



SAMSON®

ROPE TECHNOLOGIES

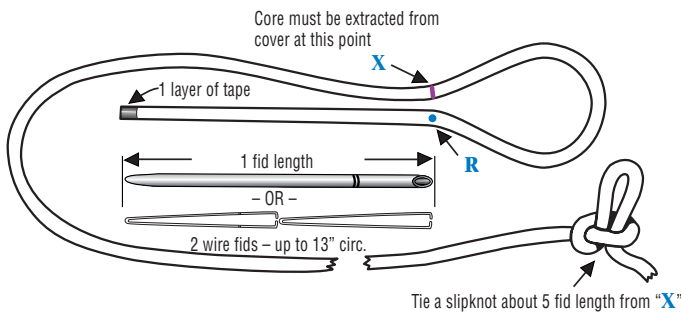
The Strongest Name In Rope



Standard Double Braid Eye Splice* Instructions for New Rope

**This splice is not suitable for core-dependent double braid constructions such as Ultra-Tech, Spectron II and the like. Special splicing instructions are available for core-dependent double braided ropes; please contact Customer Service at (800) 227-7673 or (360) 384-4669.*

All published Samson double braid rope strengths are derived from the testing of spliced rope.

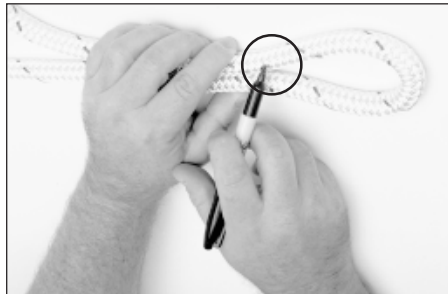


STEP 1 Marking the Measurements

Tape end to be spliced with one thin layer of tape. Then measure one (1) tubular fid length or two (2) wire fid lengths (because a wire fid is half size) of the rope and mark. This is **Point R** (Reference).

From **R** form a loop the size of the eye desired and mark. This is **Point X** where you extract the core from inside the cover. If using a thimble, form the loop around the thimble. Tie a tight slip knot approximately five (5) fid lengths from **X**.

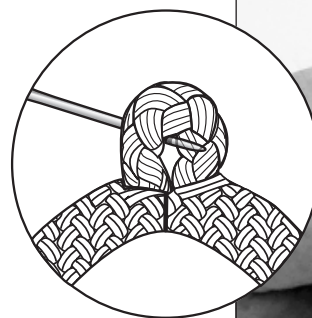
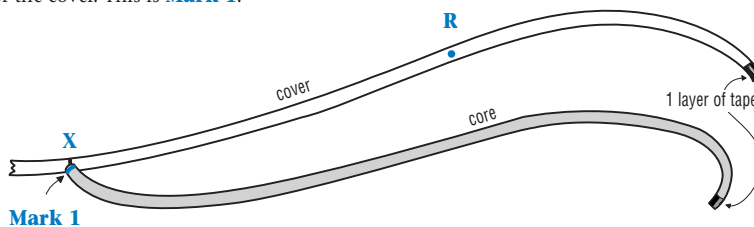
This must be done.



STEP 2 Extracting Core

Bend the rope sharply at **X**. With the pusher or any sharp tool such as an ice pick, awl, or marlin spike, spread the cover strands to expose core. First pry, then pull the core completely out of cover from **X** to the taped end of the rope. Put one layer only of tape on the end of the core. Note: Do not pull cover strands away from rope when spreading cover as this will distort the rope unnecessarily.

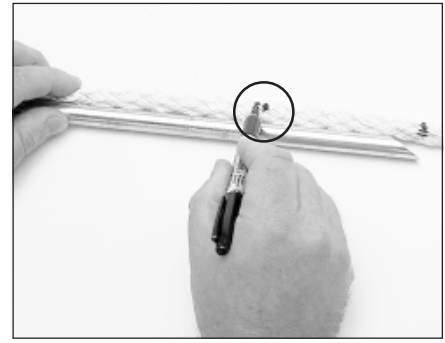
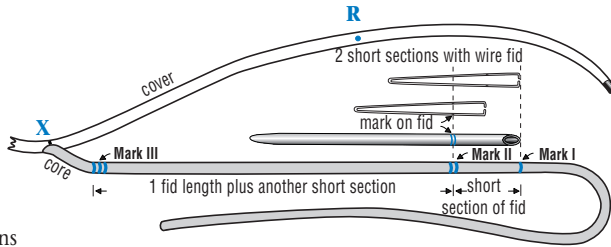
To assure correct positioning of **Mark 1** do the following: Holding the exposed core, slide cover as far back as possible toward the tightly tied slipknot. Then, firmly smooth the cover back from the slipknot toward the taped end. Smooth again until all cover slack is removed. Then, mark the core where it come out of the cover. This is **Mark 1**.



STEP 3 Marking Core

Again slide the cover toward the slipknot to expose more cover. From **Mark 1**, measure along the core toward **X** a distance equal to the short section of a tubular fid (two short sections if using a wire fid) and make two heavy marks. This is **Mark 2**.

From **Mark 2** measure in the same direction one fid length plus another short section of the fid (with a wire fid, double measurements) make three (3) heavy marks. This is **Mark 3**.

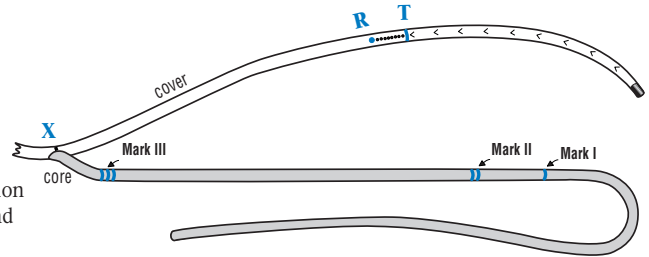


STEP 4 Marking Cover for Tapering

Note the nature of the cover braid. It is made up of strands with either one, two or three ends. By inspection you can see half the strands revolve to the right around the rope and half revolve to the left.

Beginning at **R** and working toward the taped end of the cover, count eight (8) consecutive strands (single or pairs) which revolve to the right (or left). Mark the eighth (8th) strand. This is **Point T** (see inset). Make **Point T** go completely around the cover.

Starting at **T** and working toward the taped cover end, count and mark the fifth (5th) right and left strand. From that mark count to the fourth (4th) right and left strand. Proceed in this manner, marking the fifth (5th) right and left strand and then marking the fourth (4th) right and left strand, until you reach the end of the taped cover.

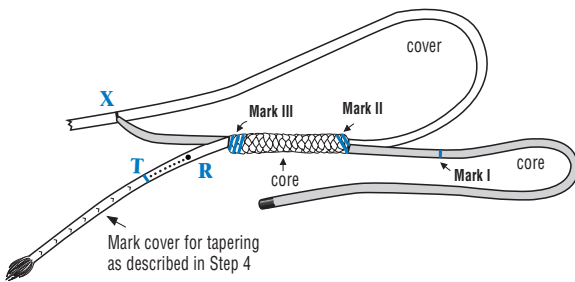
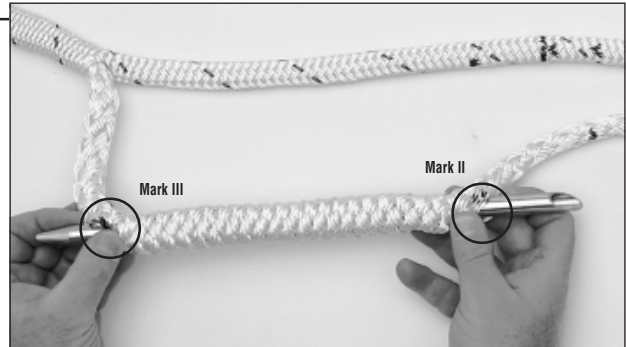


STEP 5 Putting Cover Inside Core

Insert the fid into the core at **Mark 2**. Slide it through and out at **Mark 3**.

Add extra tape to the cover end; then jam it tightly into the hollow end of the fid (see inset). Hold core lightly at **Mark 3**, place pusher joint into taped end and push fid and cover through at **Mark 2** and out at **Mark 3** (with a wire fid, first press prongs into cover, then tape over). Then, after fid is on, milk braid over fid while pulling fid through from **Mark 2** to **Mark 3**.

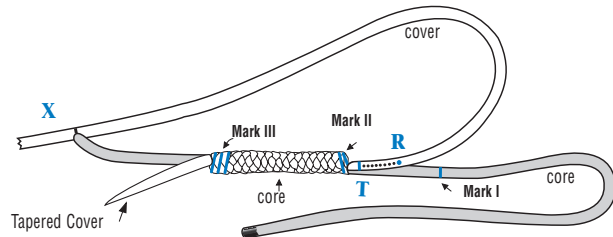
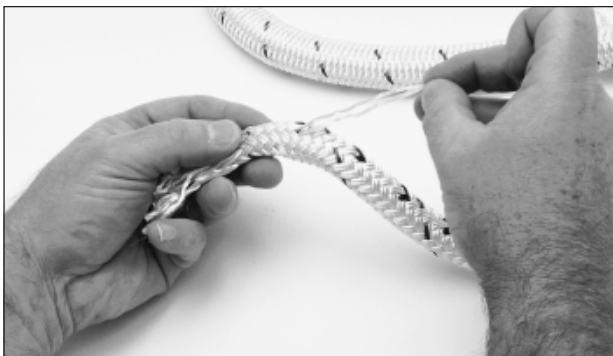
Take the fid off the cover; continue pulling cover tail through the core until **Mark R** on the cover emerges from **Mark 3**. Then remove the tape from the end of the cover.



STEP 6 Performing Taper

Make sure the tape is removed from the cover end. Start with the last marked pair of cover strands toward the end, cut and pull them completely out (see photo). Cut and remove next marked strands until you reach **Point T**. Do not cut beyond this point.

The result should be a gradual taper ending in a point. Very carefully pull the cover back through the core until **Point T** emerges from **Mark 2**.





STEP 7

Reinserting Core into Cover

From **X** on the cover, measure approximately one-third (1/3) a tubular fid length toward the slip knot on the rope and mark this as **Z**.

You are now ready to put the core back into the cover from **T** to **Z**. Insert the fid at **T**, jam the taped core end tightly into the end of the fid. With the pusher, push the fid and core through the cover tunnel, past **X** and through the cover at **Z**.



Inserting fid through cover



Pushing fid and core through cover

When pushing the fid past **X** to **Z**, make sure the fid does not catch any internal core strands.

Note: Depending on the eye size, a fid may not be long enough to reach from **T** to **Z** in one pass. If not, bring the fid out through the cover, pull the core through and reinsert the fid into exactly the same hole it came out of. Do this as many times as needed to reach **Z**.



Pulling core end to tighten cross-over

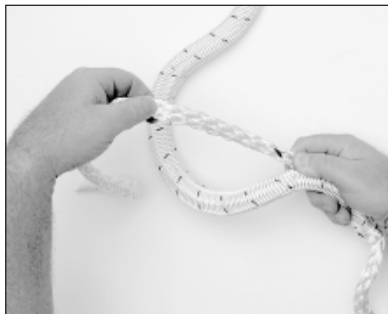
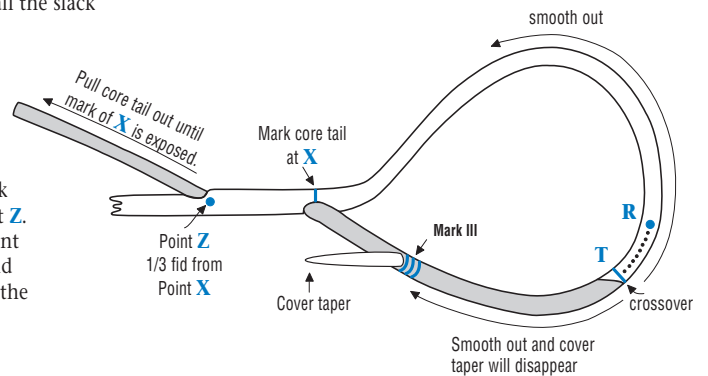
STEP 8

Marking Reduced Volume Tail Core

Alternately pull on the core tail at **Z**, then pull on the tapered cover at **Mark 3**. The crossover should be tightened until it is approximately equal to the diameter of the rope.

Smooth out the cover of the eye completely, from crossover **T** toward **X** to get all the slack out of the eye area.

Mark the core tail through the cover at **Point X**.



Pull the core tail out until the mark just made on the core is exposed at **Z**. Reduce the core volume at this point by cutting and removing one strand at each group, progressing around the circumference of the rope.

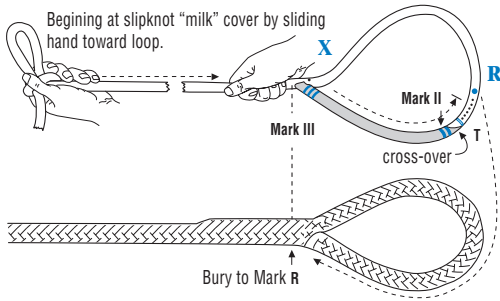
Measure one-third (1/3) of a tubular fid length from the start of the reduction cuts (mark) toward end and mark. Cut off remaining tail at this point. Make a 45° angled cut to prevent a blunt end.



With one hand, hold crossover (Mark T). Firmly and completely smooth out cover section of eye from crossover toward X. Reduced volume core tail should disappear into cover at Z.

Smooth out the core section from the crossover toward **Mark 3** and the cover taper will disappear into the core.





Tip: Before burying the cover over the crossover:

A. Anchor the loop of the slipknot by tying it to a stationary object before starting to bury. You can then use both hands and the weight of your body to more easily bury the cover over the core and crossover (see Figure 1 and Figure 2).

B. Holding the crossover tightly, milk all the excess cover from R to X.

Flex and loosen the rope at the crossover point during the final burying process. Hammering the cover at X will help loosen the strands.

With larger ropes it is helpful to securely anchor the slipknot, attach a small line to the braided core at the crossover and mechanically apply tension with either a block and tackle, capstan, come-a-long, or power winch. Tension will reduce the diameter of the core and crossover for easier burying (see Figure 2).

In order to prevent no-load opening of your eye splice, Samson recommends lock-stitching the eye. Instructions for performing this procedure are outlined below.

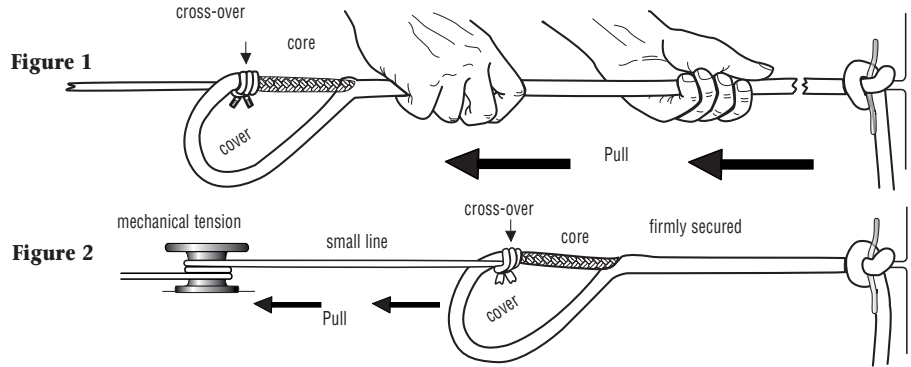
STEP 9

Burying Exposed Core

Hold the rope at the slipknot and with the other hand milk the cover toward the splice, gently at first, then more firmly. The cover will slide over **Mark 3**, **Mark 2** and crossover **T** up to **R** (it may be necessary to occasionally smooth out eye during milking to prevent reduced volume tail catching in the throat of the splice).

If bunching occurs at the crossover preventing full burying, smooth cover from **T** to **X**. Grasp crossover at **T** with one hand and then firmly smooth cover slack (female side of eye) with the other hand toward the throat (**X**). Repeat as necessary until bunching disappears.

Continue milking until all cover slack between the knot and the throat of the eye has been removed.

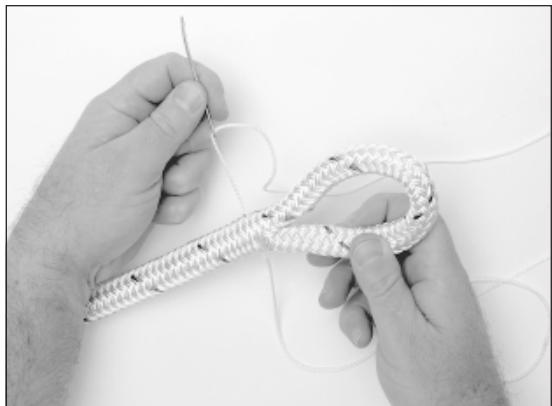


Procedure for Lock-Stitching Eye Splices

Stitch locking is advantageous to prevent no-load opening due to mishandling.

Material Required: About one (1) fid length of nylon or polyester whipping twine approximately the same size as the strands in the rope you are stitch locking.

The same strands cut from the rope you are stitch locking may also be used.



Step 1

Pass stitching through spliced area near throat of eye as shown.

Step 2

Reinsert as shown pulling snug but not tight.

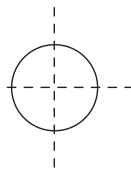
Step 3

Continue to reinsert as described above until you have at least three (3) complete stitches.



Step 4

After completing Step 3, rotate spliced part of rope 90° and reinsert end "A" into splice area in the same fashion as in Steps 1, 2 and 3. The splice will now be stitched on two planes perpendicular to each other. Make sure you do not pull stitching too tight.



Configuration of cross section after completing Step 4.



Step 5

After stitching at least three (3) complete stitches as in Step 3, extract two ends A and B together through the same opening in the braid. Tie them together with a square knot and reinsert back into the braid between the cover and core.

