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Installation Guide for the TKT-UNICAM-PFC Tool Kit with FBC-007 Cleaver

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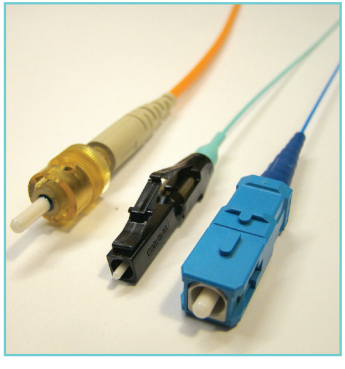

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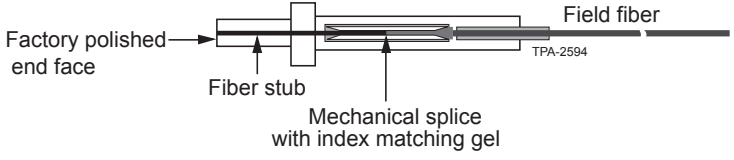
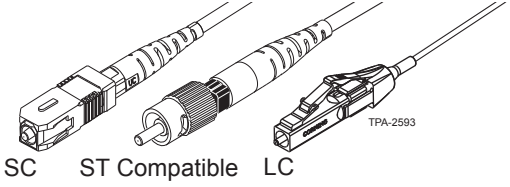
Introduction

This manual describes how to assemble Corning Cable Systems UniCam® LC, SC, and ST® Compatible connectors. This document describes installation of both multimode and single-mode connectors.





Please become familiar with the entire manual before starting to assemble a connector.

Visit www.corning.com/cablesystems/unicam for more information and videos showing this procedure.

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Safety

Optical Fiber Precautions

	WARNING: Cleaved or broken glass fibers are very sharp and can pierce the skin or damage the eyes easily. Do not let pieces of fiber stick to your clothing or drop in the work area where protect your eyes. Use tweezers to pick up pieces of fiber and place them on a loop of tape kept for that purpose alone. Good housekeeping is very important.

Chemical Precautions

	CAUTION: Fiber Optic Cleaning Fluid can cause irritation to eyes on contact. In case of eye contact, immediately flush eyes with water for at least 15 minutes. Inhaling fumes may be harmful. Use with adequate ventilation. In case of ingestion, consult a physician.

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.

Safety Glasses Precautions

	CAUTION: Recommend the use of safety glasses (spectacles) conforming to ANSI Z87, for eye protection from accidental injury when handling chemicals, cables, or working with fiber. Pieces of glass fiber are very sharp and have the potential to damage the eye.

Laser Safety

The UniCam® High-Performance Installation tool conforms to the requirements contained in IEC 60825-1:1993 plus Amendments 1:1997 and 2:2001. Pmax < 1.0 mW, λ=635nm

LASER LIGHT

DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS (MAGNIFIERS).

CLASS 1M LASER PRODUCT

CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Cable Handling Precautions

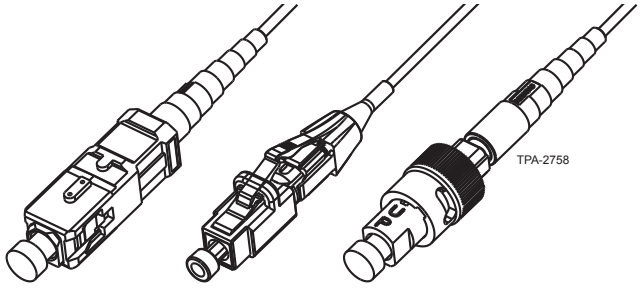
NOTE: Fiber optic cable is sensitive to excessive pulling, bending, and crushing forces. Consult the cable specification sheet for the cable you are installing. Do not bend the cable more sharply than the minimum recommended bend radius. Do not apply more pulling force to the cable than specified. Do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

For additional safety information, please visit www.corning.com/cablesystems/safety.

1. GETTING STARTED

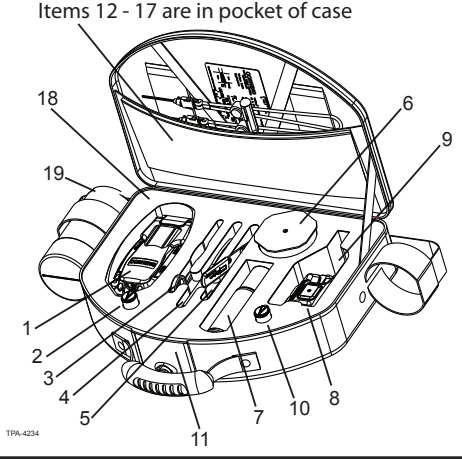
1.1. General

Please become familiar with the appropriate sections of this manual before starting to install a connector.



1.2. UniCam® High-Performance Tool Kit Contents

Table 1 describes the contents of the Corning Cable Systems High-Performance UniCam® Tool Kit.



Location	Description	Part Number
1	Installation Tool, Integrated CTS	TL-UCP
2	Ferrule Adapter / Vial Assembly, 1.25 mm	VFL-A125
3	Scissors - 5-inch Electrician w/notches	
4	Marker - Retractable Black Sharpie®	
5	Miller® Tool, 3-hole	TL-3HM
6	Wipes - Micro Care, Fiber	FCC-WIPES
7	Cleaning Fluid - Micro Care, Fiber Optic	FCC-CLEANER-FIBER
8	Cleaver Assembly, FBC-007	FBC-007
9	Track Assembly, Fiber Handler, FBC-007	HAN-TRACK
10	DS Fiber Handler / Vial Assembly, Universal	HAN-UNI
11	Crimp Tool - UniCam	
12	Cleaning Sticks - 2.5mm Connector, 10/pk	CLEAN-STICKS-250
13	Cleaning Sticks - 1.25mm 10/pk	CLEAN-STICKS-125
14	Gauge Card, UniCam Strip Length II	
15	Screwdriver - 2-inch slotted	
16	Lanyard, Connector Installation Tools (2)	
17	Visual Instruction UniCam High-Performance Tool Kit	LAN-1491-AEN
18	Case Gray w/Eva Foam Insert, PFC/CF	
19	Trash Container	
Not Shown	Ferrule Adapter, 2.5mm (Ships in Installation Tool)	VFL-A250
Not Shown	Installation Guide for the TKT-UNICAM-PFC Tool Kit	006-401

1.3. Compatible Connectors and Ordering Information

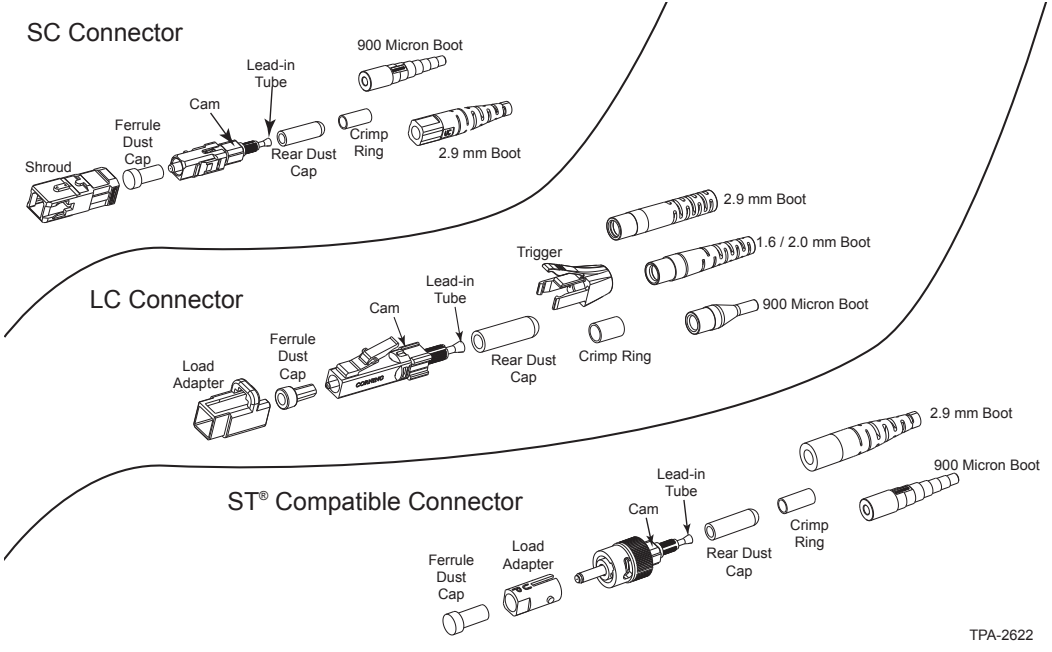
	Single-pack Part Number	Organizer-pack Part Number	Description
SC	95-000-40	95-000-40-Z	SC Standard Performance Multimode (OM1)
	95-000-41	95-000-41-Z	SC High Performance Multimode (OM1)
	95-050-40	95-050-40-Z	SC Standard Performance Multimode (OM2)
	95-050-41	95-050-41-Z	SC High Performance Multimode (OM2)
	95-050-41-X	95-050-41-X-Z	SC High Performance Multimode (OM3, OM4)
	95-200-41	95-200-41-Z	SC Single-Mode UPC (OS2)
	95-200-44	95-200-44-Z	SC Single-Mode APC (OS2)
ST® Compatible	95-000-50	95-000-50-Z	ST Compatible Standard Performance Multimode (OM1)
	95-000-51	95-000-51-Z	ST Compatible High Performance Multimode (OM1)
	95-050-50	95-050-50-Z	ST Compatible Standard Performance Multimode (OM2)
	95-050-51	95-050-51-Z	ST Compatible High Performance Multimode (OM2)
	95-050-51-X	95-050-51-X-Z	ST Compatible High Performance Multimode (OM3, OM4)
	95-200-51	95-200-51-Z	ST Compatible Single-Mode UPC (OS2)
LC	95-000-99	95-000-99-Z	LC High Performance Multimode (OM1)
	95-050-99	95-050-99-Z	LC High Performance Multimode (OM2)
	95-050-99-X	95-050-99-X-Z	LC High Performance Multimode (OM3, OM4)
	95-200-99	95-200-99-Z	LC Single-Mode UPC (OS2)

Keyed LC solutions are also available. Visit www.corning.com/cablesystems.

1.3.1 Components

Each UniCam® connector single-pack contains the parts shown in this section of the manual.

NOTE: Organizer packs only include materials for 900 micron termination.



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2. OVERVIEW OF INSTALLATION TOOLS

This chapter provides an overview of the tools required for installing SC, LC, and ST® Compatible UniCam® connectors.

2.1. UniCam High-Performance Installation Tool

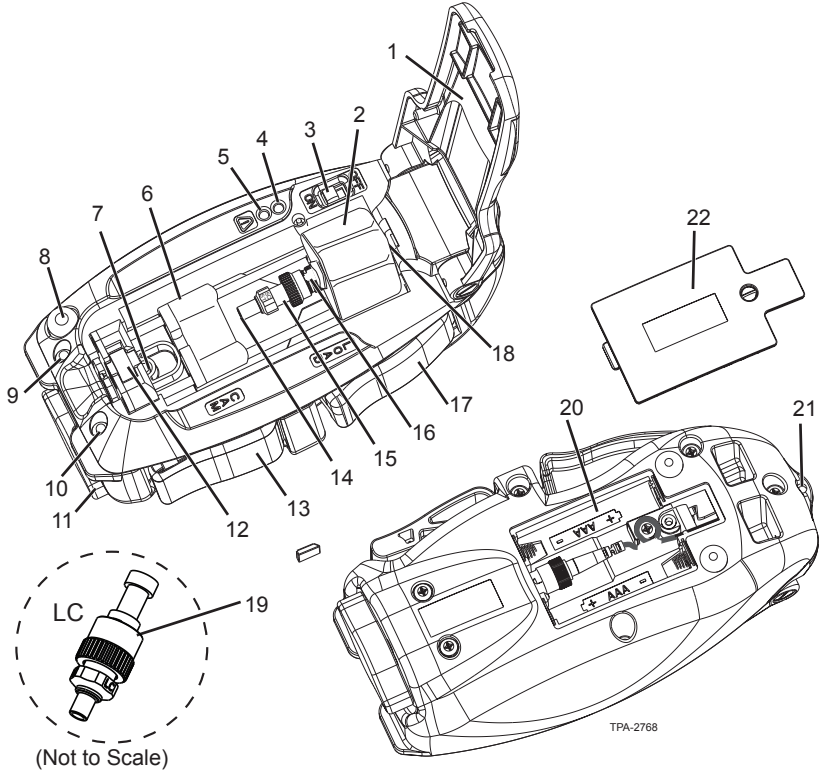
2.1.1 General

This section describes the components of the UniCam High-Performance Installation Tool.

NOTE: With the exception of the Ferrule Adapter, this tool operates independent of the connector or fiber type. SC and ST Compatible connectors require use of the 2.5mm ferrule adapter (identified by the SC/ST etch) and LC connectors require the 1.25mm ferrule adapter (identified by the LC etch). When using the Unicam High-Performance Installation Tool in bright sunlight, Corning Cable Systems recommends that the installer keep the connector lead-in area shaded and facing away from any reflective surfaces. This practice will help to ensure the most accurate activation of the CTS (Continuity Test Set) system.

Please read through this entire chapter before using the installation tool to install UniCam connectors. Refer to Chapters 3, 4, and 5 for complete operating instructions.

2.1.2 Features and Components



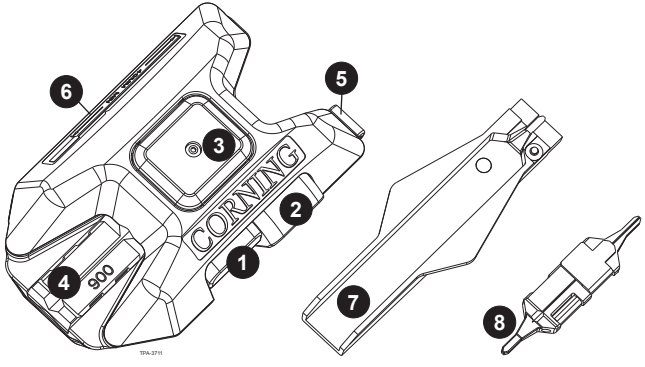
Number	Components
1	Cover
2	VFL Coupler
3	Power Switch
4	Power Light
5	Error Light
6	Connector Cradle
7	Photo Detector
8	Reset Button (Red)
9	Red Termination Light
10	Green Termination Light
11	Crimp Knob (Green)
12	Wrench
13	CAM Button (Blue)
14	Laser Aperture
15	2.50mm Ferrule Adapter (ships in the tool)
16	Ferrule Adapter Port
17	LOAD Button (Black)
18	Jumper
19	1.25mm Ferrule Adapter (ships in the toolkit)
20	Battery Compartment
21	Lanyard Attachment
22	Battery Cover

2.2. FBC-007 Cleaver

2.2.1 General

This section describes the components of the FBC-007 Cleaver. Please read through this entire chapter, the Fiber Preparation chapter, and Fiber Cleaving chapter before using the cleaver. Refer to Chapter 5 for complete operating instructions and precautions.

2.2.2 Features and Components



Number	Components
1	Keep Button (Black)
2	Scrap Button (Red)
3	Cleave Button (Blue)
4	Fiber Handler - 900/2.9 (black)
5	Latch
6	Strip Length Guide
7	Track
8	Double-sided handler (blue) - Fan / 250

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3. TOOL AND CONNECTOR PREPARATION

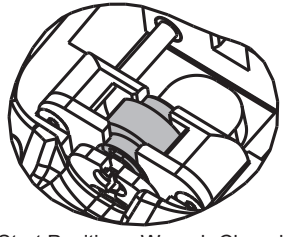
3.1. Tool Preparation

Tool is designed to be held in the left hand while working.

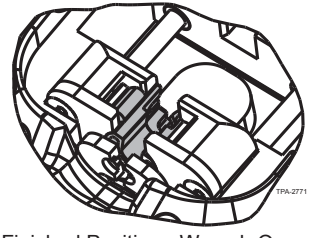
3.1.1 Open the Cover

Step 1: Components must be in the starting position.

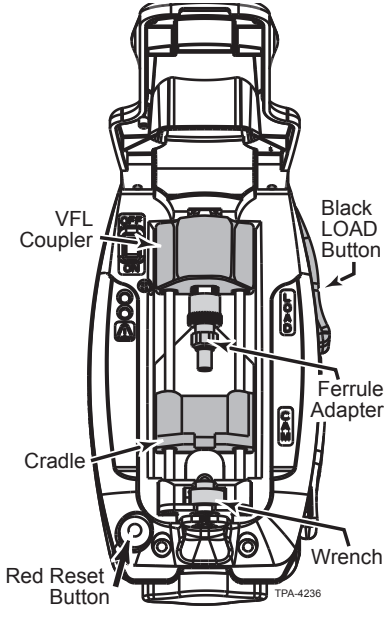
- Slide the VFL Coupler back toward the cover hinge until it locks.
- Verify the Black LOAD Button is released and the Connector Cradle is against its travel stop.
- Depress the Red Reset Button to return the Wrench to the start position.



Start Position - Wrench Closed

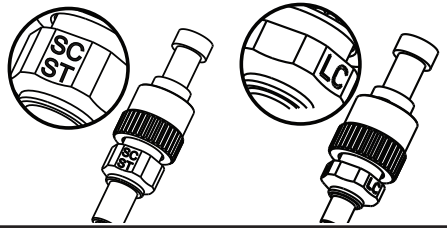


Finished Position - Wrench Open - Press Reset Button to Return to Start Position



Step 2: Ensure that the correct Ferrule Adapter is installed.

- 2.5mm for SC and ST® Compatible connectors (see SC ST etch)
- 1.25mm for LC connectors (see LC etch)
- To change the adapter, refer to Section 7.1.2.

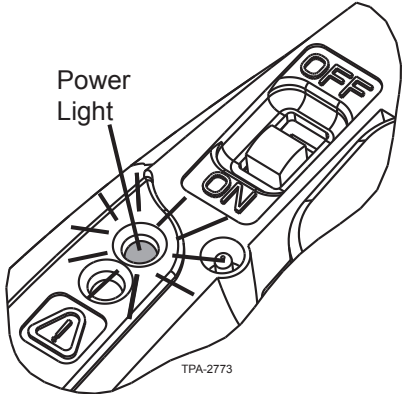


3.1.2 Switch Power On

Step 1: Locate power switch, under the cover in the upper left corner of the tool.

Step 2: Move the switch to the ON position. Once the tool is on, the Power Light will glow.

- If the Power Light flashes or does not glow, the batteries need to be replaced.
- Refer to Section 7.1.1 “Changing the Batteries” for battery replacement instructions.



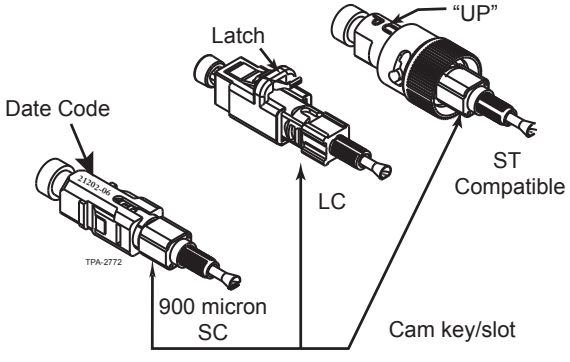
3.2. Connector Preparation

3.2.1 Verify Cam Position

Because the connector cam may rotate slightly during shipment, verify that the connector cam is in the open position. The cam is open when the cam key is 90 degrees from:

- SC connectors - the date code when it is facing up
- LC connectors - the latch when it is facing up
- ST® Compatible connectors - the “UP” label molded on the load adapter

NOTE: If the cam is not in the open position, the connector will not fit correctly into the installation tool.

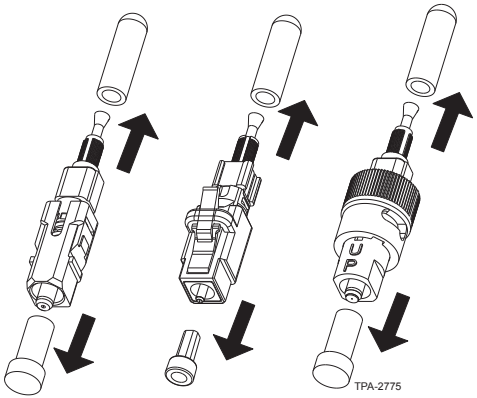


3.2.2 Prepare Connector for Loading

Step 1: Remove the rear black dust cap.

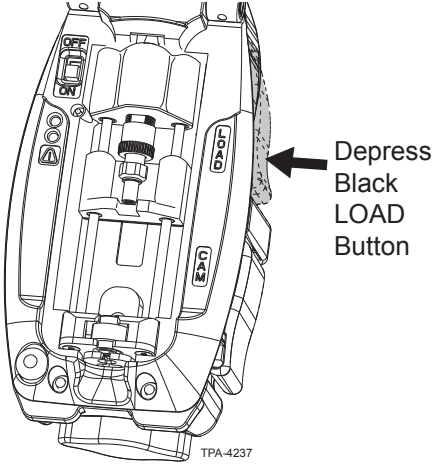
Step 2: Remove the clear ferrule dust cap.

Step 3: Leave the black load adapter on LC and ST® Compatible connectors until after termination.



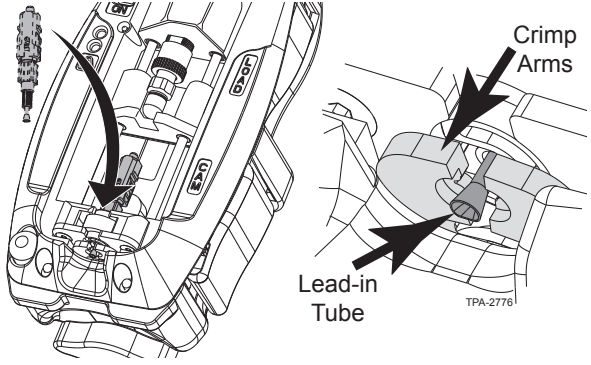
3.3. Connector Loading

Step 1: Fully depress the Black LOAD Button to move the Connector Cradle away from the Wrench. Do not release.

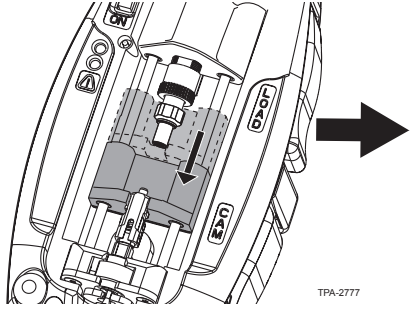


Step 2: With the connector oriented up (as shown in Section 3.2.1 “Verify Cam Position”), load the connector into the tool by inserting it, lead-in tube first, into the Wrench.

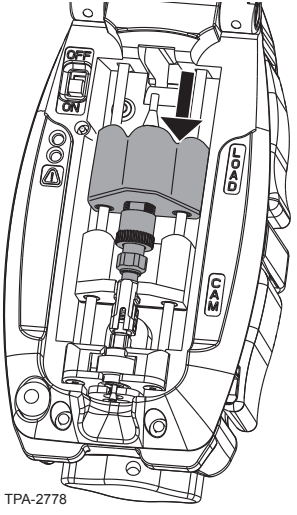
NOTE: Ensure that the cam is completely seated in the Wrench and the lead-in tube protrudes through the crimp arms. The flare of the lead-in tube should be visible beyond the crimp arms.



Step 3: Slowly release the Black LOAD button while guiding the connector into the Connector Cradle. Ensure the connector is firmly seated in the Cradle.



Step 4: Slide the VFL Coupler down until the Ferrule Adapter is fully seated on the connector.



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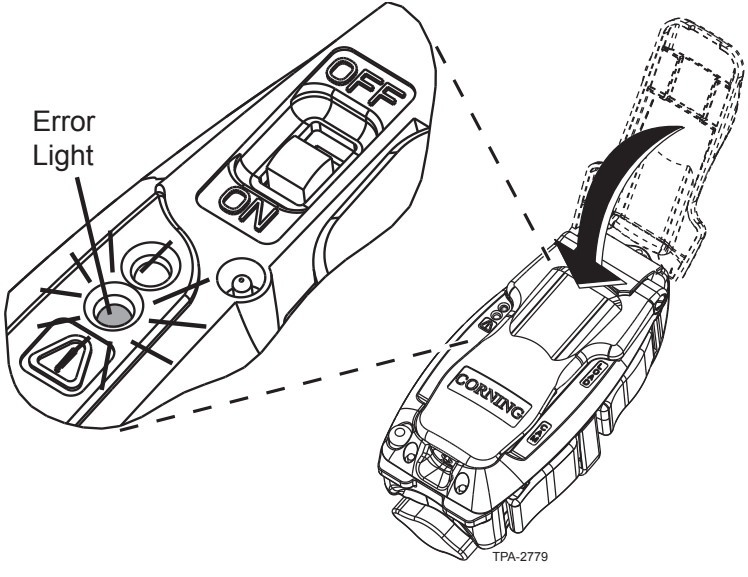
Step 5: Close the cover and check for the Error Light.

- If the Amber Error Light flashes, refer to Section 7.4 “Troubleshooting”.
- If green light only, continue to Step 6.



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Step 6: Set the installation tool aside and prepare the field fiber for termination. Proceed to Section 4 “Fiber Preparation”.

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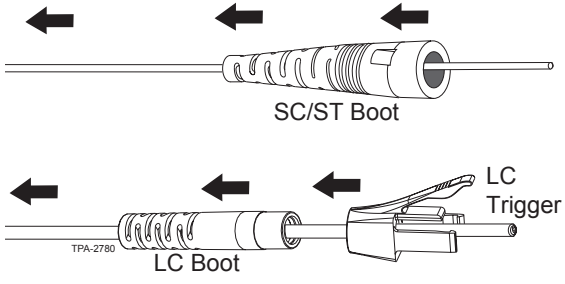
4. FIBER PREPARATION

4.1. All Fiber/Cable Types

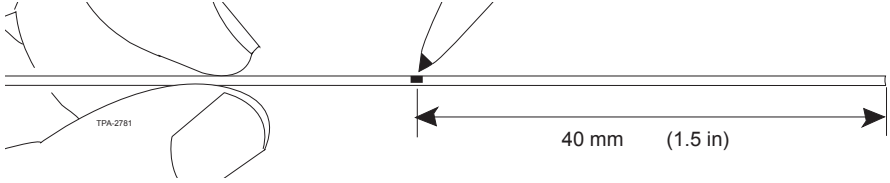
Slide the appropriate boot onto the fiber/cable.

- Use the 900 micron boot for 900 micron Tight-buffered and fan-out tubing applications.
- Use the 1.6, 2.0, or 2.9mm cable boot for Jacketed Cable applications.
- For LC connectors, also slide the trigger onto the fiber/cable after installing the boot.



4.2. 900 micron Tight-buffered Fibers

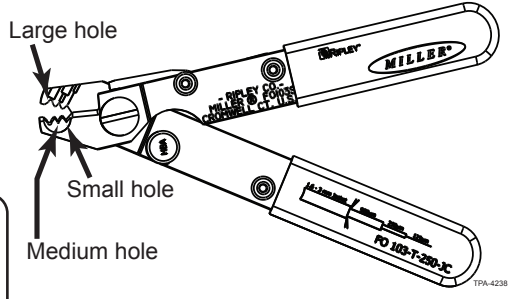
Step 1: Using the Strip Length Gauge and permanent marker, measure and mark 40mm from the end of the buffered fiber.

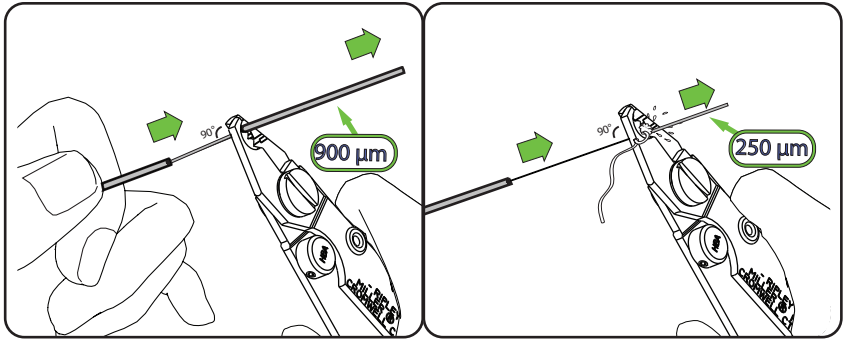


Step 2: To expose bare glass, remove the 40mm section of buffer and coating in two steps using the Three-Hole Miller Tool.

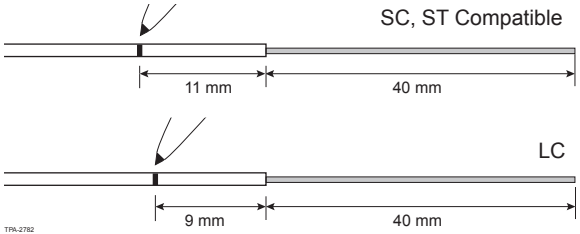
a. For the 900 micron buffer, use the medium hole.

b. For the 250 micron coating, use the small hole.





Step 3: For SC and ST® Compatible connectors, measure and place a visual mark on the buffer an additional 11mm back from the end of the buffer. For LC connectors, measure and mark the buffer 9mm back.



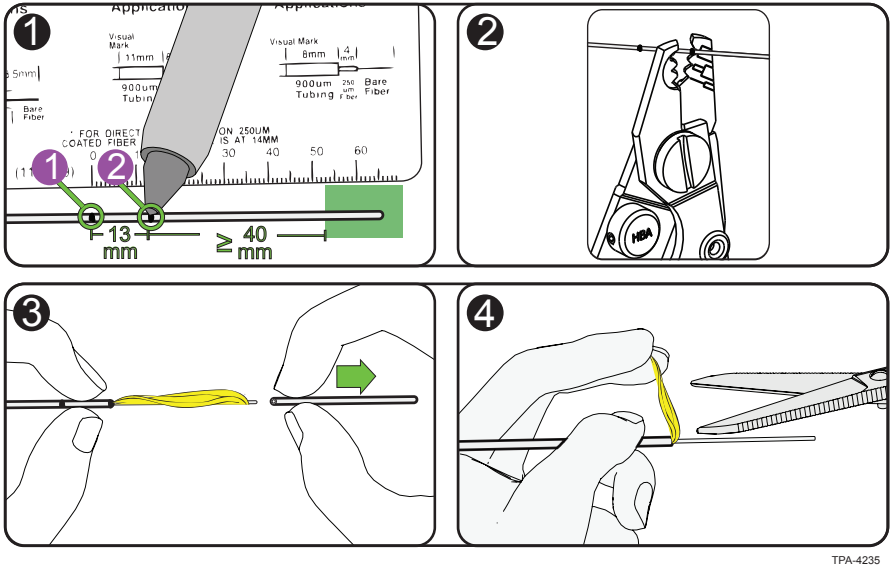
Step 4: Clean the bare fiber with two passes of a Fiber Wipe dampened with Fiber Optic Cleaning Fluid.

Do not touch the bare fiber after cleaning it. Do not remove the visual mark.

Step 5: Proceed to Section 5.1 “Cleaving 900 Micron Fiber”.

4.3. Jacketed Cable

NOTE: Take your time to do the following four steps correctly. Excessive yarn length will have to be trimmed later. Yarn too short may result in weak strain-relief for the connector.



Step 1: Ensure there is greater than or equal to 53mm of jacket and mark the 0 and 13mm points

Step 2: Use the large hole of the 3-hole stripper and fully close the tool on the jacket one time.

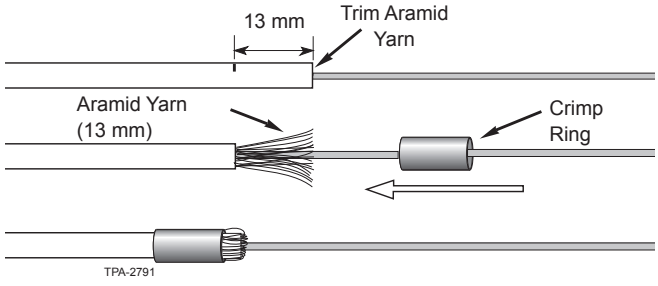
Step 3: Strip off the 40mm section of outer jacket with your fingers.

NOTE: When using the tool to strip the jacket, do NOT attempt to slide severed jacket off the fibers with the sliding motion commonly used to strip copper wire. Doing so may break the fibers.

Step 4: Use scissors to trim the aramid yarn flush with the end of the outer jacket.

Step 5: Strip off the 13mm section of outer jacket, exposing 13mm of aramid yarn using the Jacket Stripping Tool and your fingers.

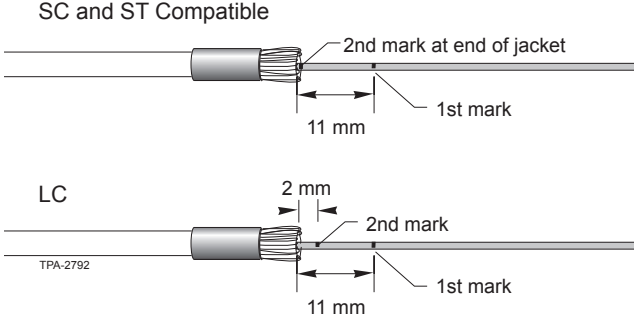
Step 6: Fold the aramid yarn back over the cable jacket and slide the crimp ring about 5mm down the yarn to hold it out of the way.



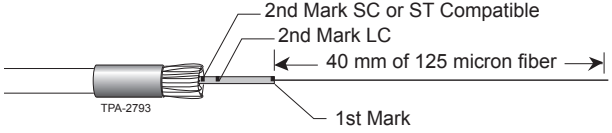
Step 7: Mark the 900 micron buffer:

- For SC and ST® Compatible connectors, mark 900 micron buffer 11mm from the end of the cable jacket and at the edge of the cable jacket.
- For LC connectors, mark the 900 micron buffer 11mm and 2mm from the edge of the cable jacket.

NOTE: The second mark is a visual aid to indicate when the field fiber has been fully inserted into the connector.



Step 8: Use the Three-Hole Miller Tool to remove the 40mm of buffer and coating in two steps: (same as step 2 from section 4.2).

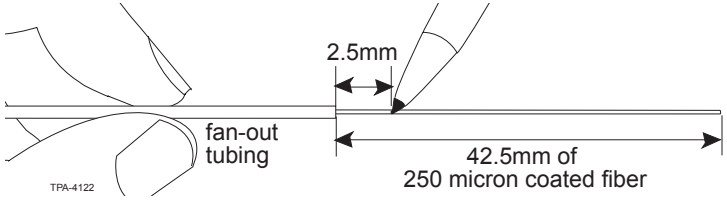


Step 9: Clean the bare fiber with two passes of a Fiber Wipe dampened with Fiber Optic Cleaning Fluid. Do not touch the bare fiber after cleaning it. Do not remove the visual mark.

Step 10: Proceed to Section 5.4 “Cleaving Jacketed Fiber”.

4.4. Fan-out Tubing Applications

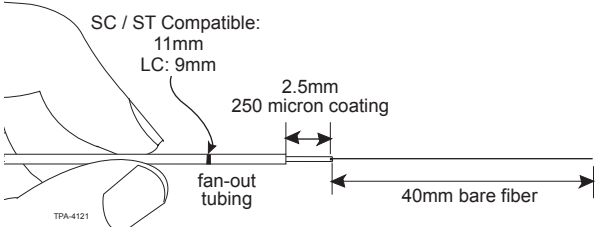
Step 1: Remove the 900 micron fan-out tubing with Three-Hole Miller Tool or trim back the fiber so that 42.5mm of fiber protrudes from the fan-out tubing.



Step 2: Measure and mark the 250 micron coated fiber 2.5mm from the end of the fan-out tubing.

Step 3: Measure and mark the fan-out tube:

- SC and ST® Compatible connectors: 11mm back from the end of the fan-out tubing.
- LC connectors: 9mm back from the end of the fan-out tubing.



Step 4: Remove the 250 micron coating to the 2.5mm mark using the small hole on the Three-Hole Miller Tool. It is important to leave 2.5mm of 250 micron fiber extending beyond the leading edge of the fan-out tubing to allow the fibers to touch before the fan-out tubing bottoms out inside the connector and to ensure a good cleave with the FBC-007.

Step 5: Clean the bare fiber with two passes of a Fiber Wipe dampened with Fiber Optic Cleaning Fluid. Do not touch the bare fiber after cleaning it. Do not remove the visual mark.

Step 6: Proceed to Section 5.2 “Cleaving Fan-out Kit Tubing”.

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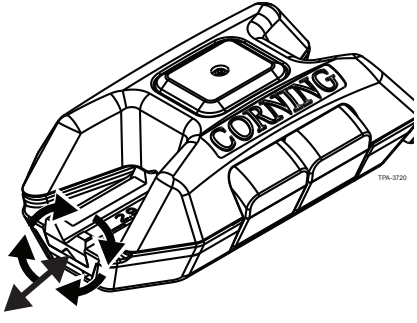
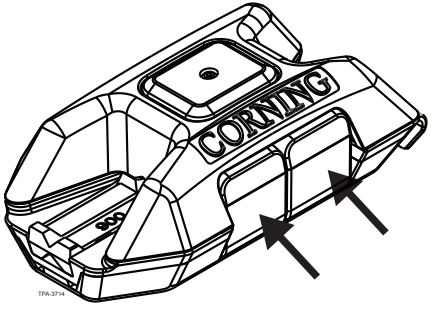
5. FIBER CLEAVING WITH FBC-007 CLEAVER

5.1. Cleaving 900 Micron Fiber

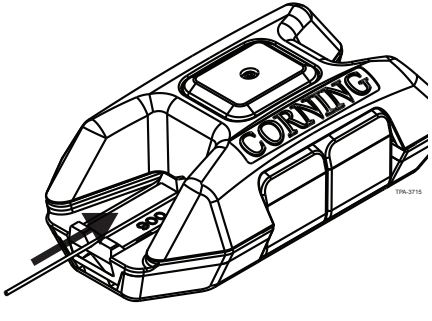
Step 1: Verify black plastic fiber handler is installed with the 900 mark facing upward. It may be necessary to remove the handler, flip it over, and reinstall it.



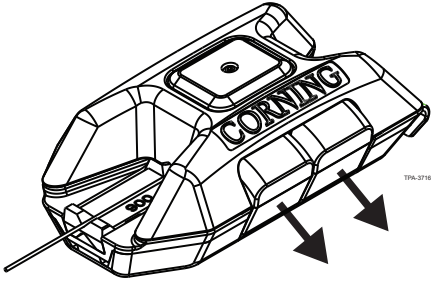
Step 2: Depress Black and Red buttons. Do not release.



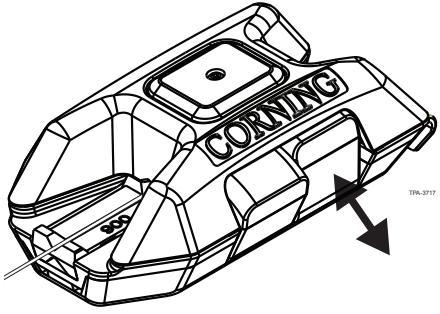
Step 3: Insert fiber until it stops.



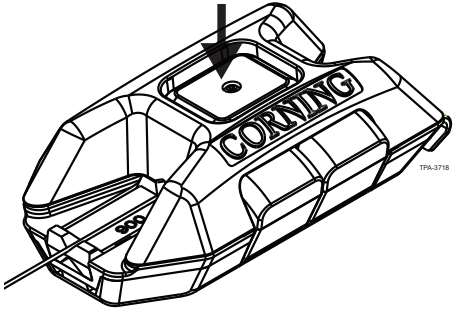
Step 4: Maintain slight inward pressure and gently release buttons.



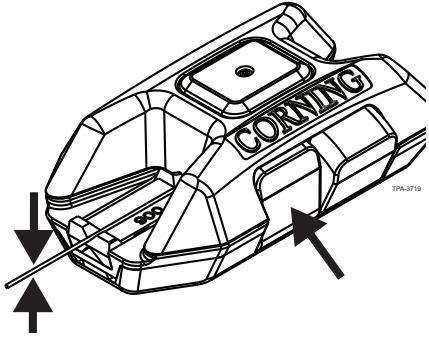
Step 5: Cycle Red button once.



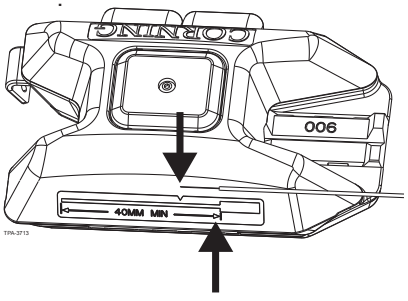
Step 6: Fully depress press Blue button.



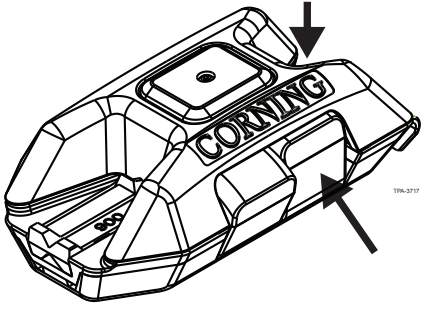
Step 7: Hold fiber and press Black button to remove.



Step 8: Check cleave length against guide to verify 10mm of bare fiber



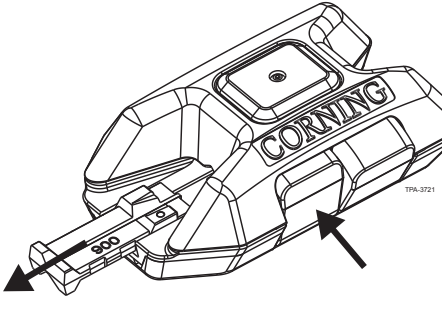
Step 9: Hold scrap fiber and press Red button to remove.



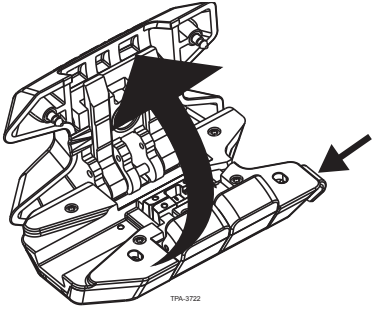
5.2. Cleaving Fan-out Kit Tubing

Step 1: Install handler track into cleaver.

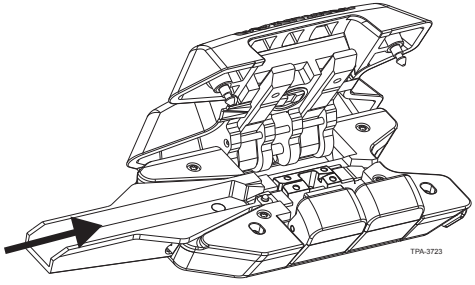
a. Depress black button and remove 900/2.9 handler.



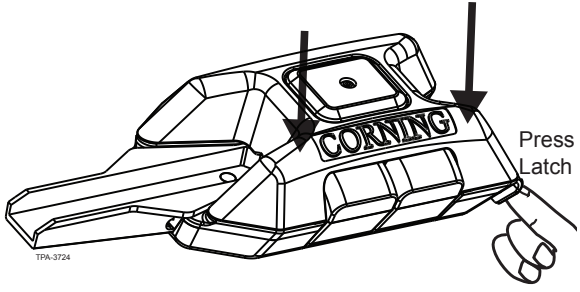
b. Depress latch and lift cover.



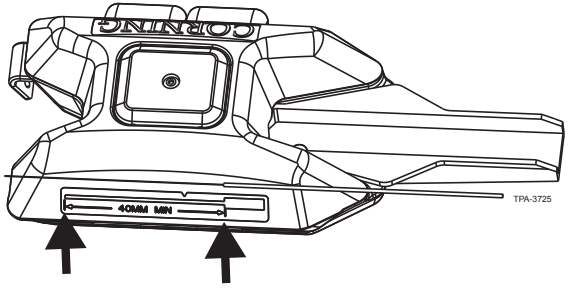
c. Insert handler track.



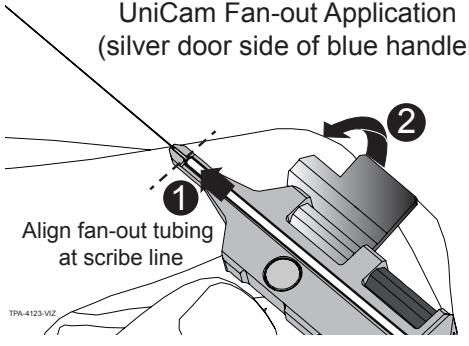
d. Depress latch while pressing cover firmly to close.



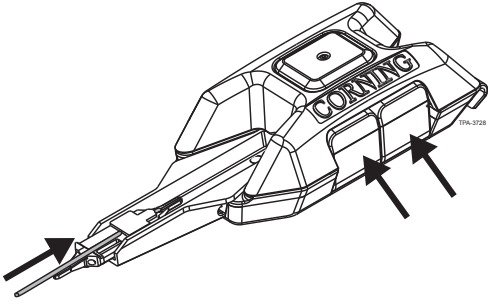
Step 2: Strip fiber and check length against guide.



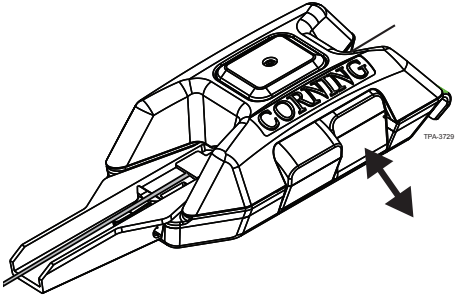
Step 3: Load fiber into Blue UniCam® fan-out handler.



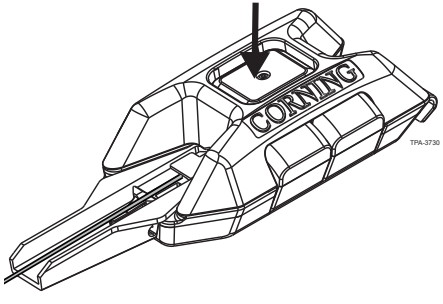
Step 4: Depress Red and Black buttons. Do not release. Load handler with fiber into cleaver until it stops. Release buttons.



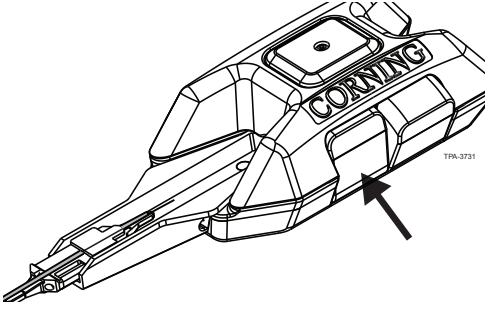
Step 5: Cycle Red button once.



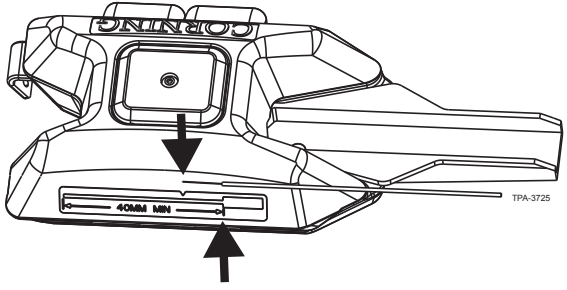
Step 6: Press Blue button.



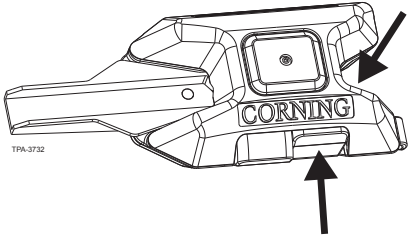
Step 7: Press Black button and slide handler out of the cleaver.



Step 8: Remove fiber from handler and check bare fiber length against guide.



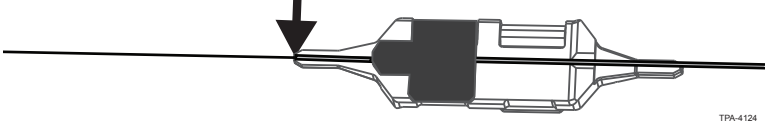
Step 9: Hold scrap fiber and press Red button to remove.



5.3. UniCam® Direct 250 micron Application

Follow Steps 1 through 9 of Section 5.2 “Cleaving Fan-out Kit Tubing”, except in Step 3 where you will load stripped fiber into the black door (250) side of the blue handler as shown here.

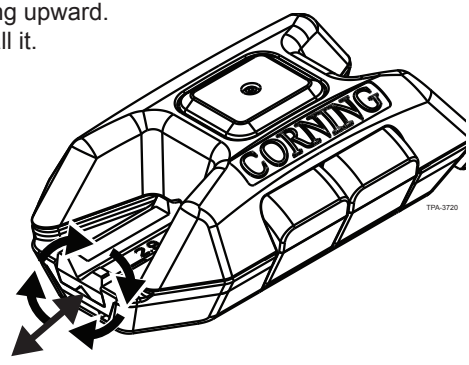
UniCam 250 Micron Application
(black door side of blue handler)
Align coating to nose.



5.4. Cleaving Jacketed Fiber

Step 1: Verify black plastic fiber handler is installed with the 2.9 mark facing upward. It may be necessary to remove the handler, flip it over, and reinstall it.

Step 2: Follow Steps 2 through 9 of Section 5.1 for cleaving 900 micron fiber.



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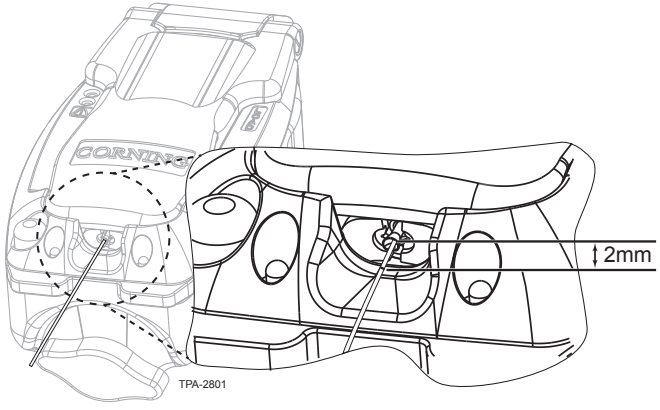
6. CONNECTOR TERMINATION

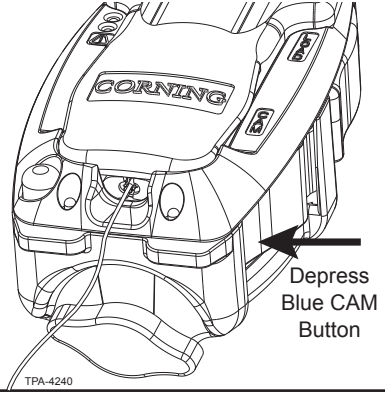
6.1. Termination Process

NOTE: Section 3 “Tool and Connector Preparation” should have been completed and green power light illuminated. THE COVER MUST BE CLOSED FOR THE SYSTEM TO FUNCTION.



Step 1: Insert a cleaved fiber into the back of the lead-in tube. Insert the fiber until you feel it firmly stop and the visual mark on the fiber should be within 2mm of the lead-in tube.

Step 2: Apply inward pressure to create a slight bend in the fiber. Hold inward pressure to maintain the slight bend in the fiber while depressing the Blue CAM button until it locks.



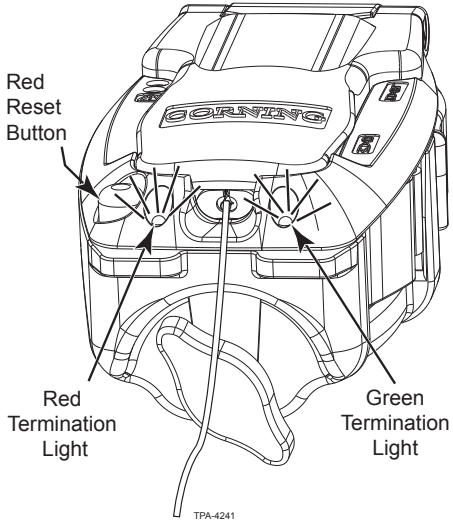
Step 3: Check the termination lights.

- If the green termination light is illuminated, the termination was successful. Proceed to Step 4.

NOTE: The green termination light only indicates proper mating of the field fiber within the connector. This is not a substitute for system testing.

Do NOT press the Red Reset Button until the connector is removed from the tool.

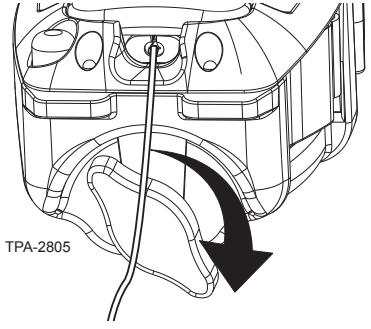
- The red termination light indicates improper mating of the field fiber within the connector.
  a. Press the Red Reset Button and remove the fiber. Repeat the termination process at Step 1.
  a. If the red light illuminates again, repeat step (a).
  a. If the red light continues to illuminate after two termination attempts, press the Red Reset Button and remove the fiber. Repeat steps to re-cleave the fiber starting at appropriate fiber preparation step in Section 4 “Fiber Preparation”.
  a. If unable to achieve a successful termination, refer to Section 7 “Maintenance and Troubleshooting” of this manual.



Step 4: Release fiber and turn the Green Crimp Knob 180 degrees in either direction.

- There may be slight resistance while turning the knob; this is normal.
- Turning the Green Crimp Knob crimps the lead-in tube onto the fiber, thus locking the connector to the fiber.

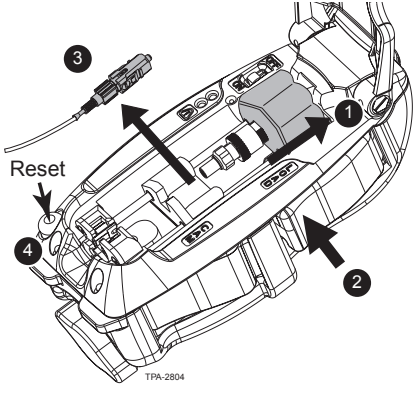
NOTE: Do NOT press the Red Reset Button until the connector is removed from the tool.



Step 5: Open the cover and gently slide the VFL Coupler back into its starting position (1) while holding the connector and cradle in place with your index finger.

Step 6: Depress the Black LOAD Button to remove the connector (2). Lift straight up on the connector and reinstall the clear ferrule dust cap (3).

Step 7: Press the Red Reset Button to make the tool ready for the next connector (4). If the cover is closed at this point without a connector loaded, the Amber Error Light will flash. This is an indication that there is no connector in the tool. Once a connector is correctly loaded and the cover closed, the light will stop flashing.



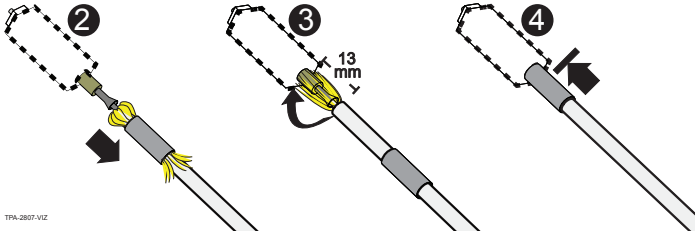
Step 8: When finished installing connectors, press the Red Reset Button, slide the Power Switch to the OFF position, ensure VFL Coupler is in the starting position, close the cover, and return the tool to the tool kit.

6.2. Completing the Connector Assembly

Complete the connector assembly process by following the appropriate steps below for your connector type.

NOTE: If not using on Jacketed Cables, skip Section 6.2.1 and proceed to the section for your connector type.

6.2.1 Jacketed Cables



Step 1: Ensure the ferrule dust cap is installed.

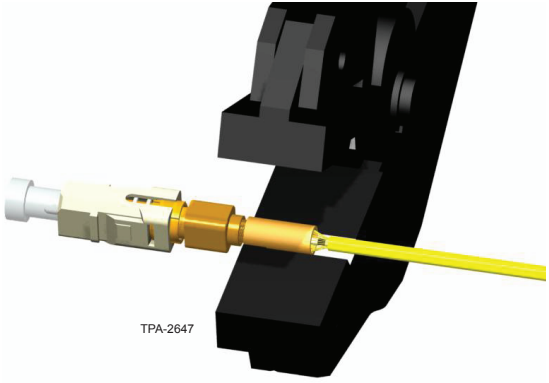
Step 2: Hold the cable and slide the crimp ring back along the cable jacket to free the aramid yarn.

Step 3: Flare the yarn around the connector. The ends of the yarn should just touch the back of the square cam. Make sure the aramid yarn is evenly distributed around the circumference of the connector body. If the yarn is too long, trim it now.

Step 4: Hold the connector and push the crimp ring over the aramid yarn and against the back of the connector's cam.

Step 5: Place the connector crimp ring into the opening of the crimp tool jaws.

NOTE: Use only the crimp tool supplied with the UniCam® tool kit (p/n 3201007-01). Other similar-appearing crimp tools (such as tools with part numbers 3201001-01 and 3201002-01) will over-crimp causing increased attenuation.



Step 6: Squeeze the handles shut until they automatically release, indicating completion of the crimp. Remove the connector and cable from the tool.

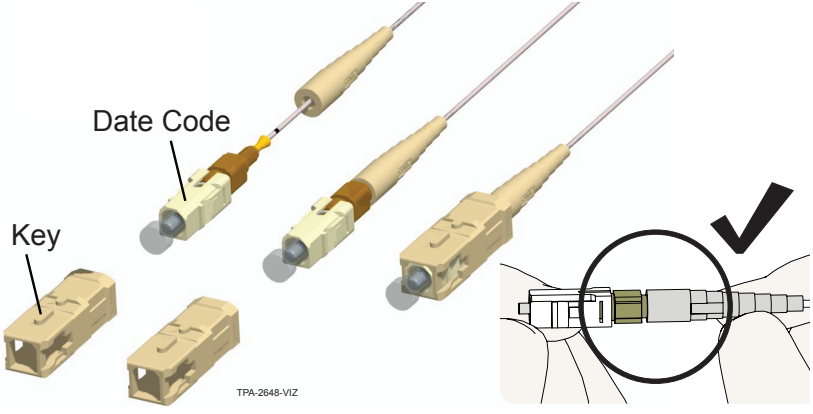
Step 7: Proceed to the description for your connector type below to complete the connector assembly.

6.2.2 SC Connectors

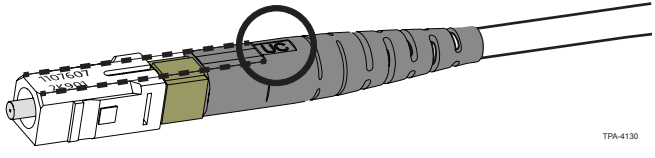
Step 1: Clean connector end face with wipe and cleaning fluid. Ensure the clear ferrule dust cap is installed.

Step 2: Slide the boot up the back of the connector until it reaches the cam.

Step 3: Install the outer shroud by lining up the date code with the key-side of the outer shroud. Using the boot, push the UniCam assembly into the outer shroud until it snaps into place.



IMPORTANT: For installation on jacketed cable, verify UC engraving on the boot is aligned up with the beveled edges of the connector.



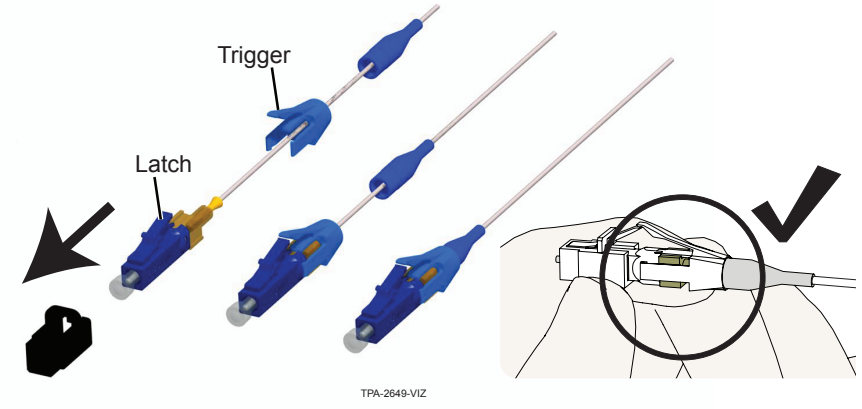
6.2.3 LC Connectors

Step 1: Clean connector end face with wipe and cleaning fluid. Ensure the clear ferrule dust cap is installed.

Step 2: Depress the latch and remove the black load adapter.

Step 3: Slide the trigger up to the back of the connector and latch its arms into the windows of the housing.

Step 4: While holding the connector by the front dust cap, slide the correct boot up the back of the connector and through the trigger until it stops.

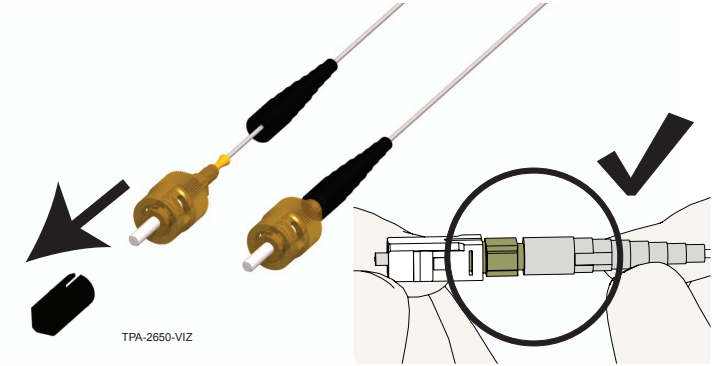


6.2.4 ST® Compatible Connectors

Step 1: Remove the black load adapter.

Step 2: Clean connector end face with wipe and cleaning fluid. Ensure the clear ferrule dust cap is installed.

Step 3: Slide the boot up the back of the connector until it reaches the cam.



7. MAINTENANCE AND TROUBLESHOOTING

This section provides maintenance and troubleshooting information for the UniCam® High-Performance Installation Tool, FBC-007 Cleaver, and UniCam connectors.

7.1. UniCam High-Performance Installation Tool

7.1.1 Changing the Batteries

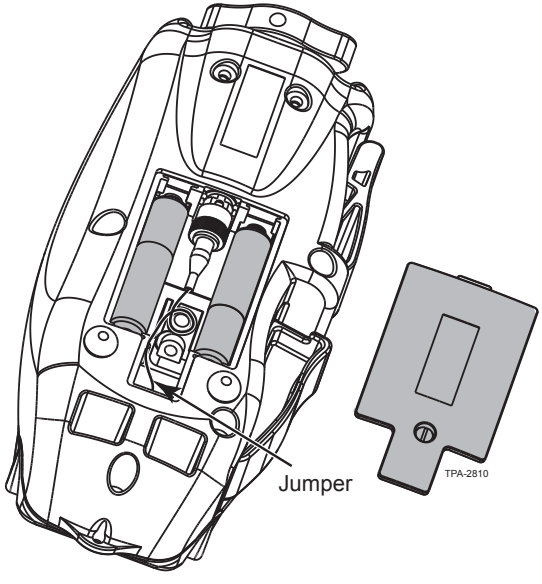
Step 1: Verify the tool is turned off.

Step 2: Remove the battery cover using the micro flat-head screwdriver.

NOTE: Be careful not to disturb the jumper.

Step 3: Replace the two AAA batteries following the polarity indicators.

Step 4: Replace the battery cover and tighten the screw, being careful not to overtighten.



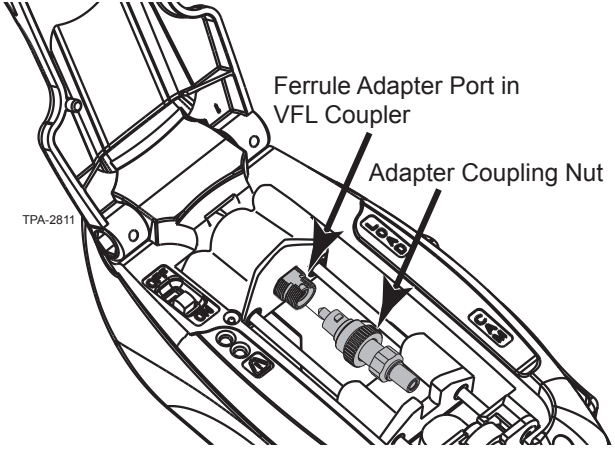
7.1.2 Replacing the Ferrule Adapter

Step 1: Verify the tool is turned off.

Step 2: Unscrew the Adapter Coupling Nut from the Ferrule Adapter Port.

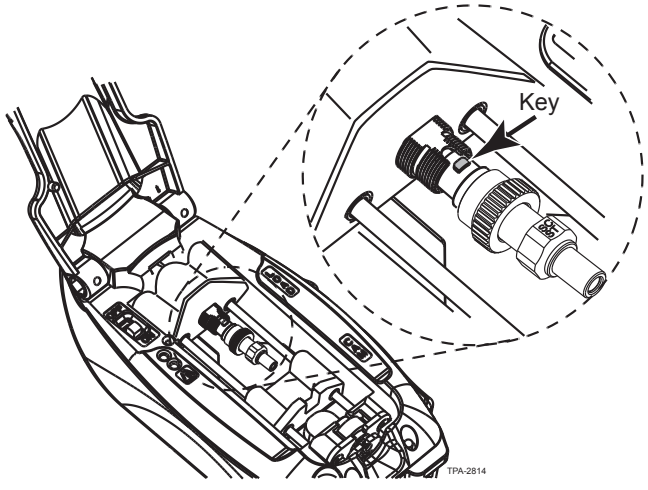
- Remove the adapter by pulling it straight out.
- Install the clear ferrule dust cap from the replacement adapter and then place in the vial.

Step 3: Clean the ferrule on the ferrule adapter per the instructions given in Section 7.1.3.



Step 4: Install the new Ferrule Adapter onto the Ferrule Adapter Port in the VFL Coupler.

Step 5: Be sure the key on the Ferrule Adapter is aligned with the keyway on the Ferrule Adapter Port, and then tighten firmly.



7.1.3 Cleaning the Ferrule Adapter

NOTE: NOTE: It is recommended to clean the Ferrule Adapter after every 100 connector installations. Use the adapter cleaning sticks provided in the tool kit.

Step 1: Select the correct size stick for VFL adapter:

1.25mm adapter - Small green stick

2.5mm adapter - Large blue stick

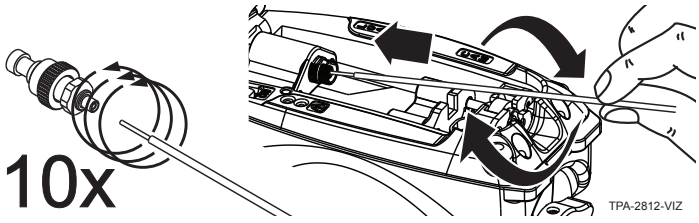
Step 2: Insert the stick into the adapter opening and rotate the tip clockwise 10 revolutions.

Step 3: Apply varying pressures to create a gentle pumping action.

Step 4: Dispose of each cleaning stick after one use.

Step 5: Select the large stick and clean the VFL coupler per Steps 2 through 4.

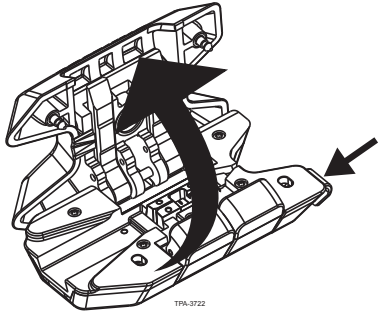
Step 6: Clean adapter end face with wipe and cleaning fluid and reinstall



7.2. Maintaining the FBC-007 Cleaver

7.2.1 Opening Cleaver for Cleaning or Maintenance

Depress latch and lift cover.

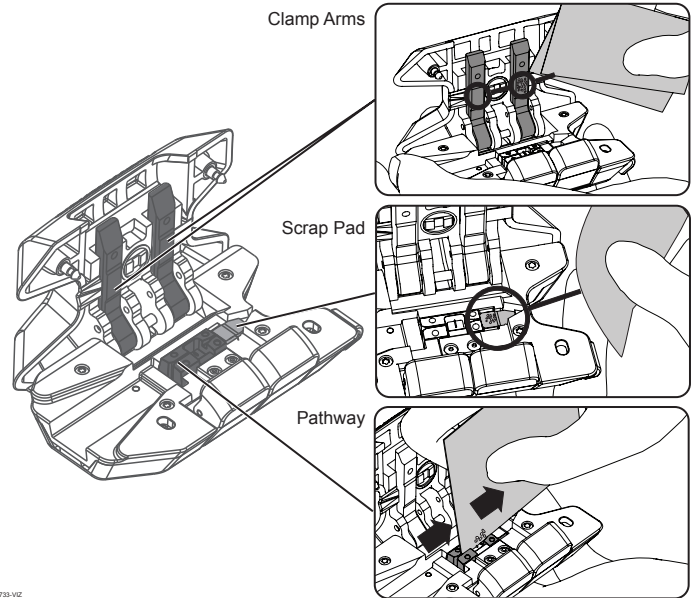


7.2.2 Cleaning

Cleaning required once every 75 cleaves.

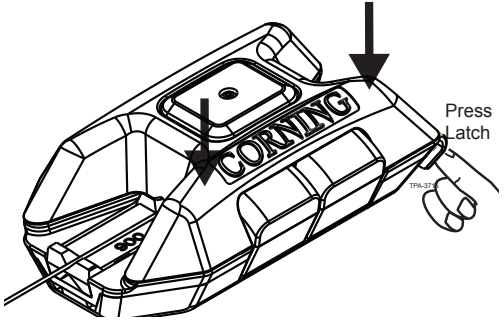
Wipe three places with fiber wipes and cleaning fluid. Aggressively clean scrap pad if experiencing fiber breaks.

Make sure there is no debris in the pathway.



7.2.3 Closing Cleaver after Cleaning or Maintenance

Depress latch while pressing the cover firmly to close.



7.2.4 Replacing Blade

Contact your Corning Cable Systems customer service representative to order a blade replacement kit.

- Blade Assembly: p/n FBC-14-15-16-BLADE
- See Installation Guide 006-374 that comes with the blade assembly to change the blade.

7.3. Connector Cleaning

Clean UniCam® connectors with Fiber Wipes and Fiber Optic Cleaning Fluid. Corning Cable Systems recommends using this cleaning procedure every time a connector is unmated or the connector is excessively dirty.

Step 1: Take a Fiber Wipe and fold once to make a square.

Step 2: Place the wipe on saturator top of the Fiber Optic Cleaning Fluid and press two to three times to wet the wipe.

Step 3: Wipe the connector end face with the wet wipe to remove dirt and debris. Wipe again with a dry wipe.

Step 4: If the connector is satisfactorily clean, immediately mate it in the appropriate adapter or sleeve, or replace the dust cap over the end face.

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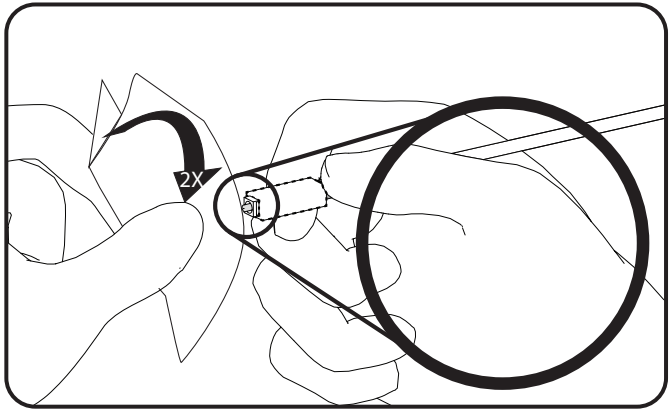

7.4. Troubleshooting

This section provides solutions to common problems. Consult the table below before sending the tool in for repair.

Problem	Possible Causes	Solutions (Actions)
Green Power Light flashes or does not come on.	Batteries need to be replaced.	Replace batteries following the instructions in the "Section 7.1.1 Changing the Batteries".
Connector will not load easily.	1. Wrench is not in starting position. 2. Connector is not in correct orientation. 3. Connector cam is not in open position.	1. Remove connector, press Red Reset Button and try loading connector again. 2. Verify the connector is loaded in the "UP" orientation with the crimp tube extending through the wrench, see Sections 3.2 through 3.3 3. Check to see that the connector cam is in the open position, see Section 3.2.1.
Amber Error Light flashes NOTE: The cover must be open to complete each action. After each action, close the cover to see if Error Light has cleared.	1. Ferrule adapter is not fully seated on connector.	1. Ensure that the: • Proper Ferrule Adapter is installed in the tool. • Ferrule Adapter is fully seated on the UniCam® connector. • Ferrule dust cap is removed from the connector.

Problem	Possible Causes	Solutions (Actions)
Amber Error Light flashes (continued) NOTE: The cover must be open to complete each action. After each action, close the cover to see if Error Light has cleared.	2. Connector loaded incorrectly.	2. Verify the connector is loaded in the “UP” orientation with crimp tube extending through the wrench, see Sections 3.2 through 3.3
	3. Ferrule Adapter or connector may be dirty.	3. Clean the adapter and connector following the instructions in Sections 7.1.2 and 7.3, respectively.
	4. Ferrule Adapter is not properly secured to the Ferrule Adapter Port.	4. Ensure the Ferrule Adapter key is in the VFL Coupler slot and the coupling nut is tight.
	5. The photo detector is dirty.	5. Clean the photo detector using a dry wipe.
	6. Weak batteries.	6. Replace the batteries. See Section 7.1.1 “Changing the Batteries”.
	7. Ferrule Adapter is broken.	7. Look inside the Ferrule Adapter for noticeable chips along leading edge of the ceramic sleeve. Replace Ferrule Adapter.
Cleaving Issues	1. Red Button was not cycled after fiber was inserted and clamped.	1. Always cycle Red Button prior to cleaving to release stress.
	2. Did not remove 250 micron coating.	2. Properly strip fiber according to the fiber type process in Section 4.
	3. Not using Track and Handler	3. Use Track and appropriate handler when terminating fiber on 250 micron Fan Out, see Section 4 “Fiber Preparation”.
	4. Debris in the clamp arms or fiber pathway.	4. Clean the clamps per the instructions in Section 7.2.2 “Cleaning”.

Problem	Possible Causes	Solutions (Actions)
Cleaving Issues (continued).	5. Debris on scrap pad.	5. Aggressively clean scrap pad.
	6. Blade is worn or damaged.	6. Replace the blade per the instructions in Section 7.2.4 “Replacing Blade”.
Unable to achieve a successful termination. (Green termination light will not illuminate.)	1. Cover not closed.	1. Ensure that you have closed the cover before inserting the fiber.
	2. Error light not cleared.	2. See Problem “Amber Error Light Flashes” above.
	3. Fiber is not inserted correctly into the connector.	3. While holding onto the fiber, press the Red Reset Button and try re-seating the fiber.
	4. Improper fiber preparation.	4. Ensure that the appropriate sections in Chapters 4 and 5 were followed. If unsure, press the Red Reset Button, remove the fiber, and start again at Chapter 4.
	5. Cleave issue.	5. Refer to the “Cleaving Issues” troubleshooting problem above.
	6. Lack of positive inward pressure on field fiber during camming process.	6. Refer to Section 6.1, Step 2.

If unable to successfully troubleshoot the installation tool using the table above, call Corning Cable Systems Technical Support at 1-800-743-2671.

7.5. Testing UniCam® Connectors

If you have questions about proper testing and required equipment, etc., call Corning Cable Systems Technical Support at 1-800-743-2671.