

# CORNING

## Sheath Removal of 1728 Fiber RocketRibbon™ Extreme-Density Cable

P/N 004-279-AEN  
Issue 7

related literature | Search [www.corning.com/opcomm](http://www.corning.com/opcomm). Click on “Resources/Standard Recommended Procedures.”

003-1032-AEN	<a href="#">Ultra Density Optical Splice Enclosure</a>
003-1036-AEN	<a href="#">Cable Entry Kit for OSE-UD</a>
003-1042-AEN	<a href="#">Furcation of a 288-Fiber Ribbon Subunit into an Optical Splice Enclosure Splice Tray</a>
004-098	<a href="#">Instruction, Ribbon Splitting Tool (RST-000)</a>
004-283-AEN	<a href="#">Furcation of a 1728/3456-Fiber Corning® RocketRibbon™ Extreme-Density Cable for EDGE™ Splice Cassettes and Splice-On Connectors</a>
004-285-AEN	<a href="#">Splicing a 288-Fiber RocketRibbon Subunit into a Single Splice Tray in an Ultra Density Optical Splice Enclosure</a>
005-011	<a href="#">Duct Installation of Fiber Optic Cable</a>
AEN049	<a href="#">Air-Assisted Cable Installation Techniques (Cable Blowing)</a>
AEN165	<a href="#">Applications Engineering Note165 Cable Handling: Squirting, Tangling, and Storage</a>
AEN166	<a href="#">Applications Engineering Note166 RocketRibbon Extreme-Density Cable Installation Checklist</a>
AEN167	<a href="#">Split Duct Cable Installation Guidelines</a>
AEN168	<a href="#">Cable Placing in Duct - Methods and Equipment for Manholes and Vaults</a>
CRR-0258V-AEN	<a href="#">Separating 36-Fiber and 24-Fiber Ribbons into 12-Fiber Ribbons</a>
CRR-0259V-AEN	<a href="#">Accessing a 288-Fiber Subunit in a Corning® RocketRibbon Extreme-Density Cable</a>
CRR-0298V-AEN	<a href="#">Routing: Installing RocketRibbon 1,728-Fiber Extreme-Density Cable in a 2178-XL Closure</a>
Video	<a href="#">Teardrop Storage Method for Mid-Span Slack Management</a>
Video	<a href="#">Railroad Method for Backfeeding Cable</a>

# 1. General

This document describes handling practices for dielectric 1728 fiber gel-free ribbon cable. Cable-end and mid-span access procedures are outlined in this document. Links to other reference material are provided in the “related literature” table.

The cable illustrated in this procedure is a non-armored cable manufactured with subunits. Four glass-reinforced plastic (GRP) rods provide tensile strength for the cable (Figure 1).

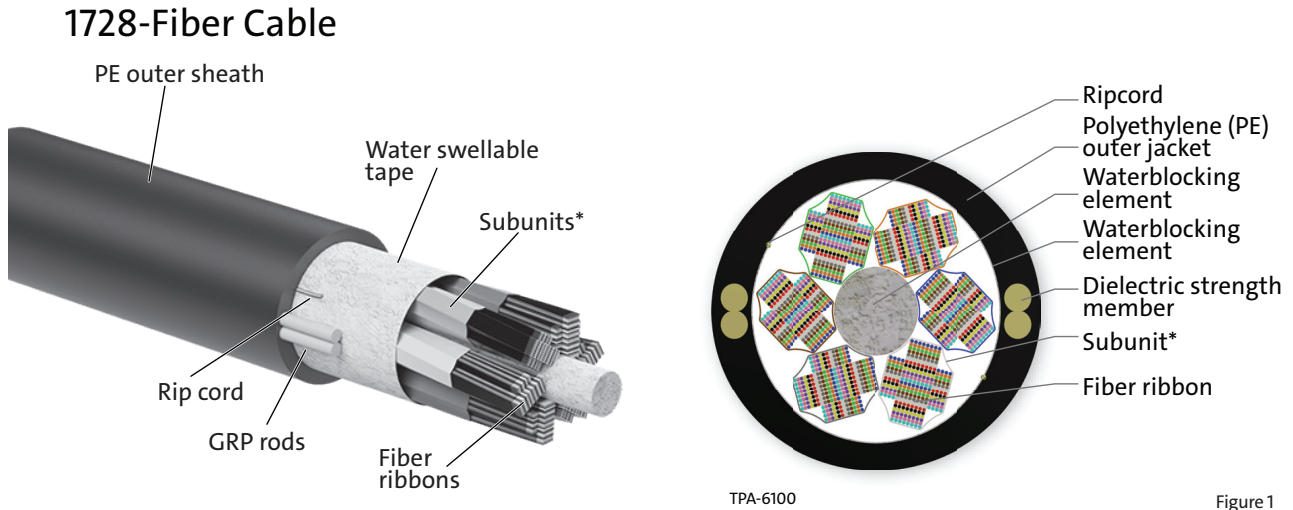



Figure 1

## 2. Precautions


### 2.1 Cable and Subunit Handling Precautions

**NOTE:** *Fiber optic cables and their internal subunits are sensitive to excessive pulling, bending, and crushing forces. Consult the cable specification sheet for the cable you are installing. Do not bend the cable or its subunits 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 subunits or allow them to kink. Doing so may cause damage that can alter the transmission characteristics of the cable; the cable may have to be replaced.*


### 2.2 Laser Handling Precautions

	<b>WARNING</b> Never look directly into the end of a fiber 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.
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### 2.3 Safety Glasses

	<b>CAUTION</b> Recommend the use of safety glasses (spectacles) conforming to ANSI Z87, for eye protection from accidental injury when handling chemicals, cables or fiber. Pieces of glass fiber are very sharp and have the potential to damage the eye.
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### 2.4 Safety Gloves

	<b>CAUTION</b> The wearing of cut-resistant safety gloves to protect your hands from accidental injury is strongly recommended when using sharp-bladed tools.
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### 3. Tools and Materials

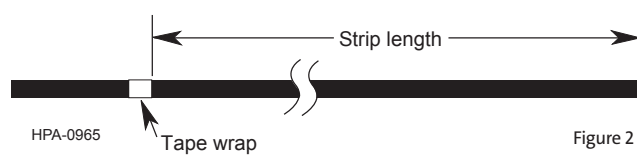
The following tools and materials are required for the cable stripping sections of this procedure:

- Gloves
- Ripley RCS-158 tool or equivalent
- Diagonal cutting pliers (Side cutters) (P/N 100300-01)
- Ribbon splitting tool (P/N RST-000)
- Ripley MB07-7000 tool
- Straight blade utility knife
- Cable sheath knife
- Needle nose pliers
- Friction tape-wrapped screwdriver
- Scissors (P/N 100294-01)
- Tape measure (P/N 100305-01)
- Permanent marking pen (P/N 2102003-01)
- Hook blade utility knife
- Ripely MB07-7500 replacement blade

### 4. Cable-End Sheath Removal

#### Method A

**Step 1A:** Determine the proper sheath removal length for the hardware being used. Mark a point at this distance from the end of the cable with a wrap of tape (Figure 2).



**Step 2A:** Position Ripley MB07-7000 tool approximately eight inches from the end of cable. Perform ring cut through the GRP rods and jacket, rotate 3-4 times. *Note: See addendum for specific tool instruction.*

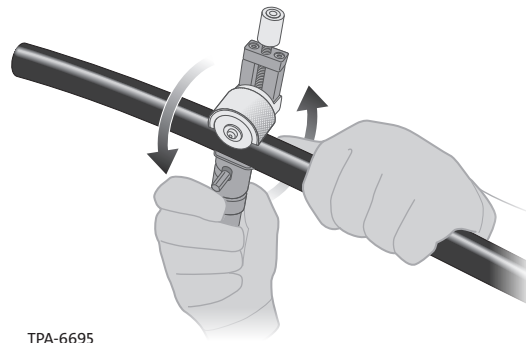


Figure 3

**Step 3A:** Flex the cable and break through the GRPs. Use scissors to cut through any remaining GRP.

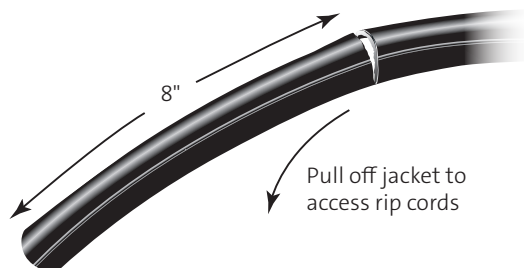


Figure 4

### Alternate Method B

**Step 1B:** Determine the proper sheath removal length for the hardware being used. Mark a point at this distance from the end of the cable with a wrap of tape (Figure 5).

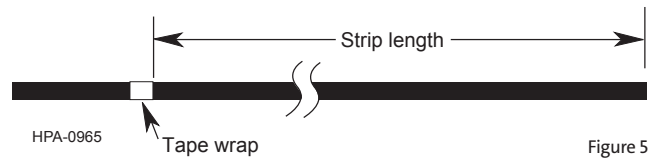


Figure 5

**Step 2B:** Position the Ripley RCS-158 tool (or equivalent) approximately eight inches from the end of cable. Perform a ring cut through the GRP rods and jacket, rotate 3 or 4 times.

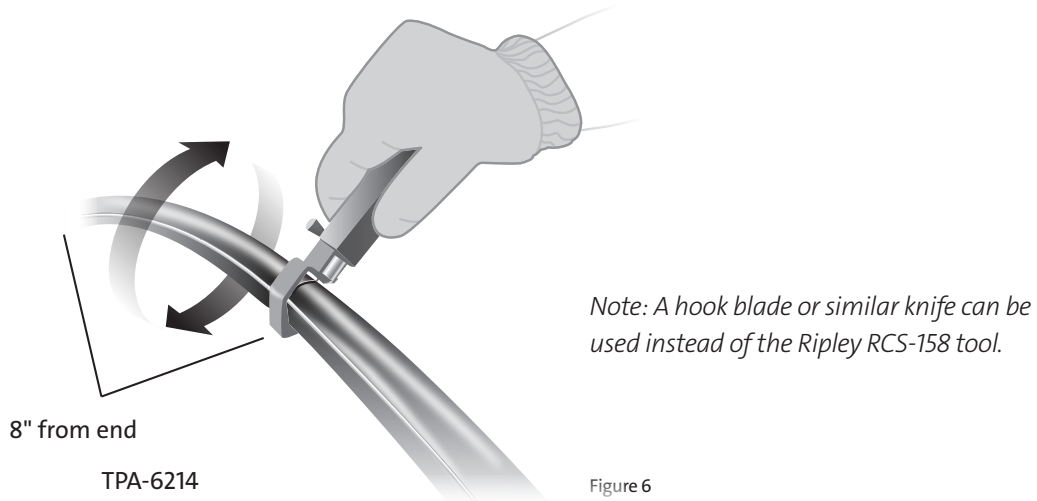
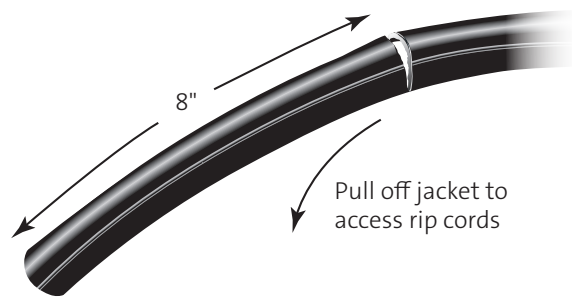


Figure 6

**Step 3B:** Flex the cable and break through the GRPs. Use scissors to cut through any remaining GRP.



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Figure 7

### Alternate Method C

**Step 1C:** Determine the proper sheath removal length for the hardware being used. Mark a point at this distance from the end of the cable with a wrap of tape (Figure 8).

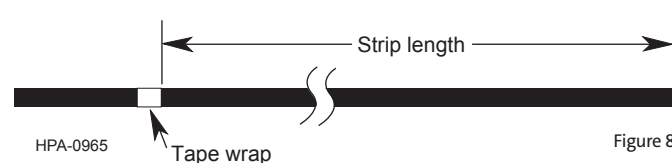
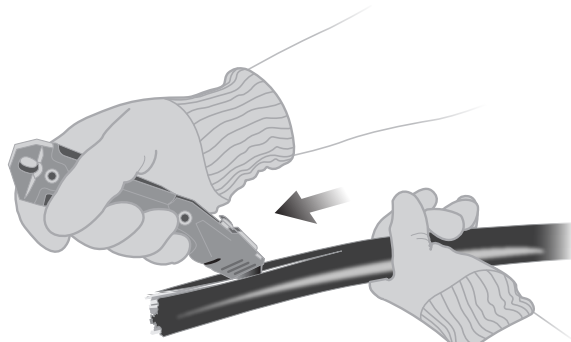


Figure 8

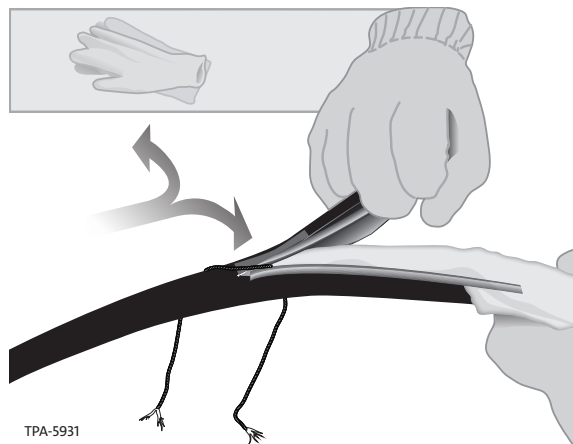
**Step 2C:** With a straight razor blade knife, make a straight cut 6 in from the end of the cable on both sides about 90 degrees from the GRP rods.



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Figure 9

**Step 3C:** Pry open end of cable using hands or with sheath knife or pliers to assist (Figure 10). Locate ripcords below the water-blocking tape. Place the rip cords on each side of the cable.

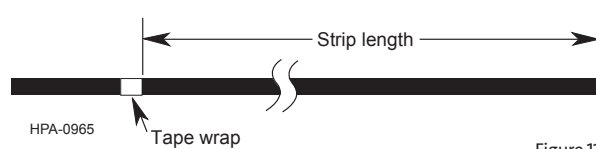


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Figure 10

### Alternate Method D

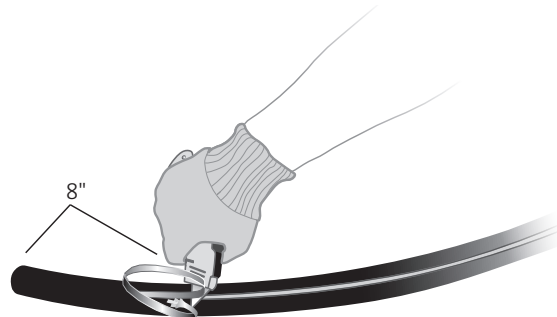
**Step 1D:** Determine the proper sheath removal length for the hardware being used. Mark a point at this distance from the end of the cable with a wrap of tape (Figure 11).



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Figure 11

**Step 2D:** Remove jacket material directly above the GRP rods on both sides of cable with a razor knife for a total of approximately 8 inches.



TPA-6213

Figure 12

**Step 3D:** Using a screwdriver or needle nose pliers, pry open the cable jacket to access the rip cords.

**Step 4:** Using the friction tape wrapped shaft of a screwdriver as a handle, pull one ripcord at a time through the sheath to the wrap of tape.

**Step 5:** Migrate ripcord from center to adjacent of the GRP rods by pulling direction, then pull ripcord parallel and close to the GRP rods to the tape location (Figure 13).

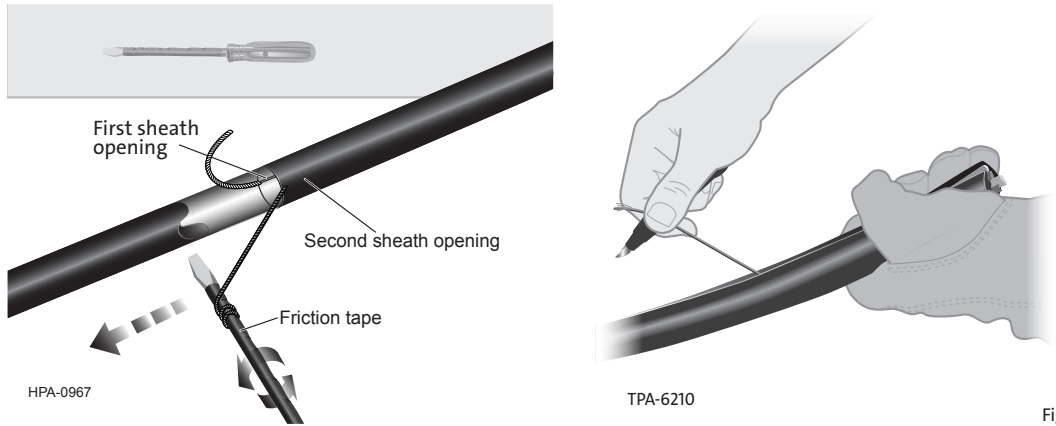


Figure 13

**Step 6:** Pull the outer jacket open to the tape mark. Bend the jacket back.

**Step 7:** After jacket is bent back, cut off the jacket and GRP rods (Figure 14). Then remove water-blocking tape with scissors.

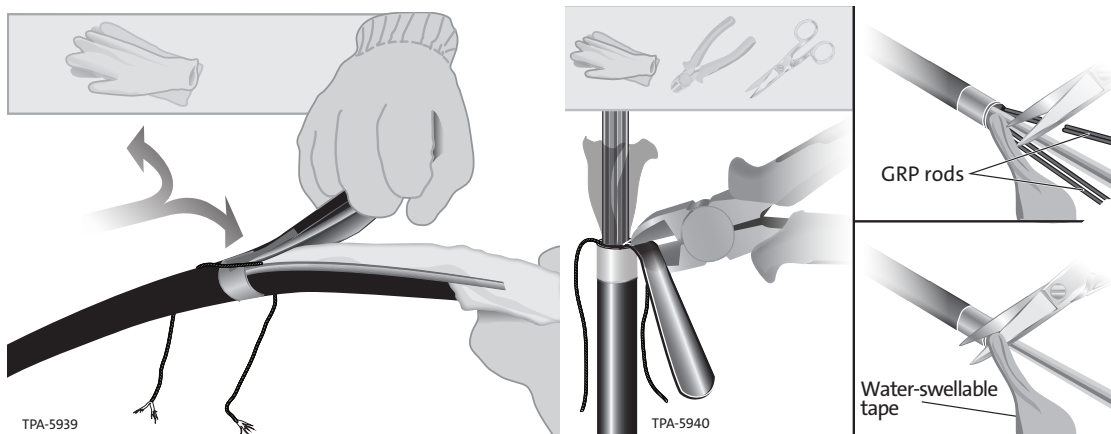


Figure 14

**Step 8:** Figure 15 shows the open cable with color-coded subunits.

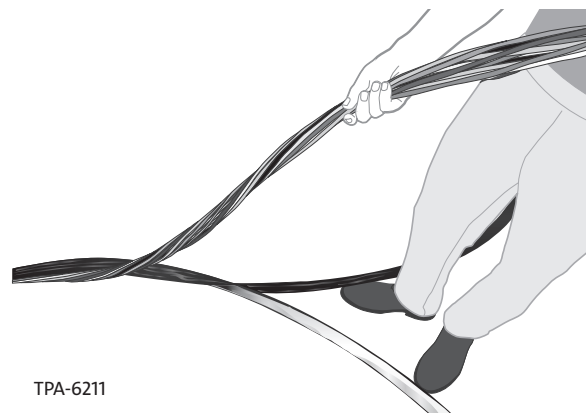


Figure 15

**NOTE:** Do not install split jacket into a splice closure entry port. Always leave cable jacket intact.

## 4.1 Accessing 288-Fiber Subunits

**Step 1:** Peel subunit with fingernail to expose ribbons (Figure 16).

**Step 2:** Continue to peel subunit jacket away from ribbons as indicated in Figure 17.

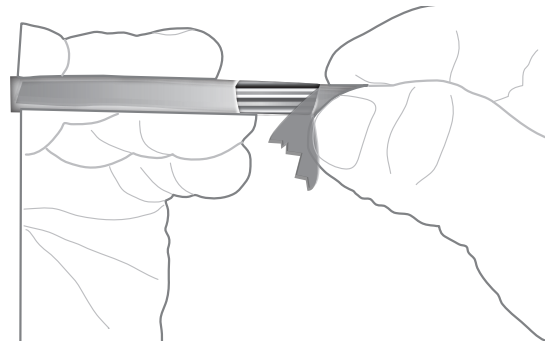
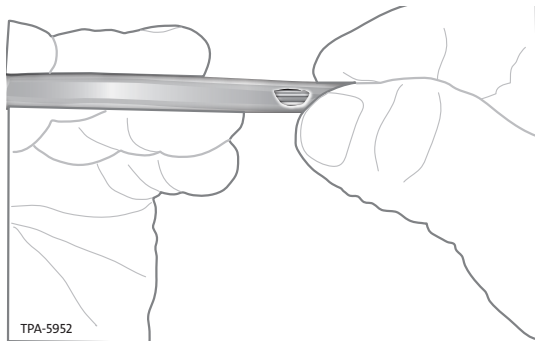


Figure 16

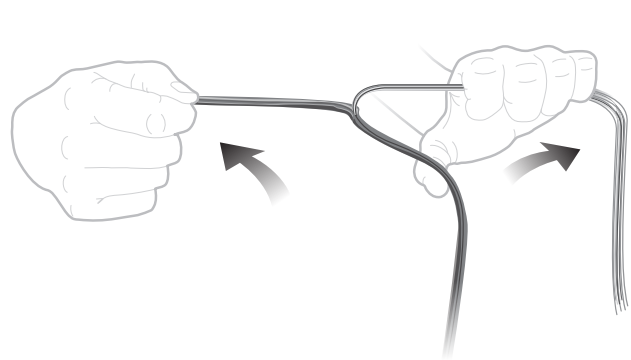
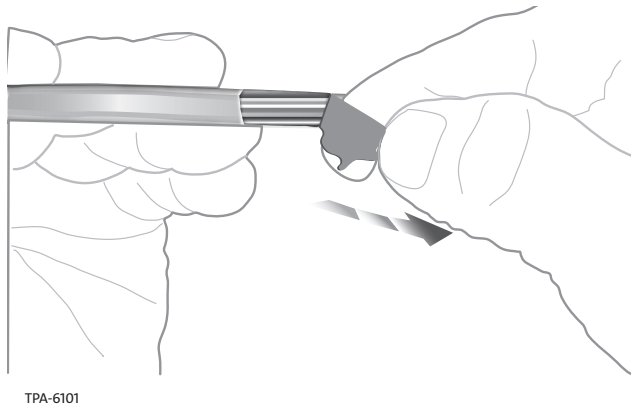


Figure 17

## 4.2 Accessing 24-Fiber Ribbons — 250 $\mu\text{m}$ fiber only\*

\*If 200  $\mu\text{m}$  fiber, separate ribbons by hand into 12 and 4 fiber counts. See AE Note 171.

**Step 1:** Use the RST-000 ribbon splitting tool to start the split on the 24-fiber ribbon.

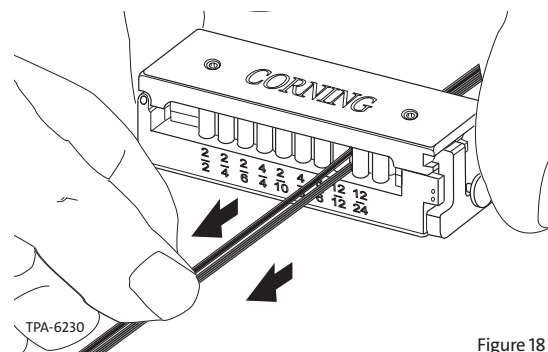
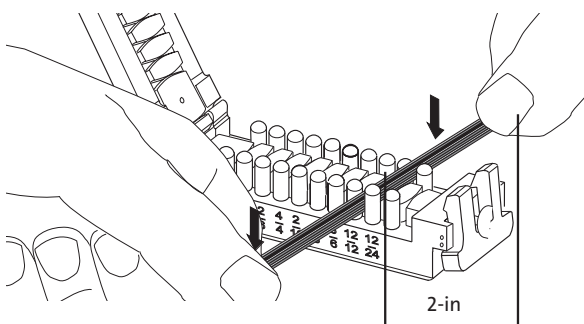
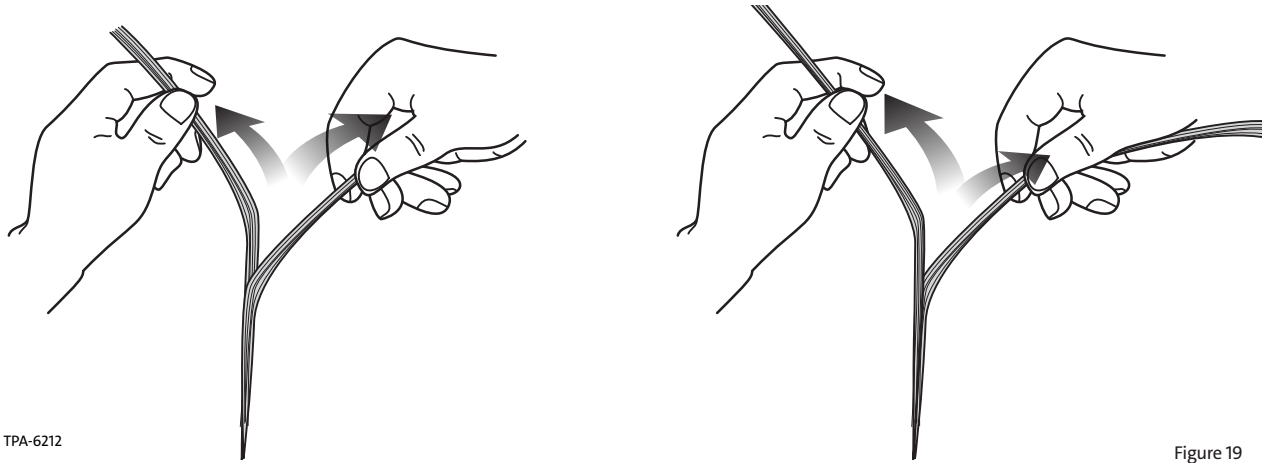


Figure 18

**Step 2:** Insert the ribbon into the 12/12 slot to allow 2 inches to extend out on one side (Figure 18). Close the door. Push in and hold the slider button on the end of the tool, then pull ribbon through the tool to split only 2 inches.

**Step 3:** Remove the ribbon from the tool.

**Step 4:** By hand split the entire length of ribbon required for the application where the ribbon is being used. Alternate the direction of split every 12-18 inches until complete (Figure 19).



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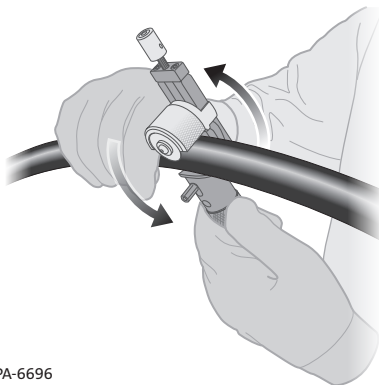
Figure 19

## 5. Mid-Span Access Cable Removal

### Method A

**Step 1A:** Tape both sides of cable at the applicable lengths for the mid-span access opening. Locate the center of the opening.

**Step 2A:** Position Ripley MB07-7000 tool in the center of the area, where jacket material is to be removed.\*Perform a ring cut – only rotate one time – 360 degrees. Then drop blade move tool 6-12 inches on the cable (see addendum for tool instructions). Perform a second ring cut (Figure 20).

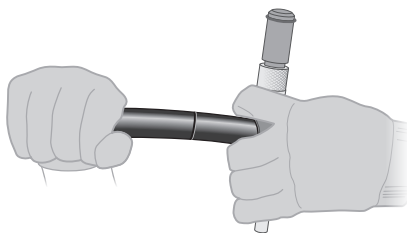


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*\*Position blade halfway between GRP strength member and hand tighten tool cable.*

Figure 20

**Step 3A:** Drop blade at second ring cut and change orientation to a parallel cut. Ensure blade is positioned halfway between GRP and strength members. Pull tool to just past the ring cut 6-12 inches away. Drop blade and rotate to opposite side and repeat long cut to just past the first ring cut, about  $\frac{1}{8}$  to  $\frac{1}{4}$  inch (Figure 21).



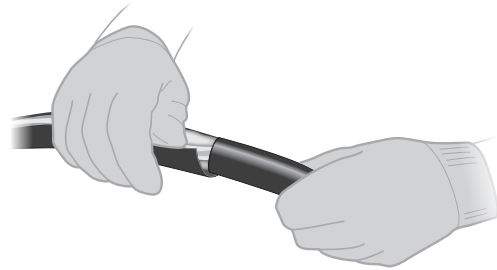
TPA-6697

*Note: Start and end long cuts about  $\frac{1}{8}$  to  $\frac{1}{4}$  inch past the ring cut.*

Figure 21

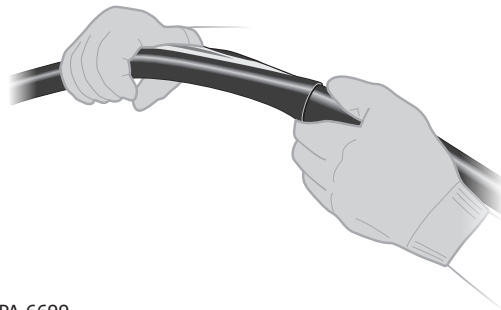


**Step 4A:** Remove tool from cable, flex and twist cable to pop open jacket, then proceed to remove jacket by hand. Use snips or scissors to remove any remnant jacket or GRP strength member at the ring cut (Figure 22 and Figure 23).



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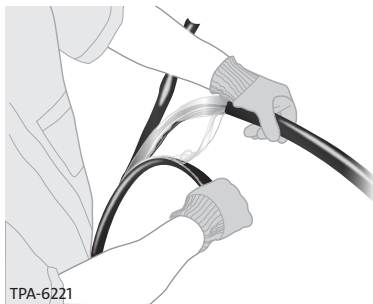
Figure 22



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Figure 23

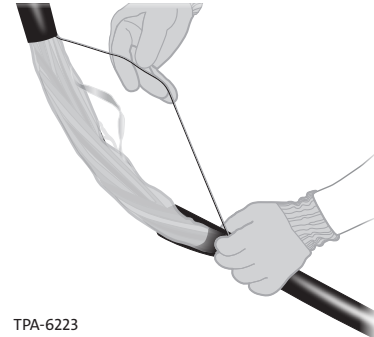
**Step 5A:** Continue to remove the jacket on the opposite side by hand. Both ripcords should now be exposed.



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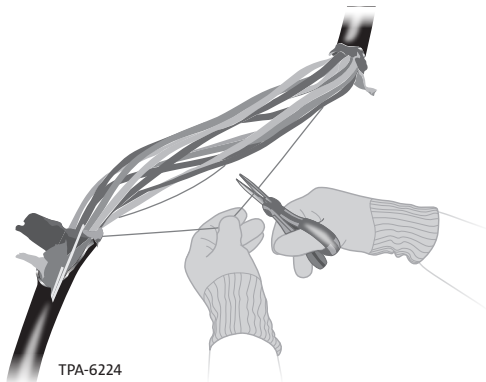
TPA-6222



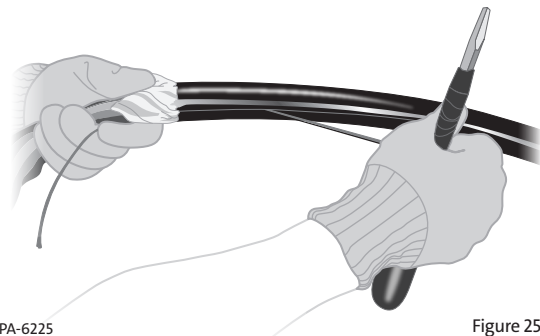
TPA-6223

Figure 24

**Step 6A:** Remove the peeled back portion of the water-packing tape, GRP rods, and jacket to create a window to access the ripcords. Cut the two ripcords in half (or pull in one direction) to allow both sides of the cable to be accessed by pulling the ripcords.



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TPA-6225

Figure 25

**Step 7A:** Pull ripcords to the tape locations on both sides of the access point and open the cable.



Figure 26

**Step 8A:** Remove remaining jackets and water-blocking tape to the tape locations with side cutters and scissors. Mid-span opening is completed.

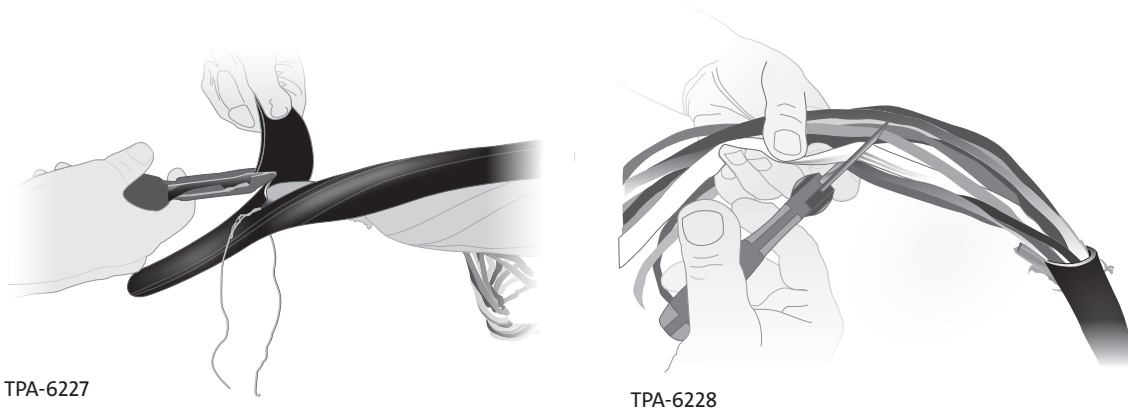


Figure 27

### Alternate Method B

**Step 1B:** Tape both sides of cable at the applicable lengths for the mid-span access opening. Locate the center of the opening.

**Step 2B:** Remove jacket material directly above the GRP rods on both sides of cable with a razor knife for a total of approximately 24 inches.

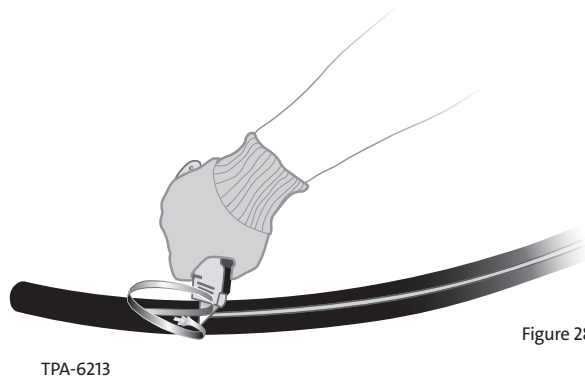
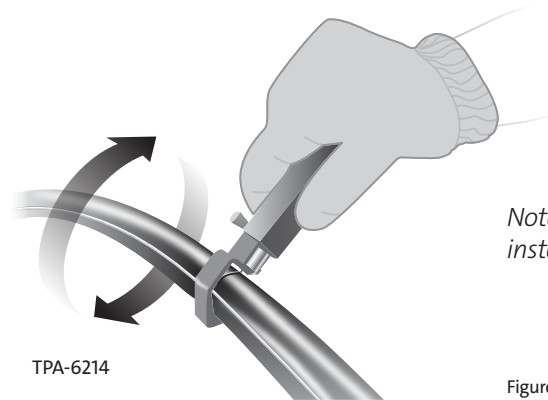


Figure 28

**Step 3B:** Using a Ripley RCS-158 tool (or equivalent), first calibrate the blade depth of the tool by using it on the end of the cable or a scrap piece of cable. Make sure that the blade does not cut too deeply, causing damage to the subunit and fibers.

**Step 4B:** Position the Ripley RCS-158 tool (or equivalent) in the center of the area, where the jacket material was removed. Perform a ring cut through the GRP rods and jacket.



*Note: A hook blade can be used instead of the Ripley RCS-158 tool.*

TPA-6214

Figure 29

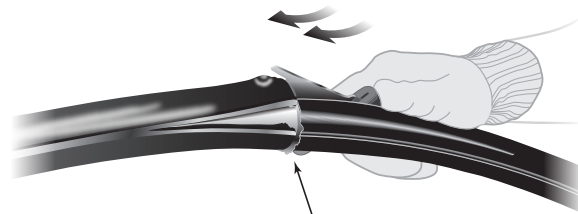
**Step 5B:** Flex the cable slightly to open a small crack for accessing inside the cable.



TPA-6215

Figure 30

**Step 6B:** Use needle nose pliers to pry up one side of the jacket.

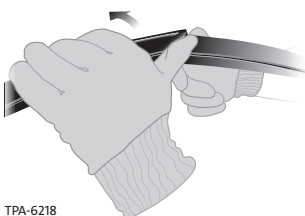


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Use pliers to pry open

Figure 31

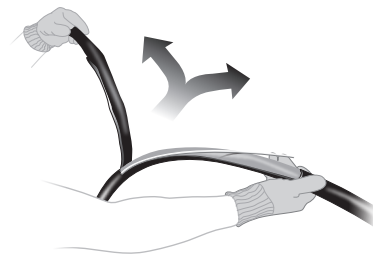
**Step 7B:** Using your hand, pry off the side of the jacket started by the pliers.



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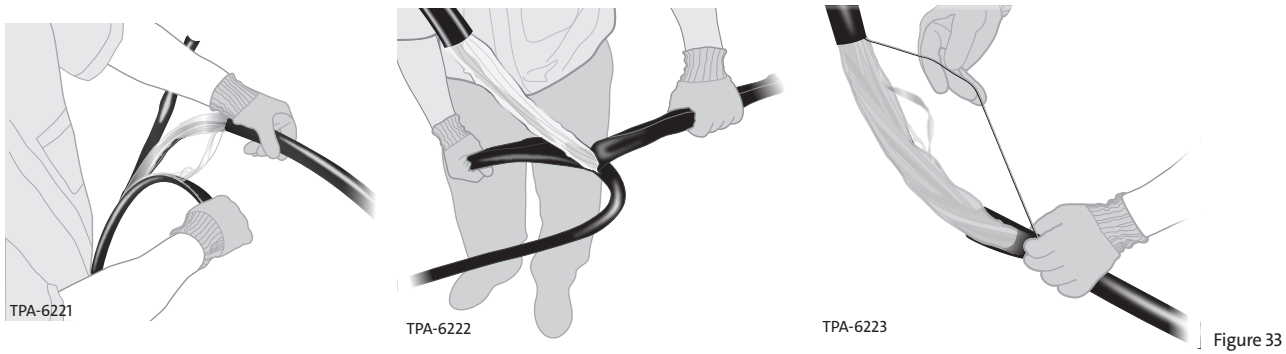
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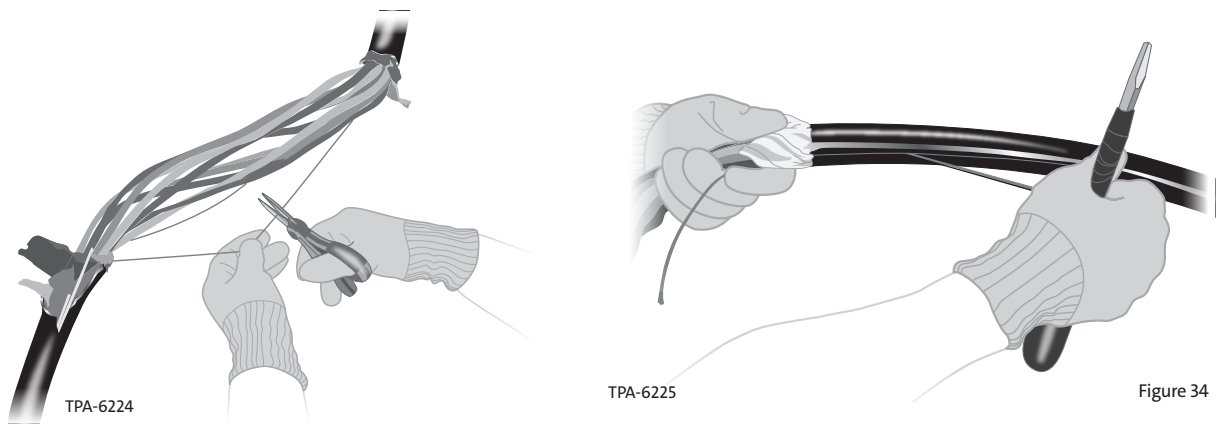
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Figure 32

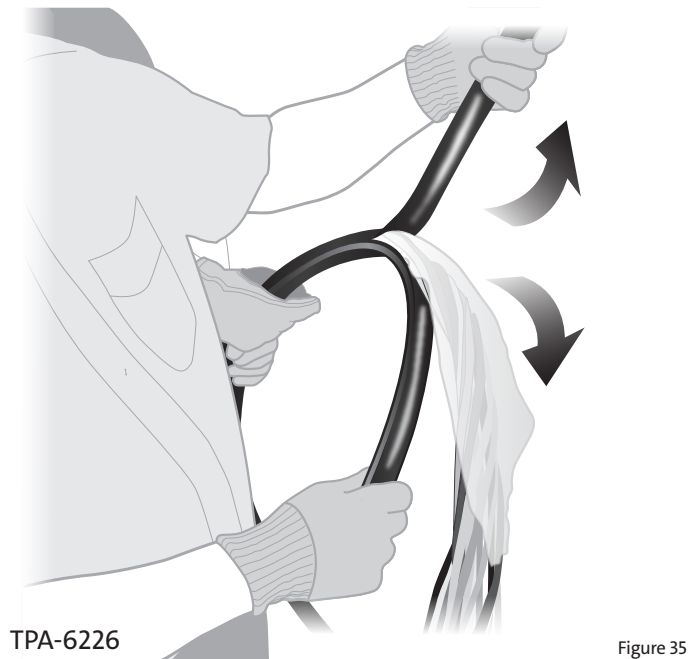
**Step 8B:** Continue to remove the jacket on the opposite side by hand. Both ripcords should now be exposed.



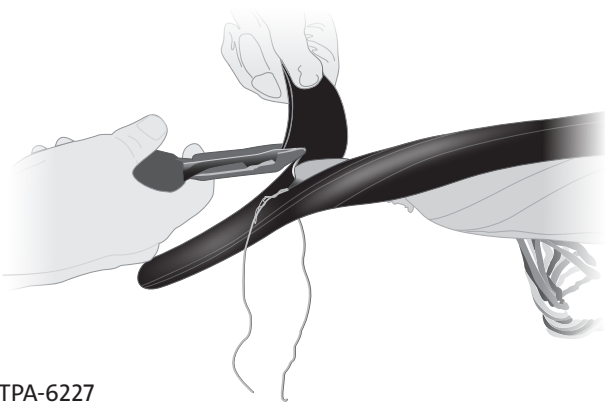
**Step 9B:** Remove the peeled back portion of the water-packing tape, GRP rods, and jacket to create a window to access the ripcords. Cut the two ripcords in half to allow both sides of the cable to be accessed by pulling the ripcords.



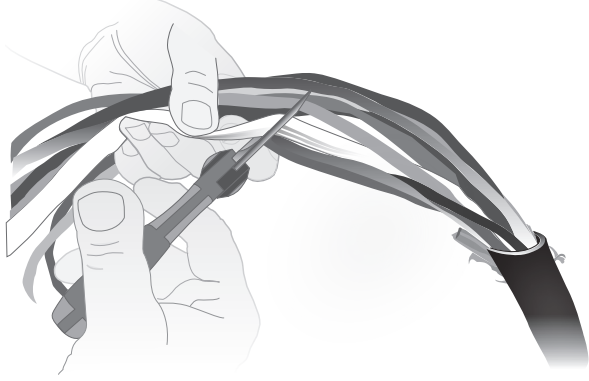
**Step 10B:** Pull ripcords to the tape locations on both sides of the access point and open the cable.



**Step 11:** Remove remaining jackets and water-blocking tape to the tape locations with side cutters and scissors. Mid-span opening is completed.



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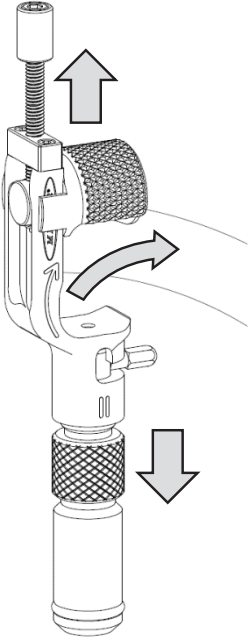
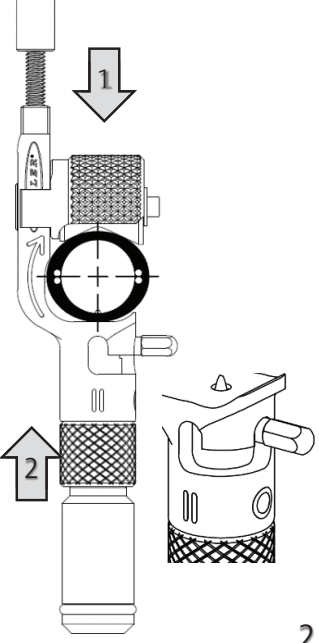
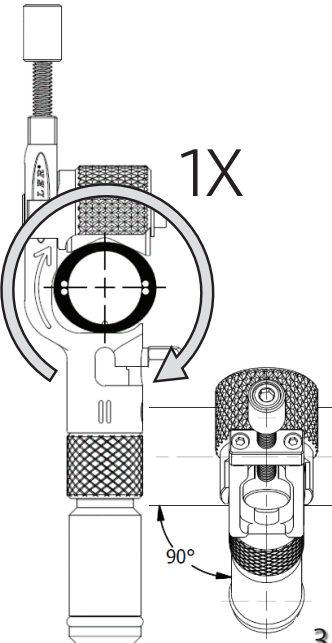
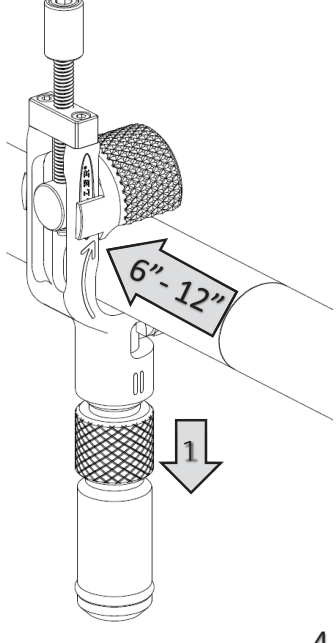
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Figure 36

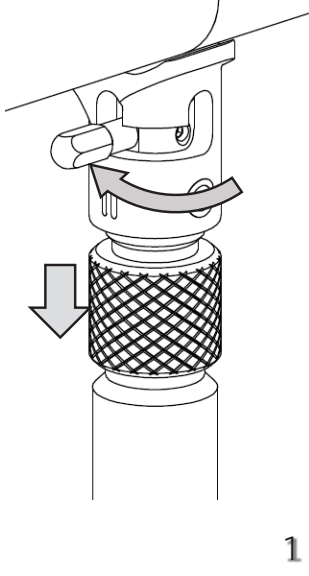
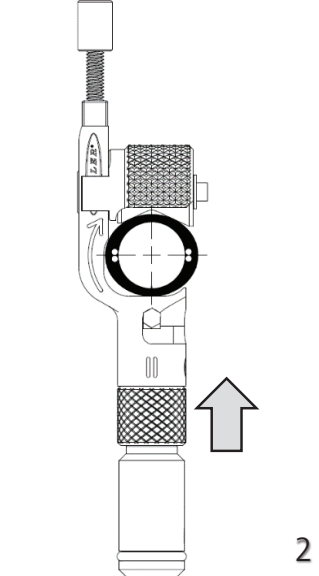
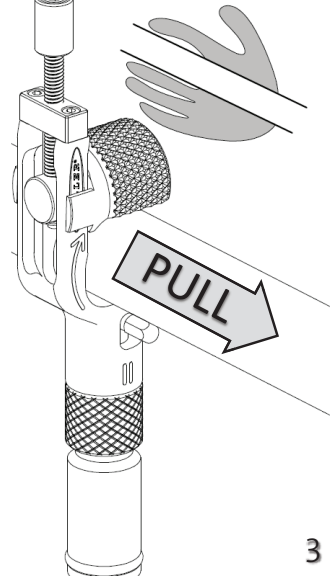
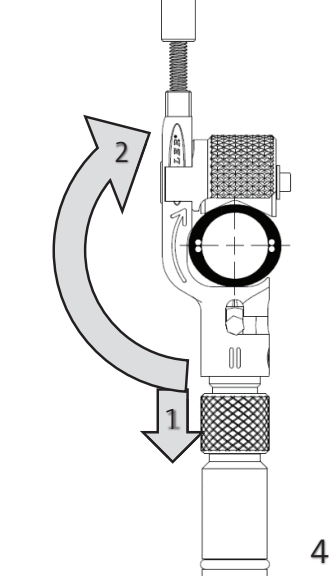
# Addendum - Ripley MB07-7000 Tool

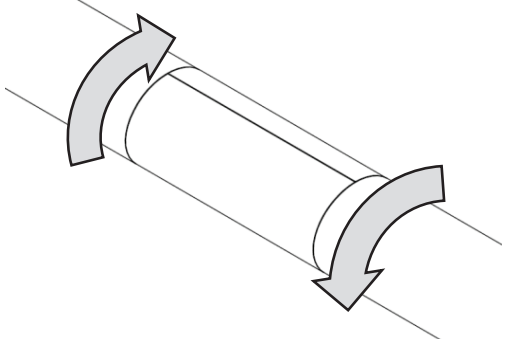
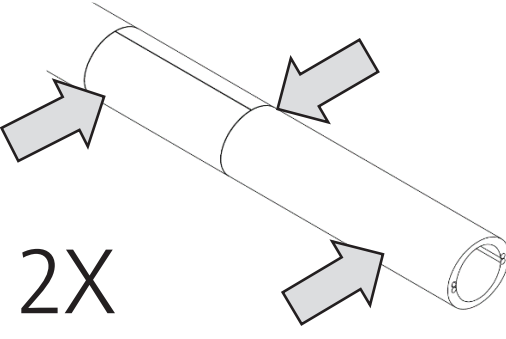
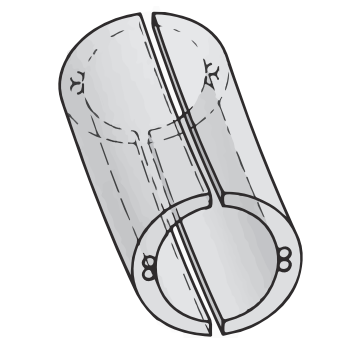
MB07-7000 RocketRibbon™ 1728 ACCESS TOOL INSTRUCTIONS = MID SPAN ACCESS

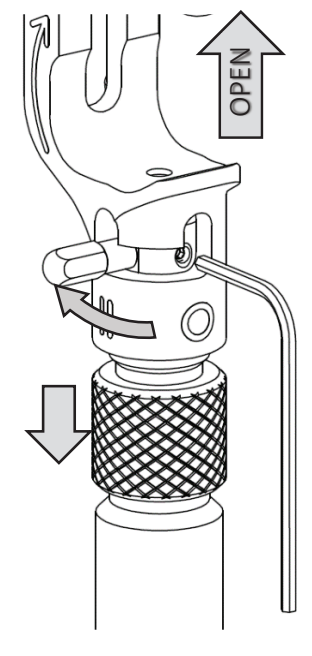
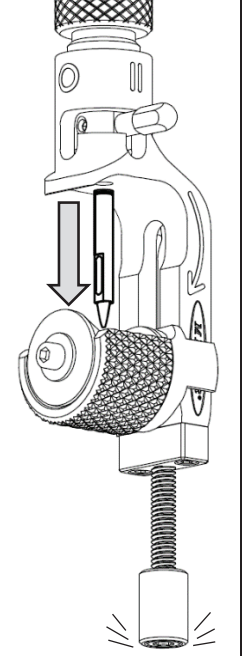
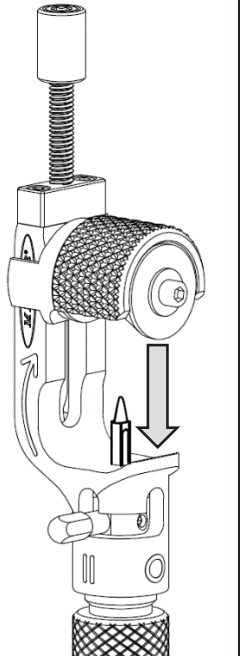
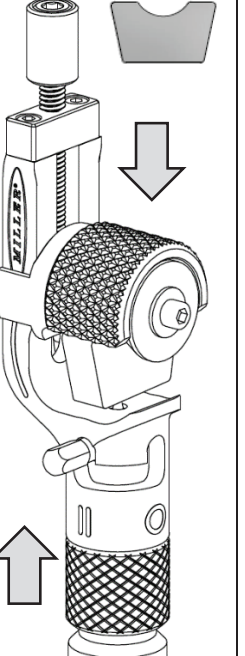
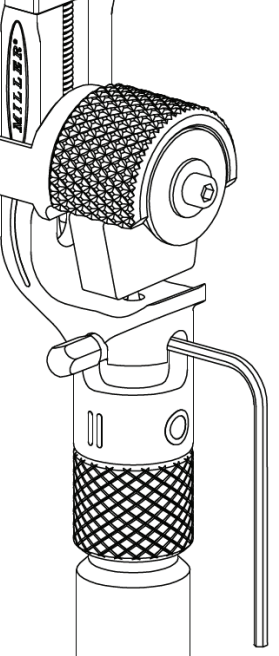
## RING CUT

 <p>1</p>	 <p>2</p>	 <p>3</p>	 <p>4</p>
<p>Open tool and disengage blade Slide tool onto cable</p>	<p>Align blade halfway between strength members Tighten tool on cable Pierce jacket with blade in "Ring-cut" position</p>	<p>Rotate tool around cable 1 time. Be sure to keep tool 90° to cable to correctly ring without spiraling</p>	<p>Disengage blade and slide tool approx. 6-12 inches down cable Repeat steps 2 &amp; 3</p>

## LONGITUDINAL CUT

 <p>1</p>	 <p>2</p>	 <p>3</p>	 <p>4</p>
<p>Disengage blade Move lever to "longitudinal cut" position</p>	<p>Ensure blade is halfway between strength members Engage blade</p>	<p>Pull tool down cable 1/8"-1/4" past the opposite ring cut Pull tool down cable, using the wheel cover for stability</p>	<p>Disengage blade Rotate tool to opposite side of cable Repeat steps 2 &amp; 3</p>

Jacket Removal		
		
Twist cable from outside of the cut portion to loosen longitudinal cut	Flex cable laterally at both ring cuts to snap strength members	Remove cable jacket. Jacket may delaminate from strength members

Blade Replacement (Blade Replacement Kit P/N MB07-7500)				
				
Open tool fully Move blade to longitudinal position, keeping blade down Loosen set screw 2+ turns	Remove blade from top of tool Tap knob on firm surface if needed	Insert new blade into tool Face blade flat towards set screw Slightly tighten screw to align blade	Raise blade Use blade block to apply pressure to tip of blade Use knob to ensure blade is fully set	Tighten screw while block is tight on blade

To order MB07-7000 Tool or MB07-7500 Replacement Blade Kit - Contact Ripley Tools ([www.ripley-tools.com](http://www.ripley-tools.com)) (800) 528-8665

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