

## Field-Installable Furcations for 2-Fiber DIB® and DFX® Cables

### 1. General

**1.1** This procedure provides instructions for assembling field-installable furcation kits on Corning Cable Systems 2-fiber DIB and DFX cables. Both single-mode and multimode versions are available:

Single-mode: p/n FUR-02-SM  
Multimode: FUR-02-MM

**1.2** Furcation is the branching of fibers contained in a fiber optic cable into individual cables (pigtailed), which can then be connectorized and terminated per system requirements (Figure 1). Furcations safely distribute individual fibers to the appropriate equipment port.

**1.3** In the furcations described in this procedure, each of the individual cables (or "legs") are made from a length of fan-out tubing and one of the two fibers from the DIB or DFX cable. The kits provide for a maximum furcation leg length of one meter (39.37 in.). The furcation kit provides the means of securing the individual cables to the original cable. Furcations can be installed on both ends of the original cable.

**1.4** This issue includes updated corporate information.

### 2. Precautions

#### 2.1 General Precautions



**WARNING:** 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 of the eye easily. The wearing of **safety gloves** to protect your hands from accidental injury when using sharp-bladed tools is strongly recommended.

#### 2.2 Heat Gun Precautions



**WARNING:** The heat gun used in this procedure is electrically energized and has heating elements. Normal care must be observed when operating a heat gun to avoid electrical shock or burns. Read and observe all precautions supplied with the heat gun by its manufacturer.

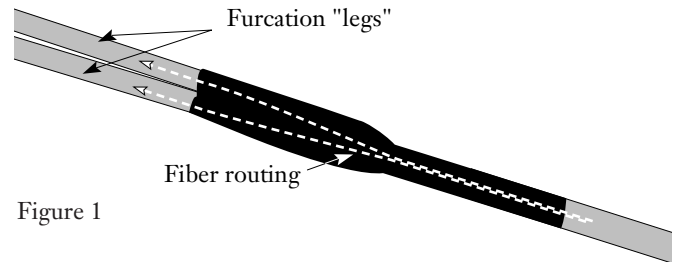


Figure 1

#### 2.3 Cable Handling Precautions



**CAUTION:** 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 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.

### 3. Kit contents

**3.1** Each FUR-2F kit contains:

- Fan out tubing, two 1- meter (39.37 in) lengths
- Heat shrink tubing, 1 section

### 4. Tools and Materials

**4.1** The following tools and materials are required to complete this procedure:

- Heat gun and power source
- Utility knife with new, straight blade \*
- Tape measure \*
- Gloves
- Scissors \*
- Buffer tube stripping tool\*
- Permanent marking pen\*

\*Items included in the M67-003 Tool Kit

### 5. Cable Preparation

**5.1** Measure and mark the point where the DIB or DFX cable will be furcated with a tape measure and marking pen. With a maximum possible length of 105 cm (41.37 in), this length should equal the length of the longest furcation leg, plus 5 cm (2 in.).

5.2 Slide the heat shrink tubing onto the DIB or DFX cable and out of the way past the mark made in step 5.1 (Figure 2).

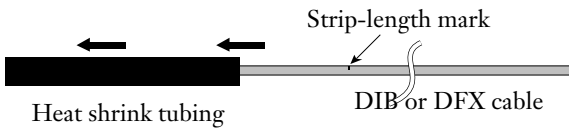


Figure 2

5.3 Use the buffer tube stripping tool to remove the outer jacket of the DIB or DFX cable at the marked strip point (Figure 3). Use care to avoid damaging the fibers.

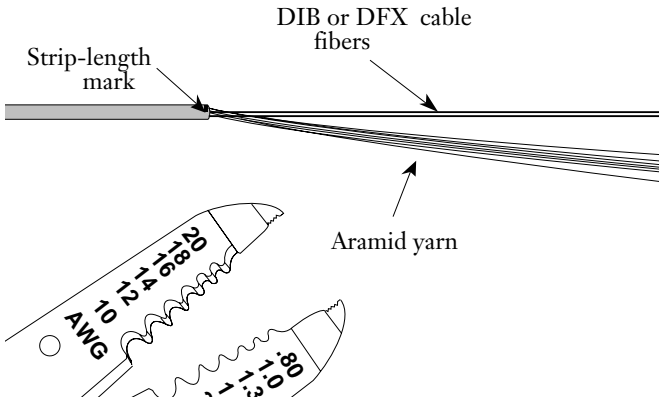


Figure 3

5.4 Use scissors to cut the aramid yarn to a length of 12.5 mm (0.5 in) (Figure 4).

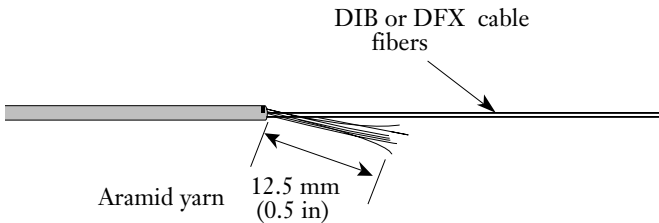


Figure 4

5.5 Prepare the fan-out tubing as follows:

- a) Prepare the “connector ends of the fan-out tubing according to the instructions supplied with the connectors you are installing.
- b) Use the buffer tube stripping tool to remove 12.5 mm (0.5 in.) of jacket from the furcation ends of the fan-out tubing

c) Cut the end of the inner tubes inside the fan-out tubes with a sharp utility knife to assure that the tube ends are open. Use care to avoid cutting the the aramid yarn (Figure 5).

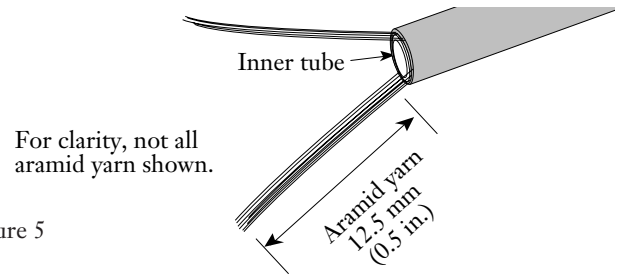


Figure 5

## 6. Furcation Assembly

6.1 Carefully slide a fiber from the DIB or DFX cable into one of the inner tubes of the fan-out tubing. Repeat this step with the other fiber and fan-out tube.

Slide the fibers into the tubes until the two lengths of fan-out tubing butt against the end of the DIB or DFX cable jacket. Make sure that the yarn from the DIB cable and the two legs overlap each other. Make sure that the fibers do not twist during this step (Figure 6).

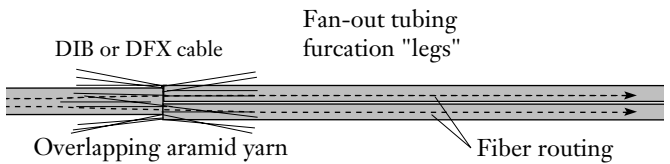


Figure 6

6.2 Slide the heat shrink tubing over the center of the furcation. Carefully shrink the tubing into place with a heat gun (Figure 7). Do not overheat or burn the PVC jackets of the DIB cable and the legs.

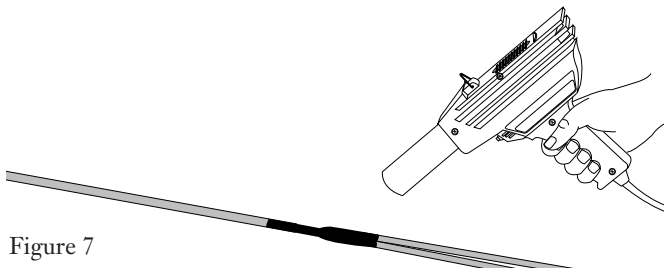


Figure 7

6.3 The furcation legs are now ready to be connectorized.

Special Note:  
Fiber Optic  
Training  
Program



Corning Cable Systems offers comprehensive, integrated training programs. Courses are structured for: telephony, CATV, LAN, Intelligent Transportation Systems and Power Utilities.  
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