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1. General

This document provides recommended jacket and buffer tube removal procedures for Corning® MiniXtend® loose tube cables with Binderless* FastAccess® Technology.

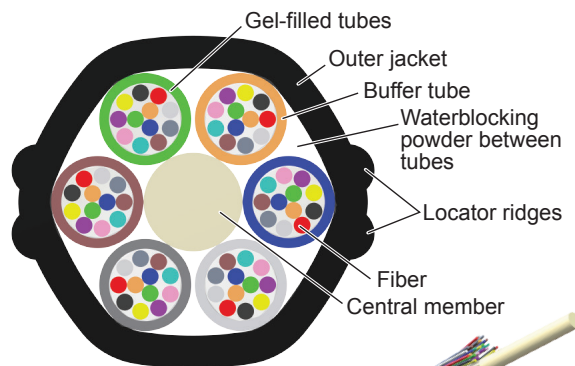
2. Precautions

2.1 Cable Handling Precautions

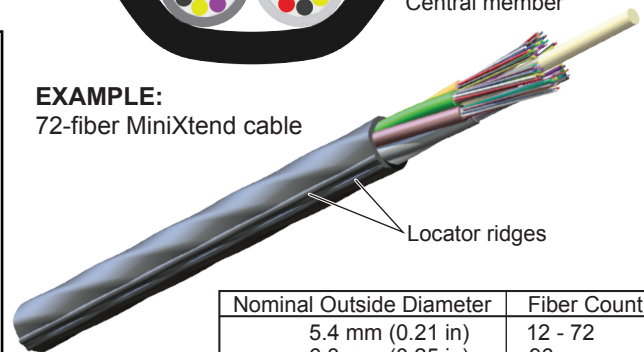


CAUTION: Fibre optic cable is sensitive to excessive pulling, bending, and crushing forces. Consult the cable specification sheet for the cable you are installing. Do not bend the cable more sharply than the minimum recommended bend radius. Do not apply more pulling force to the cable than specified. 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.

Nominal OD 5.4 mm (0.21 in)



EXAMPLE:
72-fiber MiniXtend cable



Nominal Outside Diameter	Fiber Count
5.4 mm (0.21 in)	12 - 72
6.3 mm (0.25 in)	96
8.1 mm (0.32 in)	144

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12 fibers/1.4 mm Buffer Tube

CAUTION: This cable is intended to be jettied or blown into a microduct. If pulled ensure breakaway swivel is used that is attached with a basket grip to the central strength member (GRP). Adhere to the minimum bend radius of the cable; do not exceed the cable's specified maximum allowed installation tension.

2.2 Laser Handling Precautions



WARNING: Never look directly into the end of a fibre that may be carrying laser light.

Laser light can 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.

2.3 Safety Glasses



CAUTION: Corning recommends the use of safety glasses (spectacles) for eye protection from accidental injury when handling chemicals, cables, or working with fibre. Pieces of glass fibre are very sharp and have the potential to damage the eye.

2.4 Safety Gloves



CAUTION: The wearing of cut-resistant safety gloves to protect your hands from accidental injury when using sharp-bladed tools is strongly recommended. To minimize the chance of injury from sharp-bladed tools, always cut away from yourself and others. Dispose of used blades and armor scrap properly.

3. Tools and Materials

3.1 For Cable End Removal

The following tools and materials are required for the cable end removal sections of this procedure:

- Vinyl electrical tape (P/N 100278-01)
- Rule or tape measure (P/N100305-01)
- Ideal® tool 45-165 (black plastic housing) OR
- Ideal tool 45-164 (blue plastic housing) for 144-fibre cable
- Small screwdrivers (flat head and Phillips)
- Small snips or electrician's scissors (P/N100294-01)
- Fibre cleaning materials approved by your company
- Ripley FTS-005 buffer tube access tool (Corning P/N 02-046470)
- Small needle-nose pliers
- Side-cutters
- Sheath knife

3.2 For Mid-span Access

In addition to the tools and materials listed in Section 3.1, the following tools are required for mid-span access:

- Sharpie® permanent marking pen (P/N 2102003-01)
- Corning OFAT-003 tool
- Can of compressed air

4. Cable End Access

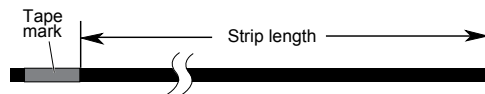
4.1 Jacket Removal

Step 1: Calibrate both flat and round blades of Ideal® tool by trial and error on scrap cable or end of cable.

Step 2: Based on the closure/hardware documentation being used, measure and use a wrap of vinyl tape to mark the required jacket removal length (Figure 1).

Step 3: Using the rounded blade on the end of the Ideal® tool, make a longitudinal cut on the two dual ridges opposite each other approximately 1-in from the end of the cable (Figure 2).

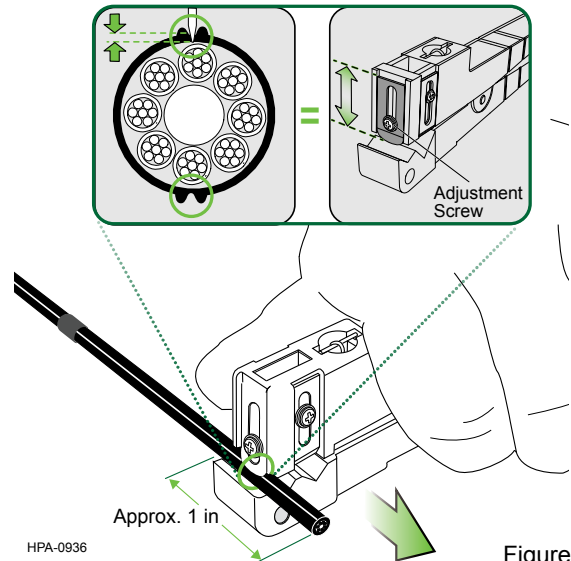
NOTE: Other options: Use needle-nose pliers or side-cutters to start tear (Figure 3).



HPA-0935

Not to scale

Figure 1



HPA-0936

Figure 2

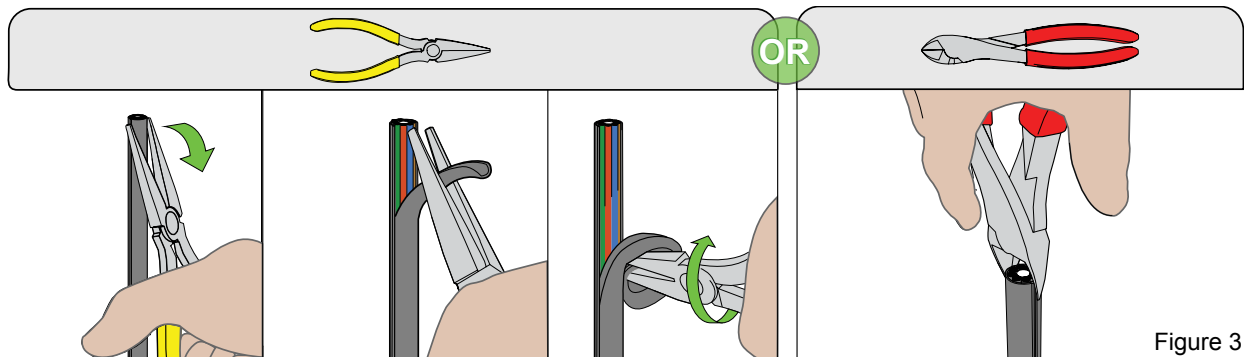
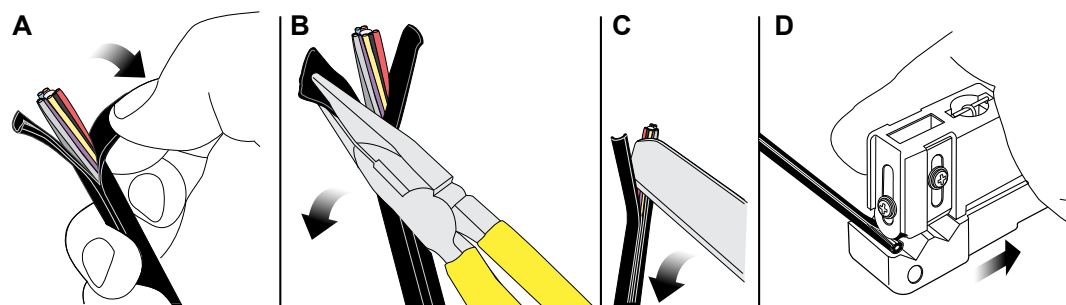


Figure 3

Step 4: With your fingers (Figure 4A), needle-nose pliers (4B), or sheath knife (4C), begin to peel back the split pieces of outer jacket at the end of the cable (Figure 4).

An alternate method is to pull the Ideal tool away from the cable enabling the round blade to pull out the jacket (Figure 4D).



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Figure 4

Step 5: Continue to remove the jacket by pulling both sides down to the tape mark and remove the jacket with side-cutter or small snips (Figure 5).

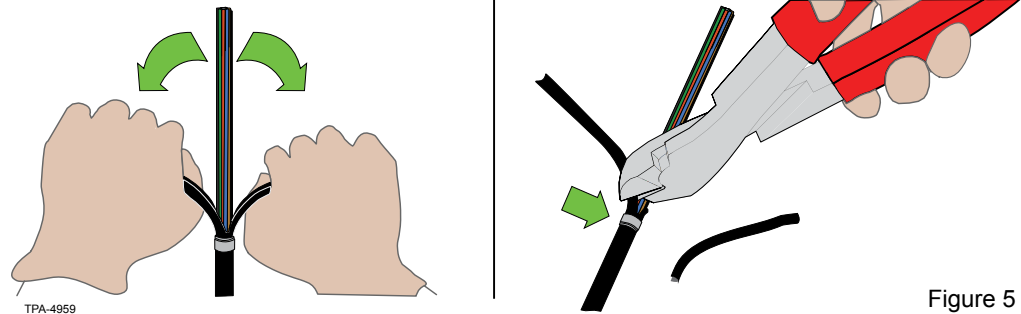


Figure 5

Step 6: Unwind and separate the buffer tubes from the central member. Cut the central member to the appropriate length for strain-relief in the hardware (Figure 6).

Step 7: For cable strain-relief hardware which clamps onto the jacket, place three layers of vinyl tape over the area where clamps make contact with the jacket.

Step 8: Load the cable in the respective hardware/closure.

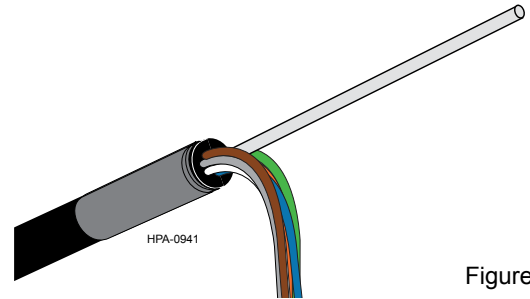
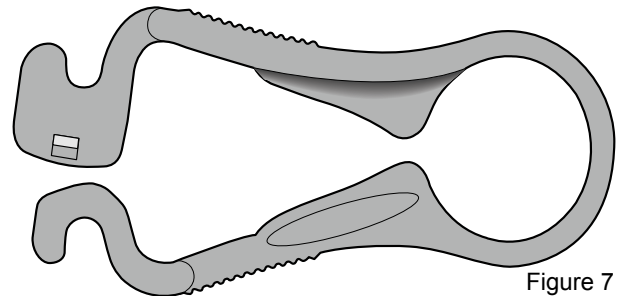


Figure 6

4.2 Buffer Tube Removal

NOTE: If you are unfamiliar with using the Ripley FTS-005 tool (Figure 7) to score buffer tubes, Corning recommends practicing Step 4.2 on a small length of scrap tubing to develop the correct technique.

Step 1: Insert the buffer tube into the 1.0 mm opening of the Ripley FTS-005 tool (Figure 7) approximately 45 cm (18-in) from the end of the tube as shown in Figure 8.



Step 2: Rotate the FTS-005 tool one revolution (360 degrees), then remove tool.

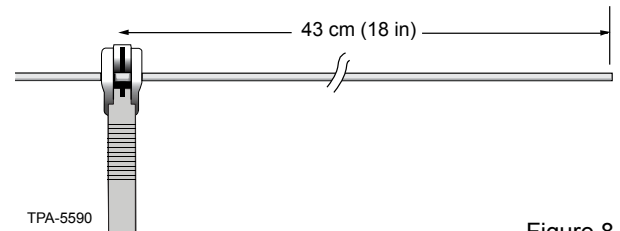


Figure 8



CAUTION: Do NOT use the tool to slide the tube from the fibres. This process can damage and break the fibres.

- Step 3:** Snap the buffer tube at the score mark by hand and carefully slide the severed section of buffer tube off the fibres (Figure 9).
- Step 4:** Repeat Steps 1 through 3 to expose the appropriate length of fibre for the splice tray.
- Step 5:** Clean the fibres with tissue and prepare them for splicing.

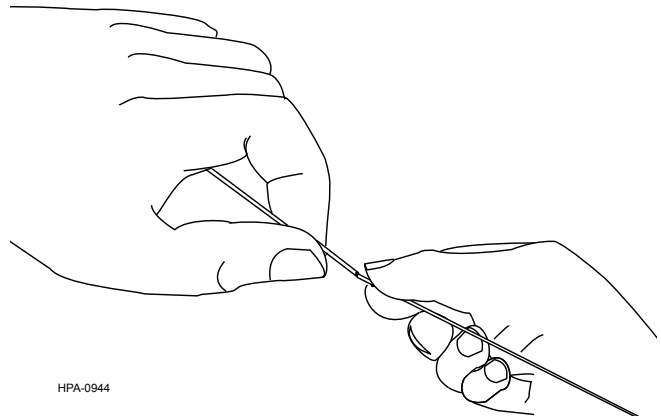


Figure 9

5. Mid-span Access

5.1 Mid-span Jacket Removal

- Step 1:** Identify the location to access the jacket for mid-span cable entry and mark each end with a wrap of tape. Typical access length is 15 ft (Figure 10).

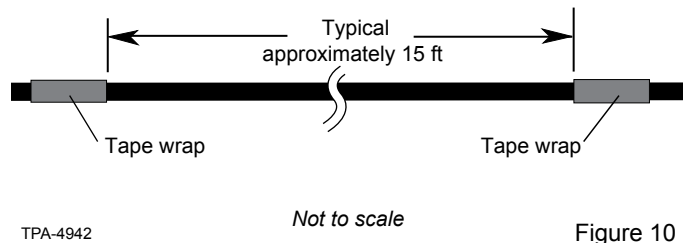


Figure 10

IMPORTANT: The Ideal® tool must be calibrated on a scrap piece of cable.

- Step 2:** Use the Ideal tool to make the first ring cut at one of the tape marks (Figure 11).
- Step 3:** Make the second ring cut at the second tape location, or simply trim off jacket (Figure 11).
- Step 4:** Use the end of the Ideal tool with a rounded blade installed. Make an approximately 1-in longitudinal cut two ridges on each side (Figure 12).

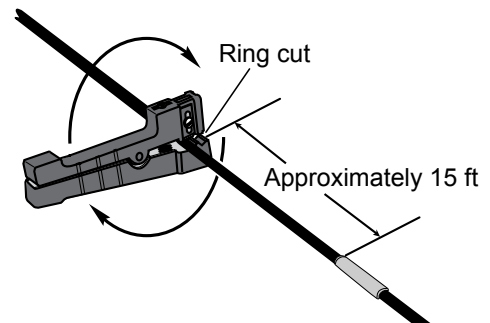


Figure 11

NOTE: An option is to make one ring cut in center and remove jacket exposing tubes for 7.5 ft on each side of ring cut, and then trim off jacket.

- Step 5:** After the last 1-in cut, either use fingers, needle-nose pliers, sheath knife, or Ideal tool round blade to pull jacket away from cable. See Figure 4.

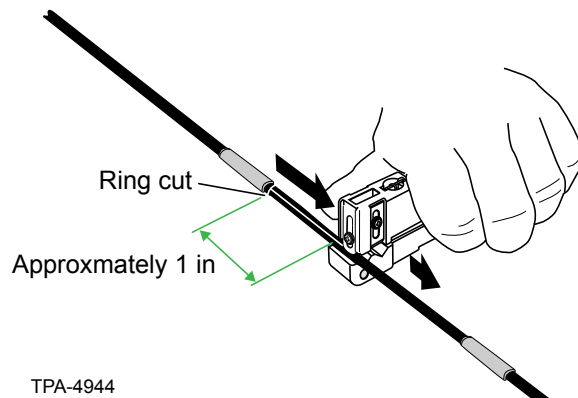


Figure 12

Step 6: Then continue to remove the jacket by pulling both sides to the second ring cut.

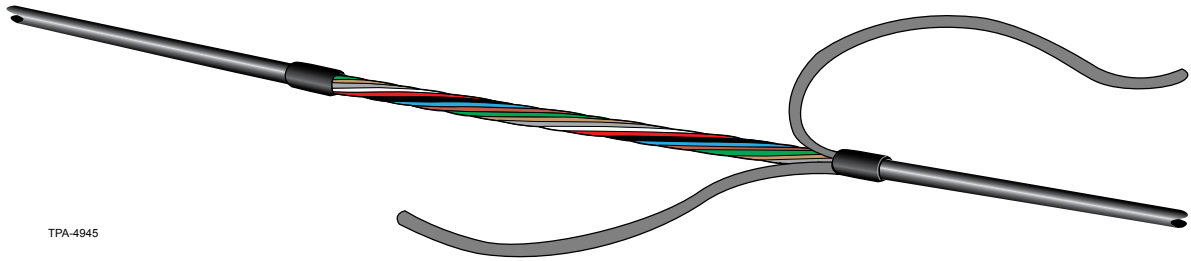


Figure 13

NOTE: If tear is misaligned, use small cutters to realign with lobes.

Step 7: Separate the buffer tubes from the central member. Cut the central member at each end of the mid-span (near the tape marks) to the appropriate length for strain-relief. If you will be installing cable strain-relief hardware that clamps into the jacket, place three layers of vinyl tape over the area where the clamps will make contact with the jacket (Figure 14).

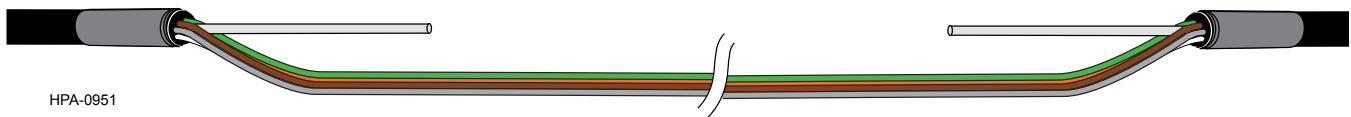


Figure 14

Step 8: Load the cable in the respective hardware/closure using care not to damage the buffer tubes.

5.2 Mid-span Buffer Tube Access

Step 1: To mid-span a buffer tube, separate and ensure there is adequate working room for the process.

Step 2: Use a permanent marking pen to mark the tube(s) with both start and end points to indicate the length of buffer tube to be opened. The length of opening is dependent on the installation, tray requirements, and the available fibre needed for splicing and routing (Figure 15).

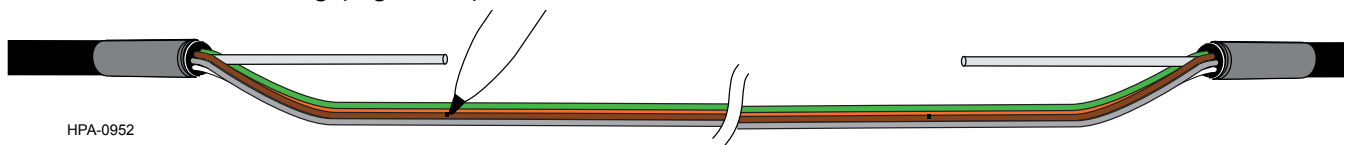


Figure 15

Step 3: To use the OFAT-003 tool from Corning to access a buffer tube:

- Unlatch the locking lever and open the tool. Note where the leading edge of the blade will make contact with a buffer tube placed in the metal holder (Figure 16).

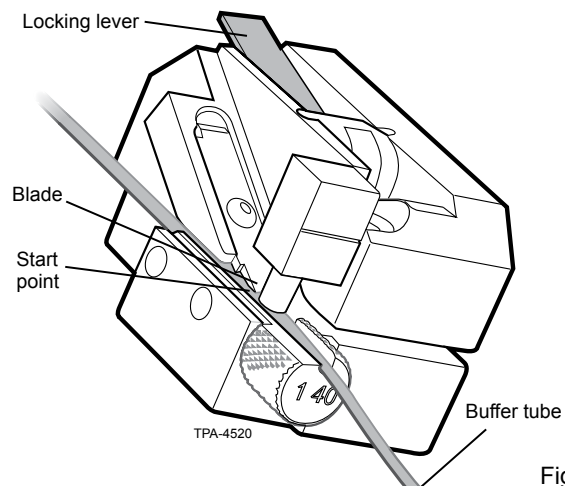


Figure 16

- b. Place the required buffer tube in the holder's slot, lining up the buffer tube's starting point mark with the blade contact point (Figure 17).
- c. Squeeze the tool manually with your hands and maintain pressure. Slide the tool backward slightly to ensure the buffer tube is correctly inside the groove. Rotate the locking lever to lock the tool (Figure 17).

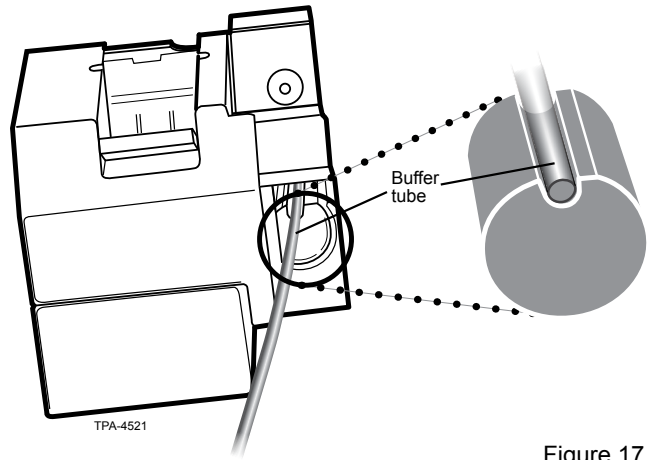


Figure 17

- d. Pull the tool as shown in Figure 18 to shave off the top of the tube and gain access to the fibres (refer to the marks on the buffer tube as required).

Step 4: Unlock the tool by rotating the locking lever. Remove the buffer tube from the holder slot. Carefully trim the buffer tube shavings from the now-accessed tube.

Step 5: Retrieve the required fibres for splicing (Figure 19).

Step 6: Clean the fibres and prepare the fibres for splicing according to your splice plan.

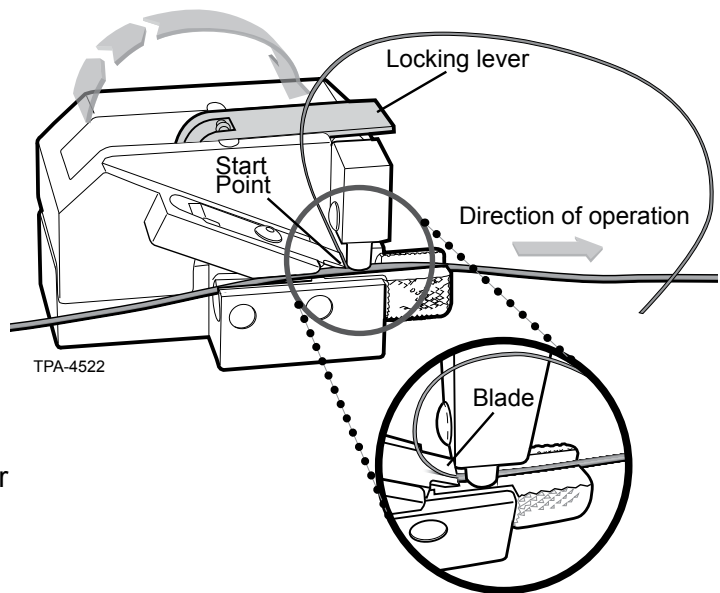


Figure 18

NOTE: Clean the OFAT-003 tool after each use. Use compressed air can commonly used for computers to blow out any residual materials.



Figure 19

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* Corning's patented Binderless FastAccess® Technology refers to the combination of a Corning FastAccess® Technology jacket with an innovative technology used to bind cable construction through the manufacturing process, eliminating the use of binder yarns and water-blocking tapes.

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