



FOSC-450C Splice Tray

Content	Page
<a href="#">INTRODUCTION</a> .....	1
<a href="#">RELATED PUBLICATIONS</a> .....	2
1 <a href="#">DESCRIPTION</a> .....	2
2 <a href="#">KIT COMPONENTS</a> .....	3
3 <a href="#">INSTALLATION OF TRAY</a> .....	4
4 <a href="#">CUSTOMER INFORMATION AND ASSISTANCE</a> .....	14

## INTRODUCTION

This user manual tells how to install the CommScope FOSC-450C splice tray in the CommScope 10K Fiber Entrance Cabinet (FEC-10K).

## Revision History

ISSUE	DATE	REASON FOR CHANGE
1	May 2016	Original.

## Trademark Information

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## Admonishments

Important safety admonishments are used throughout this manual to warn of possible hazards to persons or equipment. Admonishments — in the form of Dangers, Warnings, and Cautions — must be followed at all times.



**Danger:** *Danger is used to indicate the presence of a hazard that will cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



**Warning:** *Warning is used to indicate the presence of a hazard that can cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



**Caution:** *Caution is used to indicate the presence of a hazard that will or can cause minor personal injury or property damage if the hazard is not avoided.*

## General Safety Precautions



**Caution:** *When mounting equipment in the frame, make sure mechanical loading is even to avoid a hazardous condition, such as loading heavy equipment in the frame unevenly. The frame should safely support the combined weight of all equipment it supports.*

## RELATED PUBLICATIONS

Listed below are related manuals and their publication numbers. Copies of these publications can be ordered by contacting the CommScope Customer Service at 1-800-366-3891, extension 73000 (in U.S.A. or Canada) or 952-917-3000, (outside U.S.A. and Canada).

Title/Description	Publication Number
10K Fiber Entrance Cabinet (FEC-10K) User Manual	TECP-31-106

## 1 DESCRIPTION

The FOSC-450C is a FOSC splice tray designed for use in the high-density FEC-10K cabinet. This tray is equipped with four splice modules (as compared to the usual three splice modules). Each splice tray accommodates 288 mass fusion splices, which is equivalent to the capacity of one splice drawer in the FEC-10K cabinet. One splice tray is loaded in each of the 36 drawers of the FEC-10K for a total capacity of 10,368 splices per cabinet.

To accommodate ribbon slack storage, the FOSC-450C splice tray is twice the height of the standard FOSC splice tray.

Figure 1 shows the splice tray with cover removed and with features called out that are important in installation. These same terms (such as splice chip numbers) are used in these installation instructions.

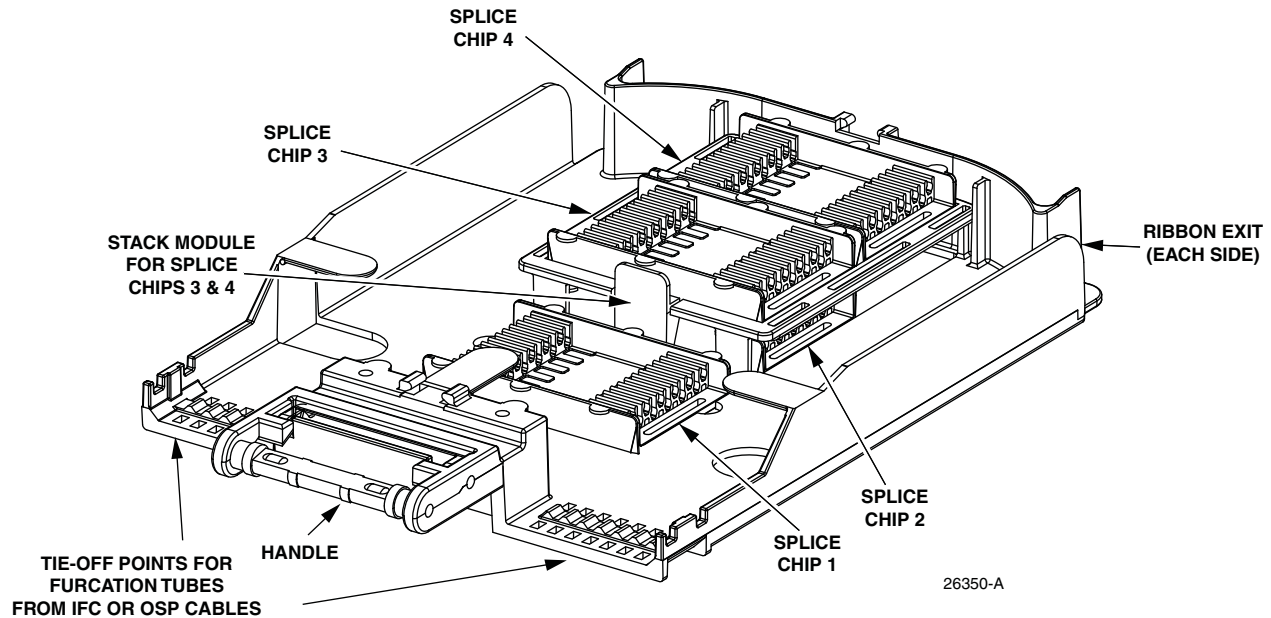
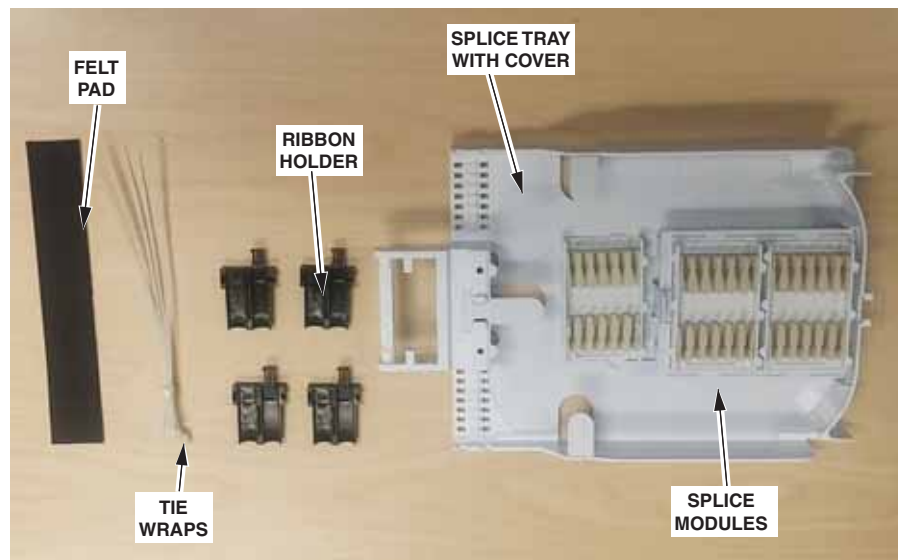


Figure 1. FOSC-450C Splice Tray Features Important in Installation  
(Shown With Tray Cover Removed)

## 2 KIT COMPONENTS

The FOSC-450C splice tray kit, shown in Figure 2, contains the following components:

- Splice tray with cover
- Four SM-6 six-position splice modules and module holder
- Four ribbon holders
- Felt pad
- Tie wraps
- Velcro straps (on back of splice tray)



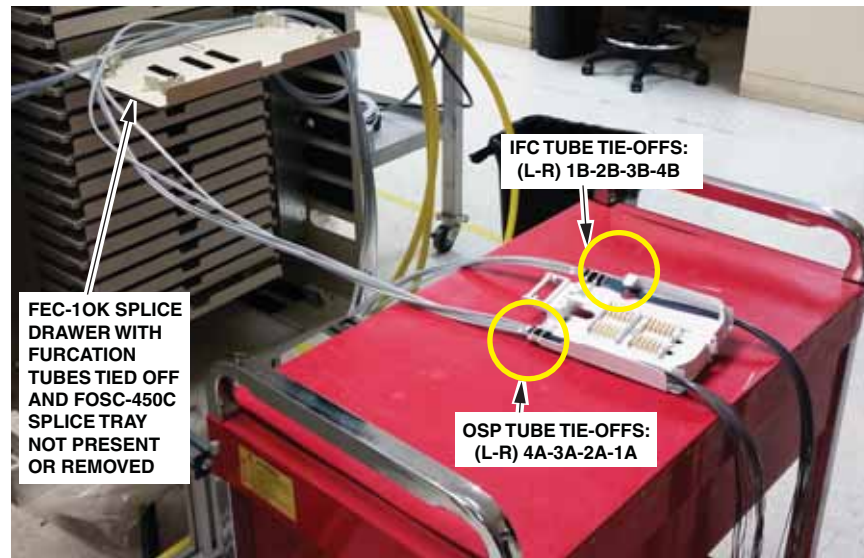
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Figure 2. Kit Components

### 3 INSTALLATION OF TRAY

Use the following procedure to install a FOSC-450C splice tray in a splice drawer in the FEC-10K cabinet.

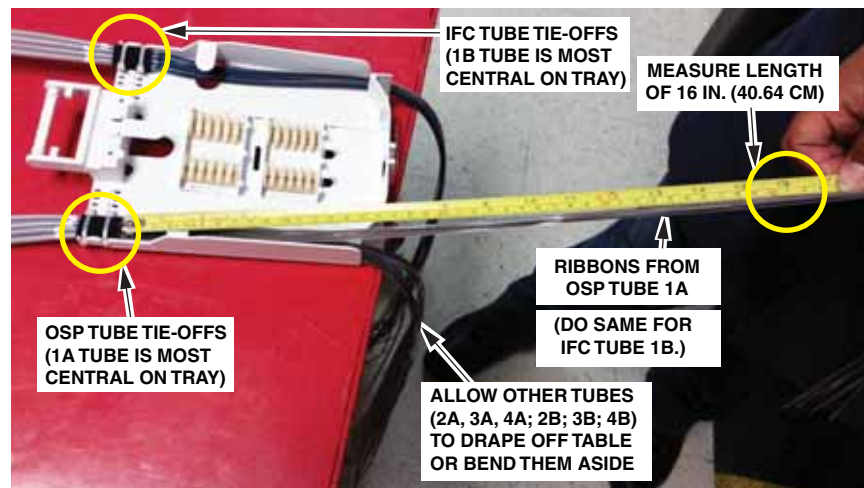
- ▶ **Note:** This procedure assumes that the OSP and IFC cable sub-units have been broken out and routed to the FEC-10K splice drawer within furcation tubes as described in the FEC-10K user manual (TECP-31-106). The section of the cable sub-unit within the drawer will then consist of eight furcation tubes and attached bare ribbon ready to be spliced.
1. Set up a work table directly in front of the FEC, as shown in [Figure 3](#). Open the splice drawer. Unpack a splice tray and place it on the table with the handle facing the FEC, as shown. Draw the OSP and IFC furcation tubes and ribbons straight out of the front of the FEC to the work table. Tie off the furcation tubes to the handle end of the splice tray.
- ▶ **Note:** Each tube houses six 12 fiber ribbons.
  - ▶ **Note:** The ribbons within the tubes must be in correct numerical order to match up the OSP and IFC ribbons correctly. Within this procedure, the eight tubes are referred to, in numerical order, as 1A-4A (OSP) and 1B-4B (IFC). The lowest number fibers should be in the middle. So, from left to right along the tray, the tie off's should be: 4A, 3A, 2A, 1A on the left side; 1B, 2B, 3B, 4B on the right side, as shown in [Figure 3](#).



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Figure 3. FOSC-450C Splice Tray on Work Table

2. Install and splice tubes 1A and 1B as follows:
  - a. Extend the ribbons straight out to measure them as shown in Figure 4.



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Figure 4. Measuring and Trimming 1A and 1B ribbons.

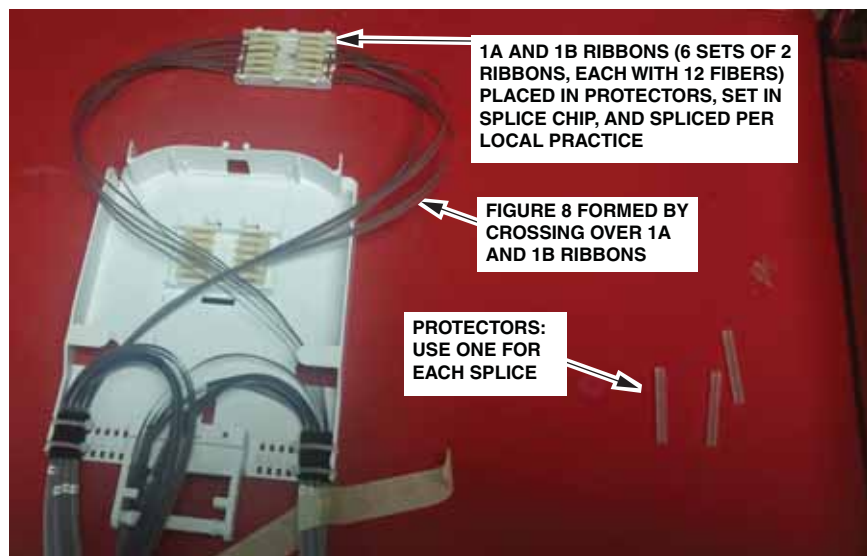
- b. Carefully trim the 1A and 1B ribbons to the 16-inch length just measured as shown in Figure 5.



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Figure 5. Trimming 1A and 1B Ribbons at 16-Inch Length

3. Splice the 1A and 1B ribbons per local practice as follows:
  - a. Place a splice protector on one of the ribbons (on either side). Clean off the ribbon matrix, cleave, and splice per local practice. Slide the splice protector over the splice. Heat shrink the splice.
  - b. Do this for remaining five pairs of ribbons.
  - c. Cross over the 1A and 1B ribbons to form a figure 8 as shown in [Figure 6](#).
  - d. Place the six splice protectors in the number 1 splice chip.

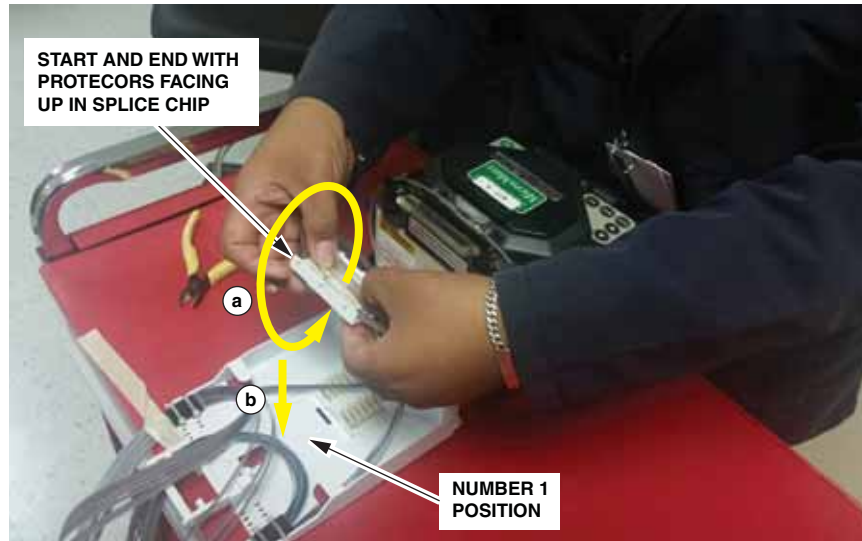


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Figure 6. Splicing 1A and 1B Ribbons



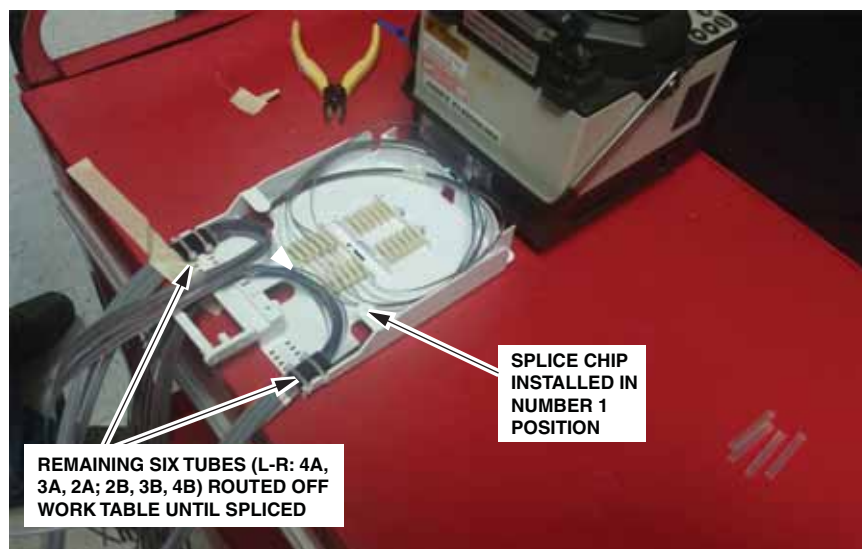
4. Starting with splice chip facing upward with protectors on top ([Figure 7](#)).
  - a. Rotate the splice chip a full 360 degrees away from the splice tray so that the protectors wind up on top again.
  - b. Install the splice chip in the number 1 position (closest to the handle).



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Figure 7. Installing Splice Chip 1

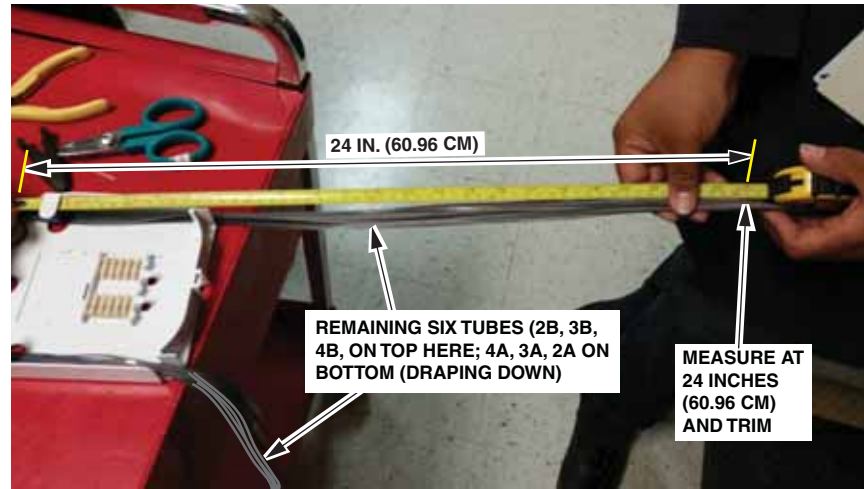
- c. After installation of the first chip in the number 1 position, arrange the fibers neatly into the splice tray, checking that the splice tray appears as shown in [Figure 8](#).



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Figure 8. Splice Chip 1 Installed

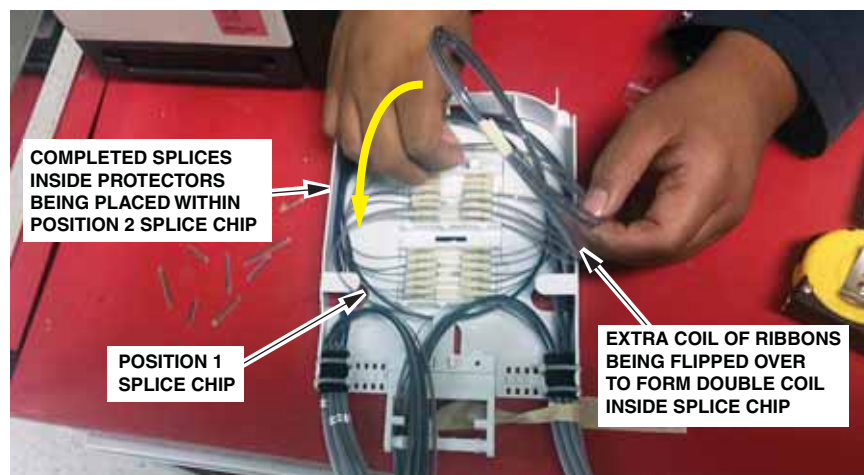
5. Stretch out the remaining six tubes (left to right: 4A, 3A, 2A; 2B, 3B, 4B) and mark them at a length of 24 inches (60.96 cm) (from the tray tie down point), as shown in [Figure 9](#). Using a snips, sever the ribbons at this mark (refer to [Figure 5 on Page 6](#)).



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Figure 9. Measuring Remaining Ribbons at 24 Inches (60.96 cm)

6. Splice and install tubes 2A and 2B ribbons in position 2 splice chip as follows:
  - a. Place a splice protector on one of the ribbons (on either side). Clean off the ribbon matrix, cleave, and splice per local practice. Slide the splice protector over the splice. Heat shrink the splice.
  - b. When done with splices, install the protectors within the splice chip, rotate the chip away from the splice tray 360 degrees, place the chip into position 2, and neatly arrange the ribbon coil into the splice tray as shown in [Figure 10](#).



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Figure 10. Splice Chip 2 Being Installed



- c. After installation of the second chip in the number 2 position, check that the splice tray appears as shown in [Figure 11](#).

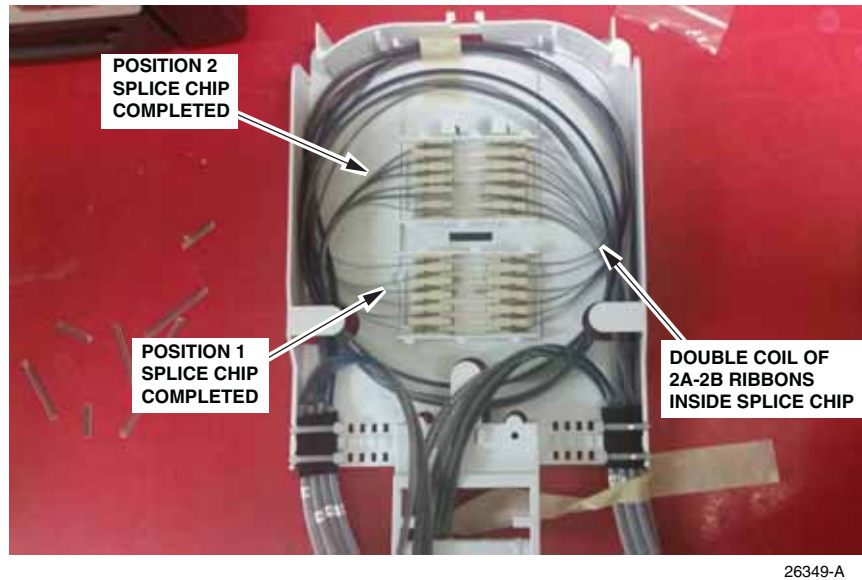


Figure 11. Completed First Two Splice Chips

7. Place on the work table, behind the splice tray, the stack module supporting the last two splice chips. Draw out the last 12 pairs of ribbons (from tubes 3A, 3B, 4A, and 4B). Place a splice protector on either side of each pair and splice per local practice. Heat shrink the splices, placing each fused protector, when completed, into the appropriate row in the splice chips. Refer to [Figure 12](#).

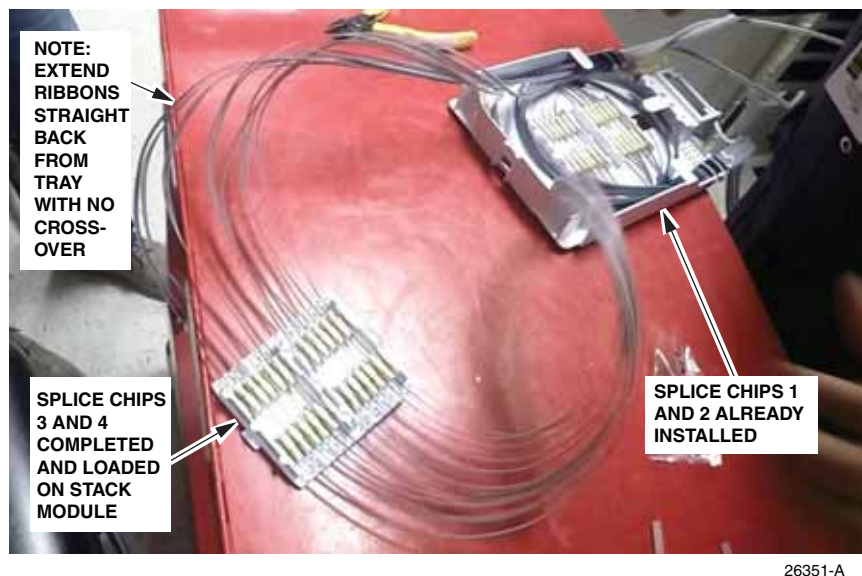


Figure 12. Third and Fourth Splice Chips on Stack Module

8. Starting with the ribbons extended from the splice tray, rotate the stack module with splice chips 3 and 4 away from the splice tray 360 degrees, which creates a twist in the ribbons. Carefully insert the ribbon bundle into the splice tray and neatly arrange the loops into the tray. Carefully snap the stack module onto the splice tray, making sure not to pinch any ribbons. Refer to [Figure 13](#) and [Figure 14](#).

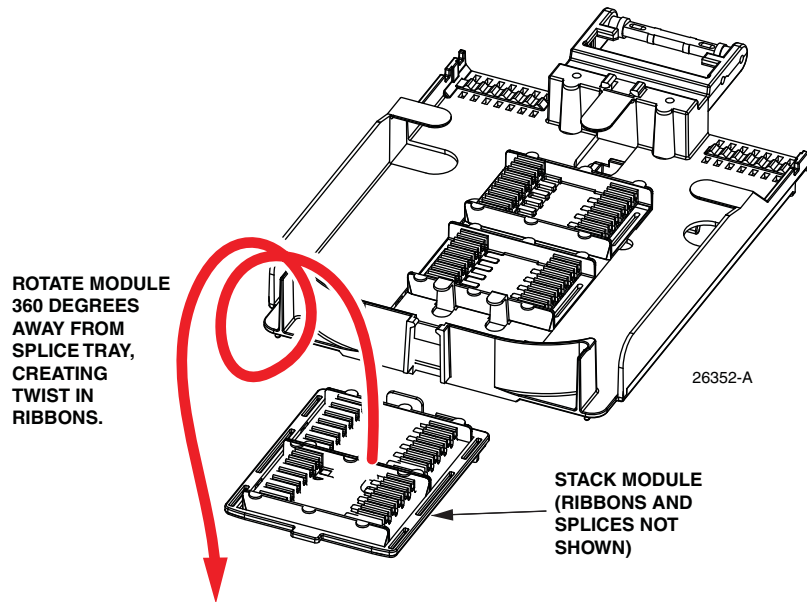
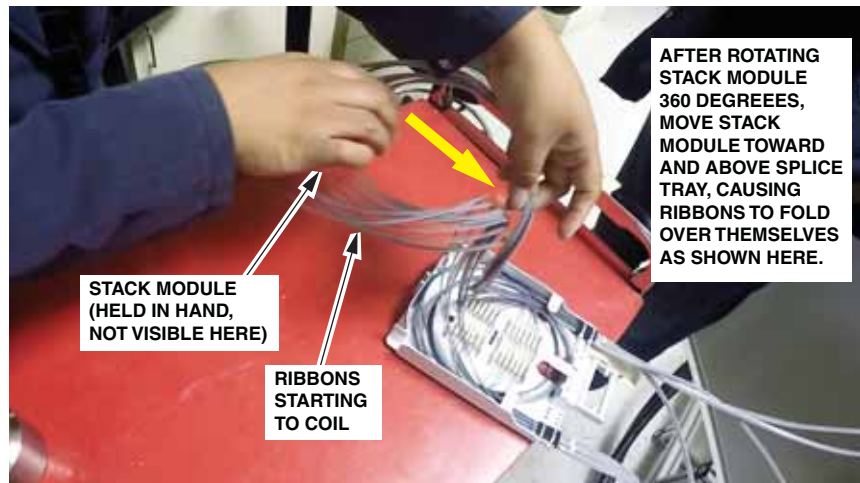


Figure 13. Stack Module Being Moved Into Splice Tray



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Figure 14. Installing Stack Module

9. Align the stack module at its installation location and press down on the two tabs on the rear of the stack module to snap the stack module into the tray. Refer to [Figure 15](#).

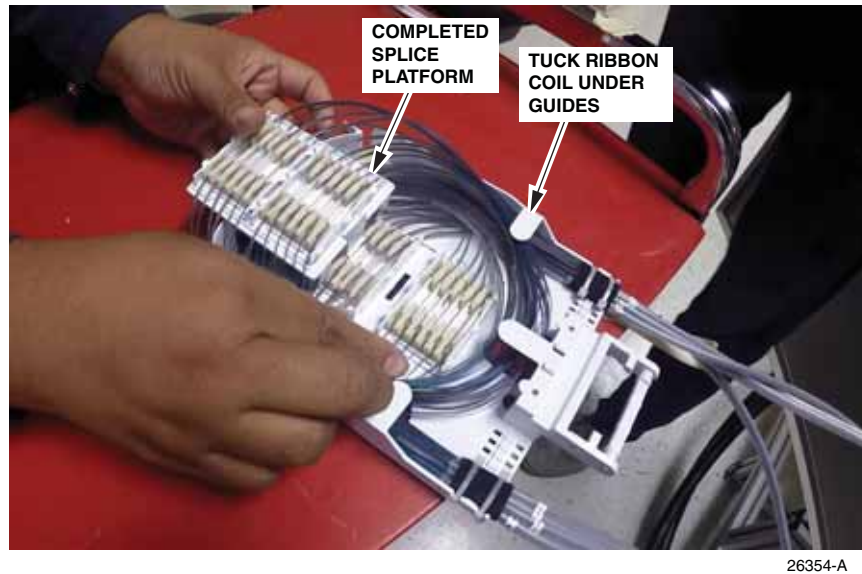


Figure 15. Installing Stack Module

10. Install the splice tray cover onto the splice tray.
11. Pick up the completed splice tray and in a wide sweep, rotating the tray counter-clockwise, as shown in [Figure 16](#), move the tray toward the open drawer in the FEC-10K where the tray is to be installed,

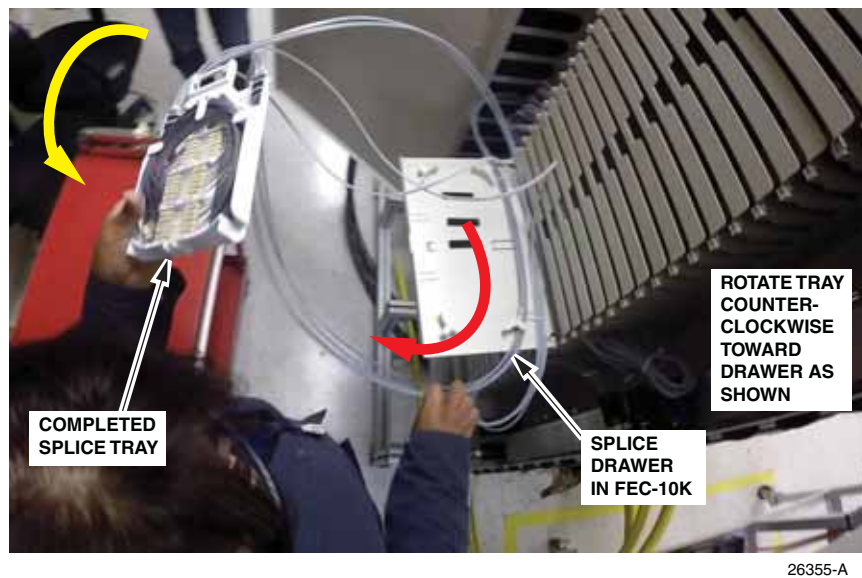


Figure 16. Moving Completed Splice Tray into FEC-10K Splice Drawer

12. Continue the counter-clockwise motion to move the tray into position above the drawer, as shown in [Figure 17](#), being careful to tuck the furcation tubes under the guides.
- **Note:** When placing the tray in the drawer, be careful to align the Velcro straps on the bottom of the tray with the Velcro straps in the drawer.

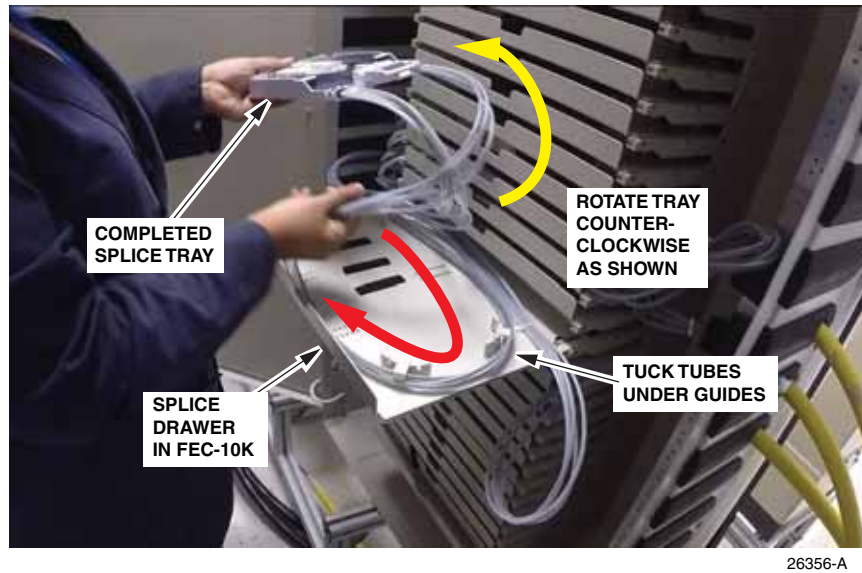


Figure 17. Moving Splice Tray Closer to Drawer

13. With the splice tray resting in the drawer, as shown in [Figure 18](#), tuck the furcation tubes more securely under the guides. Criss-cross the tubes neatly as shown.

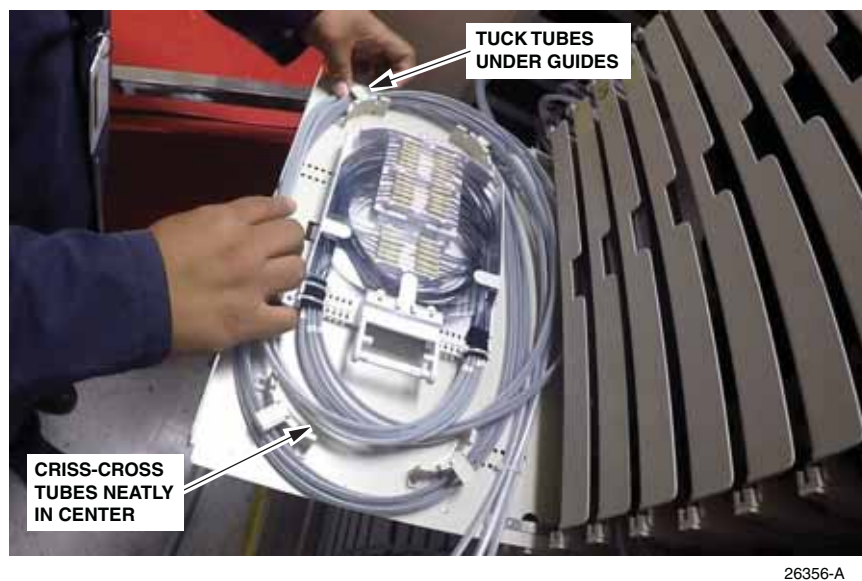
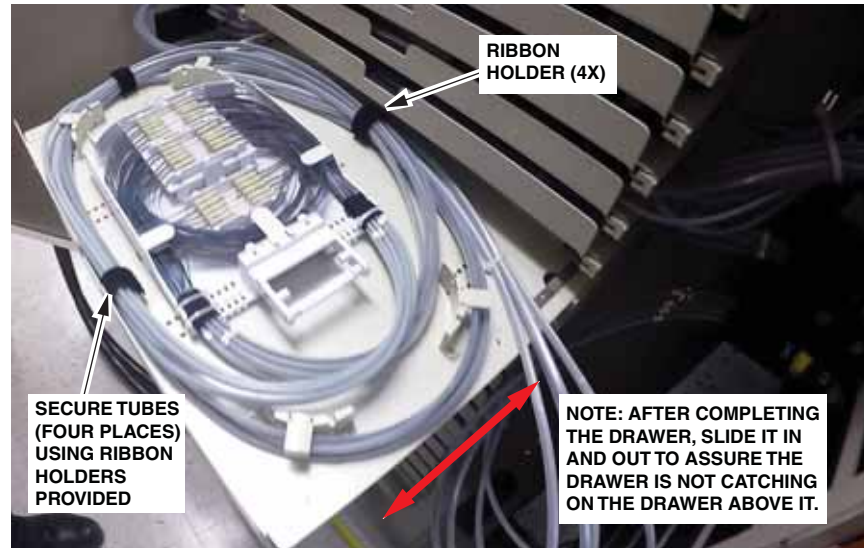


Figure 18. Tucking in and Criss-Crossing Tubes



14. Secure the tubes neatly with the ribbon holders provided, as shown in [Figure 19](#). Check for clearance by sliding the drawer in and out to assure the tubes are not catching on the drawer above.



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Figure 19. Securing Tubes With Ribbon Holders and Checking Drawer for Clearance

15. Check again for clearance, and close the drawer.

#### 4 CUSTOMER INFORMATION AND ASSISTANCE

For technical assistance for this product, call 1.800.830.5056. To email for technical service, use *TAC.Americas@commscope.com*. CommScope's website address is *www.commscope.com*.