**F AFL**

## INSTALLATION INSTRUCTIONS
## LG-600 Fiber Optic Aerial Closure

*COVER ASSEMBLY*

*BACKPLANE FRAME*

*MODULE STACKER ASSEMBLY*

**FIGURE 1–Components of the LG-600 Closure.**

### 1.0 GENERAL

**1.01** The AFL LG-600 Aerial Fiber Closure provides a unique and flexible fiber splicing system for fiber trunk, feeder, or distribution cable. Usable in either a butt or in-line configuration, the LG-600 consists of three (3) main components (Refer to Figure 1):

**1.02 Backplane Frame**

The main backplane frame consists of cable strand supports, six grommeted cable entry/exit ports (three each end), cable sheath strain relief, central strength member tie-down, buffer tube or excess fiber storage and an anchor point for splicing module stacker.

**1.03 Splicing Module Stacker**

The splicing module stacker accommodates one to six AFL UFO-O Fiber Trays, either single or mass fusion, with a fold-down splicing table that holds the tray being worked on.

**1.04 Cover**

The hinged clam shell cover can be completely removed without disturbing any installed fiber. The cover comes with four (4) quick snap cover locks that provide easy access and a security pin-in-hex lock out feature to prevent any unauthorized tampering.

### 2.0 SPECIFICATIONS

*Maximum Cable Diameter:* 1.0" (25.4 mm)

*Minimum Cable Diameter:* 0.4" (10 mm)

*Maximum Cable Entry:* 6 ports (3 per end)

*Overall Dimensions*: Sm. closure, 1-3 trays
25" L x 5" W x 5" D

Lg. closure, 1-6 trays
25" L x 7" W x 7" D
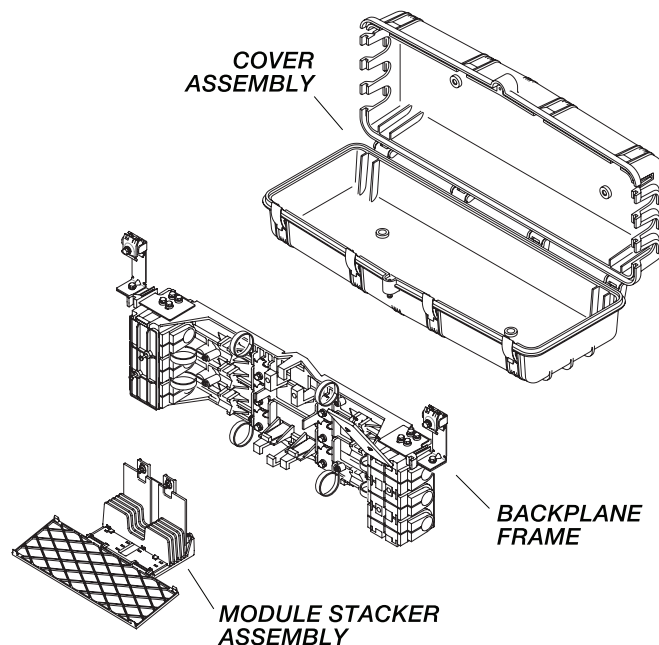
### 3.0 CLOSURE KIT CONTENTS

**3.01 Backplane Frame includes**

- (12) Cable Grommets
- (6) Cable Sheath Clamps
- (6) Central Strength Member Tie-Down Clamps
- (4) Slack Fiber Routing Rings
- (2) Hinged Grommet Doors

**3.02 Splice Trays for Closure:**

#91710-03 Single Fusion (24) Fiber Splice Tray
#91711-03 Mass Fusion (48) Fiber Splice Tray

**3.03 Additional Material Required**

- ¾" Vinyl Tape
- ⅛" Spiral Wrap
- Cable Cleaner or Wipes
- Shield Bond Connectors (if bonding)
- #6 AWG Ground Braid (if bonding)

**3.04 Tools required**

- 216 style Socket Tool
- Slotted Screwdriver
- Wire Cutter for Strength Member
- Splicers Scissors
- Splice Equipment and Sleeves
- Cable Stripper
- Cable Splicer Knife
- Needle Nose Pliers

## 4.0 CABLE PREPARATION

**CAUTION:** When preparing and prepping cable, insure that buffer tubes and fibers are **NOT** cut, nicked, or kinked. If this occurs, cut back cable to eliminate damaged area.

**4.01** Remove 120" of outer cable sheath and expose buffer tubes, removing shield, mylar, or Kevlar if present.

**4.02** Remove all cable coating compounds. Clean all primary tubes and dielectric strands with an approved cable cleaner. Clean outer sheath back approximately 6" from opening.

**4.03** Trim any solid filler tubes and discard. Trim central strength members to 6" from sheath opening. Note that on small cable sizes leave approx. 8" of Kevlar.

**5.0** Frame Attachment to Strand
**5.01** The main backplane frame with attached stacker assembly can be installed onto the strand prior to cable installation, if desired.

**5.02** Attach strand hangers to strand as indicated in Figure 2. Rest strand hanger assambly onto strand, then lift and tighten clamps on each end.
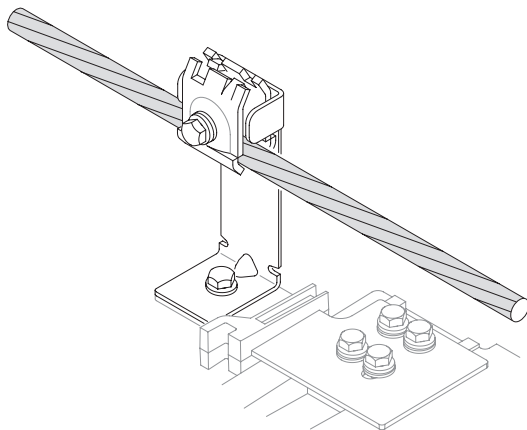


*FIGURE 2—Attaching Frame To Strand.*

**5.03** Offset hangers are available for large, pre-existing cable.

## 6.0 CABLE INSTALLATION

**6.01** Install cables into appropriate entry/exit port grommet as shown in Figure 3. Split grommets as shown and place around cable, insuring that the cable seats fully into the grommet cone. Two grommets must be used per cable and installed into frame assembly as indicated.

**6.02** Grommets are self-adjusting to cable sizes from 0.4" to 1"in diameter.

**6.03** Inner grommet should be installed approximately 4" from sheath opening as indicated.

**6.04** After cable is positioned into grommets, slide assembly down into frame, insuring that each seats fully.

**6.05** Close grommet door assembly and tighten the two (2) hex-heads fasteners. Refer to Figure 4.
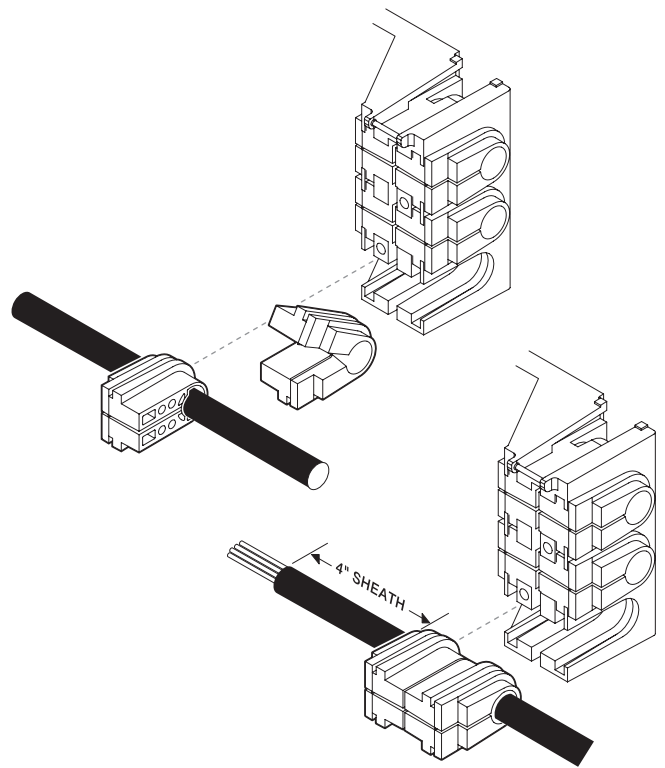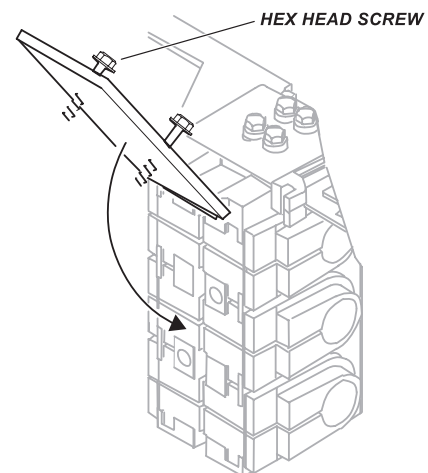


*FIGURE 3—Installing Grommets on Cable.*



*FIGURE 4—Closing Grommet Door.*

**6.06** Bonding and Grounding of Shielded Cable (Refer to Figure 5)

**NOTE:** Use caution when installing shield bond connectors so underlying layers of fiber cable are not damaged.

1. Install shield bond connectors on side of cable per standard practice.

2. If separate external grounding is required, bond C.O. cable and field cable directly to strand mount studs at each end

3. If separate external grounding is not required, bond across splice to either strand mount stud.

4. Wrap connectors with vinyl tape to protect tubes from sharp edges.

**6.07** Attach each cable to the closure frame by installing a hose clamp over the cable as shown in Figure 6.

**6.08** Loosen central strength member tie-down clamp using standard 7/16" 216 style tool. Removal of splicing module stacker assembly may benecessary.

**6.09** To remove splicing module stacker assembly, loosen the two (2) hex-head screws located on top of stacker, and lift up and out to clear tongue slots.
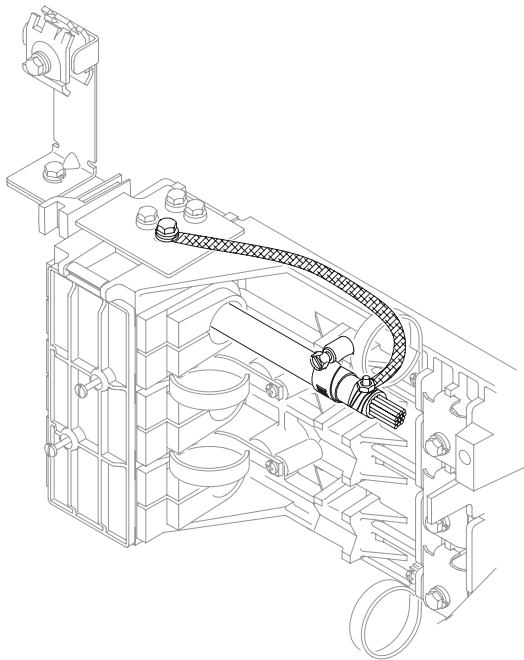
**6.10** Place central strength member under clamp and into provided groove. Firmly tighten down clamp to secure strength member in place. Trim excess if necessary.



*FIGURE 7—Removing Module Stacker Assembly.*

**NOTE:** If Kevlar is used in place of a central strength member, wrap Kevlar around bolt and under clamp, then tighten.
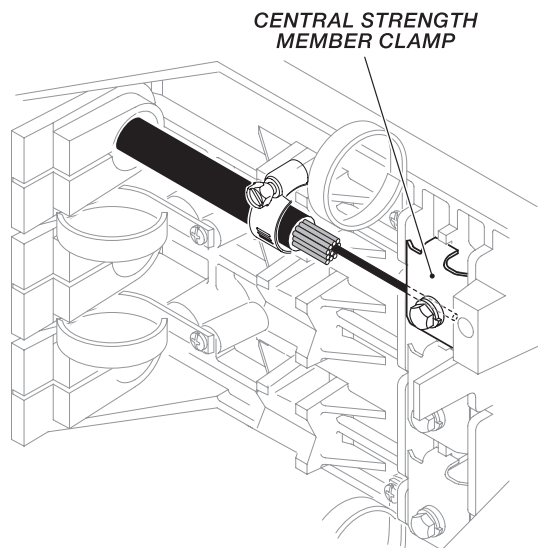


*FIGURE 5—Installing Bonding of Shield Cable.*
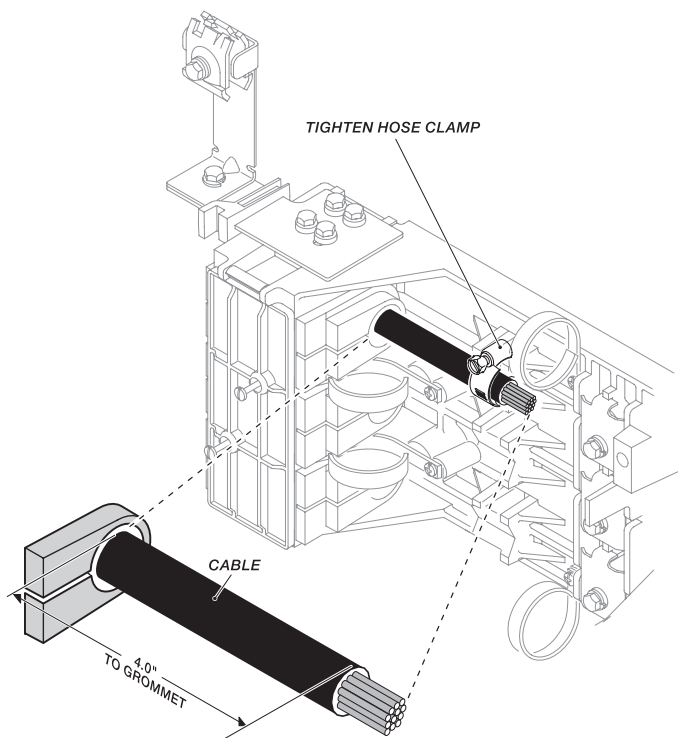


*FIGURE 6—Attaching Cable to Frame.*



*FIGURE 8—Attaching Central Strength Member.*

## 7.0  STORAGE AND ROUTING OF FIBER BUNDLES

**7.01**  Route and store fiber bundles inside closure frame as indicated in Figure 9A-D.  Fiber bundles should maintain min- imum bend radius requirements.
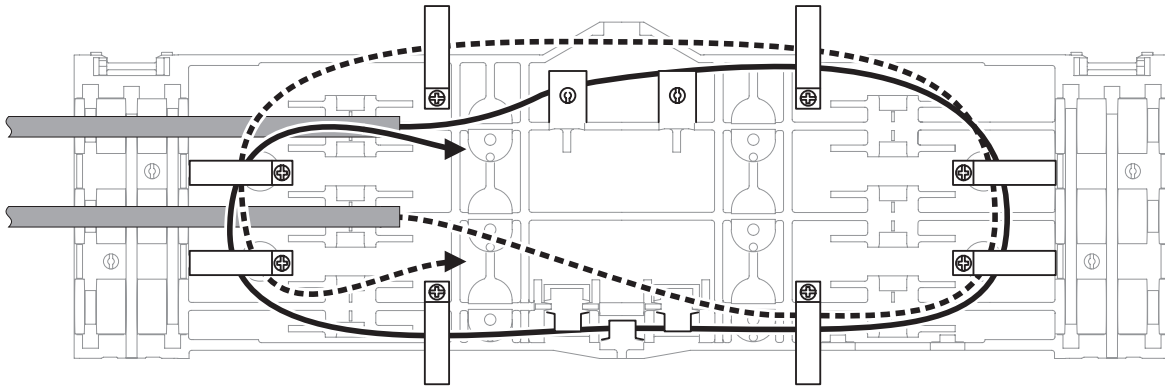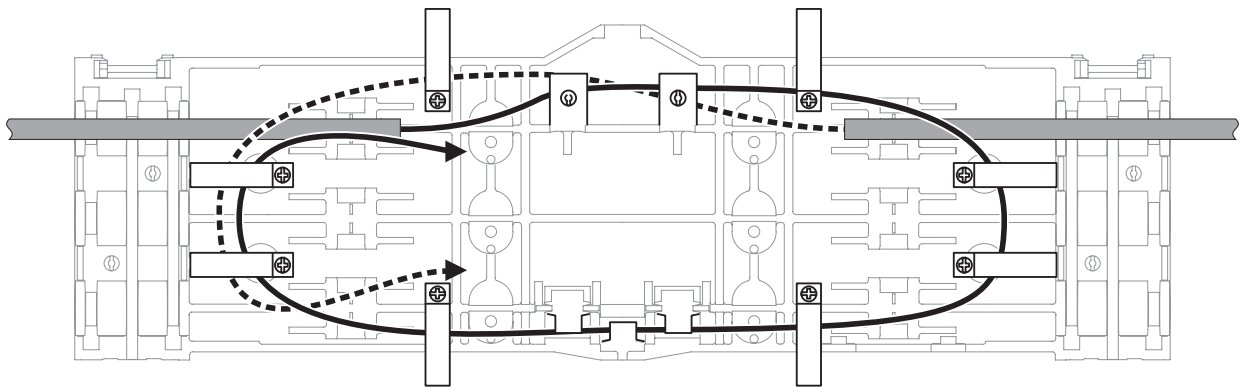
*FIGURE 9A–Butt Splice configuration.*
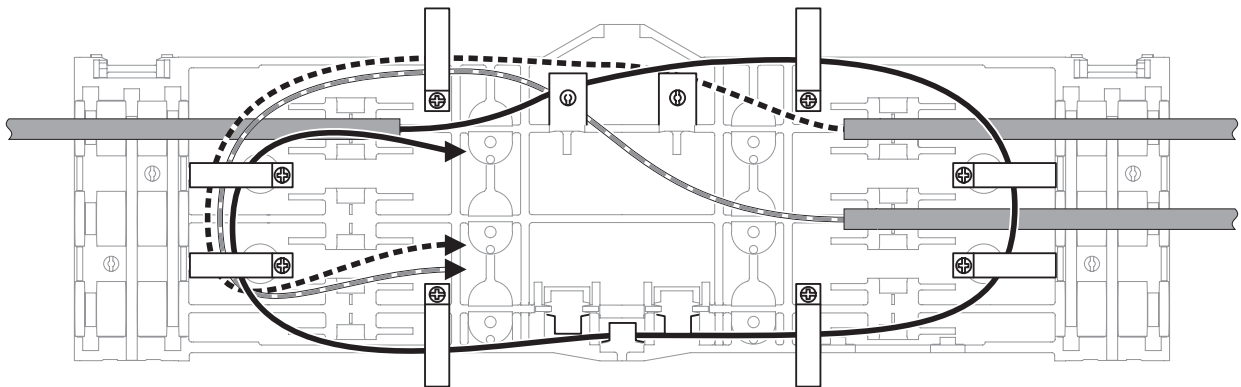
*FIGURE 9B–In-Line Splice Configuration.*
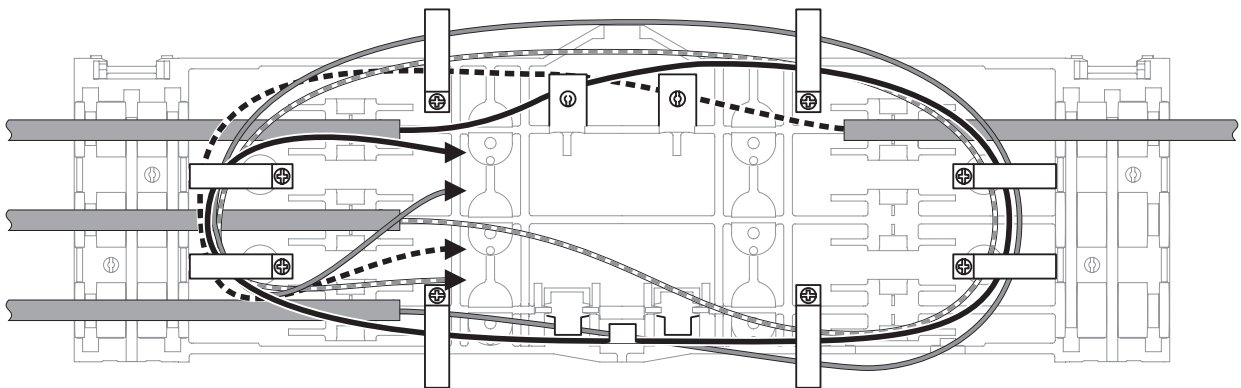
*FIGURE 9C–Branch Splice Configuration.*

*FIGURE 9D–Branch Splice Configuration.*

**7.02** Other port entry or exit combinations can be derived from Figures 9A-D.

**7.03** If fiber bundles do not match up with entry or exit ports on splice trays by following outer ring storage paths as in Section 7.01, shorter loops may be routed as per Figures 10A & B.
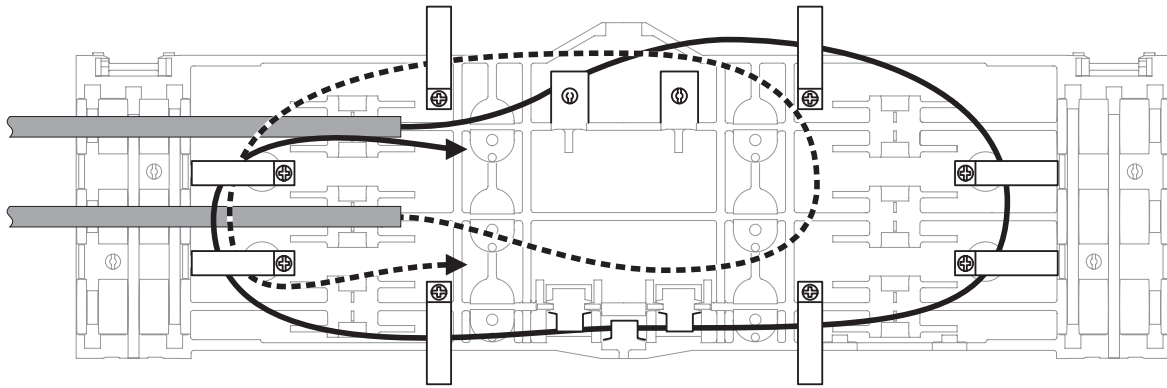


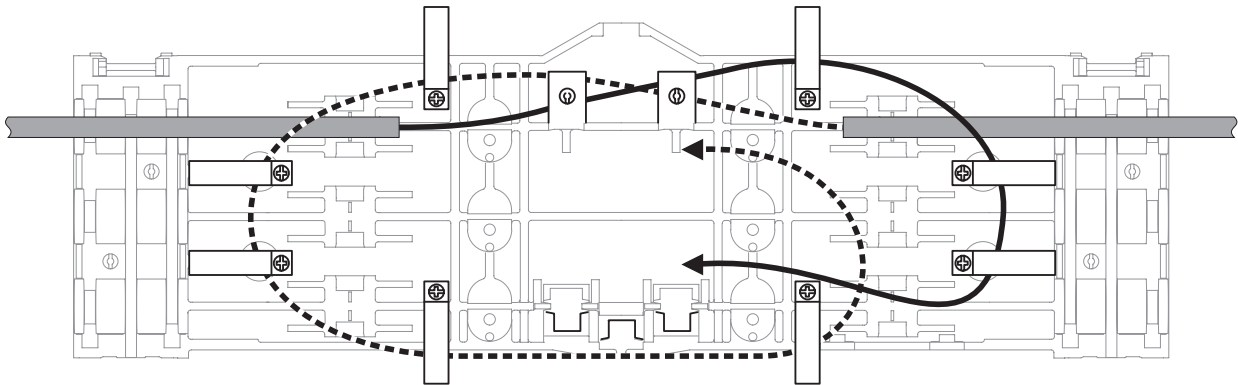*FIGURE 10A–Short Fiber Bundle Configuration.*



*FIGURE 10B–Short Fiber Bundle Configuration.*

**7.04** Fiber routing rings and channels are provided for ease of fiber bundle access and storage. Two (2) storage rings are provided on each end and two (2) channel storage areas are provided, one on top, one on the bottom. Refer to Figures 11 and 12.

## 8.0 FIBER BUNDLE PREPARATION

**8.01** Prepare fiber bundles by removing 96" of outer protective buffer tube, exposing the individual 250 µm fibers.

**8.02** Clean individual fibers as per standard practice, using an approved cable cleaner.

**8.03** Transition fiber bundle into approximately 24" of 1/8" approved spiral wrap and snap into desired splice tray.

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NOTE:  See splice tray instruction sheet for routing and storage with tray.
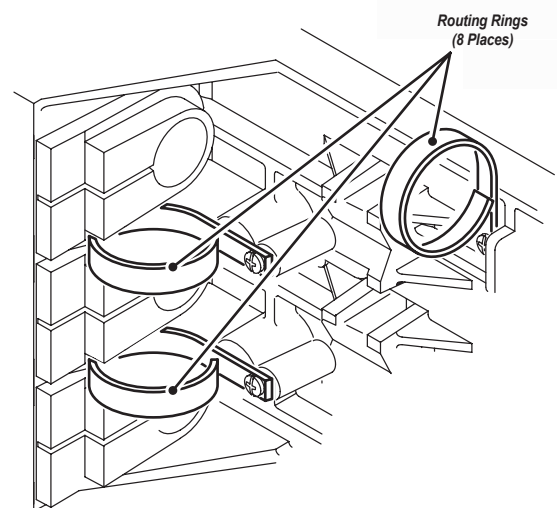
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*FIGURE 11–Locating Fiber Routing Rings.*

5

ROUTING RINGS
(8 Places)

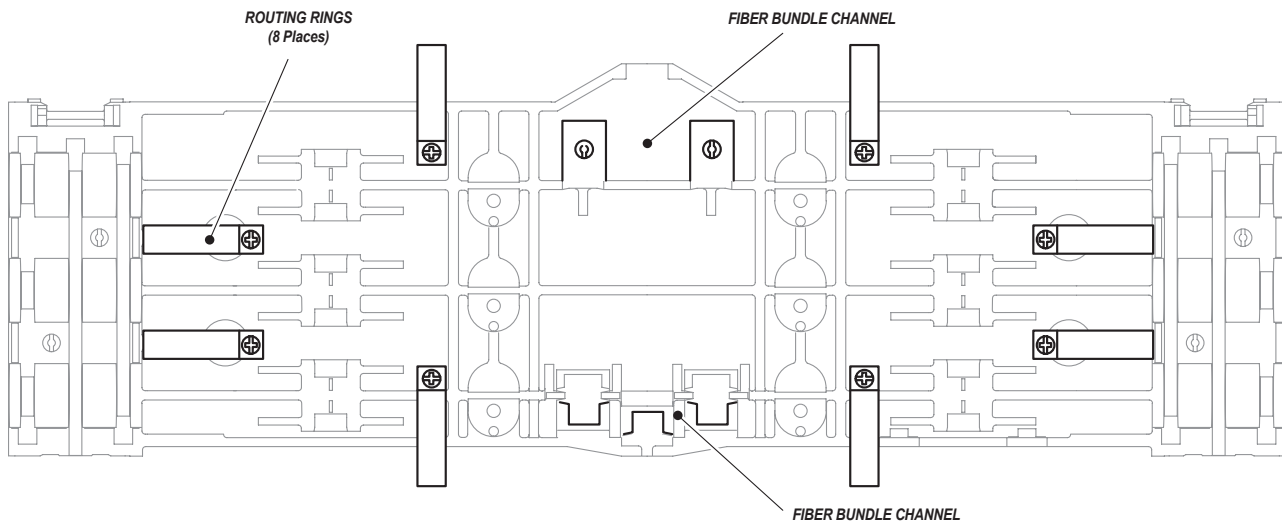FIBER BUNDLE CHANNEL

FIBER BUNDLE CHANNEL

**FIGURE 12—Locating and Routing Fiber Bundles.**

## 9.0  SPLICING MODULE STACKER ASSEMBL

**9.01**  A fully integrated fiber splice module stacker provides a convenient means of splicing and storing of fiber trays.

**9.02**  The stacker assembly attaches to the frame by a tongue and groove feature and two (2) hex-head screws.  Refer to Figure 13.
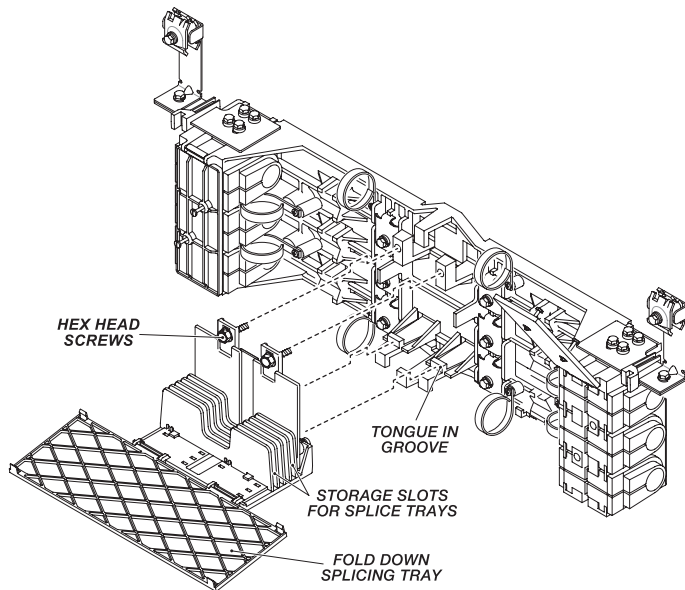


HEX HEAD
SCREWS

TONGUE IN
GROOVE

STORAGE SLOTS
FOR SPLICE TRAYS

FOLD DOWN
SPLICING TRAY

**FIGURE 13—Attaching Stacker Assembly to Frame.**

**9.03**  Completed fiber trays are stored vertically in the stacker assembly as indicated in Figures 14A & B.

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NOTE:  Stacker assembly can be removed from the frame      as indicated in Figure 13.  However, it does not      have to be removed to access the individual fiber bundles or to route new cables into the closure.
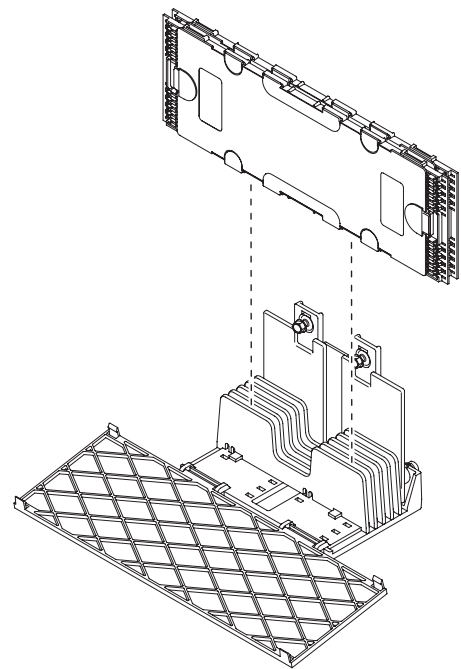
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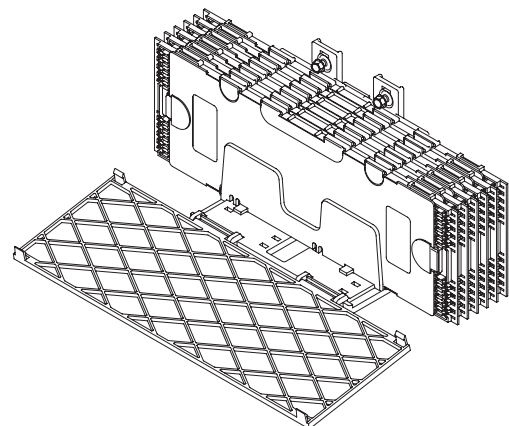**FIGURE 14A—Fiber Trays Stored in Stacker Assembly.**



**FIGURE 14B—Splice Trays in Stacker Assembly.**

**9.05** The stacker assembly will accommodate from one (1) to six (6) splice trays and is adjustable for either single fusion or mass fusion trays by moving the stacker dividers shown in Figure 15. For mass fusion trays, rotate center dividers 180 degrees and snap in place.
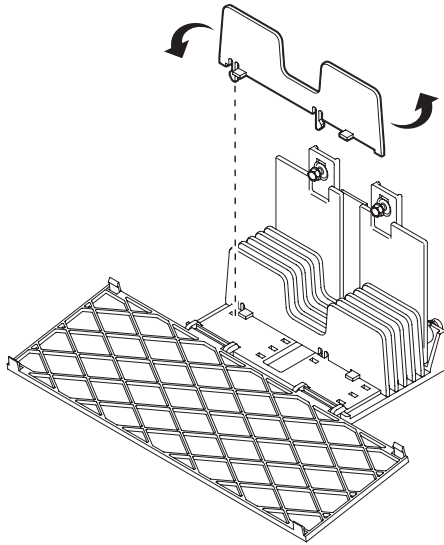


*FIGURE 15—Rotating Center Divider.*

**9.06** After all splicing is complete and the trays are stored into the divider slots, secure to closure using provided Velcro strap as indicated in Figure 16.
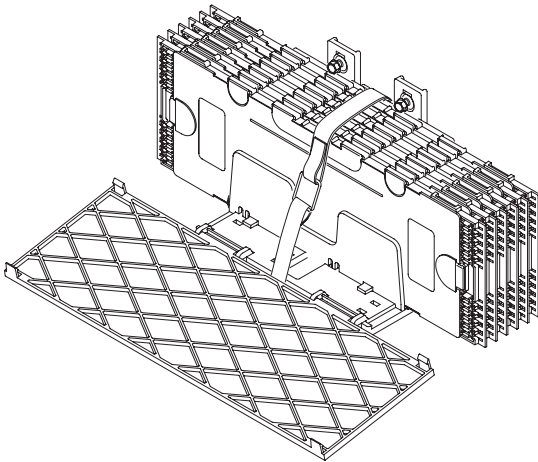


*FIGURE 16—Secure Splice Trays with Velcro Strap.*

**9.07** Store and route all fiber bundles to proper storage areas and secure.

## 10.0  CLOSURE COVER ASSEMBLY

NOTE: Insure that all loose fiber bundles are routed and secured, and that the stacker module assembly is properly locked down to the frame assembly and the splicing table is folded up. Check to insure that both grommet doors are secure and the 1/4 turn hex-head screws are locked in place.

**10.01** Position cover as shown in Figure 17 and slide onto frame assembly. Insure that all grommets on cable entry and exit ports are fully seated and that grommets on strand hanger align and seat pro-perly into cover assembly.
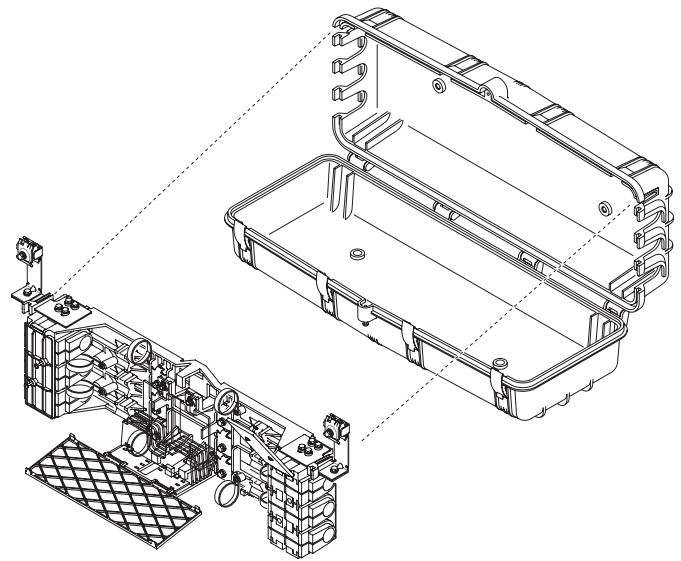


*FIGURE 17—Positioning Cover on Frame.*

**10.02** The joining of the Frame and Cover Assemblies should resemble that depicted in Figure 18.
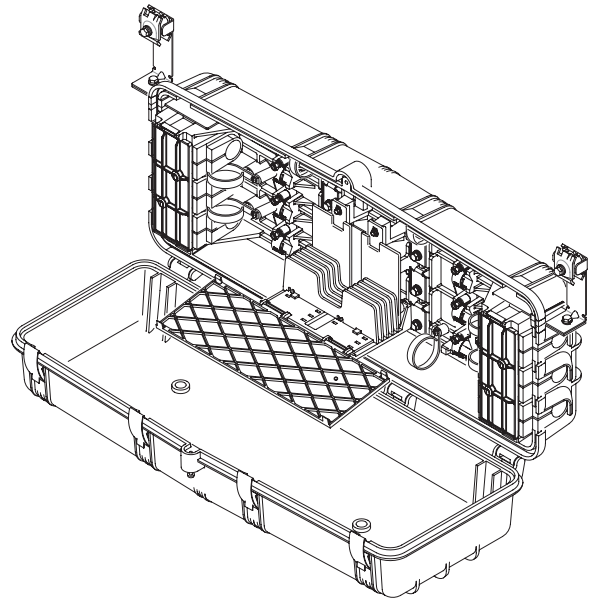


*FIGURE 18—Completed LG-600 Closure Assembly.*

**10.03** After assembly of cover to frame, lock down and secure cover to frame by using the two (2) hex-head screws located at each end of the frame.  Refer to Figure 19 on page 8.

**10.04** Close cover lid and secure using 4 latches.

**10.05** Additional security is provided by pin-in-hex or 216 style security screw located on top cover middle.
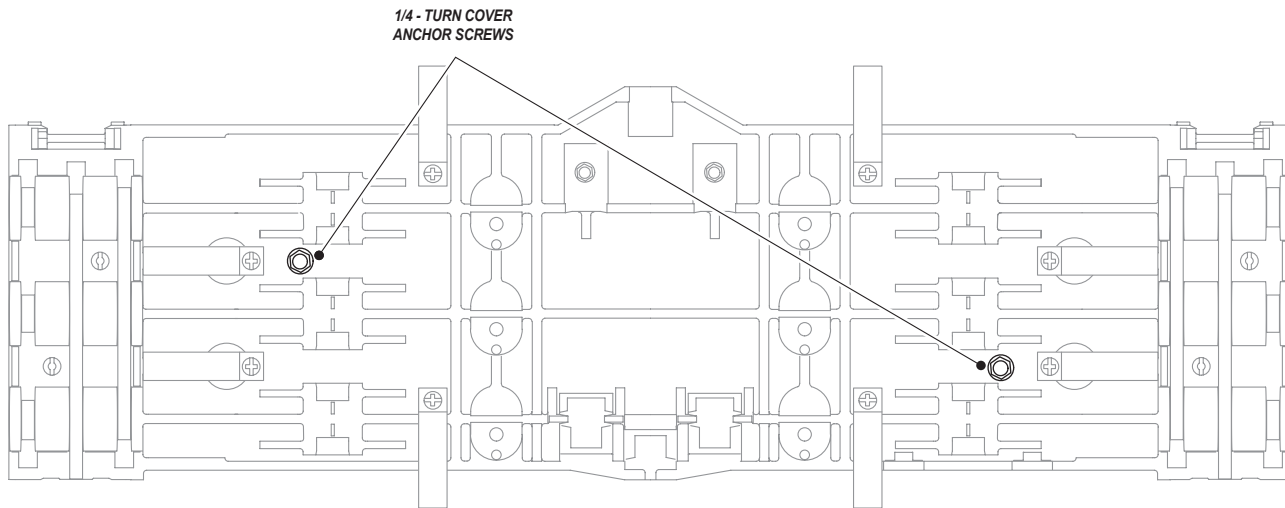
**10.06** Closure installation is now complete.

**FIGURE 19—Locating Quarter-Turn Cover Anchor Screws.**