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## 1.0 Product Applications

These instructions explain the proper procedure for using a Draka Buffer Tube Access Tool (20021562) to perform midspan access on selected fiber optic buffer tubes with an outside diameter of 4.3mm or less.

The standard Buffer Tube Access kit comes equipped with three inserts sized to accommodate tubes of the following outside diameters and fiber counts: 2.5mm 12-fiber, 2.7mm 12-fiber, and 3.0mm 12-fiber. Other sizes of inserts are available by contacting Draka Distributor.

### 1.1 Purpose of the Procedure

Use this procedure in conjunction with the access & preparation instructions for the cable design in use.

## 2.0 Warnings and Cautionary Statements

[+] **WARNING:** Never look directly into the end of a fiber that may be carrying laser light. Laser light may be invisible and can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.

[+] **WARNING: DO NOT** use magnifiers in the presence of laser radiation. Diffused laser light can cause eye damage if focused with optical instruments. Should accidental eye exposure be suspected, arrange for an eye exam immediately.

[+] Draka strongly recommends the use of approved personal protective equipment in the performance of this procedure.

[+] Wear safety glasses and gloves, and use solvents in well ventilated areas.

## 3.0 Required Tools and Materials

- [+] Buffer Tube Access Tool Kit
- [+] Electrician's Scissors (snips)
- [+] Gel Solvent
- [+] Isopropyl Alcohol
- [+] Lint-free Wipes
- [+] Gloves
- [+] Safety Glasses

### 4.1 Quick Reference Checklist

- 4.1 Remove the cable's jacket and armor.
- 4.2 Separate and clean the buffer tubes.
- 4.3 Select the appropriate tool insert for the buffer tube size and fiber count of the cable.
- 4.4 Ensure the tool's blade is correctly installed.
- 4.5 Verify that the tube fits properly into the chosen insert.
- 4.6 Load the insert in the tool.
- 4.7 Secure insert by tightening knurled knob.
- 4.8 Place tube into the groove of the insert.
- 4.9 Close the tool over the tube.
- 4.10 Pull the tool down the length of the access window.
- 4.11 Squeeze the handles of the tool together to release the tube.
- 4.12 Lift the fibers out of the opened tube.
- 4.13 Cut away the empty buffer tube.
- 4.14 Clean the fibers if gel-filled tube.

## Important Points to Remember

- [+] Use the tool only on selected buffer tubes where the outside diameter is 4.3mm or less.
- [+] Clean the buffer tube thoroughly before using the tool.
- [+] Select the correct insert for the tube size and fiber count of the tube being opened. (See Draka's data sheet for available sizes.)
- [+] To close the tool, squeeze the handles until two clicks are heard.
- [+] Pull the tool so the tube passes straight through the insert.
- [+] Use the recommended two-step fiber cleaning method.

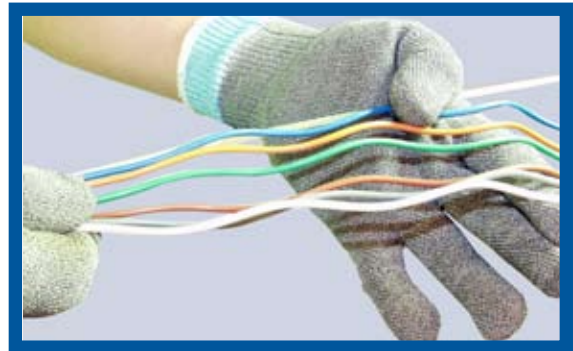
## 5.0 Procedure

### 5.1

Remove the cable's jacket and armor per the manufacturer's instructions.

### 5.2

Unwrap the buffer tubes from the stranded core. Separate the tubes and if the cable is flooded, clean the buffer tubes with gel solvent and a clear rag.

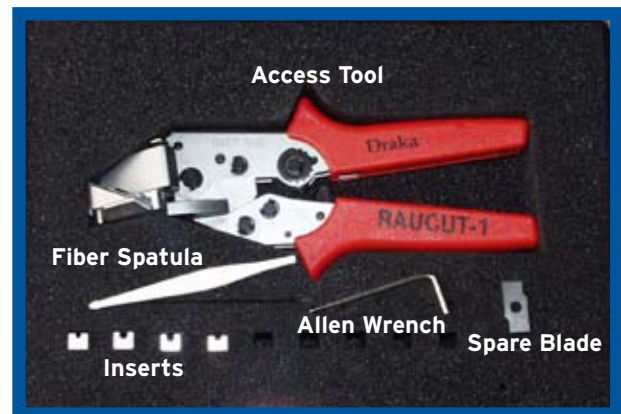


### 5.3

Open the tool's kit and select the appropriate insert to fit the outside diameter of the buffer tube to be opened.

#### NOTE:

The standard Buffer Tube Access Tool kit comes equipped with three inserts sized to accommodate tubes of the following outside diameters and fiber counts: 2.5mm 12-fiber, 2.7mm 12-fiber, and 3.0mm 12-fiber. Other sizes of inserts are available by contacting Draka Distributor. (Draka's Standard Tube is 2.7mm.)

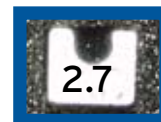


#### 5.3.1

The front of each insert is labeled with the outside diameter of the tube it is designed for.

#### 5.3.2

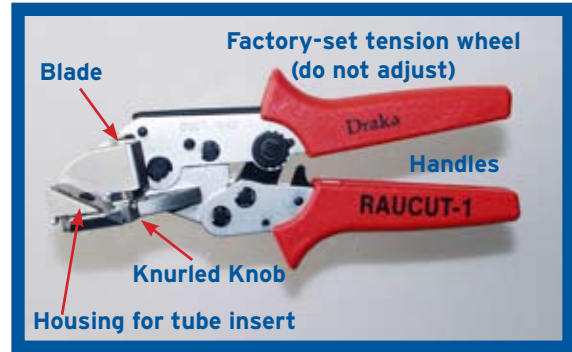
The back of each insert is labeled with the number of fibers contained in the buffer tube. If the number of fibers is not known, check the nearest splice closure to confirm. In the case illustrated, the insert is intended to safely open a 2.7mm tube containing 12 fibers.



**CAUTION:**  
Using the incorrect insert can result in damage to fibers.

**5.4**

Ensure the blade of the tool is correctly installed. The retaining screw should be set flush and the beveled side of the blade should be facing down.



**5.5**

Confirm the compatibility of the outside diameter of the tube and the insert. The top of the buffer tube should be approximately flush with the top of the insert, but should not protrude past the top of it.



**5.6**

Load the insert in the tool. The notch in the side of the insert will guide its fit into the tool body.



**5.7**

Turn the knurled knob clockwise to secure the insert.



**5.8**

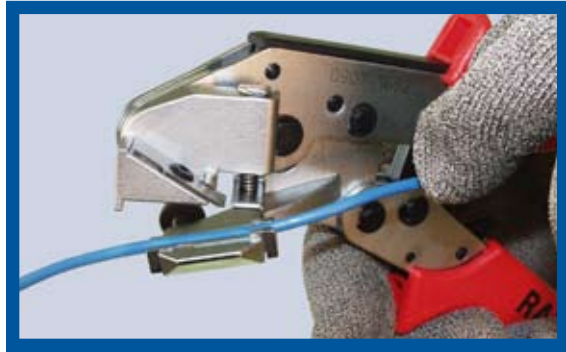
Place the tube into the groove of the insert.

**5.9**

Close the tool over the buffer tube.

**CAUTION:**

Ensure the tube remains in the insert's groove as you close the tool, or the tube can be inadvertently crushed.



**5.10**

Squeeze the tool's handles together until you hear two clicks.

**NOTE:**

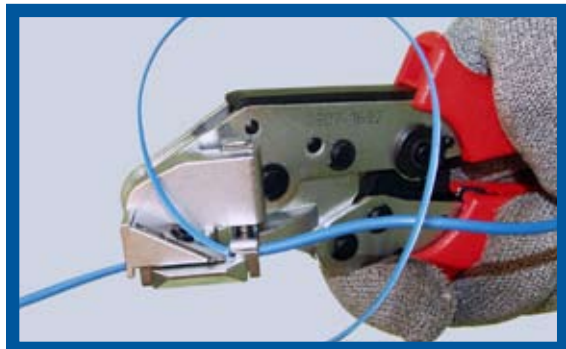
Squeezing the handles too far will release the catch and allow the tool to open. If this happens, simply repeat step 9.

**5.11**

Hold the buffer tube firmly with one hand. With the other hand, pull the tool along the tube until the desired length of tube has been opened.

**CAUTION:**

Be sure to pull the tool so the tube remains in line with the insert and blade, exiting the insert without bending. The handles of the tool will be at an angle to the tube.



**5.12**

Squeeze the handles of the tool together to release the catch and allow the tool to open.

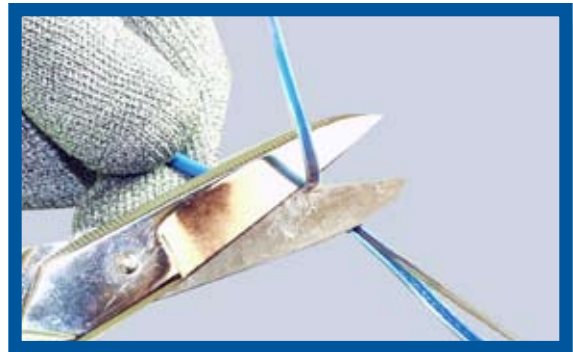
**5.13**

Use the fiber spatula to lift the fibers out of the buffer tube.



**5.14**

Using snips, cut away the empty buffer tube.



**5.15**

Clean the fibers.

**NOTE:**  
Cleaning the fibers using this two-step method will provide the best results.

**5.16**

Use lint-free wipes and gel solvent to clean the fibers, then.

**5.17**

Use lint-free wipes and Isopropyl alcohol to clean the fibers.

*Draka's verbal and written advice relating to the use of the tools to be supplied along with Draka's cables is based on experience and is, to the best of Draka knowledge, correct. These tools should not be used for applications other than those specified. Draka is not liable for any damages resulting from the use of those tools, and the buyer shall indemnify Draka for any claim the user of such tools should make against Draka. In any event, Draka's liability shall not exceed the price of the tools claimed to be defective, and Draka shall in no event be liable for loss of profit or use and, in general, any type of consequential damages.*