

No-Slack Optical Fiber Access Tool (NOFAT)

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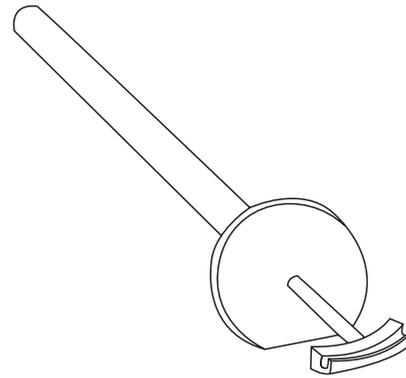


Figure 1

1. General

1.1 This instruction describes the use of the No-Slack Optical Fiber Access Tool (p/n NFT-000). The tool can be used on both armored and non-armored cable. The NOFAT is a mid-span access tool suitable for locations where no cable slack can be obtained and the buffer tubes must be accessed while remaining wrapped around the cable central member.

- The channel located at the end of the tool accommodates buffer tubes ranging in size from 2.4 mm (0.09 inch) to 3.0 mm (0.118 inch).
- The tool acts as a cutting guide for buffer tubes by limiting the penetration of the blade and exposing the fibers inside the tube without damaging them.

1.2 This document is being reissued to reflect the introduction of Gel-free buffer tubes.

1.3 Contact your customer service representative to purchase accessories that are sold separately or to request assistance.

NOTE: Read and understand this procedure and all procedures provided with related assemblies before beginning an installation.

2. Precautions

2.1 Safety Precautions

! CAUTION: The wearing of safety glasses to protect the eyes from accidental injury is strongly recommended when handling chemicals and cutting fiber. Pieces of glass fiber are very sharp and can damage the cornea easily.

! CAUTION: The wearing of safety gloves to protect hands from accidental injury is strongly recommended when using sharp instruments.

2.2 Cable Handling Precautions

NOTE: Fiber optic cable is sensitive to excessive pulling, bending and crushing forces. Consult the cable specification sheet for the cable you are installing. **Do not bend the cable more sharply than the minimum recommended bend radius. Do not apply more pulling force to the cable than specified. Do not crush the cable or allow it to kink.** Doing so may cause damage that can alter the transmission characteristics of the cable — the cable may have to be replaced.

2.3 Chemical Precautions

CAUTION: Use filling compound remover (cable cleaner) in a well-ventilated area to eliminate the possibility of dizziness and nausea. If cleaner comes in contact with skin or eyes, wash area immediately with soap and water to avoid irritation. Contains petroleum distillates. Harmful or fatal if swallowed. Do not induce vomiting if paste cleaner is ingested. In case of ingestion, consult a physician immediately.

CAUTION: Isopropyl alcohol is flammable with a flashpoint at 54°F. It can cause irritation to eyes on contact. In case of eye contact, flush eyes with water for at least 15 minutes. Inhaling fumes may induce mild dizziness. In case of ingestion, consult a physician.

2.4 Lightning Precautions

WARNING: Do not install this unit or work with telephone wiring during a lightning storm. Telephone lines can carry high voltages from lightning causing electrical shock resulting in severe injury or death.

3. Tools and Materials

In addition to the NOFAT and the provided scalpel, the following tools and materials are required to complete this procedure:

- fan-out tubing (p/n FTB250 SN)
- single-mode splice tray
- M67-003 tool kit
- Fiber-Clean® wipes if filling compound is present

4. Remove Cable Sheath

4.1 Use tape to mark the cable at the access point. Measure appropriate length (per instruction provided with your hardware) and mark access point. Refer to the sample illustrated in Figure 2.

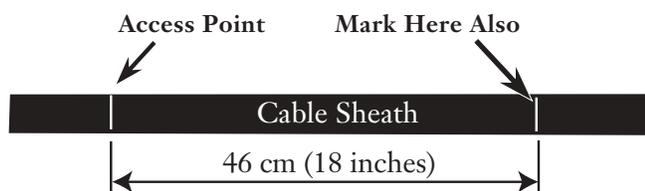


Figure 2

IMPORTANT: The buffer tubes are located underneath the waterblocking tape beneath the inner sheath. Use caution to prevent damaging the buffer tubes.

4.2 Determine cable type (armored or non-armored). Proceed to Section 4.3 for non-armored cable or to Section 4.4 for armored cable.

4.3 Remove cable sheath from **non-armored** cables:

Step 1 Use the hook-blade knife to carefully ring cut the outer sheath approximately 2.5 cm (1.0 inch) inside each tape mark (Figure 3).

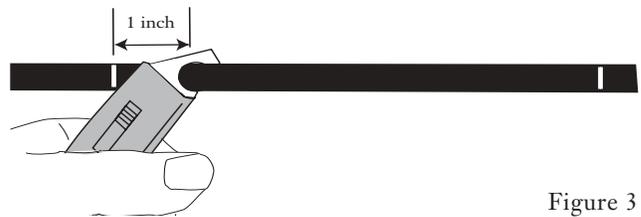


Figure 3

Step 2 Use the knife to carefully slit a 2.5 to 5 cm (1 to 2 inch) section of outer sheath on the inside of one of the ring cuts.

Step 3 Pry back this section of cable sheath to access the ripcord.

Step 4 Cut the ripcord next to the ring cut.

Step 5 Wrap the ripcord around a slotted screwdriver and pull towards the other ring cut to slit the section of outer sheath (Figure 4).

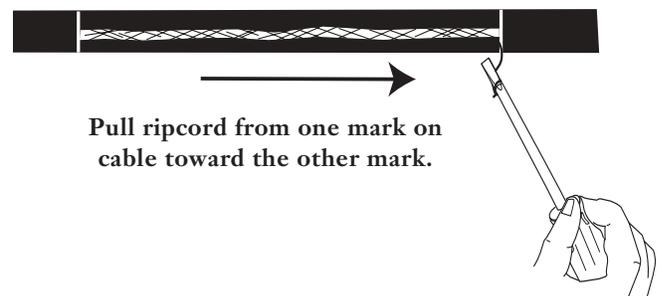


Figure 4

Step 6 Peel back the outer sheath.

Step 7 Proceed to Section 5.

4.4 To remove cable sheath from **armored** cables:

- Step 1** Use the hook-blade knife to carefully ring cut the outer sheath approximately 2.5 cm (1.0 inch) inside each tape mark.
- Step 2** Flex the cable slightly to separate the steel tape armor.
- Step 3** Carefully use the hook-blade knife to longitudinally slit the outer cable sheath.
- Step 4** Open the outer sheath along the slit and pull it away to expose the inner sheath.
- Step 5** Follow section 4.3 to remove the inner sheath of the cable.

- Step 3** Use a rag to push the cut binding tapes away from one tape mark and toward the other tape mark.
- Step 4** Cut any remaining binding tape with scissors.

IMPORTANT: Do not attempt to unstrand the buffer tubes.

5.2 Open buffer tube:

- Step 1** Carefully separate the buffer tube to be accessed from the other tubes.
- Step 2** Beginning at one of the tape marks, place the buffer tube in the channel of the NOFAT. Press down on the tube to make sure it is properly seated in the channel (Figure 6).
- Step 3** Grip the NOFAT with one hand

5. Access Fibers

IMPORTANT: Minimize cutting of the dielectric strength yarns, if present. The yarn will be strain-relieved in the closure. In some cases, the yarn will not have to be cut to access the buffer tubes.

5.1 Access buffer tube:

- Step 1** Push the dielectric strength yarns aside, if present, and determine which buffer tube to access. If the yarn must be cut, cut it as far as possible from the tape markers made in Section 4.1.
- Step 2** Use the sheath ripper from the tool kit to cut the two binding tapes around the buffer tubes. Cut the binding tapes where they overlap (Figure 5). Move down a few inches and repeat until the binding tape can be removed from around the exposed buffer tubes.

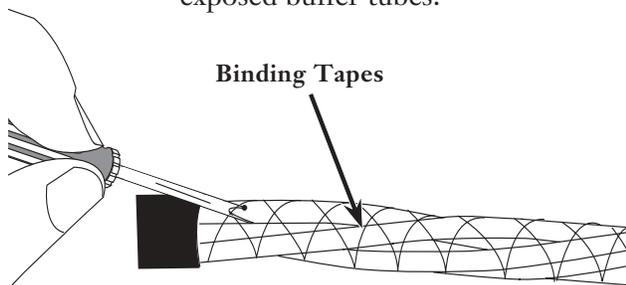


Figure 5

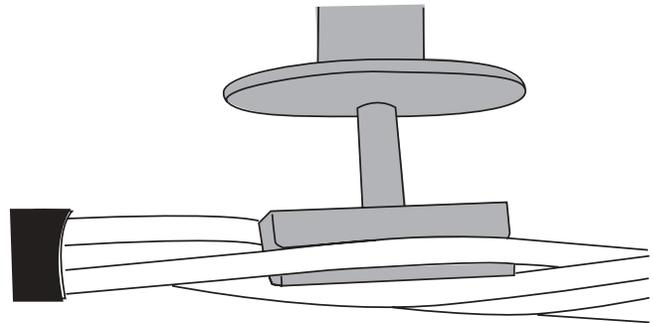


Figure 6

and hold the scalpel in the other hand.

- Step 4** Carefully use the scalpel to slice off the exposed area of buffer tube. Keep the blade flat against the NOFAT and allow the blade to follow the curve of the tool (Figure 7). The opening in the buffer tube should be approximately 2.5 cm (1.0 inch) in length to permit easy access to the interior fibers.

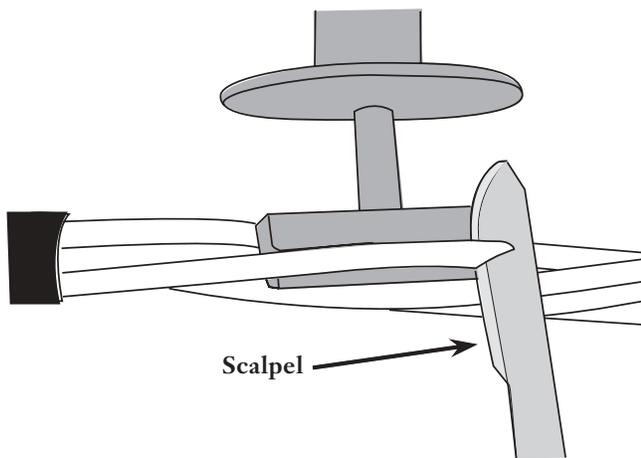


Figure 7

NOTE: *If the first cut does not result in an appropriately sized opening (one inch as shown in Figure 8), slide the tool down approximately 6.3 mm (0.25 inch) and make another slice.*

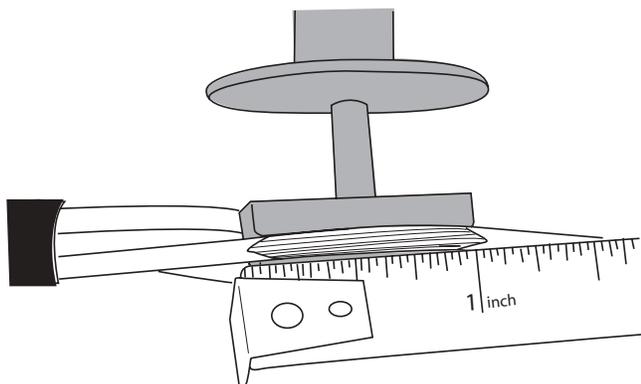


Figure 8

- Step 5** Repeat Section 5.3 for the other end of the exposed cable.

5.3 Refer to your design plan to determine which end of the cable will be branched off (dropped). For example, if a fiber from CO#2 is to be branched off, cut the *accessed fiber* on the CO#1 end of the cable (Figure 9).

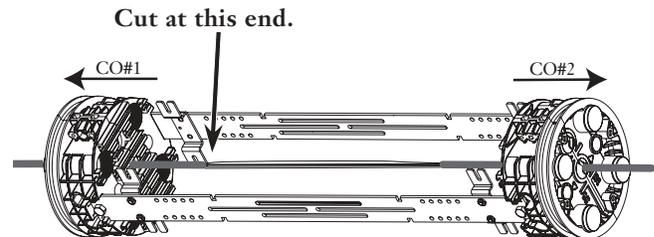


Figure 9

5.4 Determine how much fan-out tubing is required to reach from the access point on the buffer tube to the cable-tie holes in the splice tray:

- Step 1** Position splice tray as detailed in the instruction provided with your closure.
- Step 2** Cut required length of tubing. Make sure the cuts are square and that the tubing remains open at both ends.

5.5 Access fiber(s):

- Step 1** Insert the spatula into the buffer tube opening and gently pull up the fiber(s) to be accessed (Figure 10).

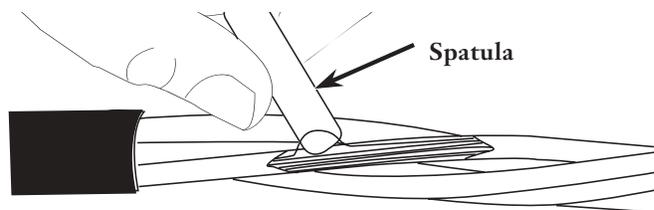


Figure 10

CAUTION: *The wearing of safety gloves to protect hands from accidental injury is strongly recommended when using sharp instruments.*

- Step 2** Use scissors to cut ONLY the fiber being accessed (Figure 11).
- Step 3** At the other accessed buffer tube opening, use the spatula to pull out the fiber(s) to be accessed. Pull the fiber with the spatula until the fiber can be pulled using your fingers.
- Step 4** If filling compound is present, wipe the filling compound from the exposed fibers with the Fiber-Clean wipes.

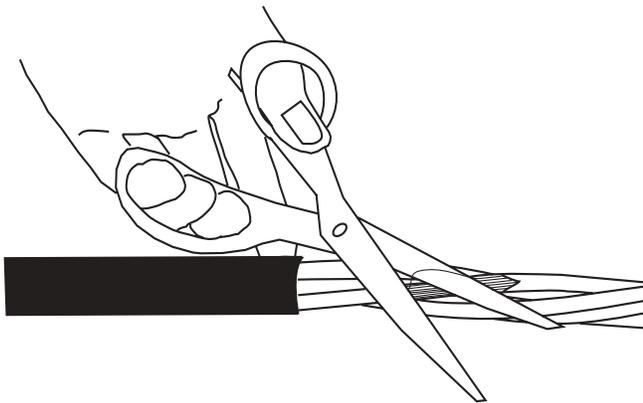


Figure 11

IMPORTANT: Do not violate the cable's minimum bend radius.

5.6 Protect accessed fiber(s):

- Step 1** Carefully insert the bare fiber into the fan-out tubing.
- Step 2** Slide the tubing until it is midway above the buffer tube opening. Make sure the tubing does not kink or stress the bare fiber.
- Step 3** Secure the fan-out tubing to the cable core and the stranded buffer tubes using a cable tie (Figure 12).

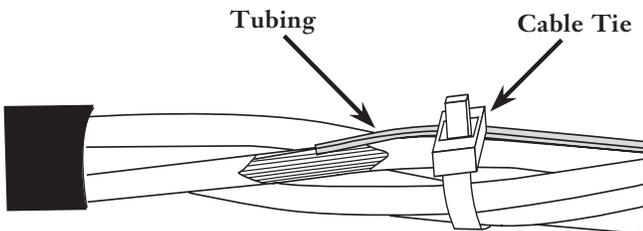


Figure 12

- Step 4** Cut a piece of paper (wax paper from the sealing tape provided with your closure, for example) approximately 3.2 by 3.2 cm (1.25 by 1.25 inch) in size.
- Step 5** Position the paper over the buffer tube opening and the end of the fan-out tubing (Figure 13) and fold over to prevent the tape in the next step from sticking to the fibers.

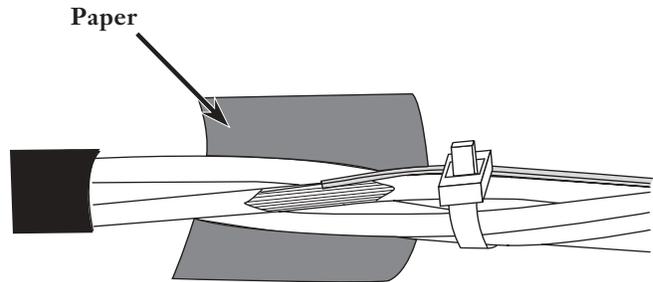


Figure 13

- Step 6** Beginning approximately 1/2 inch over the edge of the cable sheath, wrap the tape several times around the stranded buffer tubes until you have covered approximately 1/2 inch beyond the cable tie (Figure 14).

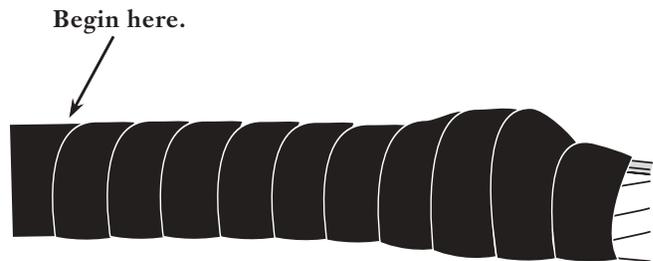


Figure 14

6. Complete Installation

- 6.1** Splice the fiber according to the instruction provided with your splice tray.
- 6.2** Secure the tray in the closure as detailed in the instruction provided with your closure.



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