

# SCS

## Semi-Con Scoring Tool

### Instruction Sheet

U.S. Patent D721,563 S

**Warning!** This tool should not be used on live electrical circuits. It is not protected against electrical shock! Always use OSHA/ANSI/CE or other industry approved eye protection when using tools. This tool is not to be used for purposes other than intended. Read carefully and understand instructions before using this tool.

The SCS Semi-con Scoring Tool is used to make precision score depth cuts on high voltage power cables with strippable semi-con for the purpose of proper semi-con removal. The cable size range is 8mm to 51mm (.31 - 2.0") diameter over the semi-con screen. The tool scoring depth is up to 4 mm (.16").

#### Tool Features

- semi-con diameter range 8mm - 51mm (.31" - 2.00")
- blade depth adjustment range up to 4 mm (.16") deep
- Tri-action scoring capability: ring cut, spiral cut, longitudinal cut
- Four (4) spiral cut settings for optimal chip width
- Micro indexing blade depth adjustments in 0.05 mm (.002") increments
- blade squaring adjustment feature
- compact size, 2" operating envelope

#### Operating Instructions

**1. Blade Depth Setting:** Set the blade to a depth equal to 75-90% the thickness of the semi-con screen. To do this, rotate the black blade depth adjustment knob **A** clockwise until the slot in the split collar aligns with the desired blade depth. The adjusting knob is capable of four complete revolutions for up to 4 mm (.16") total depth, with each index moving the blade 0.05 mm (.002") deeper. Always ensure that the blade depth is not more than the semi-con thickness. If the semi-con thickness is not known, the blade depth should be checked for acceptability on a sample piece of the cable being prepared. If a sample is not available, the cable end can be used as a test section.

**2. Ring cut: (Fig.2)** Observe the blade position mark on the blade position knob **B**. Rotate the knob fully to the left. The tool is in the ring cut position when the mark is facing forward. (See Fig 1 and 2). Lower the jaw to open the tool and secure the tool on the cable at the termination point of the semi-con, as described in the preparation instructions. Rotate the tool 1 full turn counter clockwise around the circumference of the cable for a ring cut. If room allows, the use of the SCS-C stop clamp on the cable will help ensure a square cut is made.

**3. Spiral cut: (Fig.3)** With the tool still in place on the cable, turn the blade positioning knob to one of the spiral cut locations. The ● symbols represent relative semi-con diameters, and assist in setting the best tool pitch for various cable sizes. The tool pitch is most aggressive at the smallest ●. Turn the tool counter clockwise and allow it to advance toward the end of the cable, and completely off the cable.

Note: If preferred, the tool may be operated from the end of the cable and advanced inward. Reverse the operating instructions above, advancing the tool with clockwise rotation.

**4. Longitudinal score cuts: (Fig.4)** If preferred, the tool will allow for longitudinal score cuts as an option. After finishing the ring cut in step 2, proceed to the longitudinal cuts by rotating the blade positioning knob to the longitudinal tracking position. || Carefully pull the tool down the full length of the cable scoring it to the cable end. Position the tool back on the cable at the ring cut and create the desired amount of score cuts down the length of the semi-con.

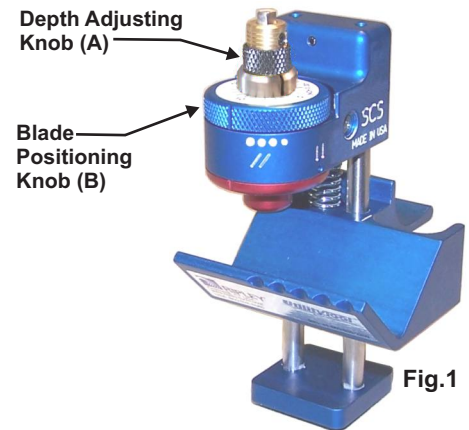


Fig.1

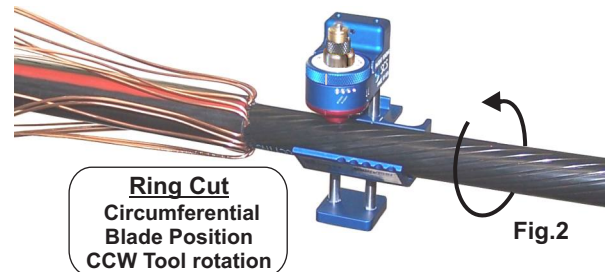


Fig.2

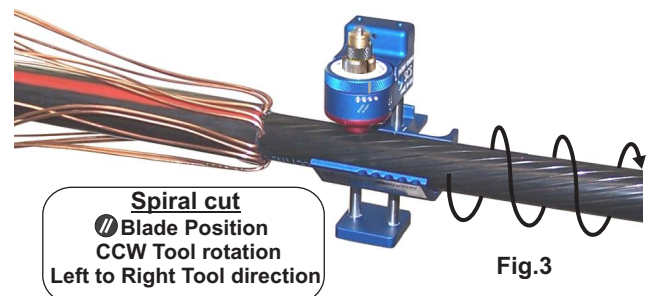


Fig.3

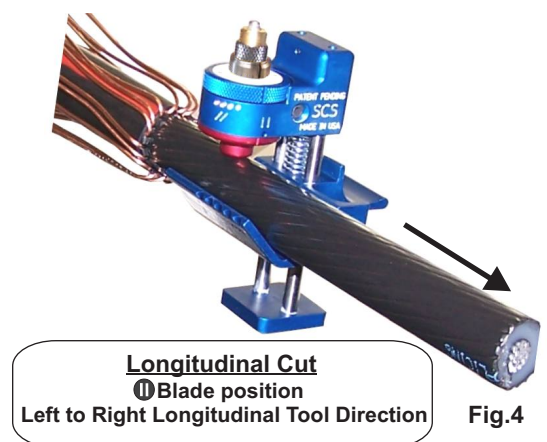


Fig.4

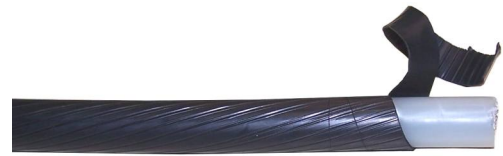
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**5. Semi-con removal: (Fig.5)** With long nose pliers or other appropriate tool, remove the semi-con in one continuous chip (spiral), or as individual chips (longitudinal scores).



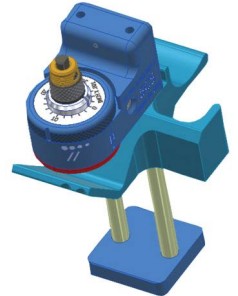
Semi-con Removal

Fig.5

### SCS Tool Models and Replacement Blade

Model	Part No.	Blade Scale	Features and Use
SCS	43630	Imperial (inch)	General purpose semi-con scoring for most medium voltage cable constructions. Standard cable guide.
SCS Metric	43625	Metric (mm)	
SCS-V2	43651	Imperial (inch)	Narrowed cable guide suitable for sheathed and jacketed 3 phase assemblies. Allows for better tool control on highly bowed or curved cable.
SCS-V2 Metric	43650	Metric (mm)	

**SCS Replacement Blade, p/n 43645: All models**



**SCS-V2**  
with narrow  
cable guide

### Tool Adjustments and Upkeep

#### Blade Replacement Instruction

1. Turn the black blade adjusting knob counterclockwise until it stops. The dial should read 0.
2. Loosen the blade retaining screw with a 1/16 hex wrench and remove blade from the collar. (Fig.7)
3. Insert a section of cable into the tool with the base of the scoring head resting on the cable OD. (Fig.8)
4. Insert a new blade assembly through the collar with the flat of the shaft facing the screw. Drop the blade so it is resting on the cable OD. Re-tighten the blade holding screw against the flat portion of the blade shaft. (Fig.8)
5. Re-adjust the blade to the desired depth setting.



Fig.7



Fig.8

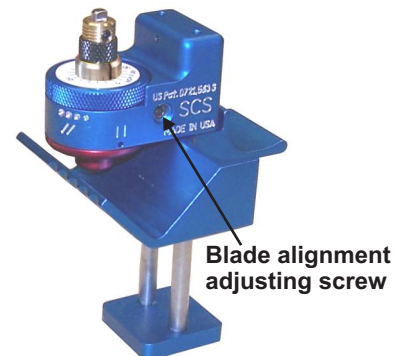
#### Tool Upkeep

1. Keep the tool clean and dry.
2. Occasionally apply a few drops of 3-in-1 or WD-40 oil under blade position knob in this corner shown to maintain smooth blade indexing.



#### Blade Alignment feature

The SCS tool is factory assembled for proper blade registration and tracking. If blade replacement is necessary, the ring cut can be checked and adjusted for proper alignment. The SCS is designed with a blade alignment feature to ensure the ring cut will track squarely. If misalignment is determined, turn the blade alignment adjusting screw with a 1/8" hex wrench in the correct direction to bring the tool back to a properly tracking ring cut.



Blade alignment  
adjusting screw

**WARRANTY:** RIPLEY warrants its products against defective materials and workmanship for a period of one year from date of shipment from the RIPLEY factory provided the product is utilized in accordance with instructions and specified ratings.



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