Sheath Removal of 1728- and 3456-Fiber RocketRibbon™ Extreme-Density Cable

1. General

This document describes handling practices for dielectric 1728- and 3456-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).

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**

**WARNING:** 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.

2.3 **Safety Glasses**

**CAUTION:** 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.
2.4 Safety Gloves

CAUTION: The wearing of cut-resistant safety gloves to protect your hands from accidental injury is strongly recommended when sharp-bladed tools.

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
- Pittsburgh® Professional Trim Tool (P/N 99739) (available from Harbor Freight)
- Diagonal cutting pliers (Side cutters) (P/N 100300-01)
- Ribbon splitting tool (P/N RST-000)
- 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)

4. Cable-End Sheath Removal

Step 1: 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 2: 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.

Step 3: Pry open end of cable using hands or with sheath knife or pliers to assist (Figure 4). Locate rip cords below the water-blocking tape. Place the rip cords on each side of the cable.
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 5).

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 6). Then remove water-blocking tape with scissors.

Step 8: Figure 7 shows the open cable with color-coded subunits.

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 8).*

**Step 2:** Continue to peel subunit jacket away from ribbons as indicated in *(Figure 9).*

![Figure 8](TPA-5952)

![Figure 8](TPA-5952)

![Figure 9](TPA-6101)

4.2 Accessing 24-Fiber Ribbons

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

![Figure 10](TPA-6229)

**Step 2:** Insert the ribbon into the 12/12 slot to allow 2 inches to extend out on one side *(Figure 10).* 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 11).

Figure 11

5. Mid-Span Access Cable Removal

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

Step 2: Remove jacket material directly above the GRP rods on both sides of cable with a razor knife for a total of approximately 36 in.

Figure 12

Step 3: 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 4: 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.

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

Step 6: Insert the Pittsburgh® trim tool to pry up one side of the jacket.

Step 7: Using your hand, pry off the side of the jacket started by the trim tool.
Step 8: Continue to remove the jacket on the opposite side by hand. Both ripcords should now be exposed.

Step 9: 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 10: 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.