

Synthetic Winch Rope Repair

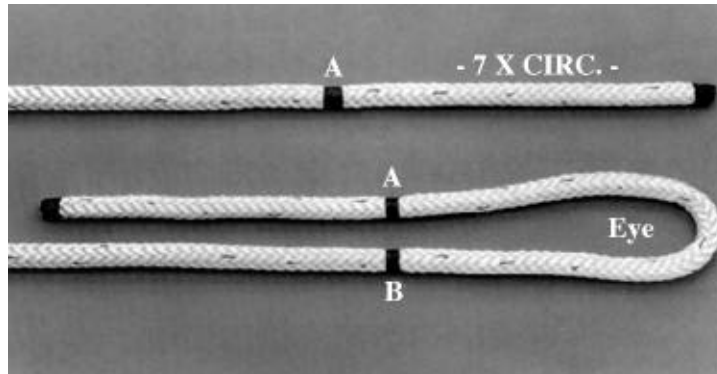
12-Strand Single Braid Eye Splice (Tuck)

From www.ropelinc.com

Step 1 - Eye Size

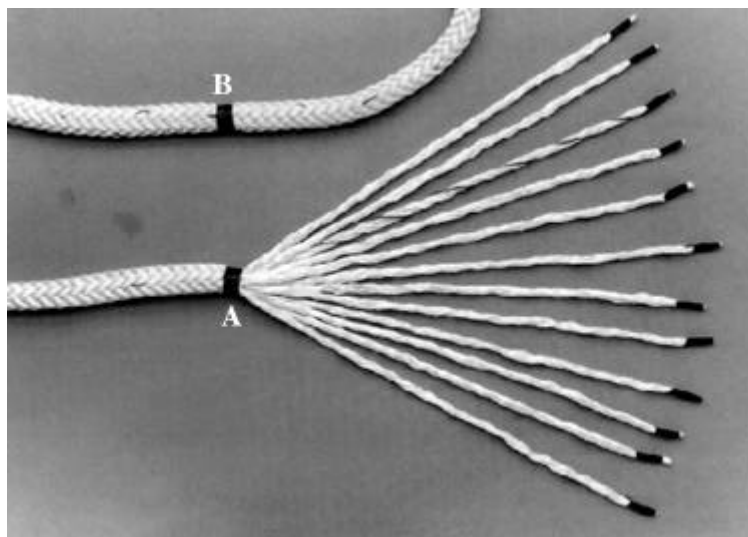
Measure from the end of the rope seven (7) times the circumference (or 21 times the diameter) in inches and make 'Mark A'. Tape at this mark.

Now form desired eye size and make 'Mark B'.



Step 2 - Strand Separation

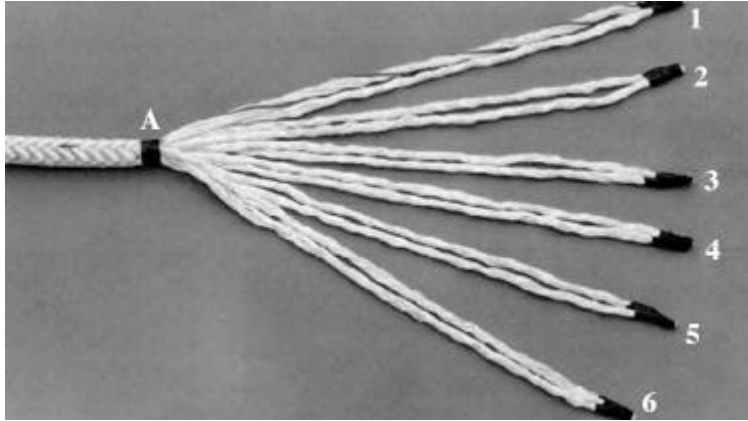
Tape each of the 12 strands and unlay strands back to 'Mark A'. Try to be careful not to remove twist from individual strands.



Step 3 - Pair Strands

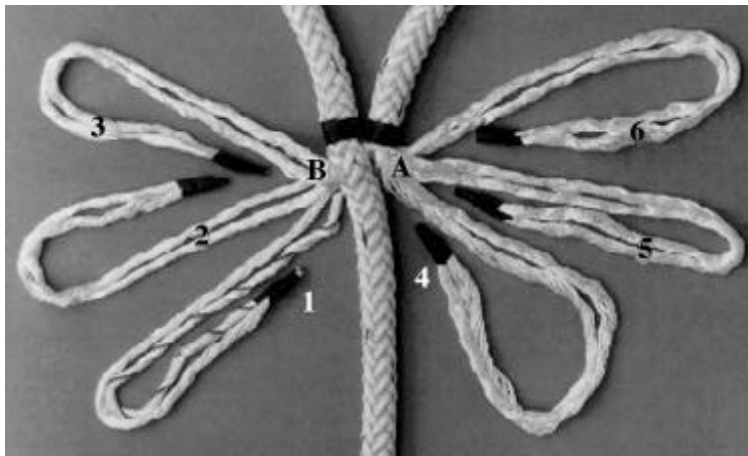
Rope is comprised of a total of 12 strands, six (6) strands with left hand twist and six (6) strands with right hand twist.

Select one left twist strand and one right twist strand and tape together. Repeat this procedure so that you have taped six separate strand pairs. Select strands that are near one another as they emerge at tape wrap at 'Mark A'.



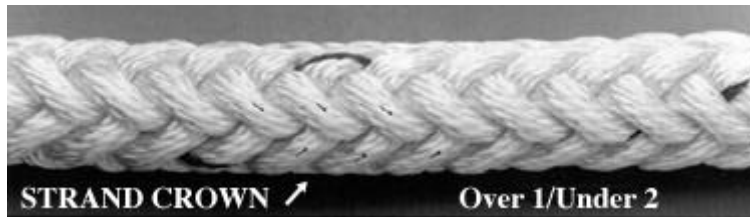
Step 4 - Marking Pairs

Lay rope out, forming eye. Do not twist rope. Select three tapered pairs closest to the standing part of the rope and mark on tape: #1, #2, #3 respectively. Mark the other 3 pairs #4, #5, #6.



Step 5 - Strand Insertion

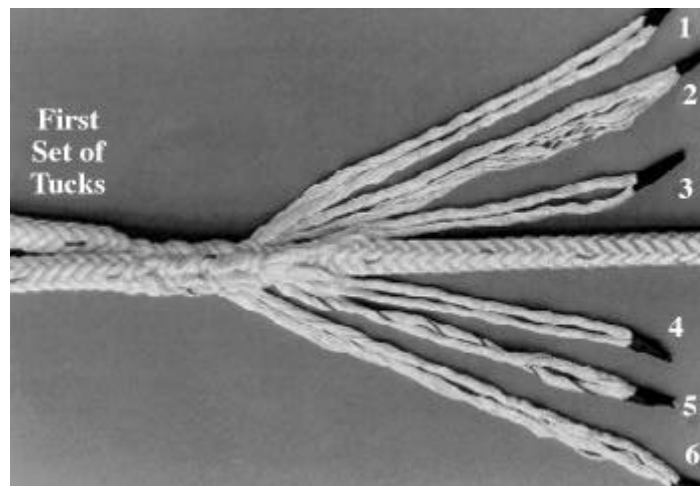
With fid, open rope at 'Mark B' and insert strand pairs #1, #2, and #3 completely through the rope at right angles to the rope axis. Once strands #1, #2, and #3 are through the rope, pull each strand so that taped end (Mark A) is snug against body of rope. It may be easier to pass the strand pairs through the rope one set at a time.



Step 6 - Initial Strand Tuck

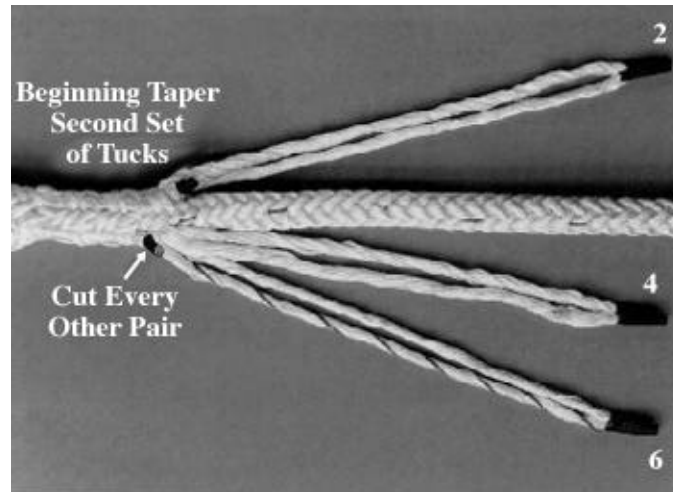
Note rope braid pattern forms a line of strand crowns running parallel to the axis of rope.

1. Starting with strand pair #1, select a row of crowns down the axis of the rope and tuck the pair #1 over one strand and under two strands. Once tucked, pull out slack in strand pair #1. Make only one tuck.
2. Now tuck pair strands #2 and #3 in the same way-with each pair, select crown row and tuck the individual pair over one strand and under two strands. Pull out slack in each strand.



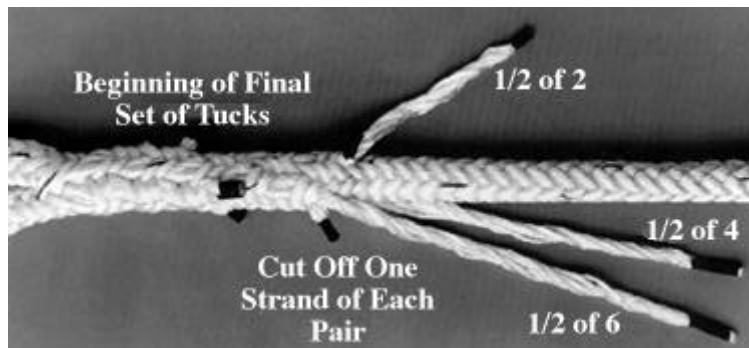
3. With remaining pair strands #4, #5, and #6, select a crown row for each pair and make one tuck. Pull out slack in each pair.
4. Remove tape wrap at 'Mark A' and gently but firmly pull on each of the strand pairs so 'Mark A' is now snug to the base of the eye. (Mark B)

5. Now complete two more sets of tucks with each taped strand pair. Be sure to tuck each strand pair down the same crown strand line, try to keep twist in each pair, and continually remove slack from each strand pair after tucking.



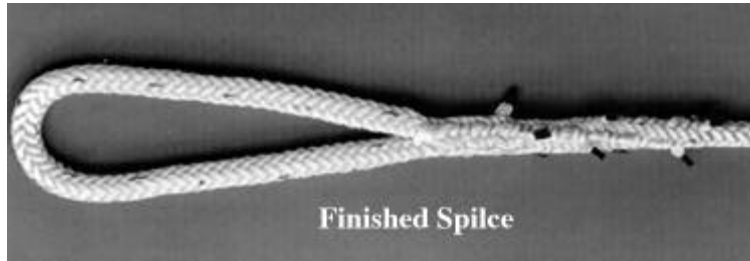
Step 7 - Taper

1. Cut off strand pairs #1, #3, #5.
2. Tuck strand pairs #2, #4, #6 for additional 3 tucks- retain twist and remove excess slack.



Step 8 - Final Tucks

1. Split each strand pair (#2, #4, #6) into 2 individual strands and tape each strand.
2. Cut off one strand in each pair leaving a short tail projecting from last tuck.



3. Tuck the remaining 3 single taped strands for 3 tucks (over one and under two) removing slack and keeping twist.
4. Now cut off the taped strands, leaving a short tail projecting as shown.