



12-Strand Class II Inboard Eye Splice For K-100™

This is an extremely short 12-strand eye splice developed specifically for the attachment point of crane hoist drums.

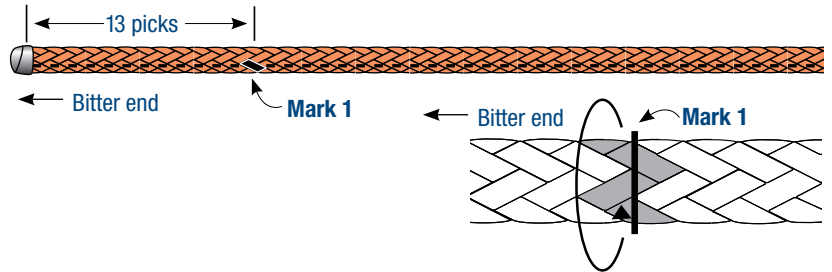
THIS NOT A FULL-STRENGTH TERMINATION — it is designed to function only as a termination on a winch drum.

The splice is accomplished by removing 6 strands from the original braid, passing them across the legs of the eye, and replacing them into the same position they occupied in the rope originally.

Items required for this splice: tape, a knife or heavy duty scissors, and a length of sturdy twine (braided nylon works well). Cut the twine to a length that is at least twice the distance from Mark 1 to Mark 2.

STEP 1 MEASURING AND MARKING

Tape the bitter end of the rope. From the taped end, count 13 picks and mark 1 strand. This is Mark 1. At Mark 1, mark 6 strands around the circumference of the rope.



STEP 2 MARKING CYCLE LENGTH

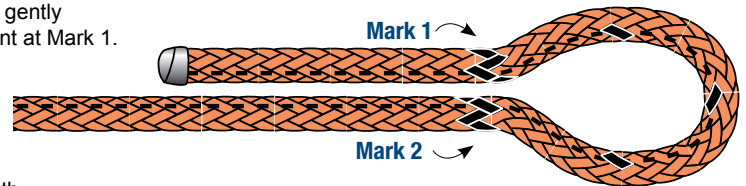
A cycle length is the distance along the rope's axis required for a strand to make one revolution around the rope. From a marked strand, it is the distance down the rope that the same strand is in the same position in the ropes' braid. For 12-strand ropes, the cycle length is 6 picks.



From one of the marked strands at Mark 1, count 6 picks and mark the same strand. The strand can be identified by pulling gently on the strand. You should be able to see slight movement at Mark 1.

Mark all 6 strands at each cycle length.

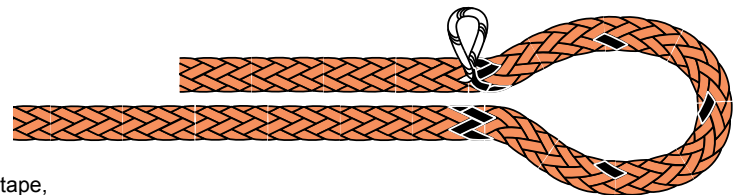
Mark # of cycle lengths in following with recommendations to fit specific hoist (typically between 2 and 4), illustrated here as 4 cycle lengths for the purposes of this document. The fourth cycle length will identify Mark 2. Mark 2 must fall at a marked cycle length.



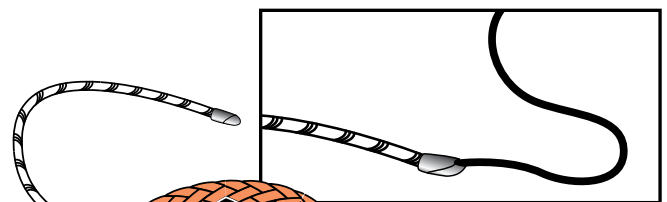
STEP 3 PULLING THE STRANDS

Remove the tape from the bitter end of the rope.

Starting with the top strand at Mark 1, pull 1 marked strand free from the braid.

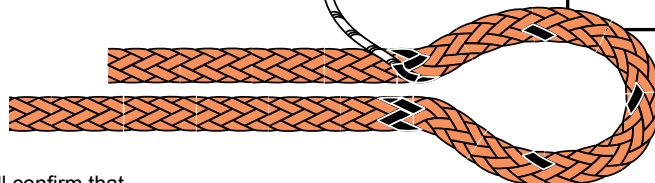


3A Tape the end of the strand and, using the same tape, attach the end of the length of twine to the end of the strand. This twine must be securely attached. It will act as a messenger line when the strand is replaced into the braid. The twine should be at least twice the length of the distance from Mark 1 to Mark 2.

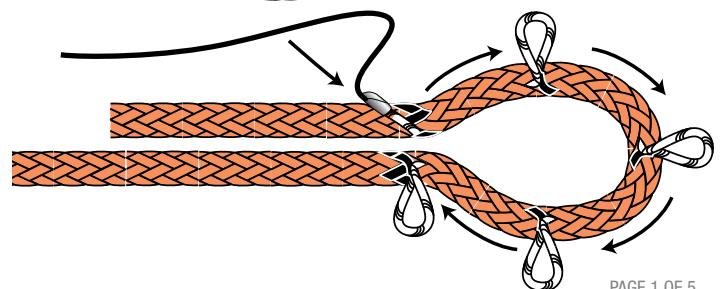


Attach twine to end of the pulled strand with tape.

3B At Mark 2, pull the strand out of the braid from Mark 1 to exit at Mark 2. It is critical to make certain you are pulling the same strand. A gentle pull on the strand at each marked cycle length will confirm that you have the correct strand. Pull the strand free of the rope, leaving the twine in its place.



The twine will replace the strand in the braid, marking its path.

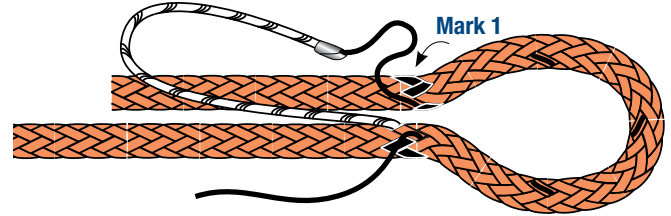
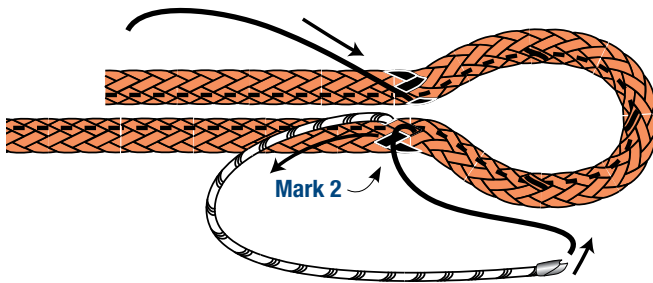




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3C Remove the twine from the end of the strand. Make certain the strand end is still taped. The twine should be entering the rope at Mark 1 and exiting at Mark 2.

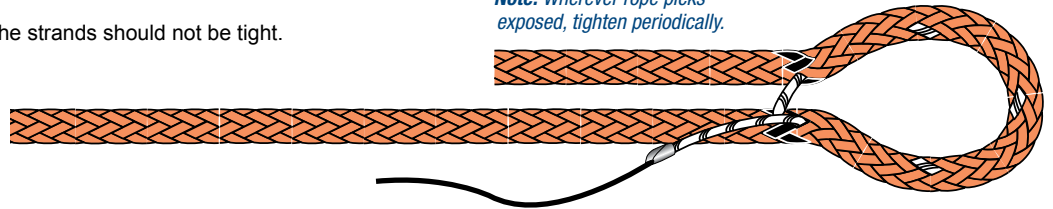
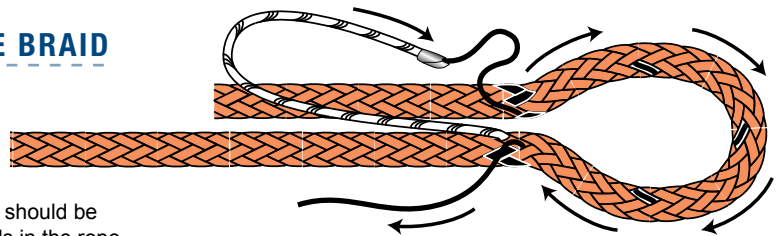
Attach the end of the twine at Mark 1 to the end of the strand.



STEP 4 REPLACING THE STRAND INTO THE BRAID

The twine should now be visible at each of the marked cycle lengths. The twine is used to pull and guide the strand back into the same position it originally occupied in the rope's braid. Work from one cycle length to the next, gently guiding the strand back into position. The twist level of the strand should be maintained. It should look identical to the other strands in the rope.

The crossover point of the strands should not be tight.

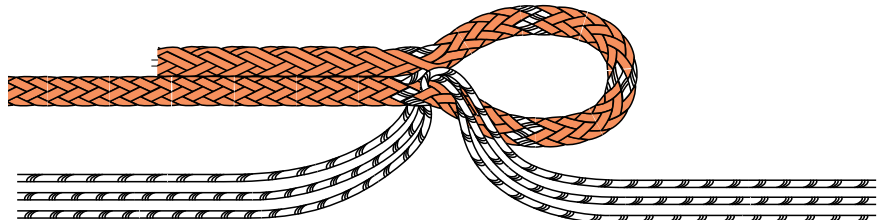
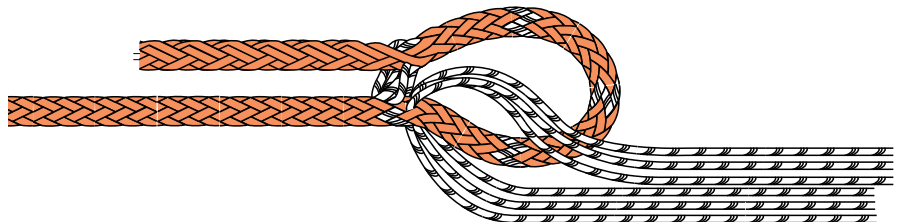


STEP 5 ROUTING REMAINING MARKED STRANDS

This same operation (pulling the strand at Mark 1, attaching the twine, pulling the strand from Mark 2, detaching the twine, reattaching the opposite end of the twine to the strand, then pulling the strand back through the rope with the twine) is performed on the remaining 5 strands marked at Mark 1.

Note: To keep the splice well balanced, there should be 3 strands that crossover on each side of the eye. These strands should follow a path that is roughly parallel to the other 2 strands that are routed on that side of the eye. The strand path shouldn't need to wrap around the rope to reach the entry point.

In order to achieve this, it will be necessary to pull 3 of the strands 1 pick below the point where they are marked at Mark 2.



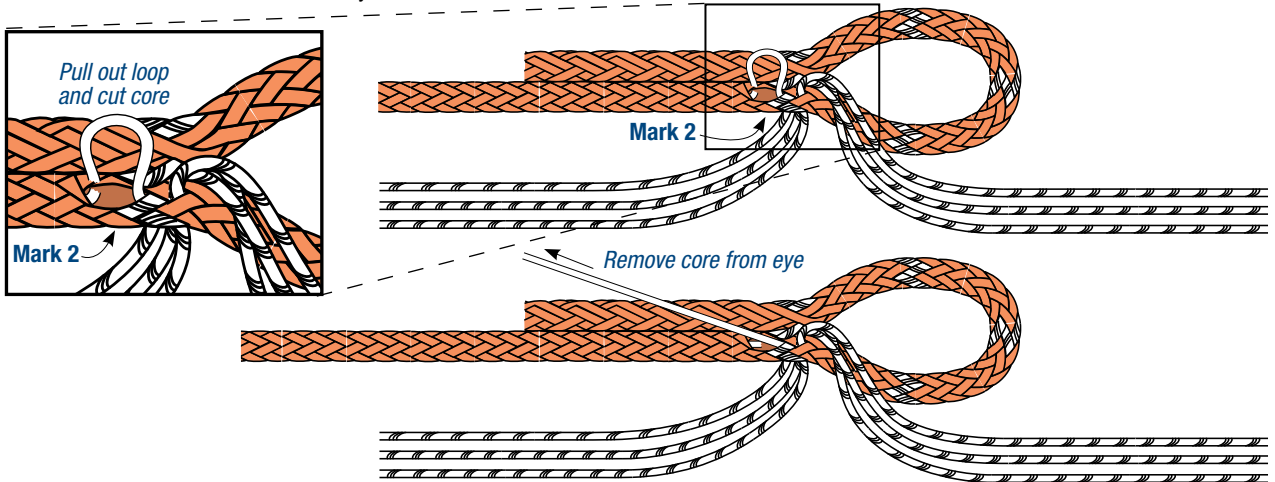
When all 6 strands are routed, pull each strand up snug. Make certain the splice is well balanced. The eye should lay flat with no twist where the two legs of the eye meet. All the strands should have the same twist level of the original braid. There should be no difference between the strands that were replaced and the original strands of the rope.



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STEP 6 CUTTING AND REMOVING CORE FROM EYE

At Mark 2, open the rope and pull a loop of core out of the rope. Cut the core and remove it from the eye.

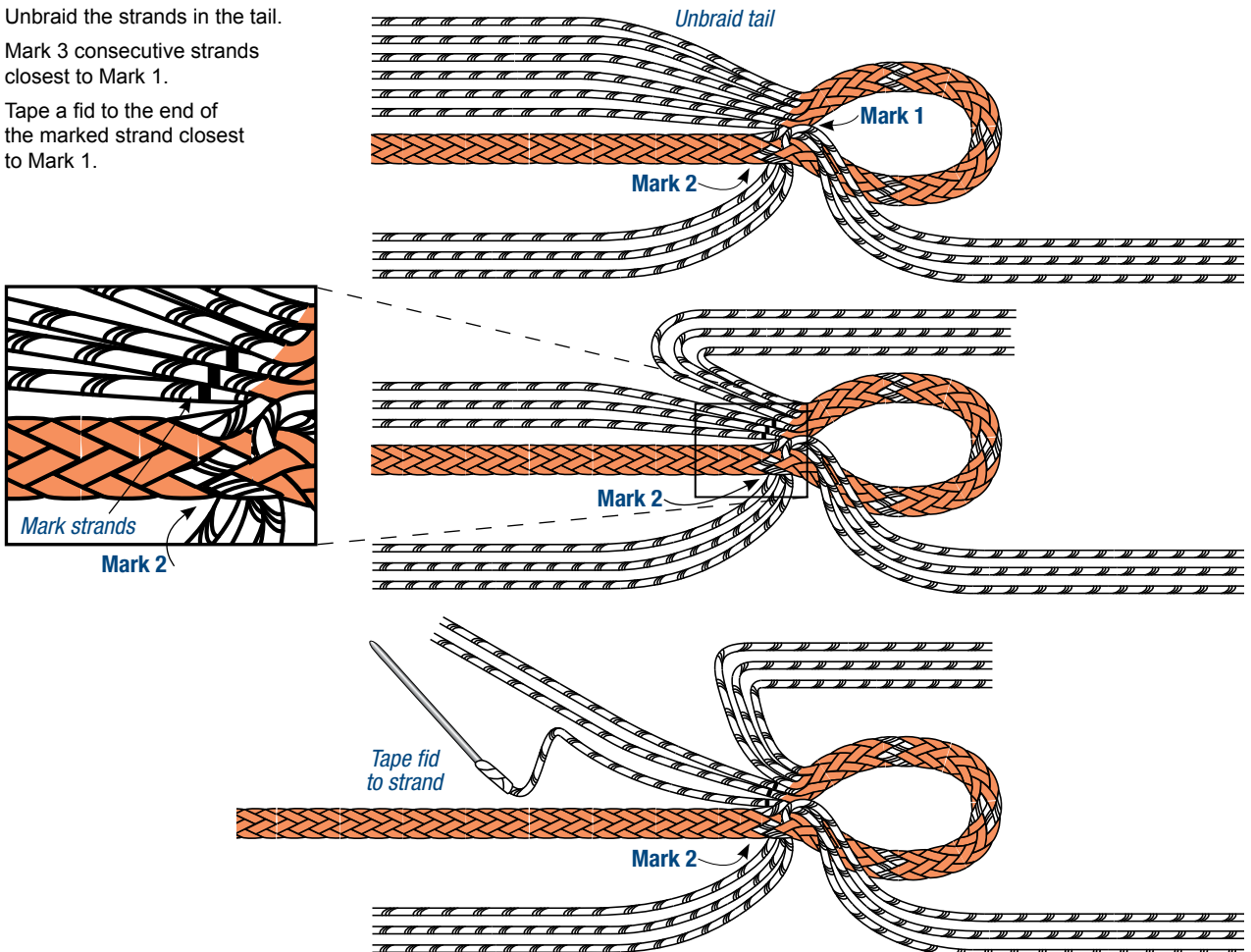


STEP 7 UNBRAIDING TAIL & MARKING STRANDS

Unbraid the strands in the tail.

Mark 3 consecutive strands closest to Mark 1.

Tape a fid to the end of the marked strand closest to Mark 1.





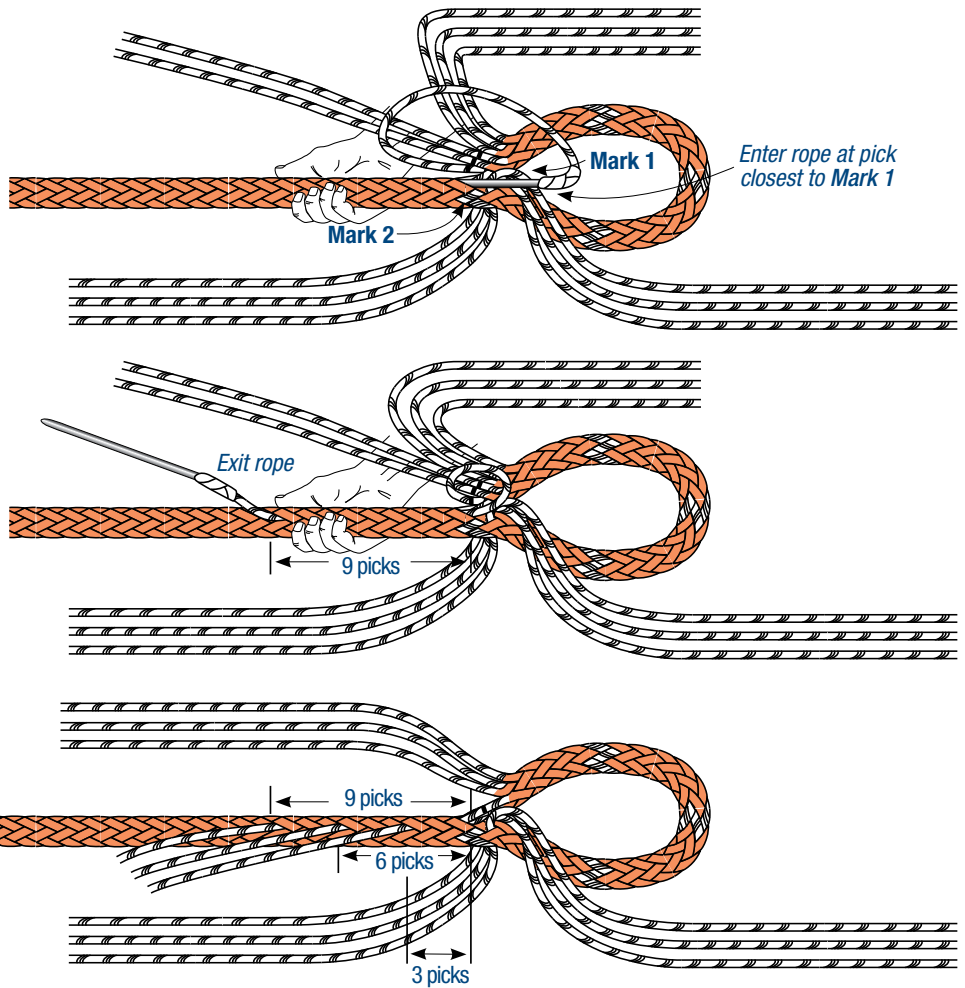
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STEP 8 BURYING STRANDS

Enter the body of the rope at the closest pick to Mark 1 using the fid. Bury the strand 9 picks down the rope and exit on the same plane as the entry point. Pull the strand out and remove the tape.

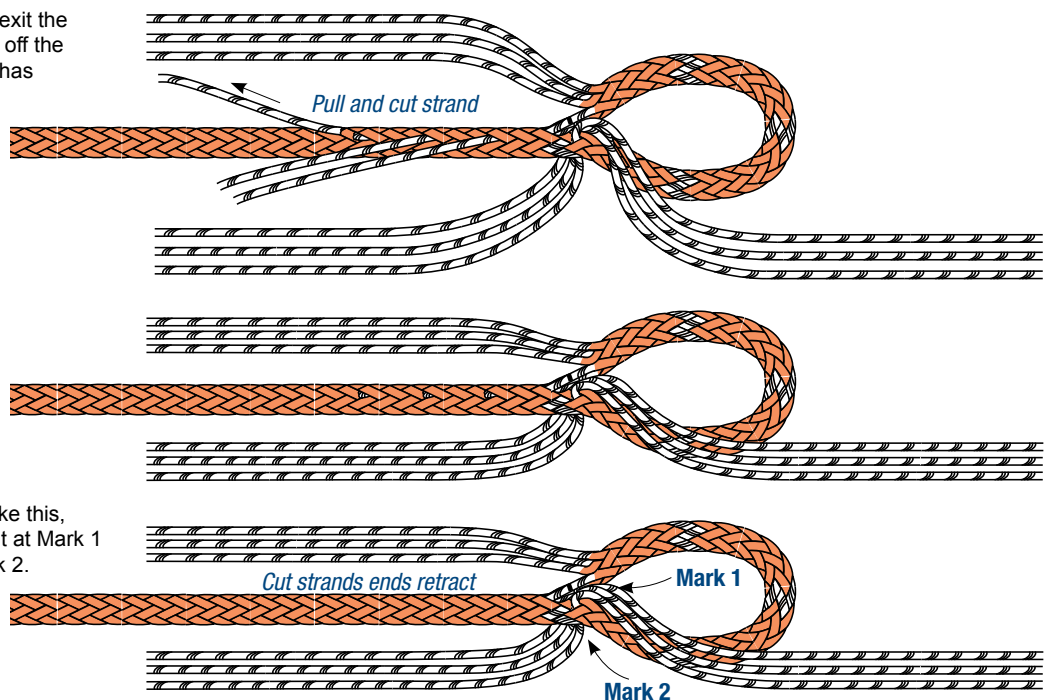
Remove the fid from the first strand and attach it to the next closest strand to Mark 1. Enter the rope at the same point as the first marked strand and bury the strand 6 picks down the rope exiting on the same plane as the entry point. Pull the strand out and remove the tape.

Finally, with the remaining marked strand, enter the rope at the same point as the other 2 marked strands and exit 3 picks down on the same plane.



STEP 9 CUTTING BURIED STRANDS

At the point where they exit the rope, lightly pull and cut off the end of each strand that has been buried.



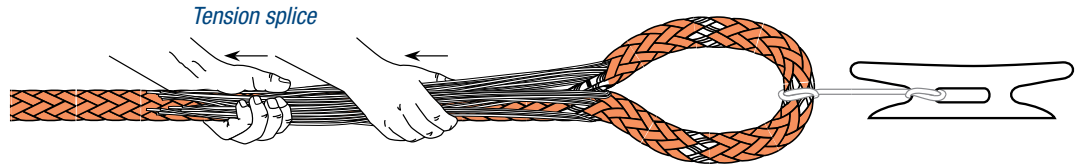
Your rope will now look like this, with 3 strands coming out at Mark 1 and 6 coming out at Mark 2.



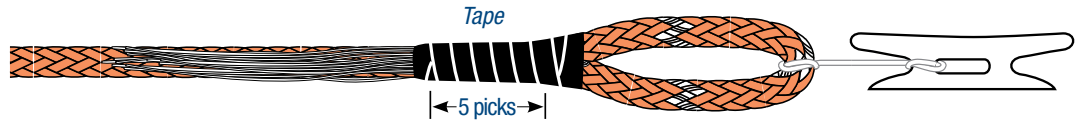
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STEP 10 TAPING DOWN TENSIONED STRANDS

Attach eye to a cleat and hand tension the rope, laying the strands against the body of the rope as you go.

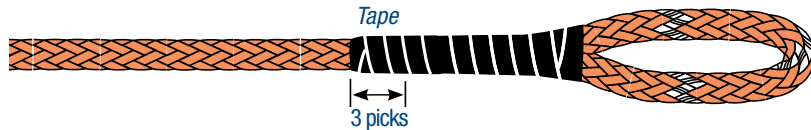
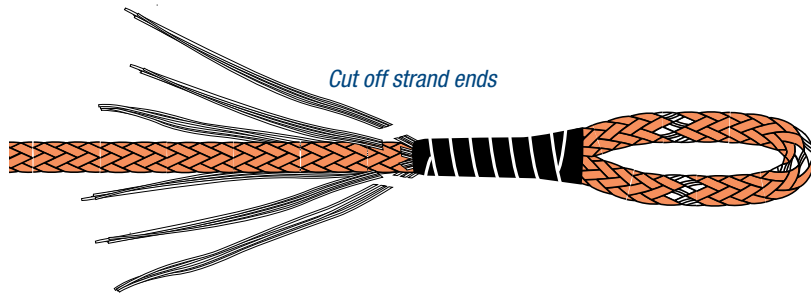


Tape 5 picks down with electrical tape.



STEP 11 TRIMMING AND TAPING DOWN STRAND ENDS

Cut strands at the end of the tape. Then continue taping down the body for 3 more picks to finish the splice.



Finished splice

