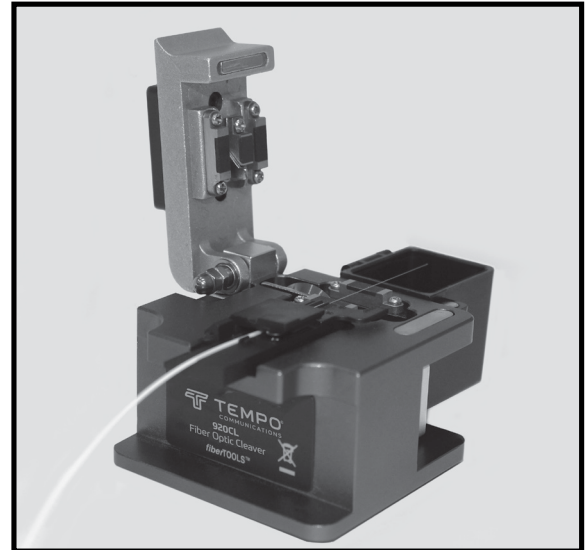


# INSTRUCTION MANUAL



## 920CL Optical Fiber Cleaver



### Preface

**Description** The Tempo Communications 920CL Optical Fiber Cleaver is intended to precisely cleave fiber optic cables.

**Safety** is essential in the use and maintenance of Tempo Communications 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 Tempo Communications 920CL Optical Fiber Cleaver.

### Keep this manual available to all personnel.

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

### 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.
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	<b>⚠ WARNING</b> Electric shock hazard: Contact with live circuits could result in severe injury or death.
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	<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.
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<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 Tempo Communications for maintenance and repairs.</li><li>• Store in a dry, clean location in the protective container.</li><li>• Store the 920CL with the two foam chips to stabilize the cleaving mechanism from moving.</li></ul>	
Failure to observe these precautions may result in injury and may damage the unit.	

**KEEP THIS MANUAL**

## Operation

1. Open the fiber dust bin.
2. Open cleaving handle mechanism.
3. Insert prepared fiber into the fiber clamp at the desired cleave length.
4. Close fiber clamp.
5. Close cleaving handle mechanism down.
6. Push cleaving wheel backwards to cleave the fiber.
7. Open the cleaving handle mechanism.
8. Open fiber clamp.
9. Make sure that the cut fiber is safely in the dust bin.

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

## Blade Position Change

1. Loosen blade locking screw.
2. Rotate blade to next scale position.



4. Lay 0.7 mm pencil lead across both pressure pads.



5. Move slider back and forth and check if blade touches pencil lead.
  - If blade touches pencil lead: Perform a cleave and check cleave angle on 915 fusion splicer.
  - If cleave is not good: Check if blade is damaged or dirty at new position.
  - If blade drags pencil lead all the way across:
    - If blade does not touch pencil lead: Rotate pencil lead  $\approx 180^\circ$  and try again.
    - If not sure: Perform a cleave and check cleave angle on 915 fusion splicer.
    - If cleave is not good: Go to "Blade Height Adjustment".

## 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.

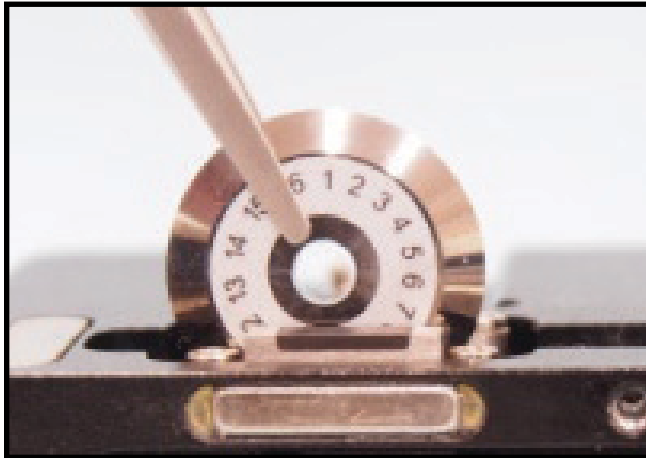
**Normal Use and Maintenance (con't)**

**Blade Replacement**

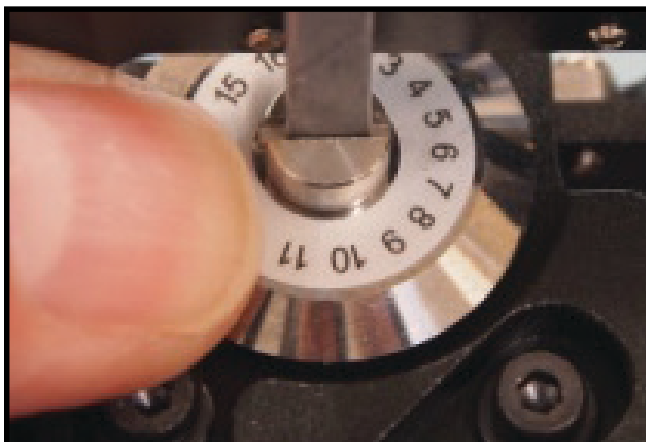
1. Lay down cleaver with scale numbers on blade facing up.
2. Remove blade locking screw.



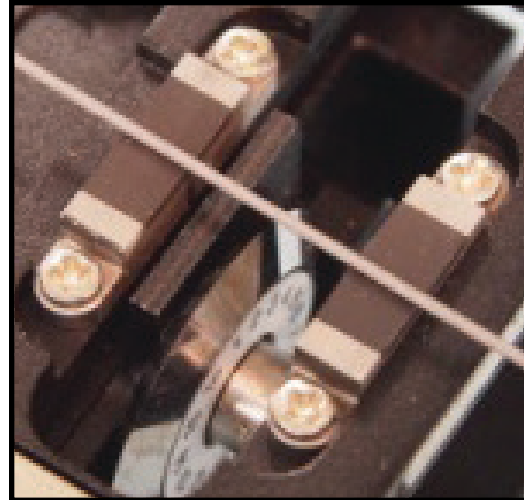
3. Remove old blade and replace with new blade. Do not touch blade (very sharp!) Use tweezers to remove old blade and insert new blade.



4. Lock new blade at position "1".



5. Lay 0.7 mm pencil lead across both pressure pads.



←  
**0.7 mm  
Pencil Lead**  
0.7 mm  
Puntilla Lapicero

6. Move slider back and forth and check if blade touches pencil lead.
  - If blade touches pencil lead: Perform a cleave and check cleave angle on 915 fusion splicer.
  - If cleave is not good: Check if blade is damaged or dirty at position "1".
  - If blade drags pencil lead all the way across: Go to "Blade Height Adjustment".
  - If blade does not touch pencil lead: Rotate pencil lead  $\approx 180^\circ$  and try again.
  - If not sure: Perform a cleave and check cleave angle on 915 fusion splicer.
  - If cleave is not good: Go to "Blade Height Adjustment".

**Blade Height Adjustment**

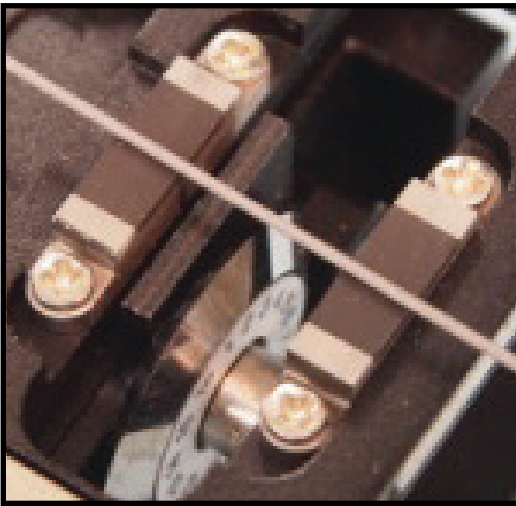
1. Loosen both compression screws and height locking screw.



- Height adjustment screw
- Height locking screw
- Compression screws for blade height adjustment arm

**Normal Use and Maintenance (con't)**

2. Turn height adjustment screw:
  - CW if blade did not touch pencil lead (moves blade up).
  - CCW if blade dragged pencil lead across (moves blade down).
3. Tighten height locking screw and both compression screws.
4. Lay 0.7 mm pencil lead across both pressure pads.



5. Move slider back and forth and check if blade touches pencil lead.
  - If blade touches pencil lead: Perform a cleave and check cleave angle on 915 fusion splicer.
  - If cleave is not good: Check if blade is damaged at current position.
  - If blade drags pencil lead all the way across: Go back to step 1 and adjust CCW until good.
  - If blade does not touch pencil lead: Rotate pencil lead  $\approx 180^\circ$  and try again.
  - If not sure: Perform a cleave and check cleave angle on 915 fusion splicer.
  - If cleave is not good: Go back to step 1 and adjust CW until good.

**Specifications**

Fiber Type	Single and multimode fiber
Fiber Size	0.25 and 0.9 mm
Coating Diameter	125 $\mu$ m
Cleaved Length	5mm - 20mm
Cleaved Angle	$\leq 0.5^\circ$
Blade Life	48,000 cleaves
Mode	Semi-automatic
Dimensions (HxWxD)	54 mm x 58 mm x 58 mm

**Troubleshooting**

Failure Mode	Cause and Solution
Fiber does not cleave.	<ol style="list-style-type: none"> <li>1. Acrylic coating not removed from fiber.</li> <li>2. Fiber surface not clean.</li> <li>3. Clean rubber presser feet.</li> <li>4. Increase height of cleaving wheel.</li> </ol>
End face has lip.	<ol style="list-style-type: none"> <li>1. Increase height of cleaving wheel.</li> <li>2. Clean rubber feet.</li> <li>3. Check rubber feet for wear or abrasion.</li> </ol>
End face has shadow or incline angle.	Increase height of cleaving wheel.
Core missing.	Lower height of cleaving wheel.

Lip

Incline

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