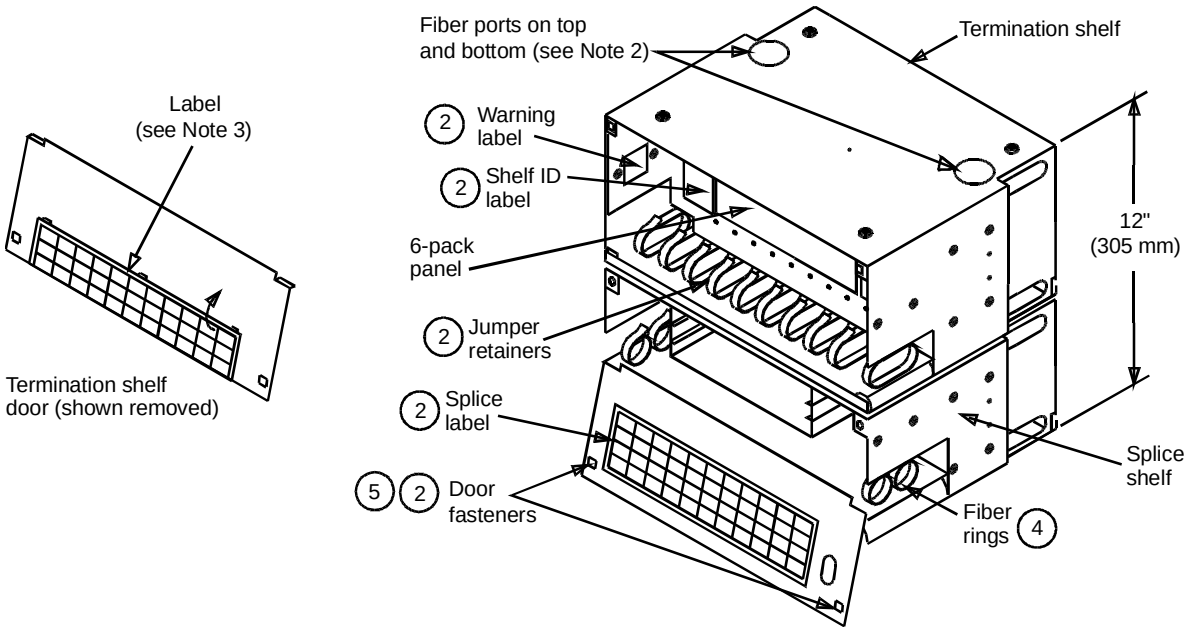
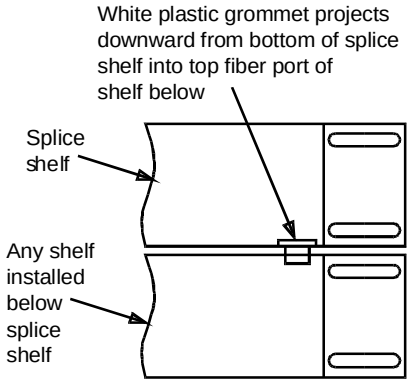
STEP 1—VERIFY PARTS AND INSTALL LABELS, GROMMETS, AND RINGS

(This product is intended for indoor use or outdoors in a suitable protective enclosure.)



LOOSE PARTS FURNISHED WITH SHELF		
ID Number*	**Description**	**Quantity**
846 247 427	Mounting brackets	2
846 247 435	Mounting bracket	1
846 247 443	Mounting bracket	1
—	Jumper retainers	11
—	Fiber rings	18
—	Shelf identification label	1
—	Warning label	2
—	Splice label	1
848 067 369	Cable clamp brackets	4
—	White plastic grommets	4
—	Misc. screws and nuts	
—	Bend limiter, upper	2
—	Bend limiter, lower	2

* For identification purposes, not for ordering.



STEP 1—VERIFY PARTS AND INSTALL LABELS, GROMMETS, AND RINGS (Continued)

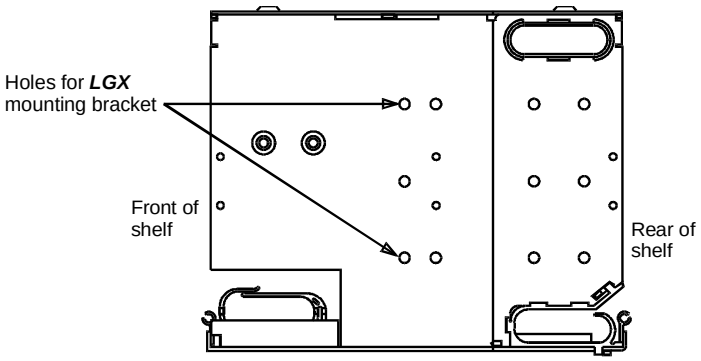
Note 1: LS-type shelves come equipped with plastic grommets in upper entry ports and slotted out lower cable entry ports. The slots will have grommets and will permit easy lay-in of cables or fibers.

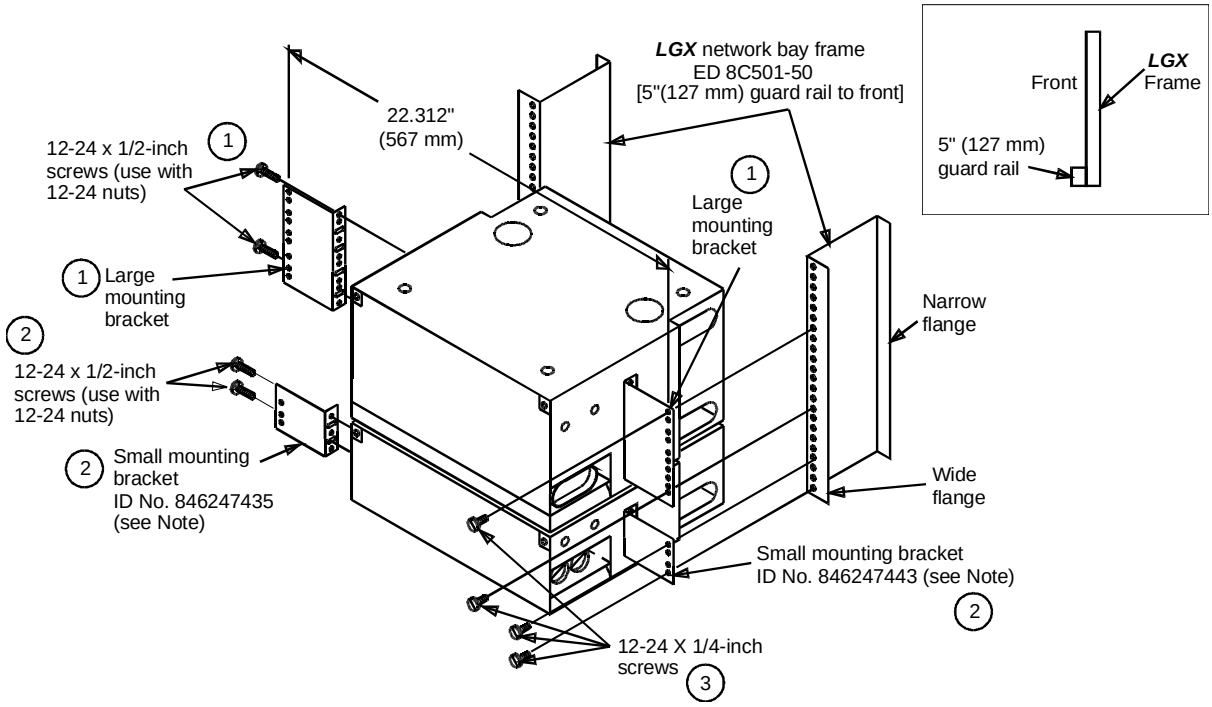
Note 2: Grommets installed in fiber ports allow fibers to be routed internally to other shelves. To install grommets, remove bottom two fiber port plugs. Install grommets from inside shelf projecting downward as shown on page 1. When mounting splice/termination shelf above another shelf, remove top fiber port plugs in shelf below. When mounting under another shelf, remove top two fiber plugs in splice/termination shelf.

Note 3: Termination shelf flip-type labels are used to record fiber termination locations on one side and circuit information on the other side. Shelf identification label is provided to key shelf to label which may be removed from door. Shelf location identification information must be written on both the flip-type label and matching shelf ID label prior to use.

1. Verify parts against parts list shown in the table on page 1. Connector panels, couplers, and splice organizers used with this shelf are ordered/provided separately.
2. Rotate front door fasteners ¼ turn and open front doors. Apply shelf identification label to 6-pack panel, warning labels to either inside wall of termination shelf—one in front of 6-pack panel and one behind panel, and splice label to inner side of splice shelf front door.
3. Jumper retainers (shown on page 1) may be installed now or following 6-pack connector panel installation.
4. Position and snap fiber rings into front and back of splice shelf as shown on page 1.
5. Return front doors to closed position and rotate fasteners ¼ turn to secure.

STEP 2—INSTALL MOUNTING BRACKETS AND MOUNT SHELF—LGX® FRAME

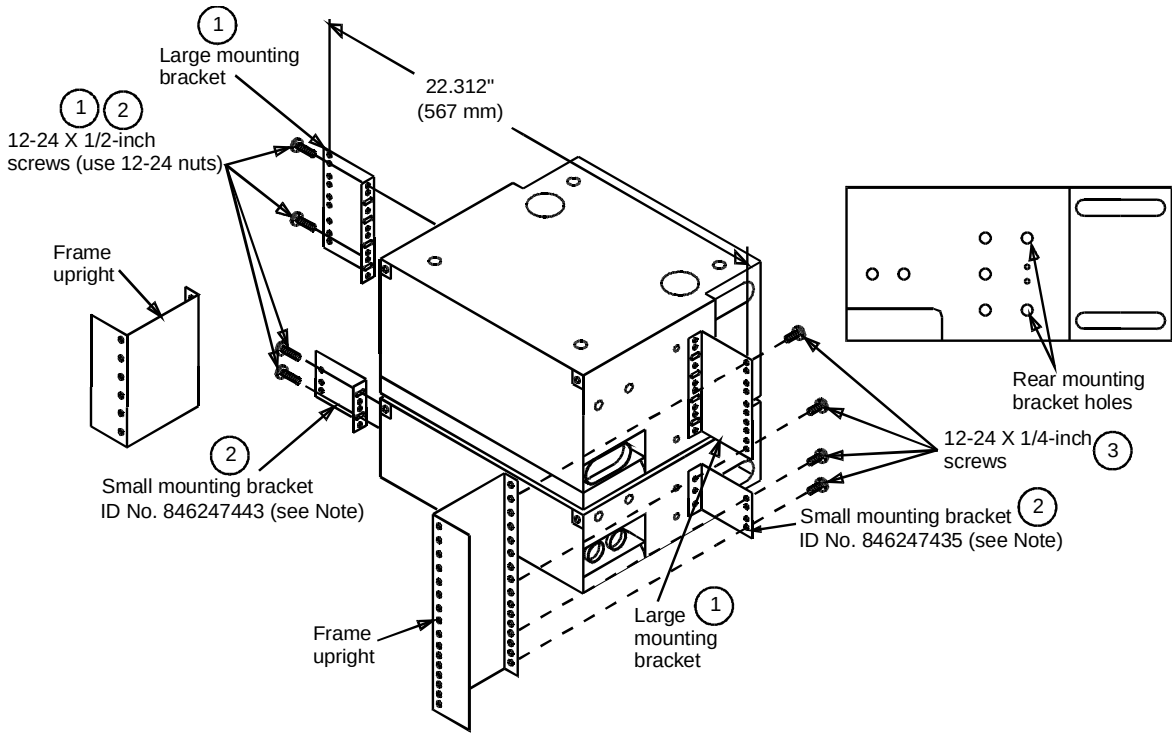




Note: Small mounting brackets are not interchangeable. Mount brackets to shelf per ID numbers shown above.

1. Position and attach each large mounting bracket to termination shelf using proper mounting holes (see above) with two 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers).
2. Position and attach each small mounting bracket to shelf using proper mounting holes (see above) with two 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers).
3. Install shelves to front of ***LGX*** frame with two 12-24 by ¼-inch screws per mounting bracket.

STEP 2—INSTALL MOUNTING BRACKETS AND MOUNT SHELF—OTHER THAN *LGX*

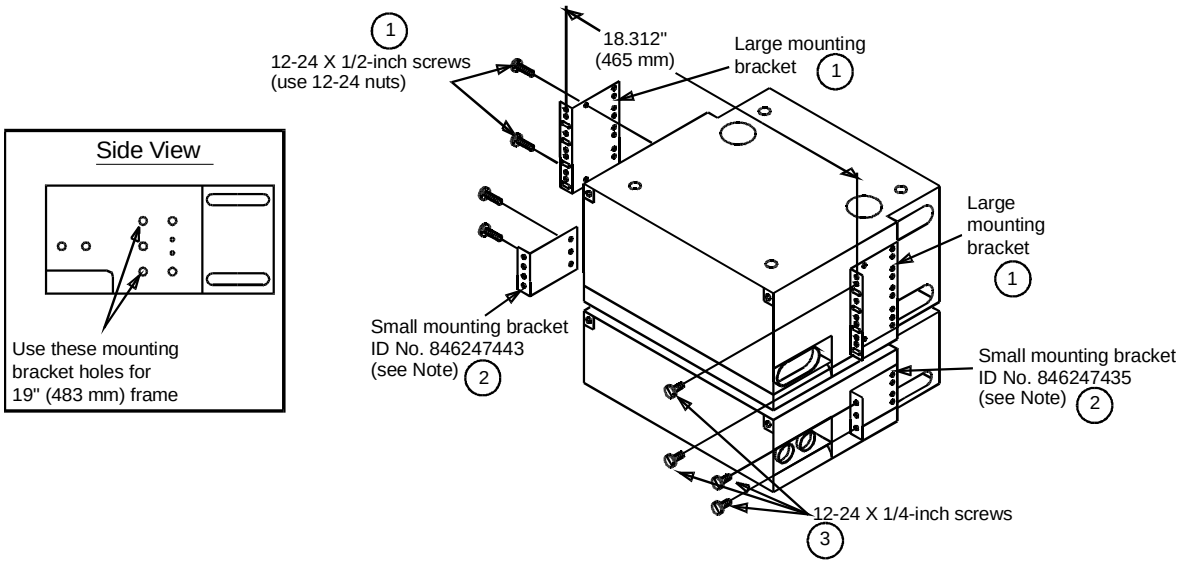


23" (584 mm) Frame Rear Mounting

Note: Small mounting brackets are not interchangeable. Mount brackets to shelf per ID numbers shown above.

1. Position and attach each large mounting bracket to termination shelf using proper mounting holes (see above) with two 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers).
2. Position and attach each small mounting bracket to shelf using proper mounting holes (see above) with two 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers).
3. Install shelves to frame with two 12-24 by ¼-inch screws per mounting bracket.

STEP 2—INSTALL MOUNTING BRACKETS AND MOUNT SHELF—OTHER THAN *LGX* (Continued)



19" (483 mm) FRAME MOUNTING CONFIGURATION

Note: Small mounting brackets are not interchangeable. Mount brackets to shelf per ID numbers shown above.

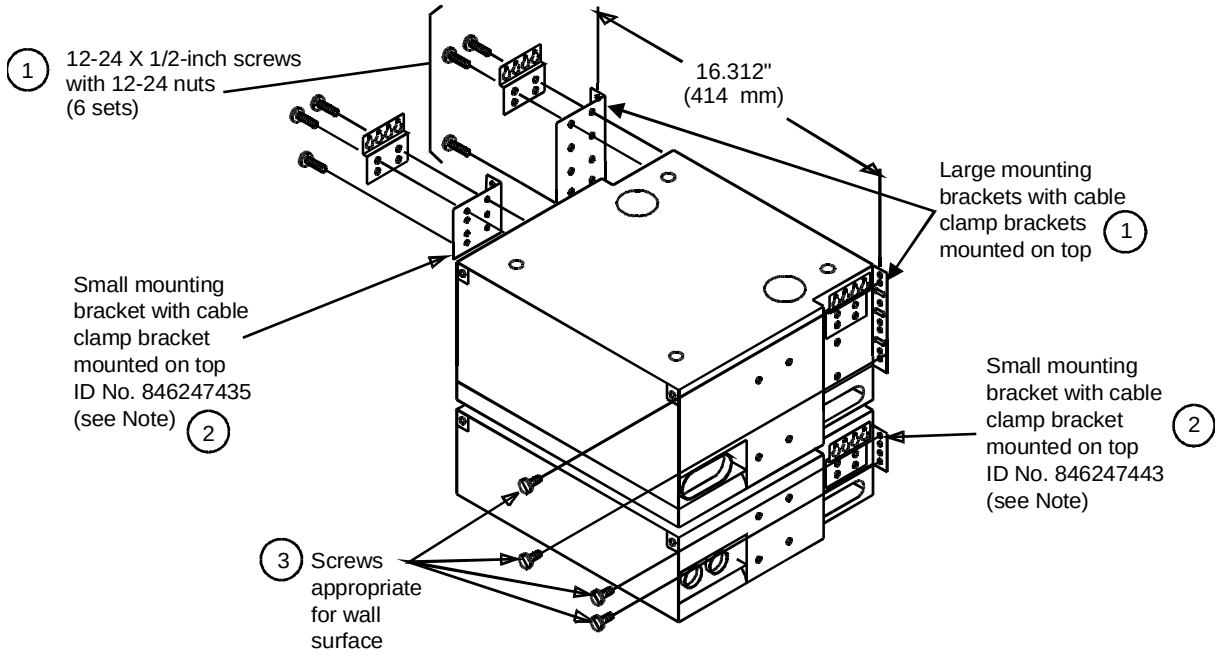
19-INCH (483 mm) FRAME MOUNTING

1. Position and attach each large mounting bracket to termination shelf using proper mounting holes (see above) with two 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers).

2. Position and attach each small mounting bracket to splice shelf using proper mounting holes (see above) with two 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers).

3. Install shelves to 19-inch (483 mm) frame with two 12-24 by ¼-inch screws per mounting bracket.

STEP 2—INSTALL MOUNTING BRACKETS AND MOUNT SHELF—OTHER THAN *LGX* (Continued)



Wall Mounting Configuration

Note: Small mounting brackets are not interchangeable. Mount brackets to shelf per ID numbers shown above.

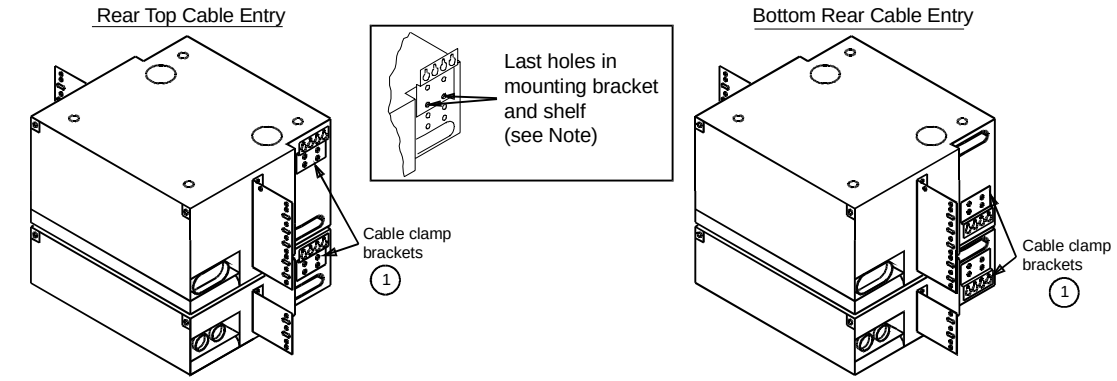
WALL MOUNTING

Note: Illustration shows wall-mounted top cable entry. See Step 3 for wall-mounted bottom cable entry. Shelf may also mount on 134-type wall bracket.

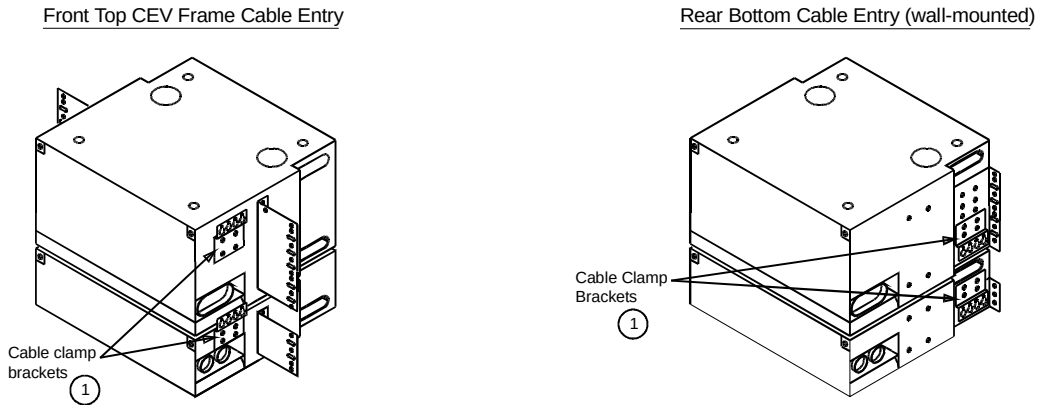
1. Position and attach large mounting bracket and cable mounting bracket to each side of termination shelf with three 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers). Two screws go through both brackets, while a third screw goes through the mounting bracket only. Repeat the same procedure for the opposite side of shelf.
2. Position small mounting brackets to splice shelf. Place cable clamp brackets on mounting bracket and attach to shelf with two 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers).
3. Install shelf to wall surface with two fasteners (locally obtained) per mounting bracket. Fasteners should be appropriate for wall surface.

STEP 3—INSTALL CABLE CLAMP BRACKETS

Front And Rear Access



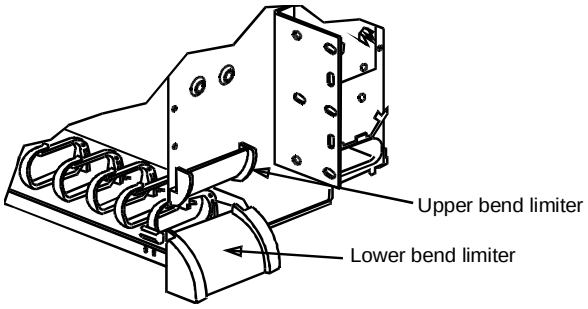
Front Access Only



Note: Some OSP cables using top or bottom entry may require cable clamp bracket to be installed using last holes in shelf and bracket to maintain proper fiber bend radius into shelf (see example above). For bottom cable entry, the cable clamp bracket would be turned 180 degrees and mounted, protruding below the bottom of the shelf.

1. Position and install each cable clamp bracket to sides of shelves with two 12-24 by 3/8-inch screws and 12-24 nuts (with captive lock washers). For wall-mounted cable clamp brackets were previously installed with mounting brackets.

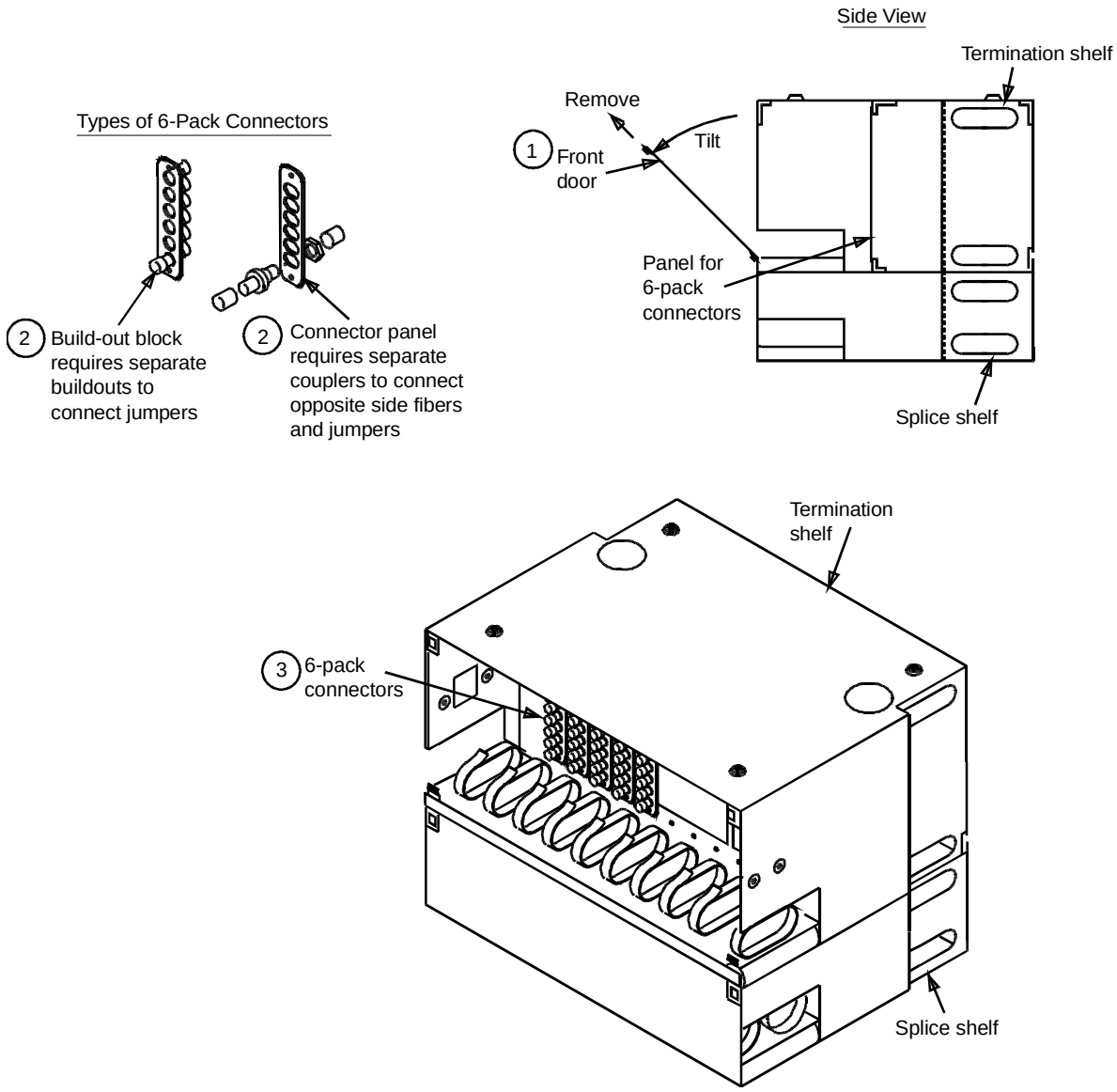
STEP 4—INSTALL BEND LIMITERS



Note: Order Comcode No. 107330565, set of bend limiters (multipack), to equip existing shelves with bend limiters. Each multipack will equip five shelves.

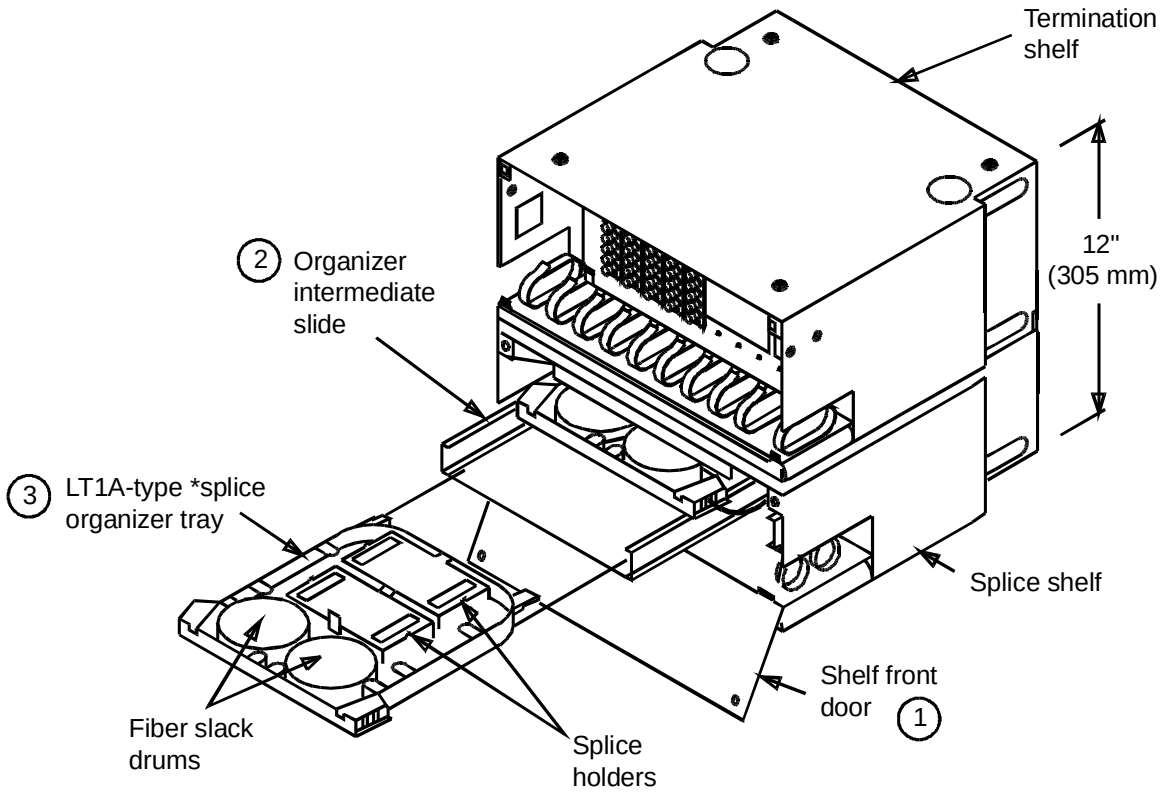
1. Installed upper and lower bend limiters in the jumper ports on left and right side of the shelf. The lower bend limiters are installed by snapping them into position. The upper bend limiters are installed using the doubled sided foam tape provided. Make sure surface of shelf is clean, peel release paper from tape on upper bend limiter, and press into position.

STEP 5—INSTALL 6-PACK CONNECTORS/BLOCKS TO TERMINATION SHELF PANELS



1. Rotate termination shelf front door fasteners ¼ turn, tilt door to align with hinge slots, and remove.
2. Couplers must be installed to 6-pack connector panels prior to installation of connector panels. Build-out blocks may be installed to the shelf panel prior to build-out installation.
3. Install 6-pack connector panels or build-out blocks to the shelf panel using the snap fasteners on the 6-pack connectors.
4. For installations where rear access to shelf is available, outside plant fibers may be connected to rear of 6-pack connector panels or build-out blocks with shelf panel in place. See Step 10 for fiber connection to shelf panel with front access only.

STEP 6—INSTALL LT1A-TYPE SPLICE ORGANIZERS



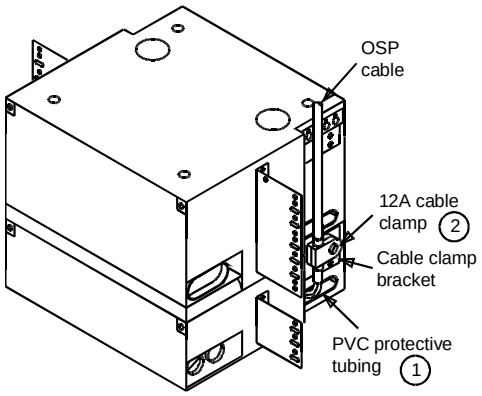
* LT1A-M/M for mechanical/rotary splices
LT1A-F/F for fusion splices

Note: Three LT1-type splice organizers may be installed in the splice shelf. Splice organizers may be installed and accessed from rear of shelf for special applications. For more information on installing LT1A-type splice organizers, see 636-299-103-15 furnished with organizer.

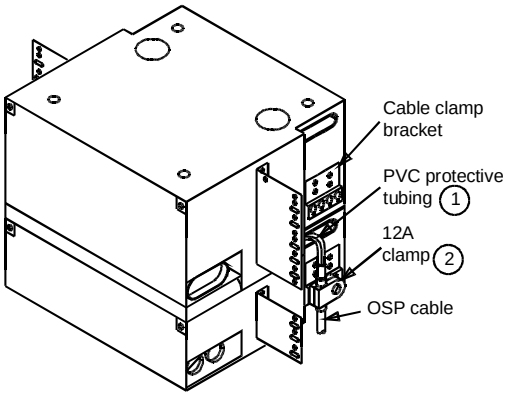
1. Rotate splice shelf front door fasteners ¼ turn and tilt door down.
2. Install organizer intermediate slides in splice shelf.
3. Install splice organizer trays into intermediate slides and push into splice shelf.

STEP 7—SECURE AND GROUND OUTSIDE PLANT TYPE CABLES TO SHELVES (FRONT AND REAR ACCESS INSTALLATIONS)

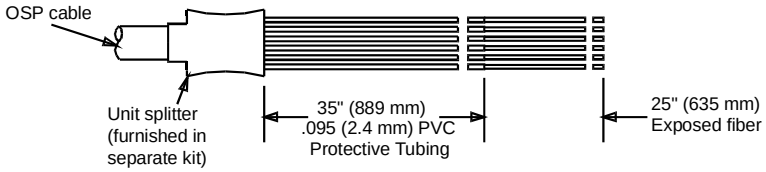
Rear Top Cable Entry



Rear Bottom Cable Entry



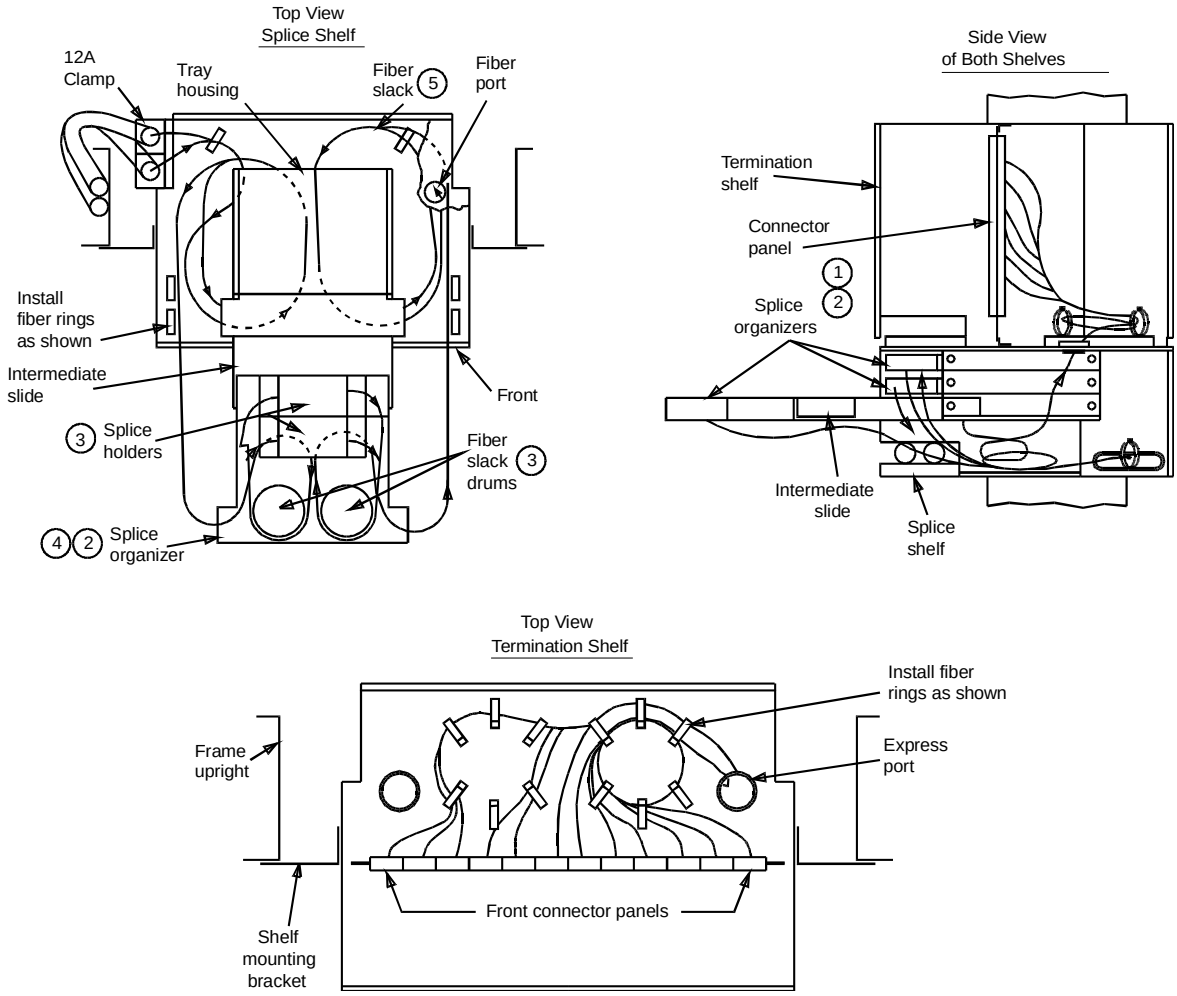
(1) Typical Stranded/**Lightpack®** OSP Cable Preparation



Note: OSP (outside plant) cables can be connected to cable brackets on either shelf and run externally or internally (through fiber port) to splice shelf.

1. Prepare stranded/***Lightpack*** cables only as shown above using unit splitter. See 636-299-110 for cable preparation procedures for other types of cable.
2. Secure and ground OSP metallic cables to cable clamp bracket and frame, respectively, with 12A1 clamps. Use 12A2 clamps for nonmetallic cables. The 12A clamps are order/provided separately—one per OSP cable to be secured. Refer to 636-299-110 for details.
3. Route OSP cable fibers into shelf for splicing to pigtails or buffering, connectorizing, and terminating to connector panels or build-out blocks.
4. If sufficient bend radius cannot be maintained between the cable connected to the cable clamp bracket and the fibers turning into the shelf entry port, a special mounting bracket arrangement can be used. See Step 3 illustration and note on page 7.

STEP 8—SPLICE FIBERS IN SHELF (FRONT AND REAR ACCESS INSTALLATIONS)



Note: Splicing can be accomplished with splice organizer tray installed or removed from intermediate slide. For more information on splicing and installing LT1A-type splice organizers, see 636-299-103-15 provided with organizer.

SPLICING PROCEDURE WITH SPLICE ORGANIZER INSTALLED IN SHELF

1. Obtain rotary/mechanical or fusion splice materials as required per type of splice to be made.
2. Pull out splice organizer to “stop” position.
3. Splice fibers, place into holders, and coil two loose turns of fiber slack around fiber-slack drums in organizer tray.
4. Slide splice organizer into splice shelf.
5. Carefully coil and store excess fiber slack in bottom of splice shelf.

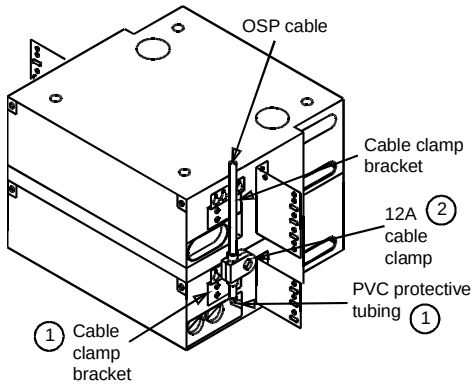
STEP 8—SPLICE FIBERS IN SHELF (FRONT AND REAR ACCESS INSTALLATIONS) (Continued)

SPLICING PROCEDURE WITH SPLICE ORGANIZER REMOVED FROM SHELF

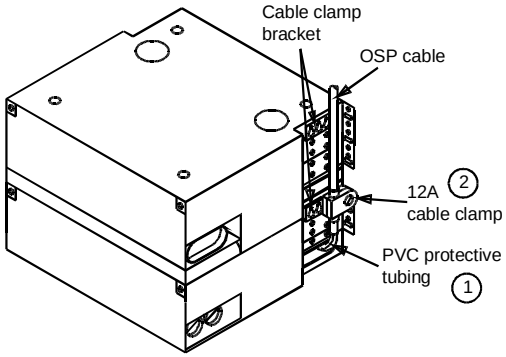
1. Obtain rotary/mechanical or fusion splice materials as required per type of splice to be made.
2. Pull out splice organizer to “stop” position. Press in tabs on rear side of organizer and remove from intermediate slide.
3. Splice fibers, place into splice holders, and coil two loose turns of fiber slack around fiber-slack drums in organizer tray.
4. Insert splice organizer tray into intermediate slide and push in to “stop”.
5. Carefully coil and store excess fiber slack in bottom of splice shelf.

STEP 9—SECURE AND GROUND OUTSIDE PLANT TYPE CABLES TO SHELVES (FRONT ACCESS ONLY INSTALLATIONS)

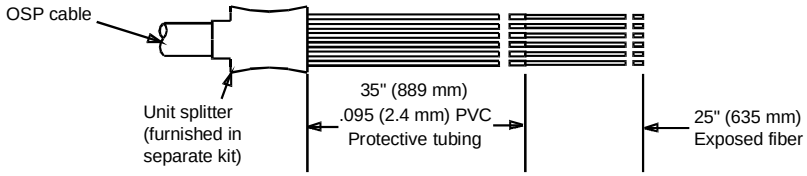
Front Top CEV Frame Cable Entry



Rear Top Cable Entry (wall mounted)

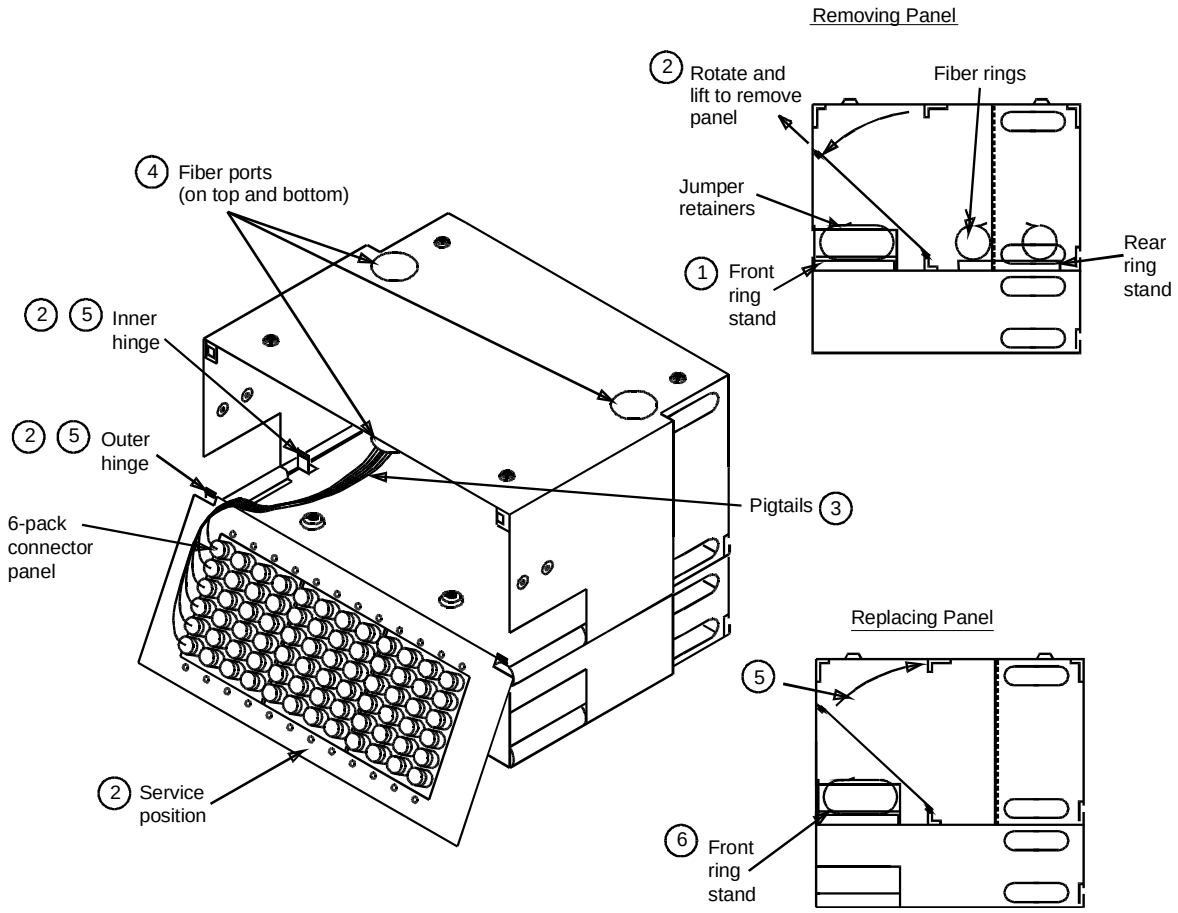


1 Typical Stranded/***Lightpack*** OSP Cable Preparation



1. Prepare stranded/***Lightpack*** cables only as shown above using unit splitter. See 636-299-110 for cable preparation procedures for other types of cable.
2. Secure and ground OSP metallic cables to cable clamp bracket and frame, or suitable ground, with 12A1 clamps. Use 12A2 clamps for nonmetallic cables. The 12A clamps are order/provided separately—one per OSP cable to be secured. Refer to 636-299-110 for details.
3. Route OSP cable fibers into shelf for splicing to pigtails or buffering, connectorizing, and terminating to connector panels or build-out blocks.
4. If sufficient bend radius cannot be maintained between the cable connected to the cable clamp bracket and the fibers turning into the shelf entry port, a special mounting bracket arrangement can be used. See Step 3 illustration and note on page 7.

STEP 10—REPOSITION TERMINATION SHELF PANEL (FRONT ACCESS ONLY INSTALLATIONS)



1. Pull plungers up on front ring stand fasteners and remove stand from shelf. Any jumper cables in the jumper retainers must be removed first.
2. Loosen panel fasteners, tilt and align panel with inner hinge slots, and remove panel from shelf. Place panel in outer hinges (service position) and tilt down.
3. Connect pigtails to 6-pack connector panel.
4. Rotate, lift, and fasten panel back to original inner hinged position.
5. Reinstall front ring stand and front door.