Closures are precision devices. To insure proper performance, store the closures in cartons under cover and handle them carefully.

Step 1 – Express and Drop Cable Preparation and Installation

1. Remove sheaths as per manufacturer's instructions (Figure 1) and refer to Table C for express and drop cable minimum sheath removal lengths.

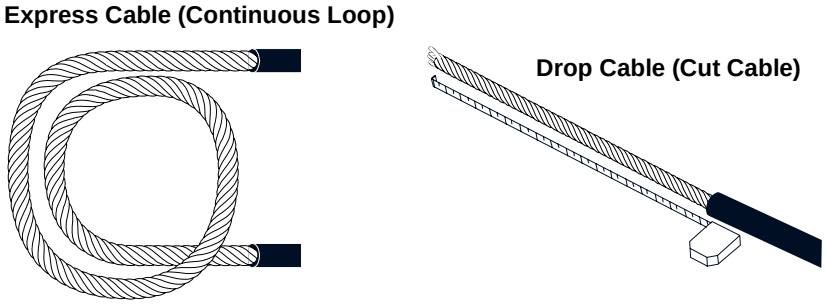

Figure 1

Table C.

	Closure Size	Minimum Sheath Removal
Express Cable	650	152" (3.86 m)
	800	152" (3.86 m)
	500	152" (3.86 m)
Drop Cable	650	76" (1.93 m)
	800	76" (1.93 m)
	500	76" (1.93 m)

2. Using the cleaning tissue provided, clean and de-grease all prepared cable sheaths (Figure 2).

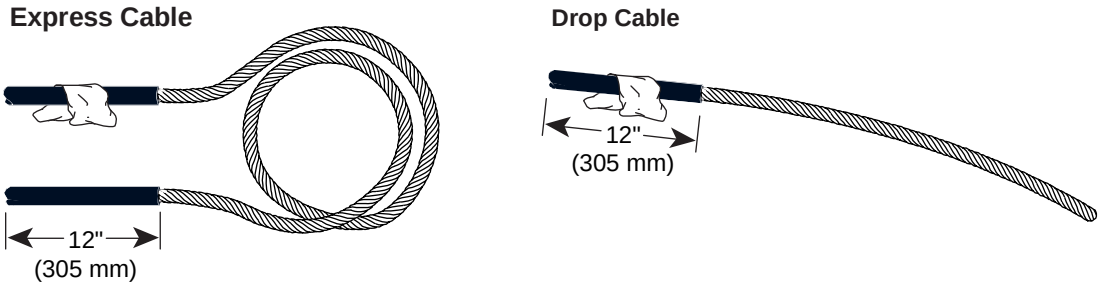

Figure 2

3. Feed the uncut express buffer tubes and cable butts through the endcap express opening (Figure 3).

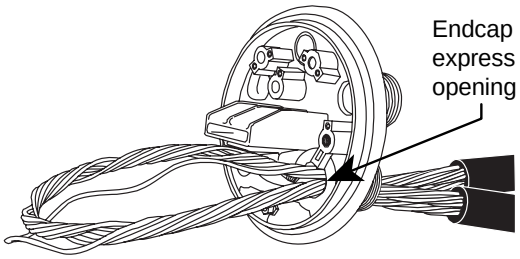

Figure 3

Step 2 – Express and Drop Cable Grommets Installation

1. (**Express cables only**) Insert the narrow end of the center wedge grommet first into the opening between the express cable ports with the shape and keys aligned to the opening, see Figure 4-A. Continue inserting until flush with the endcap, see Figure 4-B.

   Note: Cut cable can utilize the express port openings, proceed as described in this section except there is no need to cut cable grommets. They can be slid over the cable end.

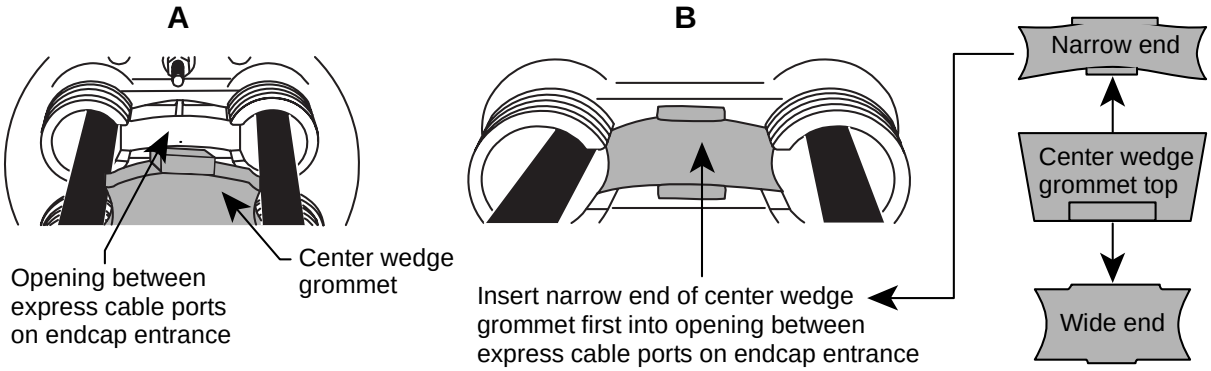

Figure 4

2. Measure the circumference of each express or drop cable entering the closure with the provided grommet measure tape (Figure 5-A) to determine which size grommets are required to complete the sealing process. Refer to Table D for grommet sizes.

   Note: The range of grommets (A-C) is designed to fit express and drop ports.

Table D.

Tape Measure Reference	No. of Entries	Cable Range (mm)	Cable Range (inches)
Grommet A	1	10 to 15	.390 to .590
Grommet B	1	15 to 21	.590 to .820
Grommet C	1	21 to 25	.820 to 1.00
Grommet 2H	2	7 to 12 drop port only	.27 to .47 drop port only
Grommet 4H	4	3 to 7 drop port only	.11 to .27 drop port only

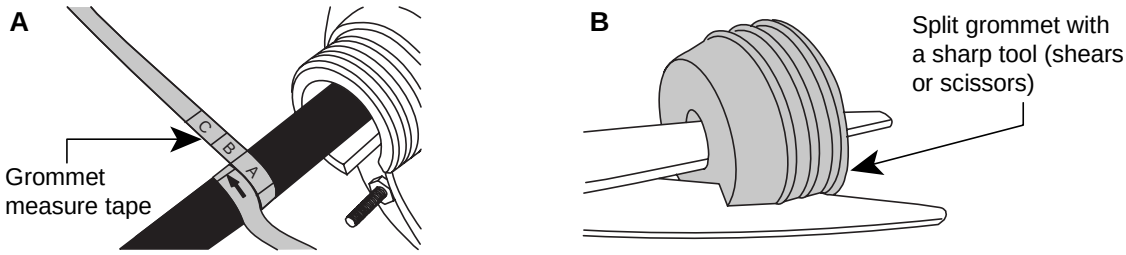

Figure 5

3. Do the following to fit express or drop grommets on the cable.
   - **Express** cable grommets require splitting. Split each grommet with a clean cut through the grommet material using a sharp tool (shears or scissors), Figure 5-B.
   - **Drop** cable grommets should be fitted over the cables prior to preparation without splitting unless the cable is already in operation and spliced.

     Note: If cable is in operation, cut the grommet with a sharp tool (shears or scissors).

4. (**Express cables only**) Lubricate the express cable grommets – (Figure 6).
   - From the packet provided apply a thin film of lubricant to the inside surface of each grommet.
   - Fit the split grommets over the cable narrow end to the endcap entrance and align the split opposite to the center wedge grommet.
   - From the packet provided apply a thin film of lubricant to the outer surfaces of both grommets entering the closure. Using finger pressure, maneuver the grommets as far as possible into the express ports of the endcap.

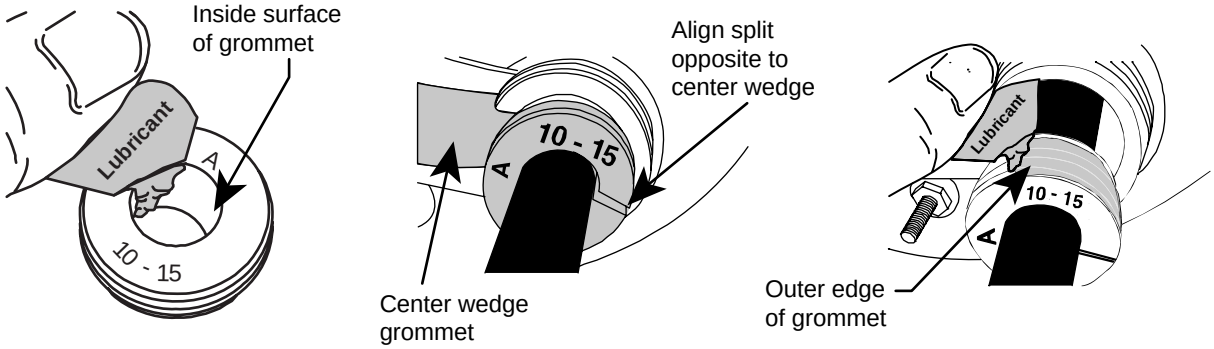

Figure 6

Step 3 – Express and Drop Port Split Driver and Locking Cap Installation

Express Port Installation

1. Select the large split driver for express ports (Figure 7-A), then fit the split driver over the cable and position against the grommet at both express port entrance locations.

   Note: Make sure to maintain both express cable grommet splits opposite to the wedge.

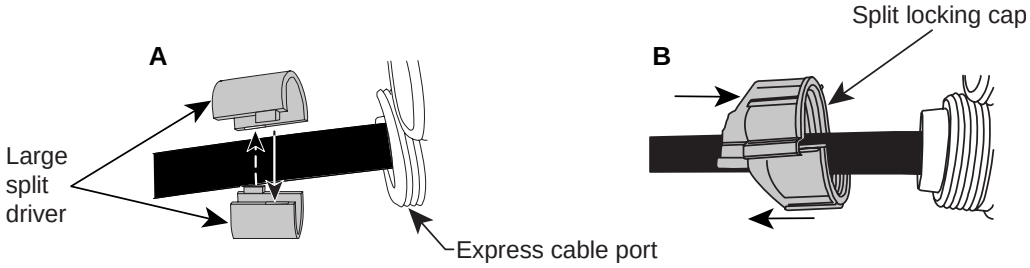

Figure 7

2. Select the correct size split locking cap (larger one fits the express port). Fit over the cable and lock the two halves together, Figure 7-B.
3. Engage the locking cap onto the endcap threads 2 to 3 turns only by hand (Figure 8).

   Note: While still loose, extend the cable butts a little further into the closure for easy work access.

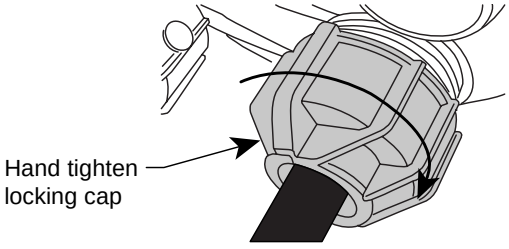

Figure 8

Drop Port Installation

1. Select a drop port entrance. Break through the membrane seal using the knockout tool (provided) and locking cap (Figure 9–A, B, and C). Refer to the Table D for drop port grommet selection.

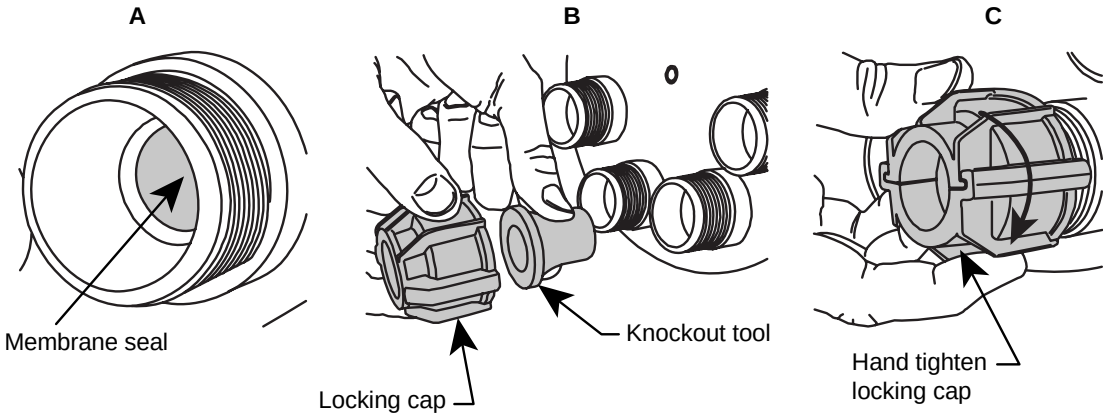

Figure 9

2. Feed the prepared drop cable through the selected grommet and the cable port up to the point where the cable butt is inside and clear of the endcap (Figure 10-A).

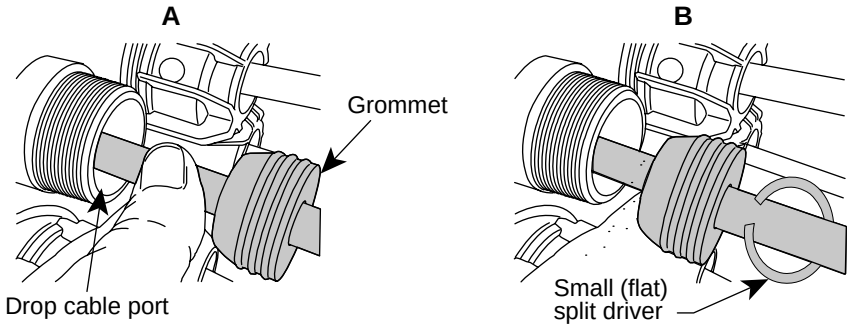

Figure 10

3. Select the small split driver for drop ports (Figure 10-B), then fit the split driver over the cable and position against the grommet at the drop port entrance locations.
4. Select the correct size split locking cap (smaller one fits the drop port). Fit over the cable and lock the two halves together, Figure 7-B.
5. Engage the locking cap onto the endcap threads 2 to 3 turns only by hand (Figure 8).

   Note: While still loose, extend the cable butts a little further into the closure for easy work access.

Step 4 – Express and Drop Cable Attachment Installation

1. Lay the strength member end clamp along the cable as shown in Figure 11.
2. Mark and cut the cable strength member to fit the end clamp (approximately 2" [51 mm]). Ensure that the hose clamp fits at least .25" (6 mm) from the cable butt before trimming the strength member.

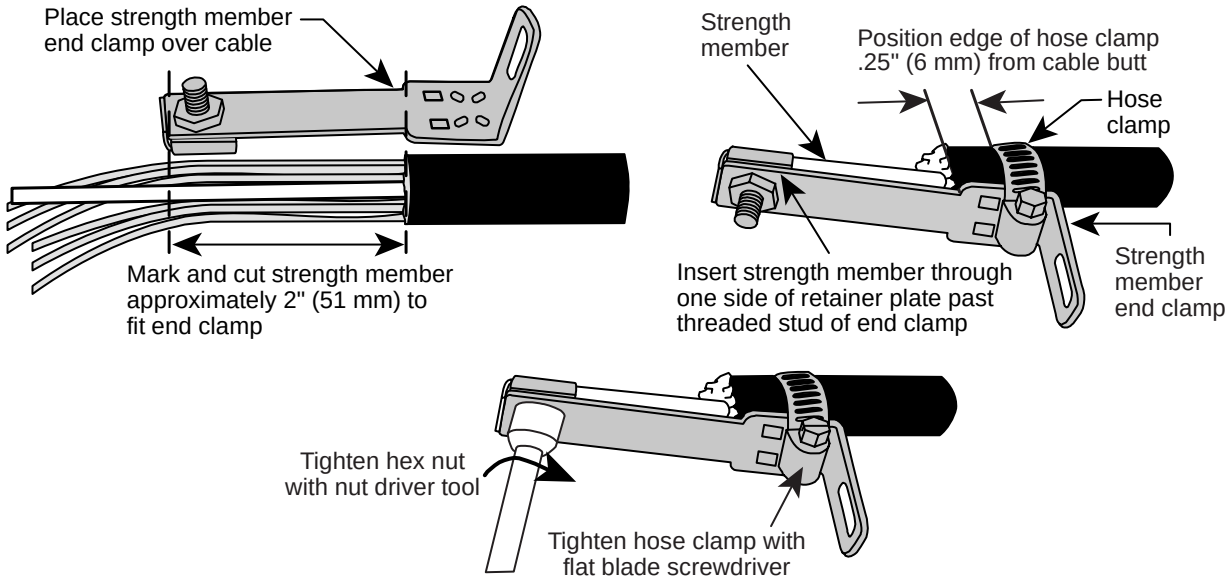

Figure 11

3. Insert strength member through one side of retainer plate. Then, tighten hex nut to secure strength member to end clamp (Figure 11).
4. Attach the hose clamp around end clamp and cable, and tighten fully (Figure 11).

Step 5 – Secure Strength Member End Clamp to Endcap

1. Maneuver the cable and attachments back to the endcap. With the bolt provided, attach the lower side of the strength member end clamp to the endcap threaded insert and fully tighten for creep-in/pull out requirements (Figure 12).

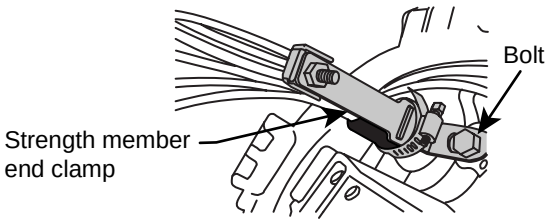

Figure 12

Step 6 – Cable Sealing

1. Fit two halves of the split tightening assistant around the cable and lock halves together (Figure 13).
   - **Express Port Cables** – Evenly tighten both express locking caps with alternating 2/3 turns for each side until both locking caps are tight against the endcap and center wedge grommet (Figure 4 and Figure 13).
   - **Drop Port Cables** – Engage the tightening assistant onto the locking cap and fully tighten in a clockwise direction (Figure 13).

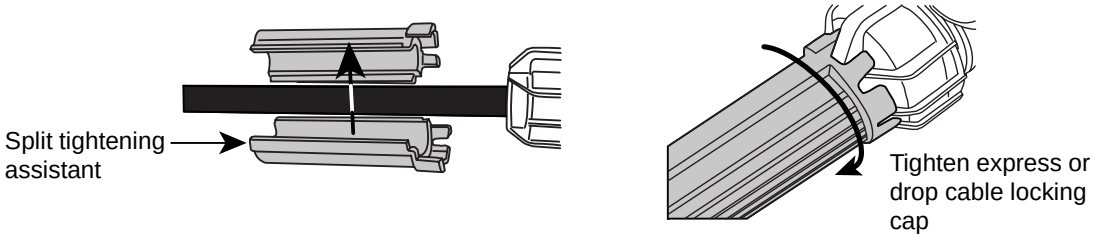

Figure 13

Step 7 – Fiber Organization

1. Insert the splice tray mounting plate into the endcap splice tray holder and lock in position with the pin provided (Figure 14).

   Note: Install selected fiber system to separately provided installation practice.

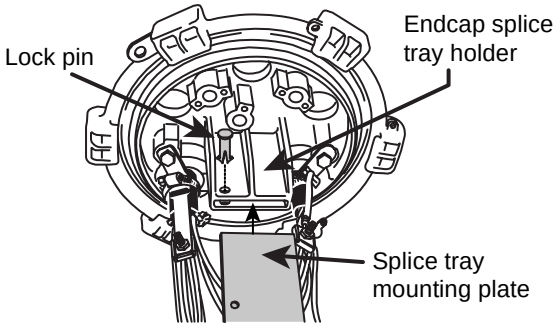

Figure 14

Step 8 – Fiber Cable Splicing

Refer to instruction sheet 860385863, *OFE-CLS-Type Outside Plant (OSP) Fiber Optic Closures Slide Lock Management System* for splicing fibers.

Step 9 – Closure Sealing

1. Apply a small amount of lubricant to the O-ring prior to closure sealing (Figure 15).

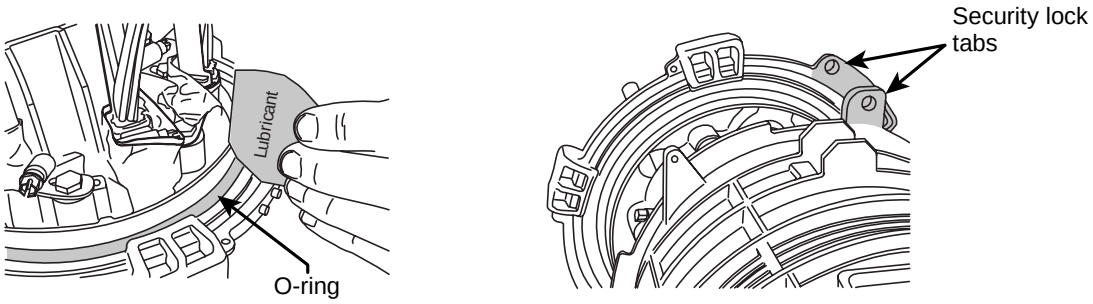

Figure 15

2. Carefully locate the cover over the endcap ensuring that the security lock tabs on the cover and endcap line-up (Figure 15).
3. Rotate the cover counter clockwise seating it on the O-ring inside the endcap. Rotate the sealing collar of the endcap clockwise to seal cover and endcap together (Figure 16).

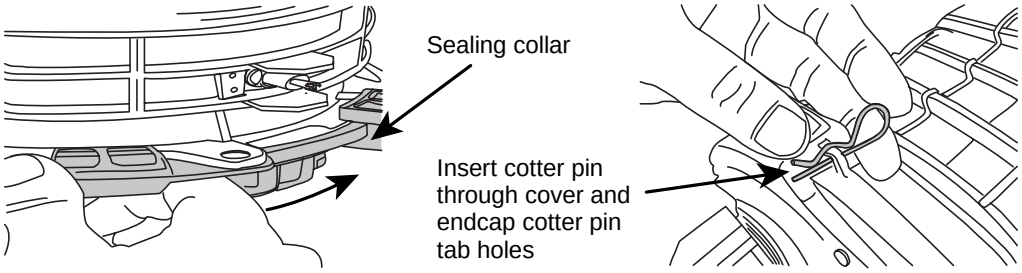

Figure 16

4. If the closure is correctly sealed, the safety cotter pin can be fitted through the small cotter pin tab holes of cover and endcap.

   Note: The cotter pin tab holes should be in line to seat the cotter pin, ensuring that the closure is secure prior to pressure testing (Figure 16).

Step 10 – Prove Closure Seals

1. Apply up to 10 psi (689 milibars) maximum of air pressure to the closure through the fitted air valve. Test all of the cable seals and the endcap to closure seal for leaks using a leak solution. At the conclusion of the test, reduce the closure air content to zero (Figure 17).

CAUTION:

Ensure the safety cotter pin is fitted in position during this operation.

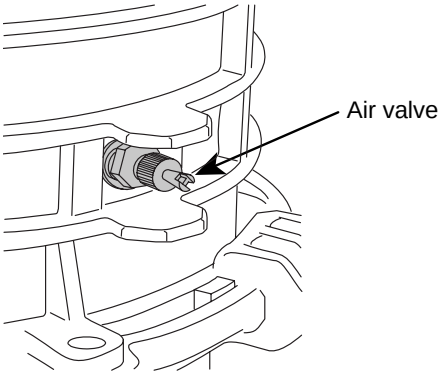

Figure 17

Step 11 – Security Option

1. A lock (not supplied) can be fitted to restrict closure access (Figure 18).

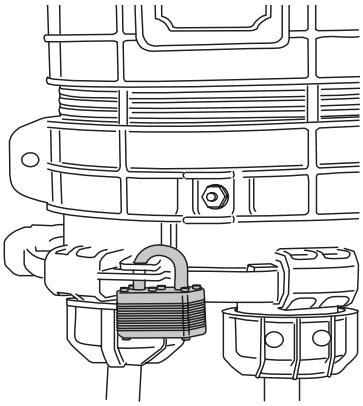

Figure 18

Step 12 – Closure Re-Entry

CAUTION:

First remove the core from the air valve to make sure there is no air in the closure. Remove the safety cotter pin.

1. Twist the endcap collar in an anti-clockwise direction to separate the endcap and closure. Carefully remove the dome to gain access to the internal organization system.

Step 13 – Closure Re-Sealing

1. Follow the process in **Step 9 –Closure Sealing**.

Maintenance Notes

1. A small amount of lubricant should be applied to the endcap O-ring prior to each closing following re-entry (Figure 19).

   Note: New grommets should be used if the sealing grommets are removed from the express or drop ports.

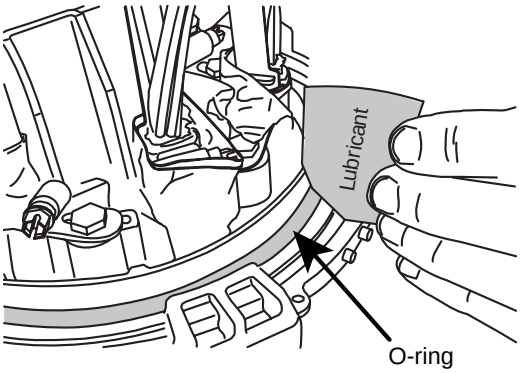

Figure 19