

# RECOMMENDED Procedure

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## SP-F02-012 LITEPIPE™ Tube Slitter (Part No.s TS-0, TS-1, TS-1.5, TS-2, TS-2.5, TS-3, TS-4) Procedures, Issue 5

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### 1.0 General

For some applications, being able to access fiber from the middle of a cable without disturbing the other fibers is necessary. This technique is referred to as Mid-Span access. The central buffer tube construction of Sumitomo's LITEPIPE™ cables allows for this to be easily accomplished. This procedure describes the steps in performing a Mid-Span access on the central buffer tube of a LITEPIPE™ cable.

### 2.0 Safety Precautions

The use of safety eyeglasses is strongly recommended when handling optical fibers and ribbons. Do not run fingers down center slot of tool. Blades protruding from both sides of slot can cause injury if not careful.

### 3.0 Reference Documents

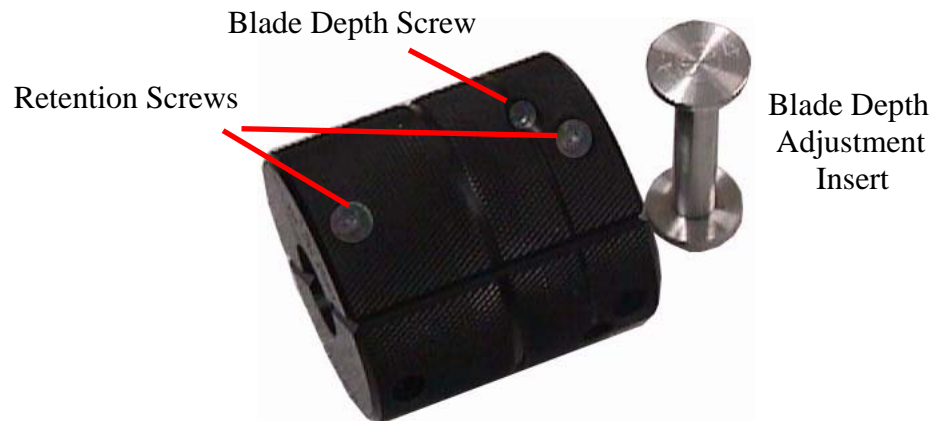
Sumitomo Recommended Procedures:

- SP-F02-006 *LITEPIPE™ Cable Midspan Access*
- SP-F02-008 *LITEPIPE™ Indoor Riser Cable*
- SP-F02-013 *Hostile Environment Cable*

## 4.0 Tools Required

The following tools and materials are required to complete this procedure.

1. 1 - Central Buffer Tube Slitter Tool (part #'s TS-0, TS-1, TS-1.5, TS-2, TS 2.5, TS-3, TS-4)
2. 5/32" Allen Wrench
3. Isopropyl Alcohol
4. Gauze Pads
5. Razor Blades (2 included with Tube Slitter Tool)



## 5.0 Tube Slitting Procedure

**NOTE:** This procedure assumes a Sumitomo Recommended Procedure (SP-F02-006, SP-F02-008, or SP-F02-013) or other appropriate cable cleaning procedure has already been followed and the cable is prepared with the central tube exposed.

- 5.1 Make sure the outside of the central tube is clean and free of water blocking gel. The tube surface can be easily cleaned with isopropyl alcohol and a clean rag, or other cable cleaning solvent.
- 5.2 Choose the appropriate tube slitter according to Table 1.
- 5.3 Separate the two halves of the tube slitter, and remove the blade depth adjustment insert.
- 5.4 Reconnect both halves of the tube slitter around the central tube, such that the tube takes the place of the previously removed blade depth adjuster.

Tool #	Tube OD (mm)	Standard Outside Plant Cables	Dritube, Plenum, Indoor/Outdoor Ribbon Cables
TS-0	4.75	Bundle 2-24 Fibers	
TS-1	6.00	Bundle 26-48 Fibers	
TS-1.5	7.10	ADS* Ribbon 12-48 Fibers	
TS-2	8.00	Bundle 50-72 Fibers ALX Ribbon 12-96 Fibers ADS* Ribbon 60-96 Fibers	12 - 48 Fibers
TS-2.5	8.70	ADS* 108-144 Ribbon	
TS-3	10.50	ALX Ribbon 108-216 ADS* Ribbon 156-216 Fibers	60 - 144 Fibers (Ribbon)
TS-4	14.60	ADS/ALX Ribbon 288-432 Fibers	156 - 216 Fibers (Ribbon)

\* ADS Ribbon Cable counts 12-48 manufactured prior to April 2005 use TS-2

\* ADS Ribbon Cable counts 108-144 manufactured prior May 2005 use TS-3

*Table 1. Tube Diameters and Slitters*

**IMPORTANT:** Make sure that when placing tube in slitter tool, the “PULL” arrow (marked on side of slitter tool) is pointing in the direction you will be slitting the tube.



**NOTE:** Location of the blades inside the tool is indicated by the thin radial band mark on the outside of the tool.

5.5 Gripping the slitter tool and cable firmly, pull slitter in the direction of the “PULL” arrow for the desired length, slitting the tube. Make sure to fully compress the slitter to ensure a proper cut in the tube is made.

5.6 Carefully score and snip away both tube halves with tube ring cutter, and clean ribbons as necessary with isopropyl alcohol and gauze pads.

## 6.0 Tool Adjustments

### 6.1 Blade Depth Adjustment

6.1.1 Separate two main halves of Tube Slitter tool.

6.1.2 Holding one of the halves with the blade facing down, use a 5/32" Allen wrench to completely loosen the two retention screws. The screws are captured in the tool, and therefore can not be fully removed.

6.1.3 Using the Allen wrench, turn the blade depth screw counter-clockwise 4 revolutions.

6.1.4 Still holding the slitter half with the blade faced down, carefully separate the two pieces apart from each other roughly 1/8". This permits the blade to fall into maximum blade depth position.



6.1.5 Push the two pieces back together and tighten the retention screws.

6.1.6 Repeat steps 6.1.1 through 6.1.5 on second half of tool.

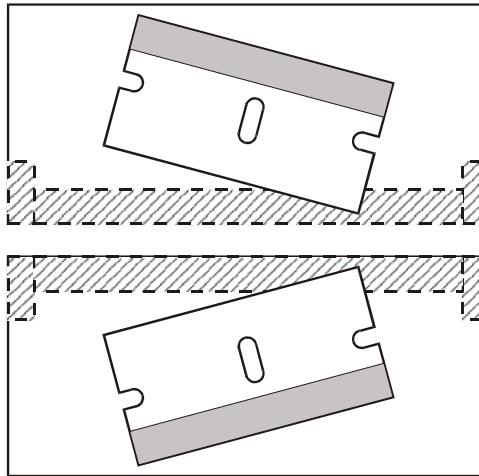
6.1.7 After performing all above steps on both tool halves, attach halves together with blade depth adjustment insert in the middle, and compress firmly until both halves are physically touching each other.

6.1.8 Firmly holding the halves together, tighten the blade depth screws simultaneously until they start getting slightly tighter, or until you notice the two tool halves starting to slightly separate.

### 6.2 Blade Replacement

6.2.1 Follow steps 6.1.1 through 6.1.3.

6.2.2 Completely separate both pieces of the tool half, carefully, so as not to damage the guide pins holding the pieces together.



*Cross-Sectional view of upper and lower halves*

6.2.3 Depending upon the usage of the blade, either replace the razor blade, or rotate blade so as to utilize the unused edge.

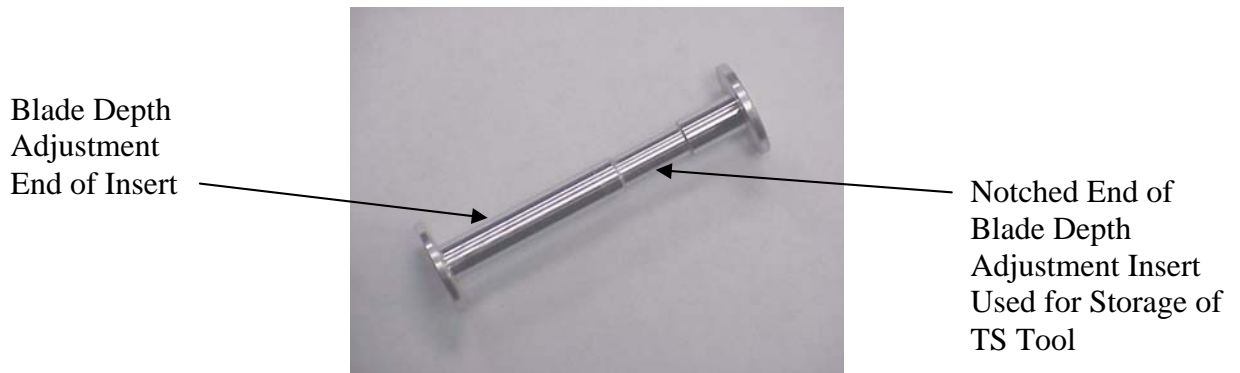
6.2.4 Put the two pieces back together, and tighten retention screws.

6.2.5 Repeat steps 6.2.1 through 6.2.4 on second half of tool.

6.2.6 Perform steps 6.1.7 and 6.1.8 to complete blade replacement procedure.

### 6.3 Tool Storage

6.3.1 Identify notched end of Blade Depth Adjustment Insert.



6.3.2 Once the notched end is identified, place notched end over the blades and put the two halves back together and store for future use.