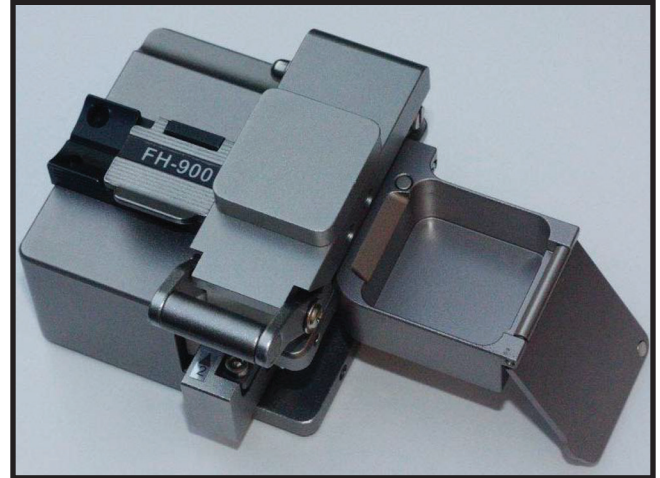


# INSTRUCTION MANUAL



## 910CL Optical Fiber Cleaver



### Preface

#### Description

The Greenlee Communications 910CL Optical Fiber Cleaver is intended to precisely cleave the fiber optic cable for subsequent use in the 910FS Fusion Splicer. Each fiber cleave must be  $<0.5$  degrees so that the subsequent splice loss attained from the splicing process meets specification.

#### Safety

Safety is essential in the use and maintenance of Greenlee tools and equipment. This instruction manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

#### Purpose of This Manual

This instruction manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the Greenlee Communications 910CL Optical Fiber Cleaver.

Keep this manual available to all personnel. Replacement manuals are available upon request at no charge at [www.greenlee.com](http://www.greenlee.com).

All specifications are nominal and may change as design improvements occur. Greenlee Textron Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

**KEEP THIS MANUAL**

### Important Safety Information

	<b>⚠ WARNING</b> Read and understand all of the instructions and safety information in this manual before operating or servicing this tool. Failure to observe this warning could result in severe injury or death.
--	---

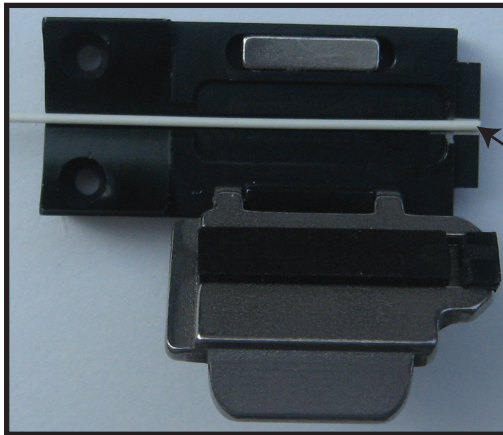
	<b>⚠ WARNING</b> Electric shock hazard: Contact with live circuits could result in severe injury or death.
--	--

	<b>⚠ WARNING</b> Wear eye protection when using this tool. Fiber fragments can be extremely dangerous if they come into contact with eyes or skin or are ingested.
--	--

<b>⚠ CAUTION</b>	
<ul style="list-style-type: none"><li>• Collect all fiber scraps in the dust bin and dispose of them in an approved fiber disposal unit.</li><li>• Do not touch the cleaving wheel blade cutting area.</li><li>• Do not disassemble or lubricate. Contact Greenlee for maintenance and repairs.</li><li>• Store in a dry, clean location in the protective pouch.</li></ul> Failure to observe these precautions may result in injury and may damage the unit.	

## Operation

1. Open the fiber clamp mechanism and pull the fiber cleaving wheel mechanism back toward yourself.
2. Place the fiber to be cleaved in the desired fiber adapter.

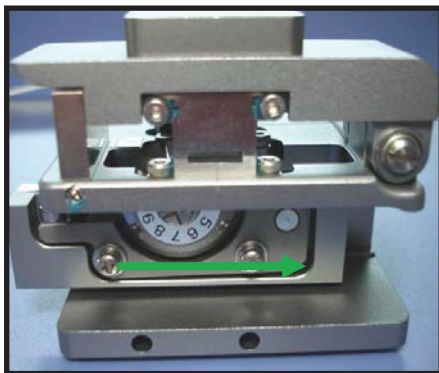


Load 900  $\mu$  fiber into the adapter so that the buffer is flush with the end of the adapter.

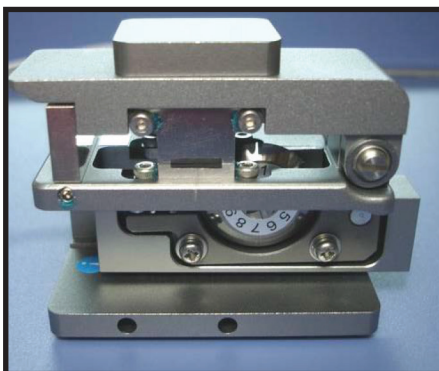
*Hint: It is easier to load the fiber into the adapter if the fiber is curled in a downward direction from the fiber clamp.*

3. Close the fiber clamp mechanism.
4. Push the cleaving wheel mechanism away from yourself to cleave the fiber.

*Note: Dust bin is removed for these photos.*



**Cleaving Start Position**



**Cleaving Finished Position**

5. Open the fiber clamp mechanism.
6. Make sure that the cut fiber end is safely in the dust bin.
7. Remove the adapter with the cleaved fiber from the cleaver.
8. Place the adapter with the cleaved fiber into the 910FS for splicing.

*Note: There is no need to remove the cleaved fiber from the fiber adapter after the cleaving operation.*

## Normal Use and Maintenance

Make sure that the rubber presser feet and the fiber guide groove are clean (no dust and fiber debris). Keep the fiber contact surfaces clean by using isopropyl alcohol with a lint free cleaning wand.

Change the position of the cleaving wheel if the cleaving quality degrades due to the blade being worn (usually 1000 cleaves per blade position). After the cleaving wheel has been rotated through all 16 positions, the height can be increased and the wheel can be reused through all of the 16 positions once again. The cleaving wheel can be rotated two times for a total of 48,000 cleaves.

### To Change Blade Position

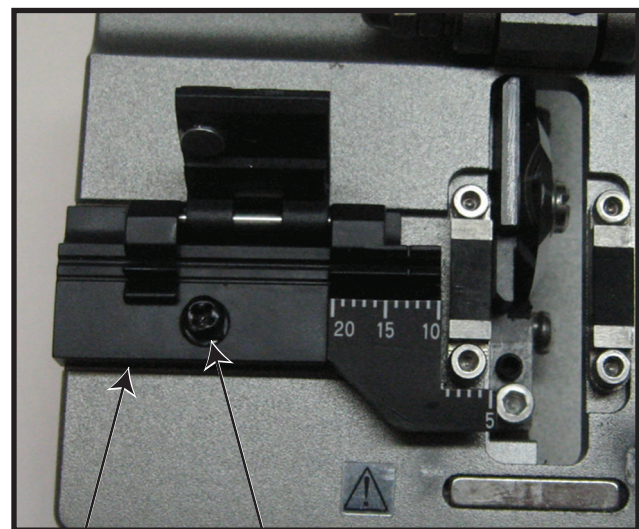
1. Loosen the compression screw of the cleaving wheel.
2. Rotate the cleaving wheel to the next scale number (generally there are 12 or 16 positions).
3. Hold the side face of the cleaving wheel and relock the screw to complete the adjustment.



### Converting the 910CL to a Fixed Clamp Cleaver

Place the fixed clamp mechanism into the 910CL and secure with the screw provided.

The 900  $\mu$  and 250  $\mu$  fiber adapters can be permanently left in the 910FS fusion splicer. If desired one M2X5 screws can be used to secure each fiber adapter into the fiber adapter mounting area of the 910FS.



Fixed Clamp

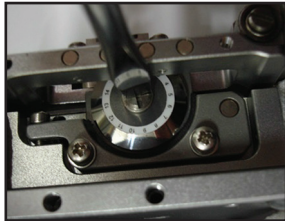
Mounting Screw

**Normal Use and Maintenance (con't)**
**910CL Cutting Wheel Replacement and Subsequent Height Adjustment**


1. Obtain 0.7 mm pencil lead.



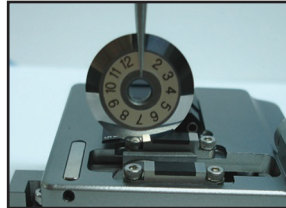
2. Loosen the cutting wheel mounting plate.



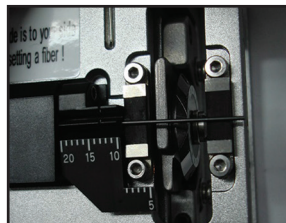
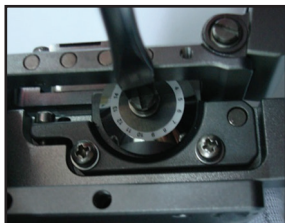
3. Loosen the cutting wheel screw.



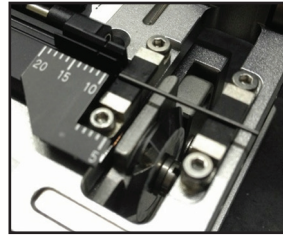
4. Remove the old cutting wheel. Use of protective gloves is recommended.



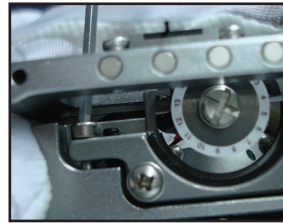
5. Install new cutting wheel.



6. Lay the 0.7 mm pencil lead across the two pressure pads.



7. Move the slider back and forth; the pencil lead should just touch the cutting wheel.



8. Adjust the height adjustment screw as necessary:

- CW is UP
- CCW is DOWN

Best performance occurs when the cleaving wheel just barely makes contact with the pencil lead.



9. Tighten the cutting wheel height screw and the two mounting plate screws.



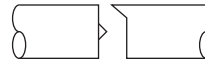
10. Observe the cleave in the 910FS fusion splicer.

**Specifications**

<b>Fiber Type</b>	Single and multimode fiber
<b>Fiber Size</b>	0.25/0.9/3 mm (fiber holder replaceable)
<b>Coating Diameter</b>	125 µm
<b>Cleaved Length</b>	10 mm
<b>Cleaved Angle</b>	≤0.5°
<b>Blade Life</b>	48,000 cleaves
<b>Mode</b>	Semi-automatic
<b>Dimensions (H×W×D)</b>	54 mm × 58 mm × 58 mm
<b>Weight</b>	310 g

**Troubleshooting**

<b>Failure Mode</b>	<b>Cause and Solution</b>
Fiber does not cleave.	1. Acrylic coating not removed from fiber. 2. Fiber surface not clean. 3. Clean rubber presser feet. 4. Increase height of cleaving wheel.
End face has lip.	1. Increase height of cleaving wheel. 2. Clean rubber feet. 3. Check rubber feet for wear or abrasion.
End face has shadow or incline angle.	Increase height of cleaving wheel.
Core missing.	Lower height of cleaving wheel.

**Lip**

**Incline**


*Note: Contact Greenlee if the above chart does not provide a solution to attaining a reliable cleave.*