

# Fiber Cable Breakout and Moisture Blocking Kit for Dielectric Uni-Tube Cable Installation Instructions

Content	Page
<b>INTRODUCTION</b> .....	<b>1</b>
Revision History .....	1
Trademark Information .....	1
<b>ADMONISHMENTS</b> .....	<b>1</b>
<b>1 GENERAL</b> .....	<b>2</b>
<b>2 INSTALLATION</b> .....	<b>3</b>
<b>3 CUSTOMER INFORMATION AND ASSISTANCE</b> .....	<b>8</b>

## INTRODUCTION

The Fiber Cable Breakout and Moisture Blocking Kit provides material for breaking out the ribbon or stranded fiber sub-groups and sealing Dielectric Uni-Tube Outside Plant fiber cable.

## Revision History

ISSUE	DATE	REASON FOR CHANGE
Issue 1	10/1994	Original.
Issue 2	02/1997	Updated to reflect the addition of bushings in flare tube cap.
Issue 3	01/1998	Updated to include new ADC corporate address.
Issue 4	03/1999	Updated to current format standards.
Rev B	November 2019	Updated to CommScope format.

## Trademark Information

CommScope (logo) and CommScope are trademarks of CommScope, Inc. ST is a trademark of AT&T Technologies, Inc.

## ADMONISHMENTS

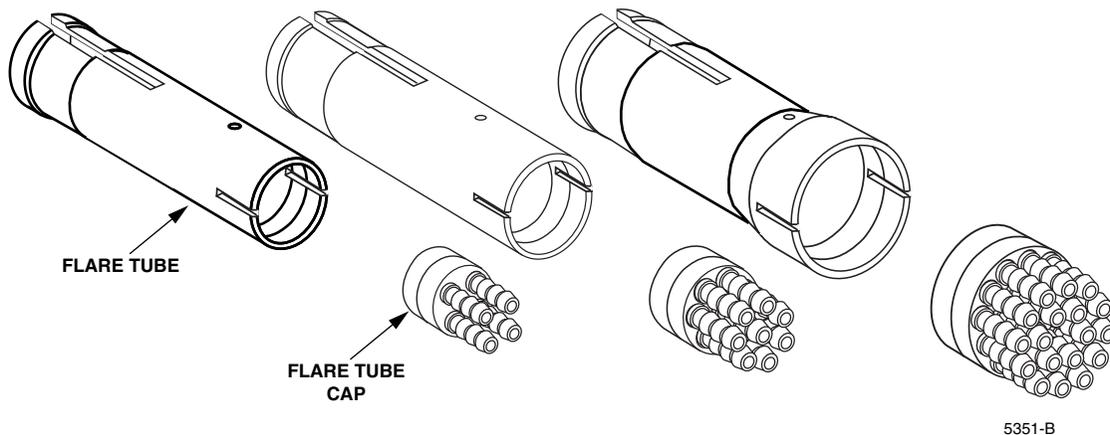
Important safety admonishments are used in this manual to warn of possible hazards to persons or equipment. The admonishments — in the form of Dangers, Warnings, and Cautions — must be followed at all times. These warnings are flagged by use of a triangular alert icon (shown below), and are listed in descending order of severity of injury or damage and likelihood of occurrence

-  **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.*

## 1 GENERAL

The Fiber Cable Breakout and Moisture Blocking Kit provides material for breaking out the ribbon or stranded fiber sub-groups and sealing the cable. Kits are available for Uni-Tube cables from various manufacturers that are made up of 1-4, 5-8, 9-18, or 19-24 sub-groups.

Flare tubes (small, medium, large, or extra large; see [Figure 1](#)) are designed to accommodate cables with the above mentioned sub-group counts, respectively. The kits are ordered with the appropriate flare tubes for the sub-group count in the cable. The extra large flare tube is not shown in [Figure 1](#) as it is the same design as the other flare tubes except it has 24 holes.



**Figure 1. Flare Tubes and Flare Tube Caps**

Contents of a typical kit are listed in [Table 1](#). Protective tubing is provided for protection of the fibers over the routing path to the splicing point. The use of tubing is recommended; however, it can be optional, as determined by local practice. These installation procedures refer to ribbon sub-groups, but they also apply for stranded sub-groups.

**Table 1. Breakout and Blocking Kit Parts**

ITEM	QUANTITY
Flare tube	3
Cable ties - small	20
Cable tie - large	1
Tube markers (package)	1
Protective tubing for flare tubes other than extra large	55 feet (16.8 cm)
Extra large flare tube	75 feet (22.8 cm)
Flare tube caps	3
Syringe	1
Sealant	1
Needles	2

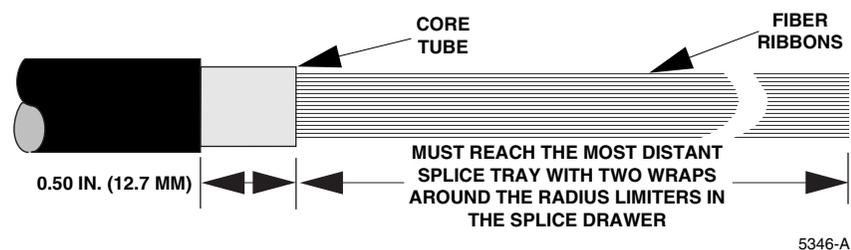
## 2 INSTALLATION



**Danger:** Do not look into the ends of any optic fiber. Exposure to invisible radiation may result. Do not assume laser power is turned off or the fiber is disconnected at the other end.

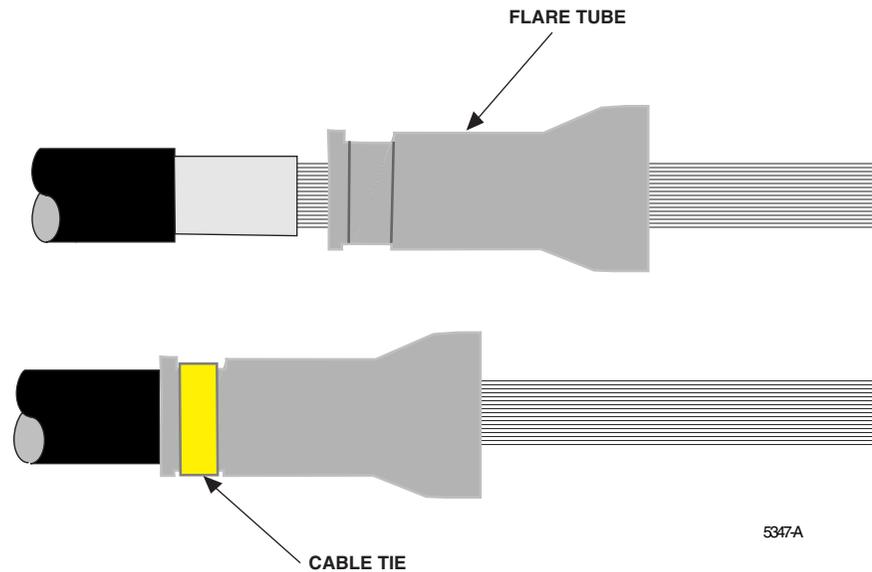
Strip the cable outer jacket and install the Breakout and Moisture Blocking Kits using the following procedures:

1. Lay out a length of cable that will reach from the cable clamp point to the most distant splice tray including two wraps inside the splice tray. Mark the cable.
2. Following the cable manufacturer's recommendations, strip the cable outer jacket to the mark.
3. Cut the core tube off at 0.50 inch (15.2 mm) from the outer jacket end as shown in [Figure 2](#).



**Figure 2. Cutting Off Core Tube**

4. Clean the fiber ribbons following the cable manufacturer's recommendations for cleaning. Ensure all ribbons are clean and dry.
5. Slide the flare tube (from the breakout and blocking kit) over fiber ribbons and core tube, as shown in [Figure 3](#). Secure the flare tube to the cable with a large cable tie. Do not over tighten the cable tie.



**Figure 3. Installing Flare Tube**

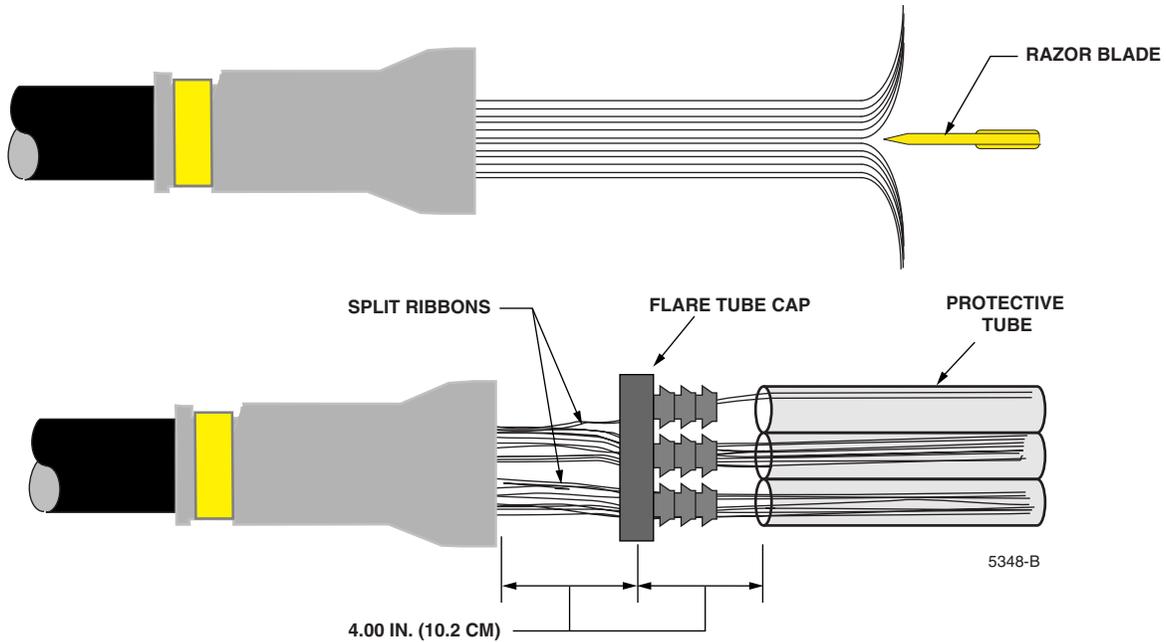
6. The use of protective tubing is recommended. If the tubing is not used, skip to step 8. When using protective tubing, prepare and place the tubing over the ribbons as follows: (see [Figure 4](#)):
  - a. Determine the length of tubing for each ribbon that will reach from the cable breakout point to the designated splice tray. The tubing should end at the tie point on the splice tray. **Each tube length will vary according to the cable port and splice drawer locations.** Cut the tubing and mark it with the fiber ribbon number for identification.
  - b. Work with one ribbon at a time and split the end of the fiber ribbon between the middle fibers. Use a razor blade to start, then carefully pull the fibers apart. Ensure that the split reaches into the flare tube.



**Caution:** *Carefully guide the ribbons through the flare tube caps to avoid excessive bending.*

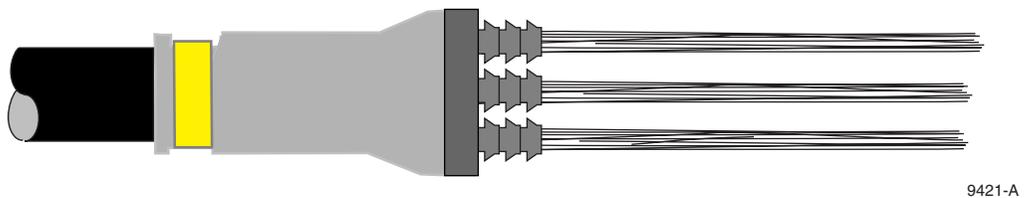
- c. Lay the ends of the split ribbon over each other and insert through the flare tube cap.

- d. Attach a tag to the ribbon with the identification number.
- e. Repeat steps (b) and (d) for the remaining ribbon sub-groups.



**Figure 4. Installing Protective Tubing**

- f. Slide the flare tube cap into the flare tube, as shown in [Figure 5](#). Gently hold tension on the ends of the fibers to prevent a kink in the fibers while sliding the cap into the flare tube.



**Figure 5. Installing Flare Tube Cap**



**Caution:** *To avoid excessive bending, carefully guide the ribbons while inserting them into the protective tubes.*

- g. Select the appropriate ribbon and protective tube, as shown in [Figure 6](#) and [Figure 7](#). Remove the tag from the ribbon. Carefully feed the ribbon into the protective tube. When the ribbon is fed completely through the protective tube, carefully push the tube over the metal bushing in the flare tub cap until it meets the bushing shoulder. **Take extreme care not to kink the tubing and fibers.**

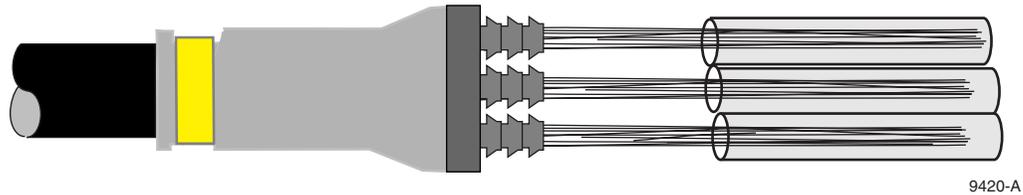


Figure 6. Positioned Protective Tubes

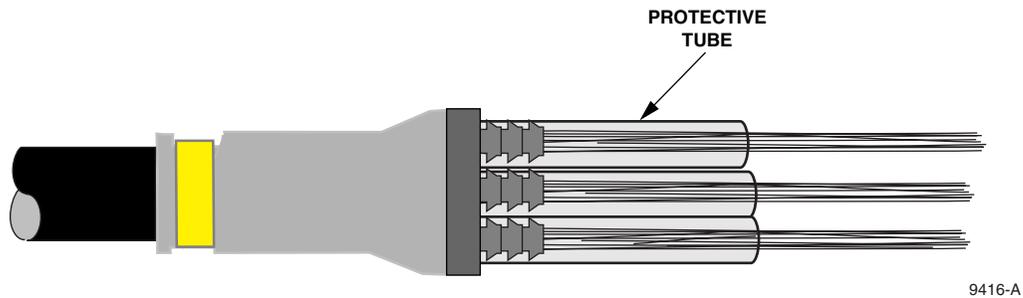


Figure 7. Installed Protective Tubes

- h. Repeat step (g) for the remaining fiber ribbons.
7. Inject Sealant or equivalent sealant into the flare tube through the access holes, as shown in [Figure 8](#). Ensure the sealant completely fills the flare tube cavity.

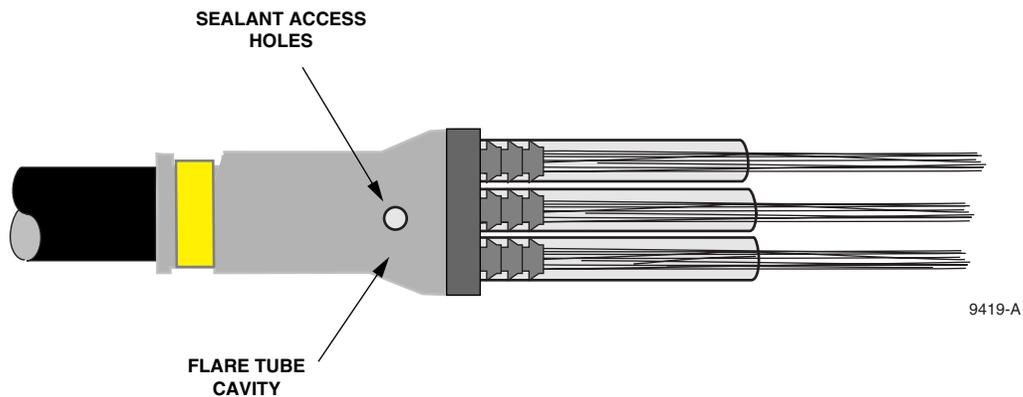
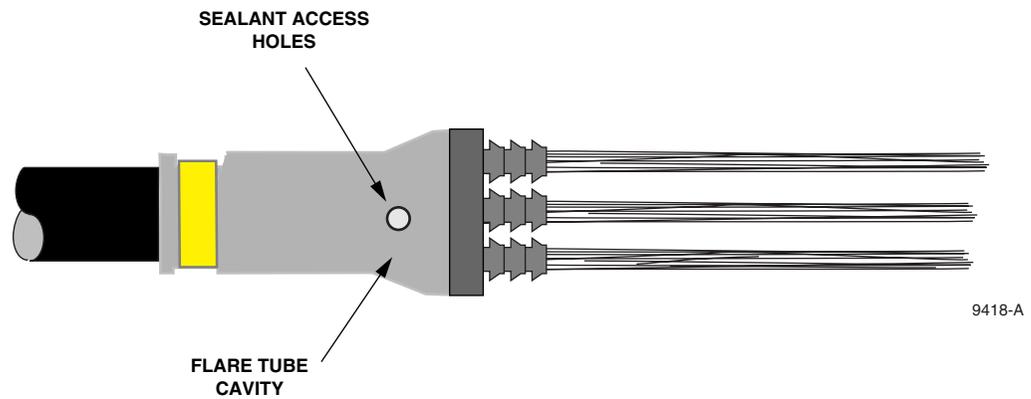


Figure 8. Injecting Sealant (Protective Tubing Used)

- If protective tubing is not used, inject Sealant into flare tube around the ribbons completely filling the flare tube cavity, as shown in [Figure 9](#).



**Figure 9. Injecting Sealant (Protective Tubing Not Used)**

- Route and secure the protective tubes to the designated splice drawers. Store the fibers in the splice drawer for splicing later.

### 3 CUSTOMER INFORMATION AND ASSISTANCE

- To find out more about CommScope® products, visit us on the web at [www.commscope.com](http://www.commscope.com)
- For technical assistance, customer service, or to report any missing/damaged parts, visit us at <http://www.commscope.com/SupportCenter>

**COMMSCOPE®**

© 2019. CommScope, Inc.

All Rights Reserved  
Printed in U.S.A