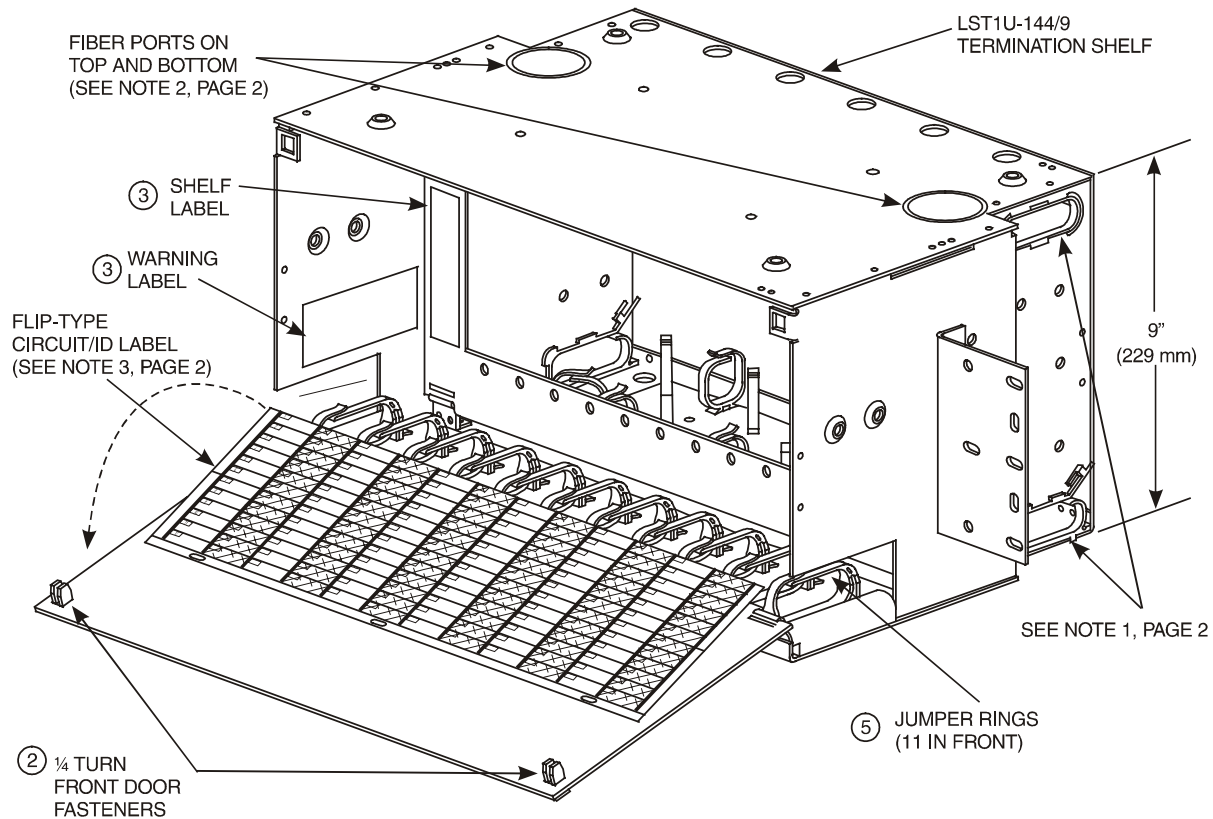


**STEP 1—VERIFY PARTS AND INSTALL LABELS, GROMMETS, AND RINGS**

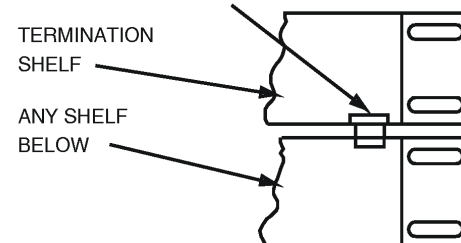
(This product is intended for indoor use or outdoors in a suitable protective enclosure.)



LOOSE PARTS FURNISHED WITH SHELF ①		
ID Number*	Description	Quantity
846 247 427	Mounting brackets	2
—	Fiber rings	12
—	Shelf identification label	1
—	Warning label	2
848 067 369	Cable clamp brackets	2
—	White plastic grommets	2
—	Misc. screws and nuts	
—	Jumper retainer	17
—	Bend limiter, upper	2
—	Bend limiter, lower	2
—	216-termination label	1

\* For identification purposes only. Not for ordering.

WHITE PLASTIC GROMMET PROJECTS DOWNWARD FROM BOTTOM OF TERMINATION SHELF INTO TOP FIBER PORT OF SHELF BELOW (SEE NOTE 2, PAGE 2)



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

**Note 1:** LS-type shelves come equipped with plastic grommets in upper cable entry ports and slotted lower cable entry ports.

**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 in the inset drawing on page 1. When mounting a termination shelf above another shelf, remove top fiber port plugs in lower shelf. When mounting under another shelf, remove top two fiber plugs in termination shelf.

**Note 3:** The flip-type circuit/ID label provides fields on both sides. Use one side to record fiber termination location and other side to record circuit information. Shelf identification label is used to coordinate information on the circuit/ID label, which is removable from door. Therefore, shelf location identification information must be written on both the circuit/ID label and shelf ID label.

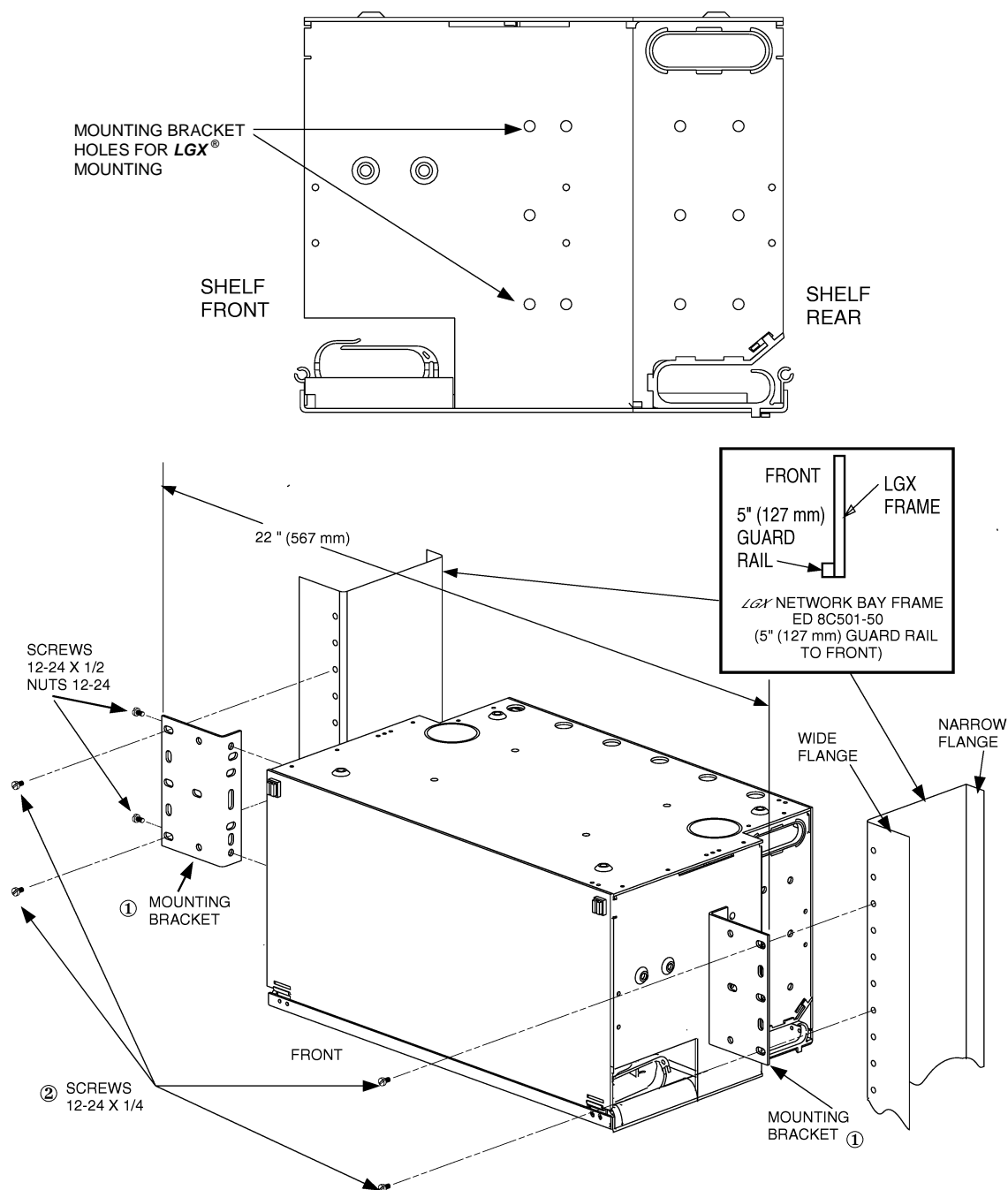
Shelves manufactured after July 1, 1998, come equipped with a new larger flip-type designation label designed to make recording termination locations easier. In addition, a 216-position label is included as a loose part for 216-termination applications.

1. Verify the parts shipped with this unit against the parts listed in the table on page 1.

**Note:** All connector panels, build-out blocks, and couplers used with this shelf must be ordered separately.

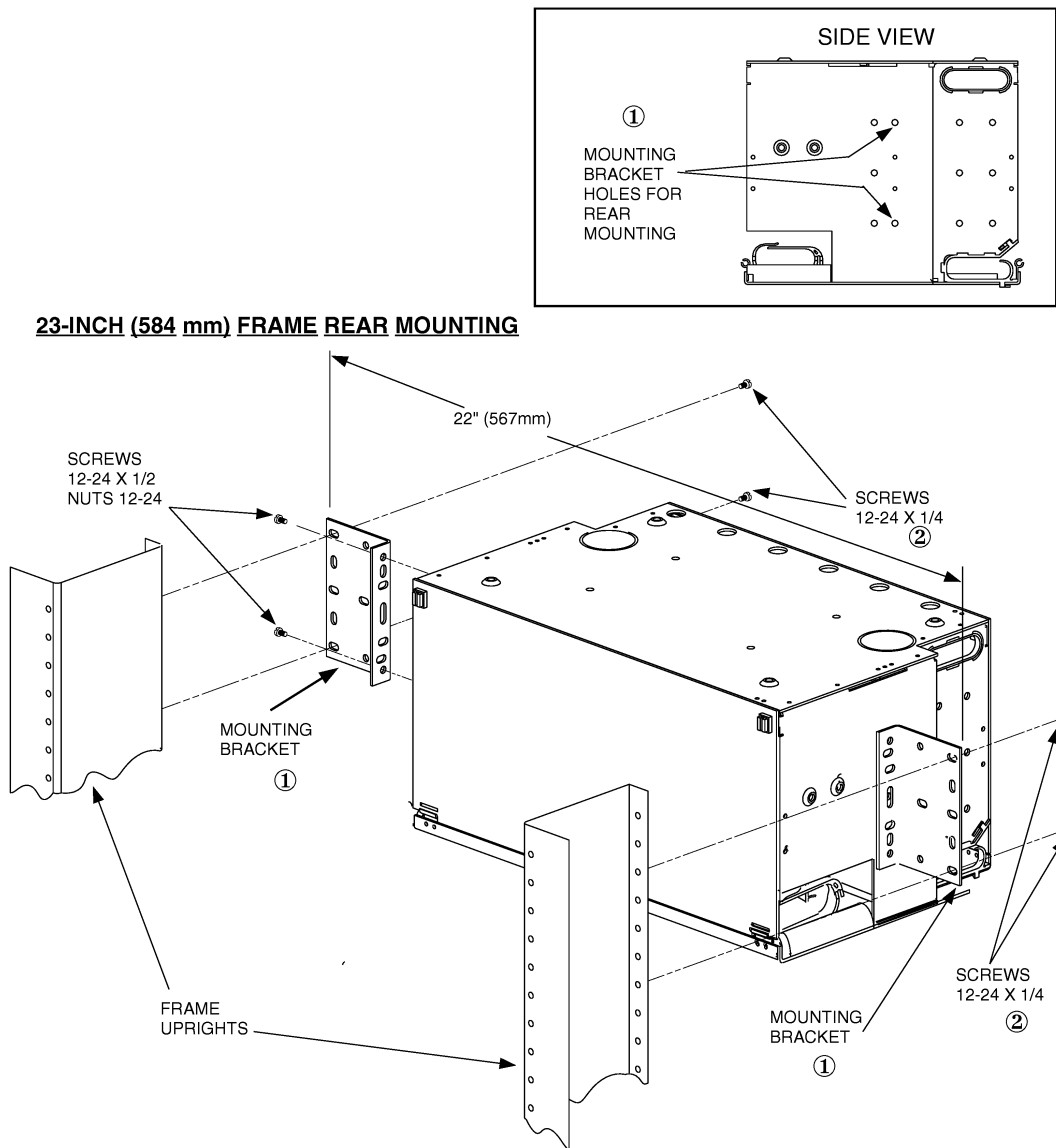
2. Rotate front door fasteners  $\frac{1}{4}$  turn and open front door.
3. Apply shelf ID label to 12-pack panel (as shown on page 1). The warning labels are affixed to the inside wall of the shelf—one in front of 12-pack panel and one behind the 12-pack panel.
4. Twelve fiber rings and six jumper retainers are provided for the rear of shelf. The fiber rings should be installed for buffered fiber or the jumper retainers, if jumpers are to be terminated (see page 7).
5. Install the 11 jumper rings into the ring stand (see page 1) by hooking the base into the rear hole and then snapping the level end into the rear hole.
6. Close the front door and rotate fasteners  $\frac{1}{4}$  turn clockwise to secure.

## STEP 2—INSTALL SHELF MOUNTING BRACKETS AND MOUNT SHELF

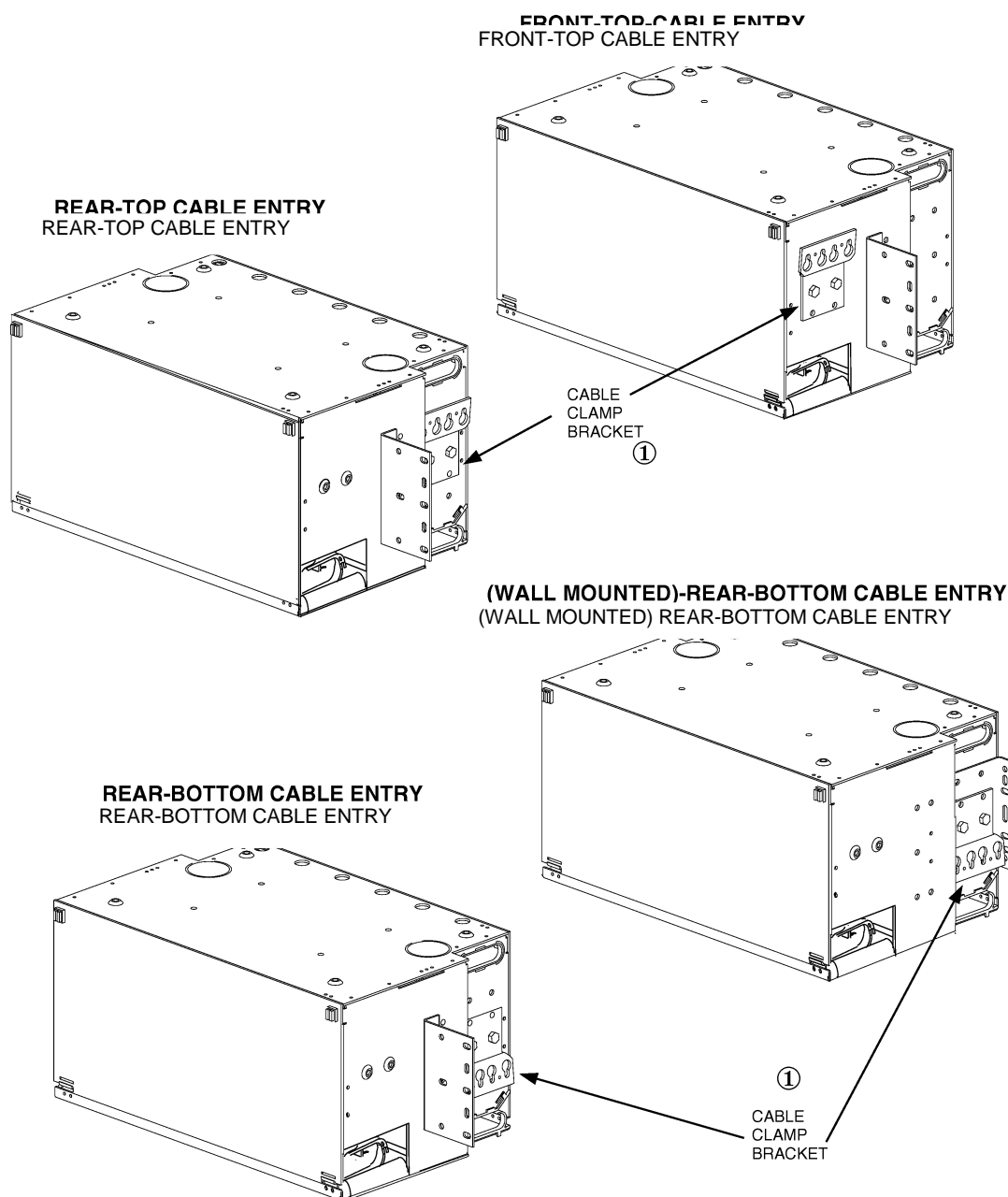


1. Position and attach each mounting bracket to the shelf using the proper mounting holes (see above) with two 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers).
2. Install shelf in its frame with two 12-24 by ¼-inch screws per mounting bracket.

**STEP 2—INSTALL SHELF MOUNTING BRACKETS AND MOUNT THE SHELF (Continued)**



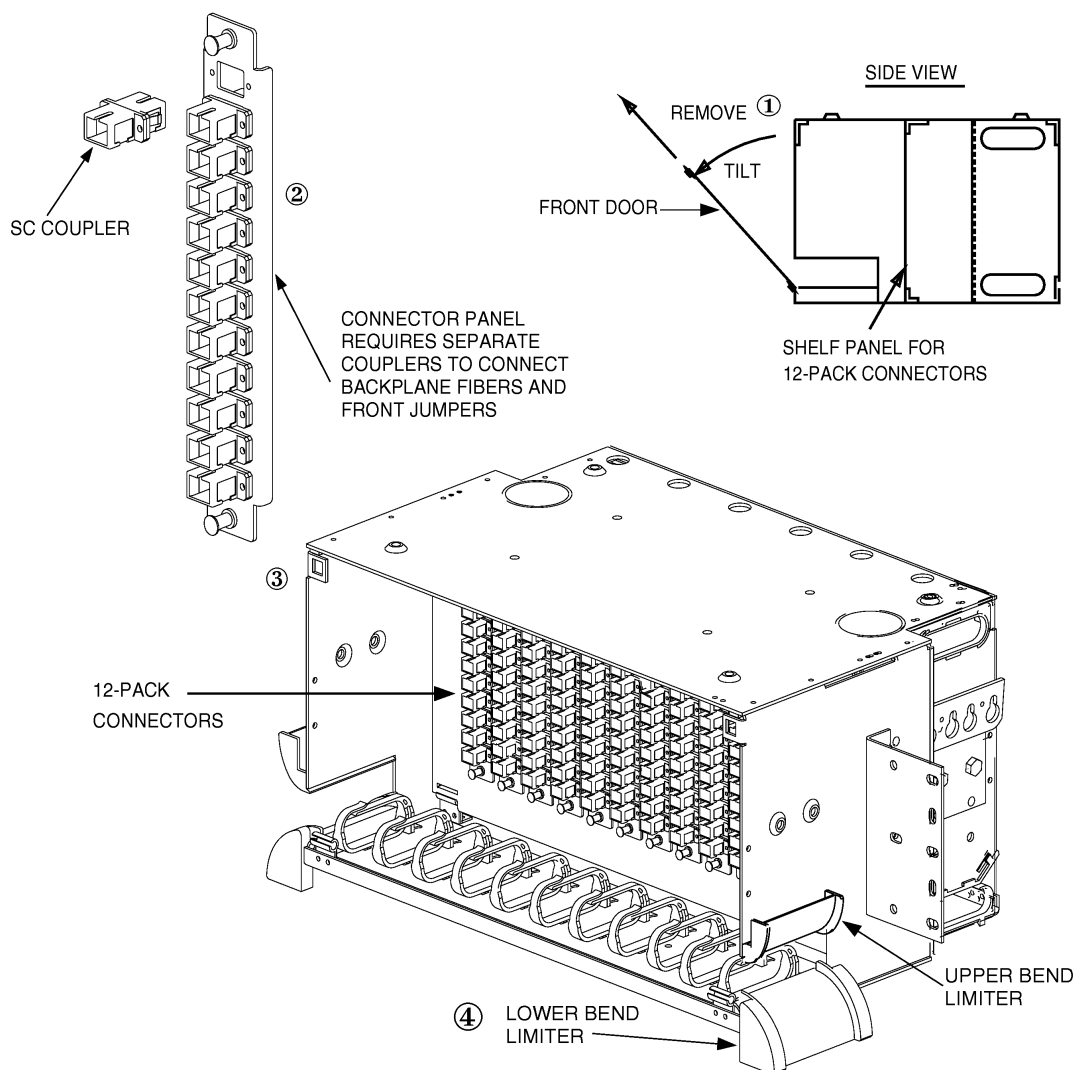
1. Position and attach each mounting bracket to the shelf using the proper mounting holes (see above) with two 12-24 by ½-inch screws and 12-24 nuts (with captive lock washers).
2. Install shelf in its frame with two 12-24 by ¼-inch screws per mounting bracket.

**STEP 3—INSTALL CABLE CLAMP BRACKETS**

**Note:** For wall mounted shelves, cable clamp brackets were previously installed with mounting brackets.

1. Position and install each cable clamp bracket to sides of the shelf with two 12-24 by 3/8-inch screws and 12-24 nuts (with captive lock washers).

## STEP 4—INSTALL 12-PACK CONNECTORS TO SHELF PANEL AND INSTALL BEND LIMITERS



### JUMPER PORTS

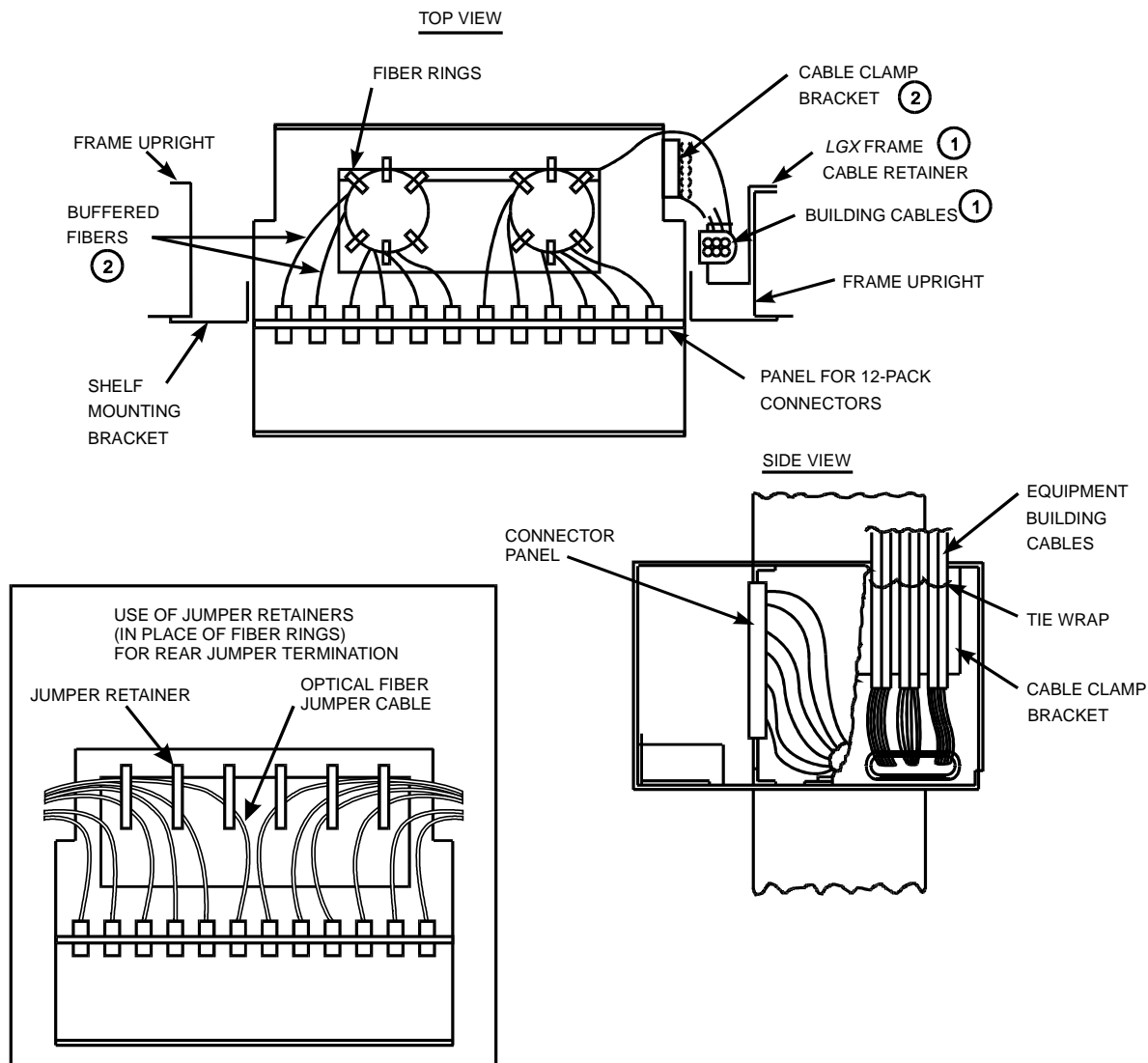
1. Rotate the front door fasteners  $\frac{1}{4}$  turn, tilt door to align with hinge slots, and remove.
2. Attach the couplers to the 12-pack connector panels, if required.

**Note:** This step is applicable to all types of couplers currently in use. However, only SC couplers are shown in this instruction sheet.

3. Install the 12-pack connector panels to the shelf panel using the snap fasteners on the 12-packs.
4. Install the upper and lower bend limiters at the jumper ports on the left and right sides of the shelf. The lower bend limiters are attached by snapping them into position. The upper bend limiters use the double sided foam tape provided. Make sure the surface of the shelf is clean, peel the release paper from the tape on the back of the upper bend limiter, and press it into position.

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

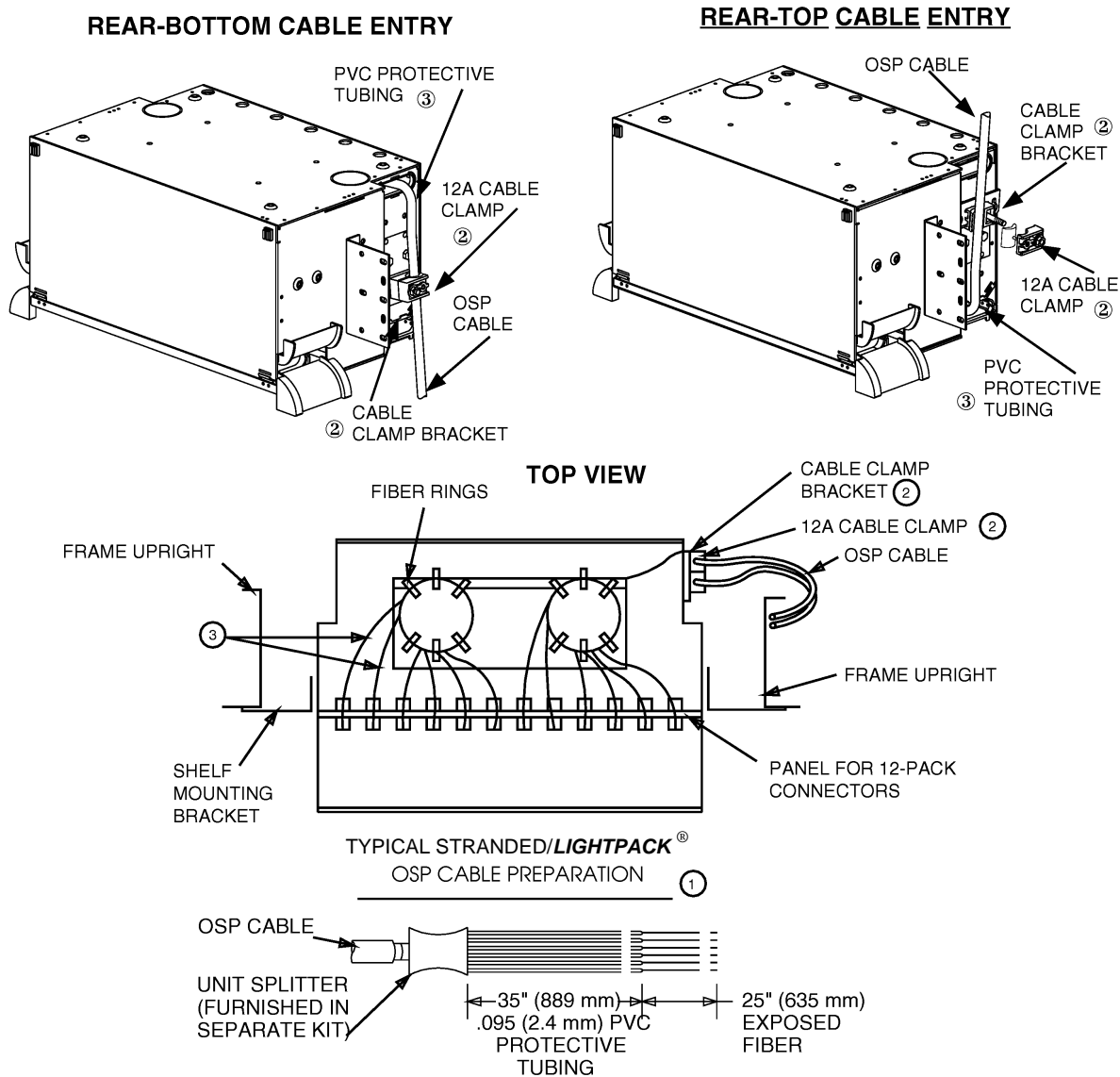
# **STEP 5—INSTALL BUILDING CABLES TO THE SHELVES WITH FRONT AND REAR ACCESS (NORMAL EQUIPMENT ROOM/CENTRAL OFFICE APPLICATION)**



**Note:** The ideal procedure for securing building cables is to use a spiral wrap, if available, around each building cable at the cable clamp bracket. Tie wraps should only loop through the spiral wrap to secure the cable.

1. Route and loosely secure (tie wrap) the building cables to the cable retainers and cable retainer brackets when used on an **LGX**<sup>®</sup> distribution frame.
2. Loosely secure (tie wrap) the building cables to the cable clamp bracket on the shelf. Route the buffered fibers into the shelf, storing the fiber slack in the fiber rings (see above) and terminate to the 12-pack connectors.

**STEP 6—INSTALL OSP CABLE (DIRECT TERMINATION) TO THE SHELVES WITH FRONT AND REAR ACCESS (NORMAL EQUIPMENT ROOM/CENTRAL OFFICE APPLICATION)**



1. Prepare stranded/**Lightpack** cables typically as shown above using a 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, 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 buffering, connectorizing, and terminating to connector panels or build-out blocks.



## ADDING A HIGH-DENSITY BAY TO A STANDARD DENSITY LINEUP

When adding a bay for 9-inch (229 mm) shelves to an existing lineup of 7-inch (178 mm) shelves, first remove the end guard from the existing frame.

### If JR2A retainers are on the frame:

1. Remove the JR2A retainers from the end of the frame.
2. Install new JR4A retainers (positions shown on next page).

**Note:** The retainer height will deviate from the standard position in accordance with the positions shown on next page.

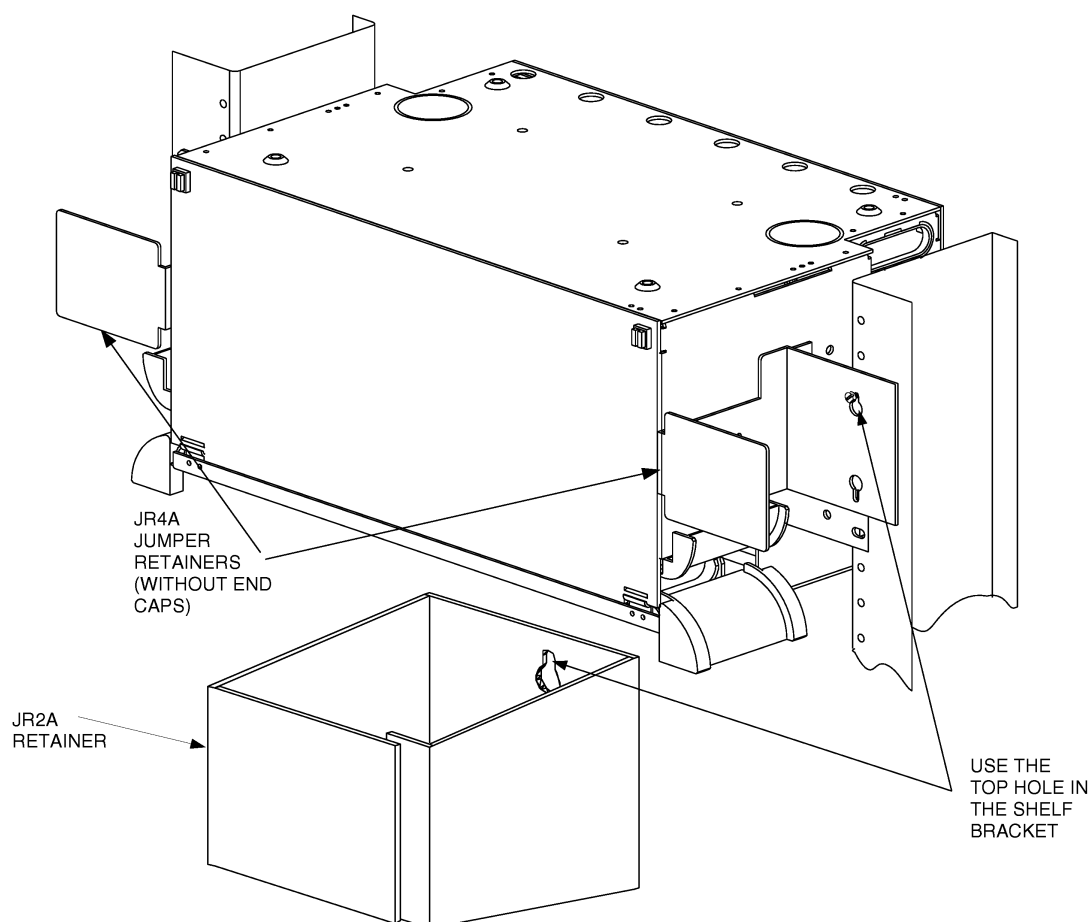
### If JR4A retainers are on the frame:

1. Remove the end caps from the end vertical jumper retainers.
2. Move the retainers on the existing 7-inch (178 mm) shelves to the positions shown on the next page.

**Note:** The retainer height will deviate from the standard position in accordance with the positions shown on next page.

## RETAINER REPLACEMENT

The accepted procedure for attachment of a vertical jumper retainer is to hang it on the upper screw holding the shelf bracket to the frame, as shown below. The acceptable deviations from this position for all shelves are shown on the next page.



### ADDING A HIGH-DENSITY BAY TO A STANDARD DENSITY LINEUP (Continued)

3. Attach the new frame for the 9-inch (229 mm) shelves to the existing 7-inch (178 mm) lineup.
4. Install the 9-inch (229 mm) shelves, starting at the bottom of the frame and working up to the top.
5. Install all JR4A retainers for the 9-inch (229 mm) shelves at their proper positions, as shown below.

**Note:** Only shift the retainers at the interface between bays.

