



Double Braid Class I Eye Splice Modified for Used Rope

samson
THE STRONGEST NAME IN ROPE

Class I ropes are made from any or all of the following fibers: olefin, polyester, or nylon.

This is an eye splice which can be performed on used rope. This is an all-purpose splice technique designed for people who generally splice used rope as frequently as new rope.

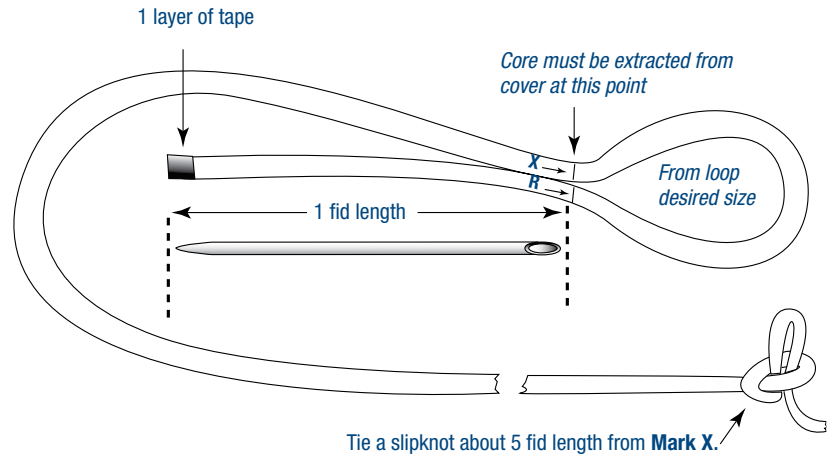
You may wish to read the supplemental information, "Special Tips for Splicing Used Rope" at the end of these instructions, before beginning.

Splicing used rope can be made easier by first understanding the rope condition. Natural shrinkage has occurred caused by water and heat. In addition, the cover yarns have often been abraded. Soak the section of rope to be spliced in water for several minutes — this lubricates and loosens fibers.

STEP 1 MEASURING AND MARKING

Tape end to be spliced with 1 thin layer of tape. Then, measure 1 tubular fid length from end of rope and mark. This is Point R (Reference). From Point R form a loop the size of the eye desired and mark. This is Point X, where you extract core from inside the cover. If using a thimble, form the loop around the thimble.

Tie a tight slipknot approximately 5 fid lengths from Point X. This must be done!



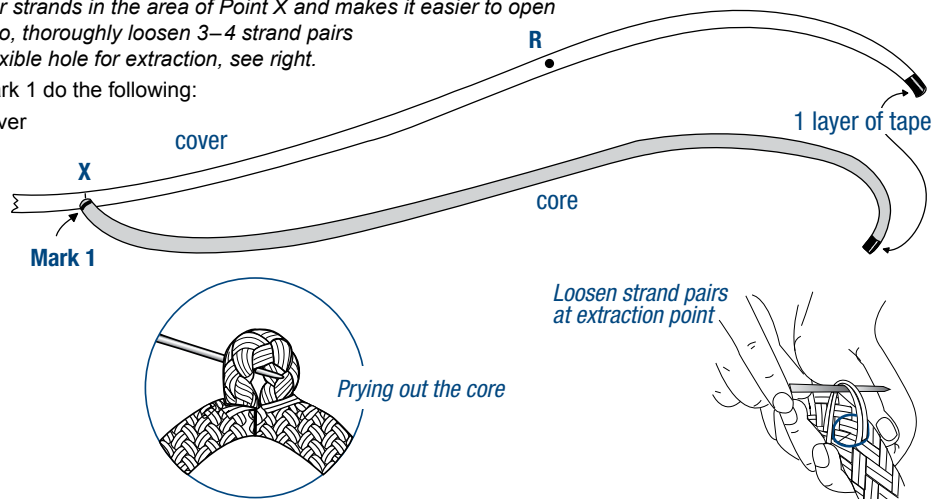
STEP 2 EXTRACTING THE CORE

Bend rope sharply at Point 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 Point X to the taped end of the rope. Put one layer only on end of core.

Tip: After marking cover, untape end of rope, grasp end of core, and slide back cover pulling out core. This loosens and bunches up cover strands in the area of Point X and makes it easier to open up cover strands for extraction. Also, thoroughly loosen 3–4 strand pairs at Point X to assure a large and flexible hole for extraction, see right.

To assure correct positioning of Mark 1 do the following:

Holding the exposed core, slide cover as far back towards the tightly tied slipknot as you can. Then, firmly smooth the cover back from the slipknot towards taped end. Smooth again until all cover slack is removed. Then, mark the core where it comes out of the cover. This is Mark 1.

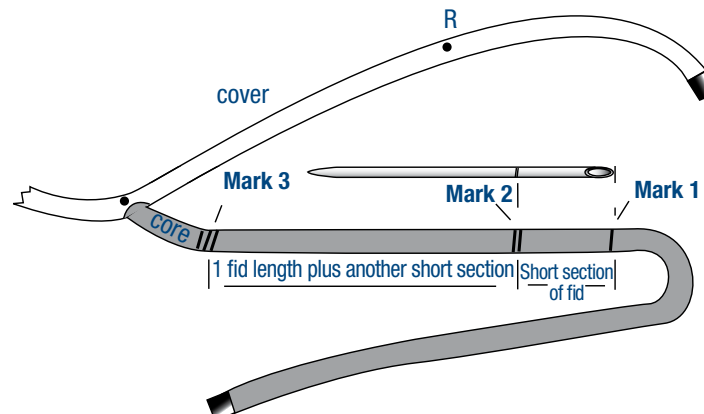


STEP 3 MARKING THE CORE

Again slide cover toward slipknot to expose more core.

From Mark 1, measure along core towards Point X a distance equal to the short section of tubular fid and make 2 heavy marks. This is Mark 2.

From Mark 2, measure in the same direction 1 fid length plus another short section of the fid, make 3 heavy marks. This is Mark 3.





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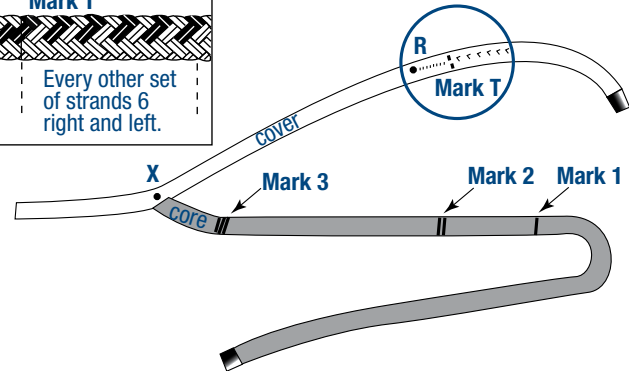
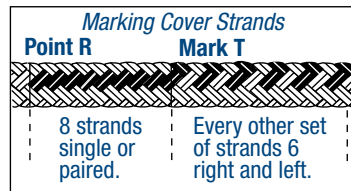
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STEP 4 MARKING THE COVER FOR TAPERING

Note nature of cover braid. It is made up of strands – single or paired. By inspection you can see half the strands revolve to the right around rope and half revolve to the left.

Beginning at Point R and working toward taped end of the cover, count 8 consecutive strands (1 or 2) which revolve to the right (or left). Mark the 8th strand. This is Mark T. Make Mark T go completely around cover.

Starting at Mark T and working toward the taped cover end, count and mark every 2nd right set of strands for a total of 6. Again starting at Mark T, count and mark every 2nd left set of strands for a total of 6.

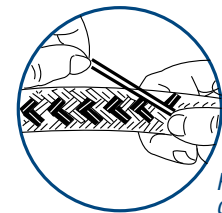
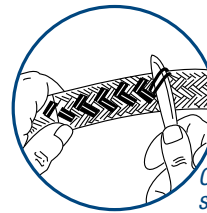
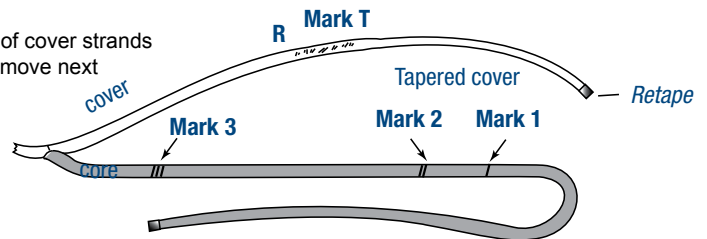


STEP 5 PERFORMING THE TAPER

First remove tape from cover end. Start with last marked set of cover strands toward the end, cut and pull them completely out. Cut and remove next marked strands and continue with each right and left marked strands until you reach Mark T. Do not cut beyond this point.

The end of the cover has now been tapered from Mark T to the end. Retape tapered end.

Note: If the same strand(s) is marked twice by accident, continue as though it is another strand.



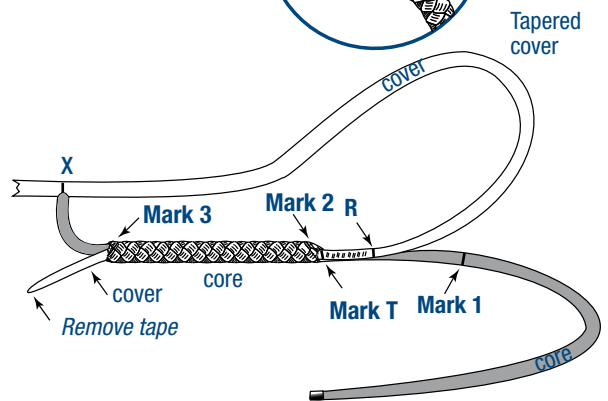
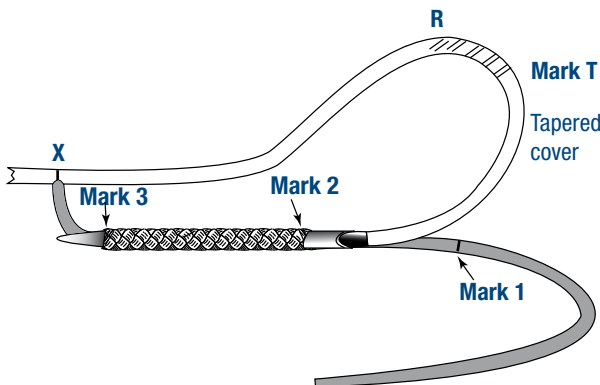
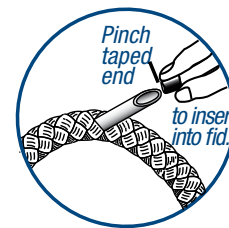
STEP 6 PUTTING THE COVER INSIDE THE CORE

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

Add extra tape to tapered cover end; then jam it tightly into the hollow end of fid. Hold core lightly at Mark 3, place pusher point into taped end, and push fid and cover through from Mark 2 and out at Mark 3.

With wire fid first press prongs into cover, then tape over. Insert fid and milk braid over fid while pulling fid through Mark 2 to Mark 3.

Take the fid off the cover. Continue pulling cover tail through the core until Mark T on the cover meets Mark 2. Then remove tape from end of tapered cover.





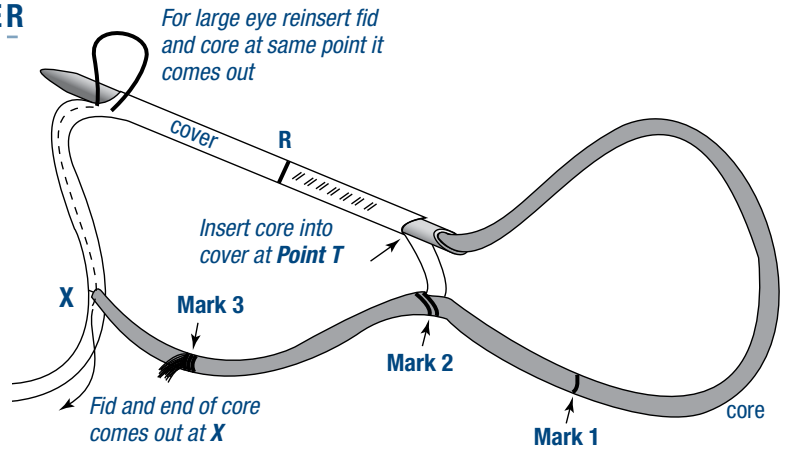
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STEP 7 REINSERTING CORE INTO COVER

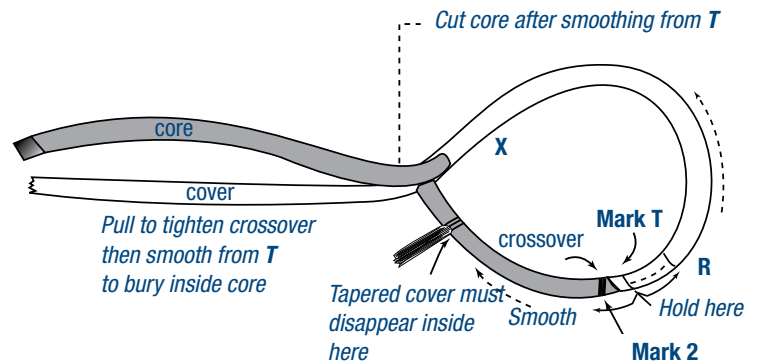
You are now ready to put core back into cover from Mark T to Point X. Insert fid at Mark T, jam the taped core end tightly into end of fid. With pusher, push fid and core around to, and through opening at Point X (exactly where core was first extracted.) When using wire fid, attach fid to taped core. After fid is on, milk braid over fid while pulling through from Mark T to Point X.

Depending on eye size, fid may not be long enough to reach from Mark T to Point X in one pass. If not, bring fid out through cover, pull core through and reinsert fid into exact hole it came out of. Do this as many times as needed to reach Point X.



STEP 8 PREPARING TO BURY CORE

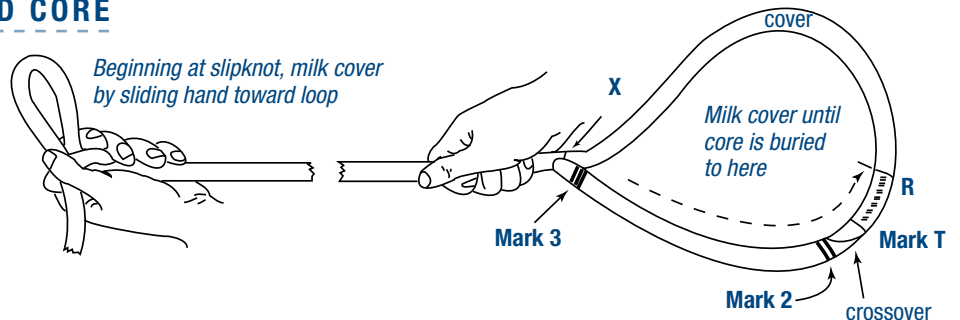
Next, pull on core tail coming out at Point X, then on tapered cover coming out at Mark X, the crossover should be tightened until opening in crossover is approximately equal to diameter of rope. Hold the loop at the crossover with one hand. With other hand firmly smooth towards Point X in one direction, and towards Mark 3 in other direction. Remove all cover slack. Tapered cover will disappear at Mark 3. Then cut core tail off close where it comes out at Point X.



STEP 9 BURYING THE EXPOSED CORE

Hold rope at slipknot and with other hand milk cover toward splice, gently at first, then more firmly. Cover will slide over Mark 3, Mark 2, the crossover, and Point R.

Then smooth loop from Mark T to Point X removing all slack. Continue milking until all cover slack between knot and throat of eye has been removed.

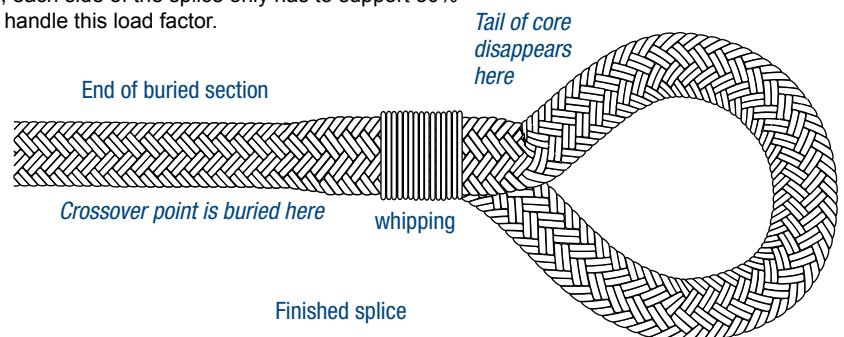


STEP 10 FINISHING THE SPLICE

Now untie the slipknot. If eye is not the right size, carefully check Steps 1 through 9.

If a hollow spot appears at the throat this means that the core tail was cut too short. Do not worry as this does not affect the splice performance nor its strength. Reason: the total load of an eye splice is split between the two legs. Therefore, each side of the splice only has to support 50% of the total load. The braided cover alone can handle this load factor.

You should whip the eye splice starting at base of throat of eye, especially if rope is 1" diameter and larger.





Special Tips: Splicing Used Double Braid

Splicing used rope can be made easier by first establishing the rope's condition. Natural shrinkage may have occurred, caused by water and heat. Sometimes the cover yarns have been braided. By using the technique outlined in the Used Rope Eye Splice for Class I Double Braids, along with the following tips, you can splice used braided rope more easily and with better results.

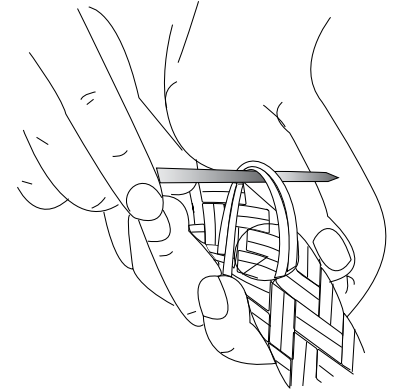
TIP 1

Before you begin, soak the section of rope to be spliced in water for several minutes — this lubricates and loosens fibers.

TIP 2

After marking cover (as shown in Step 2 of the splicing instruction) untape end of rope, grasp end of core, and slide back cover to pull out core. This loosens and bunches up cover strands in the area of Point X making it easier to open up cover strands for extraction. Carefully loosen 3–4 strand pairs at Point X to assure a large and flexible hole for extraction (Fig. A).

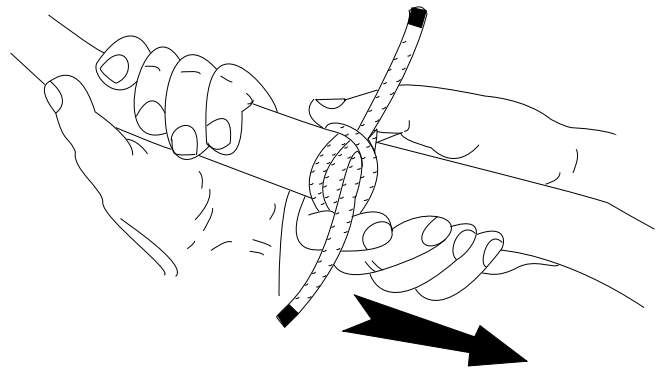
Figure A



TIP 3

The use of a shock cord in a rolling hitch around the cover is useful to make final burying easier and more complete. Pull on the hitch toward the eye until all cover slack is removed (Fig. B).

Figure B



Whipping Method I and Seizing Method II

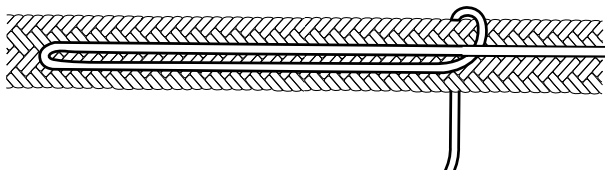
Choosing twines for whipping:

In general, braided nylon twine is preferred for whipping. Polyester twines, or twisted twines in either polyester or nylon, can also be used.

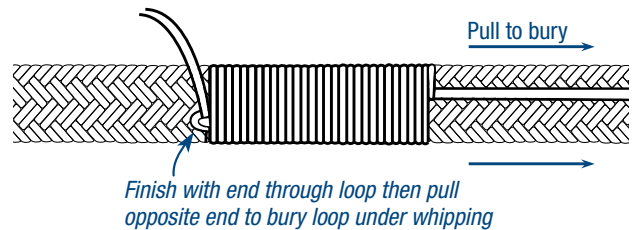
For double braids the twine used should be approximately twice the diameter of the strands in the cover.

Whip or seize the end of the spliced area with whipping twine for extra security and a professional touch. Keeping tension on rope while wrapping results in tighter whipping.

STEP 1 Form loop along the rope with whipping twine and wrap end around the back.



STEP 2 Continue wrapping at least 1 rope diameter in length.



STEP 3 Cut both ends close to whipping.

