

Splicing Instructions

Rope Terminology

BIGHT: A loop made in any part of a rope.

BITTER END: The end of a rope opposite the end in use.

BLOCK: Similar to a pulley. Used to give mechanical advantage when lifting or pulling heavy objects.

END: The end of a rope in use. (Opposite the bitter end).

FATHOM: A unit of measurement: 1 fathom is 6 feet.

FALL: The standing part of the rope coming from the fixed block on a block-and-tackle on which strain is applied.

LAY: The way a twisted rope is constructed. Lay is either right-hand or left-hand.

LINE: Rope used aboard boats and ships is called line.

PULLEY: A device consisting of a sheave mounted in a block or wall, which is used to achieve mechanical advantage when lifting or pulling heavy objects.

ROUND TURN: Two turns of rope around the object to which it is being fastened.

SHEAVE: Pronounced "shiv". The grooved wheel in a block or pulley upon which the rope rides when in use.

STANDING PART: The main part of the rope.

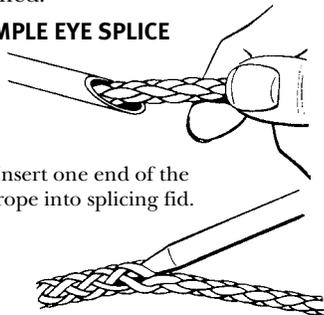
TURN: One turn of a rope around the object to which it is being fastened.

SPLICING DIAMOND BRAID ROPE

TOOLS NEEDED

All that is needed to splice Diamond Braid rope is a hollow splicing fid of the proper size. Each diameter rope requires a fid of the same size. All fids are marked with the rope diameter for which they are designed.

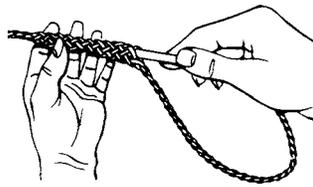
SIMPLE EYE SPlice



1. Insert one end of the rope into splicing fid.



2. Select point where splice is to begin. Insert tapered end of fid between the strands at this point.



3. As fid penetrates striches, guide the fid down the hollow center of the rope. In this step, push fid with right hand . . . at the same time use left hand to work the rope over the fid.

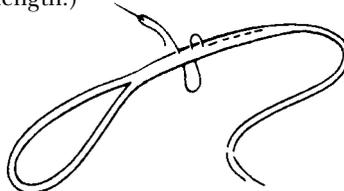


4. Six to eight inches below starting point, bring the fid out between two strands.

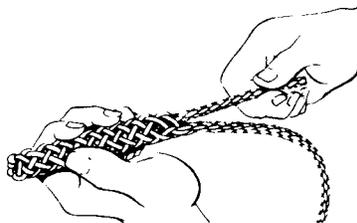


5. Remove fid from rope.

Tighten splice by pulling as indicated. (Caution: Completed splice section should measure at least six inches in length.)

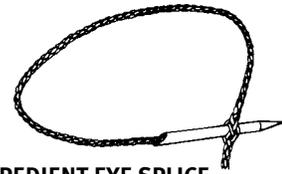


6. For maximum security the splice should be stitched using a needle and heavy nylon polyethylene or polypropylene twine. If a needle is not available the fid may be used to lead the twine back and forth through the splice.



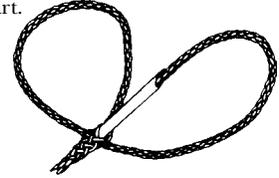
CROWN SPlice

Make small eye splice as explained in Simple Eye Splice. Steps 1-5. Pull end protruding from the splice until loop slides down flush with end of rope. Trim off protruding end.

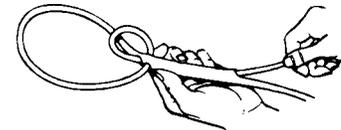


EXPEDIENT EYE SPlice

1. Run end of rope through point where splice is to start.

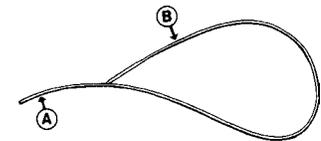


2. Start splice two stitches above penetrating rope. Run fid through penetrating rope and continue down the hollow center for approximately six inches. Bring fid out through stitches. Remove from rope.



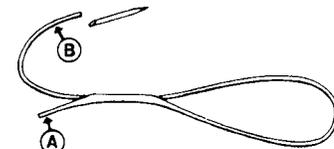
3. Tighten splice. Clip protruding end.

PERMANENT EYE SPlice 1

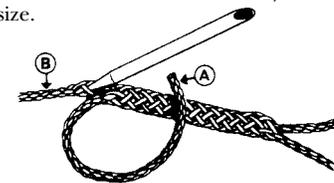


1. Cut approximately 2 ft. from one end of rope to be spliced. Put end B into splicing fid and insert it about 8 inches from one end of rope. Push fid 4 inches through center of rope and bring it out, leaving end approximately 4 inches long.

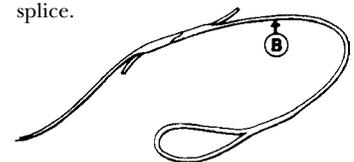
Note direction of splice in diagram!



2. Remove fid. Pull end B until eye is correct size.



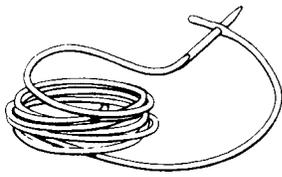
3. Splice A into B as described in End-to-End splice.



4. Splice end B into original rope with an End-to-End splice.

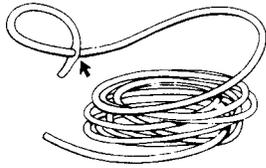
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Splicing Instructions (continued)



PERMANENT EYE SPLICE 2

1. Place splicing fid on end of rope, opposite to end where Eye splice is wanted. Insert fid through rope, about 6 inches from end, as shown.



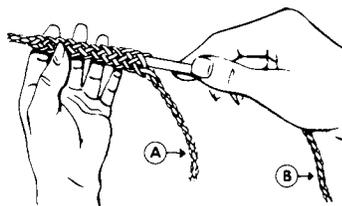
2. Remove fid and pull entire length of rope through to size of Eye splice desired.



3. Just below the point where rope comes through, (Arrow) insert fid into rope in direction away from loop, as illustrated. Insert short rope end into fid and guide fid down the hollow center of the rope. Push fid forward with right hand . . . at the same time use left hand to work rope over fid.

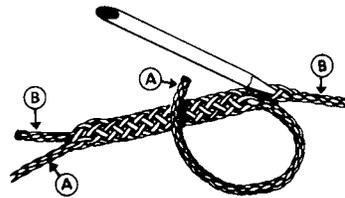


4. Five inches below starting point bring the fid out between two strands. Remove fid and pull protruding end to tighten the splice, then trim protruding end.

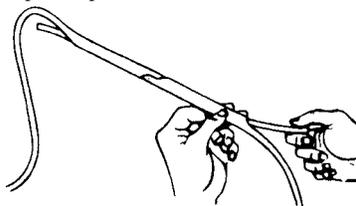


END-TO-END SPLICE

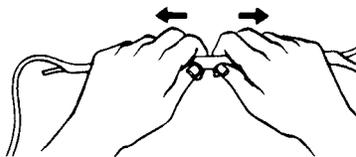
1. Splice rope B into rope A using principles described in EYE SPLICE. Steps 1-5.



2. At point where A overlaps B insert fid into rope B. Splice A into B.

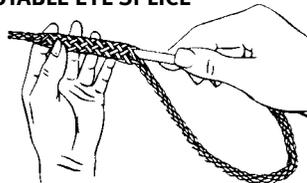


3. Adjust splice so that A abuts B.

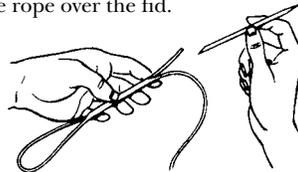


4. To tighten grasp splice firmly at center with thumb and forefinger of each hand . . . slide hands along rope as indicated by arrows. Clip any protruding ends.

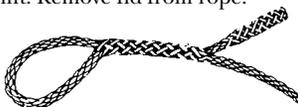
ADJUSTABLE EYE SPLICE



1. Insert rope into hollow end of splicing fid, then insert fid into rope at point about 24 inches from its end. As fid penetrates strands, guide it down the hollow center of the rope. In this step, push fid forward with right hand . . . at the same time use left hand to work the rope over the fid.



2. Bring the fid and rope out between two strands six to eight inches below starting point. Remove fid from rope.



3. Cap the protruding end with a Crown splice to prevent it from slipping back through the splice.

Eye size can be changed by adjusting the length of rope protruding from the splice.

SPLICING BRAID-ON-BRAID ROPE

TOOLS NEEDED

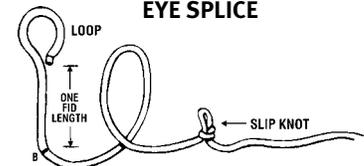
A FID . . . (B-Series) of the proper size. Braid-On-Braid splicing fids are identified with a "B" series number in addition to the rope diameter, size E, G, 3/8" (B-12) . . . 1/2" (B-16) . . . etc.

A PUSHER . . . Used for pushing rope and fid into rope when making a splice.

TAPE . . . Any type of tape is satisfactory as it is only used temporarily to prevent unraveling while making a splice.

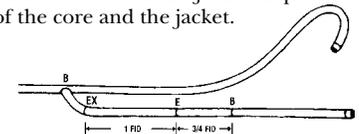
A MARKING DEVICE . . . Pencil, Dry Marker, Chalk or anything that will mark the rope being used.

EYE SPLICE

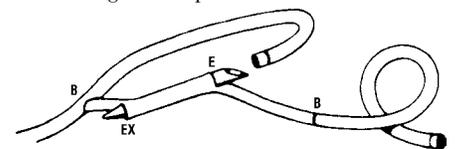


1. Form a loop the size of eye desired, then put a mark one fid length from the loop. This "B" (Base Point) is where you will extract the braided core from the braided jacket. It is important to make a slip knot approximately 5 feet from "B".

Using the pusher, part the strands of the jacket and pry out the core. Re-mark point "B" on the core where it comes out of the jacket. Now, using your fingers, pull the rest of the core out of the jacket. Tape the ends of the core and the jacket.



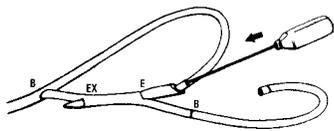
2. Grasp the core where it comes out of the jacket and slide jacket back until approximately 3/4 fid length is exposed. Mark this spot point "E" (Entrance). Slide jacket further back and mark point "EX" (Exit) one fid length from point "E".



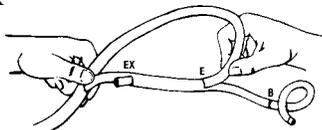
3. In this step you will pass the end of the jacket through the hollow core. Separate the strands of the core at point "E", insert fid, and slide it through . . . coming out of point "EX"

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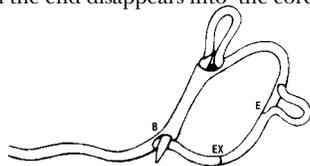
Splicing Instructions (continued)



4. Insert end of jacket into the socket of the fid. Hold the core lightly at "EX", then place the point of the pusher into the socket of the fid and push the fid and jacket through "E" to "EX" until end of jacket emerges at "EX"



5. Holding the core and end of the jacket tightly at "EX", smooth the braid of the core evenly from "EX" back to "E". Remove the tape from the end of the jacket sticking out at "EX". Pull the jacket carefully as shown, until the end disappears into the core.



6. The core must now be put back into the cover, finally emerging at point "B". Insert the fid into the jacket about 1/2 inch from "E". Place the end of the core into the fid, and use the pusher to slide fid and core through. Pull end of core until slack is taken out. You may not be able to push fid all the way to point "B" in one pass. If so bring out the point of fid between the strands of jacket and re-insert fid at the exact point where you brought it out and push it through the rest of the way, coming out at "B".



7. Grasp rope at point "E" and smooth down both sides of loop. Now, hold rope at slip knot, and with the other hand slide the jacket toward the splice. Repeat this action until exposed core is hidden inside jacket, and all slack in jacket has been removed. If bunching occurs at point "E" pull firmly on tail of core until it disappears. With this complete, smooth loop until all slack is removed and cut off tail near jacket. End will disappear by further smoothing of the loop. Untie the slip knot and your eye splice is completed.

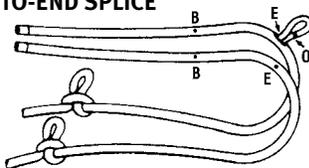
CROWN SPLICE



A crown splice will keep a line from fraying and unraveling. This is made similar to the eye splice with the following variations:

1. In Step 1, do not measure any loop, just measure one fid length from the end of the line to get point "B". Be sure to tie a slip knot.
2. Steps 2 thru 5 are the same.
3. After cover has been inserted in core, proceed to Step 7, and bury core in the jacket. Cut off tail of core flush with end of splice.

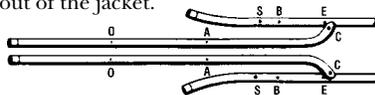
END-TO-END SPLICE



1. Place ropes to be spliced side by side and mark point "B" (Base point) one fid length from the end of each rope. Mark point "E" about 2/3 a fid length from point "B". Make certain that both ropes are marked identically. Tie a slip knot about 5 feet from point "E" in each rope.

Using the pusher, part the jacket stands at point "E" and extract the core. Tape the ends of both jackets and extracted cores.

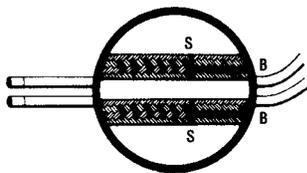
Mark point "O" on each core where it comes out of the jacket.



2. Mark both cores as follows:

Hold core at point "O" and slide jacket back about 2/3 a fid length. Mark point "A".

Hold core at point "A" and slide jacket back about 1-2/3 fid lengths. Mark point "C".

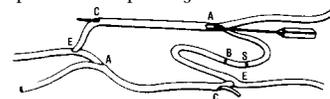


3. It is necessary to taper the jacket to prevent bulge in the crossover. Do this to both ropes as follows.

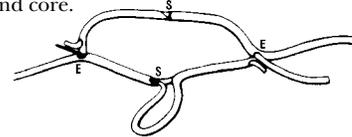
Starting at point "B" count 7 adjacent pairs of strands and mark point "S". From this point count, and mark every other intersecting pair of strands (see illustration). 7 intersecting pairs are to be marked.

Remove the tape from the jacket end and beginning with the marked intersecting

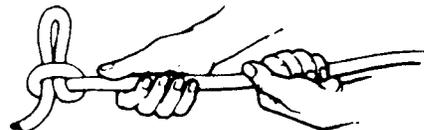
strands nearest the jacket end, cut the marked strands only and pull them from the jacket. DO NOT CUT BEYOND POINT "S". Tape end of tapered jacket.



4. Place the ropes end to end with the jacket of each beside the extracted core of the other. Insert the end of one jacket into the fid socket. Insert the fid at point "A" on the other rope core. With the pusher, push the fid through the center of the core and bring it out at point "C". Pull the jacket through the core till point "S" on the jacket meets point "A" on the core. Repeat this procedure with the other jacket and core.



5. Insert taped end of one core into the fid socket. Insert fid at point "S" on the other rope jacket. With the pusher, push fid through the center of the jacket and bring it out at point "E". Repeat this procedure with the other core and jacket.



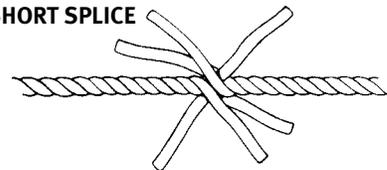
6. Remove tape from jacket ends and pull crossover snug by pulling jacket and core simultaneously on each side of splice. Hold the crossover firmly and smooth excess braid away from it in both directions. Cut off protruding cores at point "E".



7. Hold rope at the slip knot with one hand and with your other hand, slide the jacket toward the splice. Repeat with other rope. Do this until all slack has been removed between the slip knots and the length of the opening in the splice is about equal to the rope's diameter.

SPLICING 3-STRAND TWISTED ROPE

SHORT SPLICE



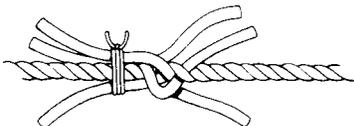
1. For end-to-end splicing of two ropes, first, unlay both ropes for a short distance and bring them together so that the main bod-

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Splicing Instructions (continued)

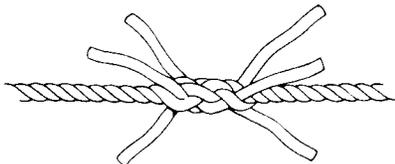
ies of the ropes fit snugly and the unlaid strands mesh, alternating a strand of one with a strand of the other. Sealing the strand-ends of synthetic fiber ropes with a flame or hot knife will prevent their unraveling.

It is helpful to temporarily tie the strands of one rope to the body of the other rope.



- Now, tuck one of the unlaid strands over and under a strand of the opposite rope, working against the twist.

Take the unlaid strand next to the strand just tucked, and tuck it over and under the next strand in the opposite rope. Do the same thing with the remaining unlaid strand. Now, take one more truck with each strand.



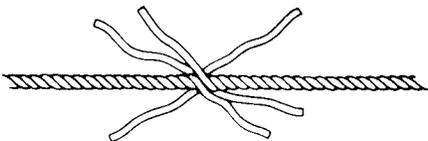
- Remove the temporary tie and make two tucks with the other three strands. You now have the strands of each rope tucked two times through the strands of the other rope. Now go back and make at least two more tucks with each of the six strands . . . four additional tucks are recommended for synthetic ropes.



- Roll the splice under your foot, or a board and clip off ends of the protruding strands.

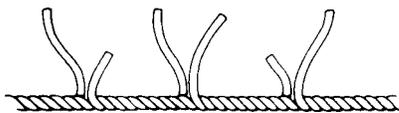
CAUTION: Do not clip ends too close to the splice.

LONG SPLICE

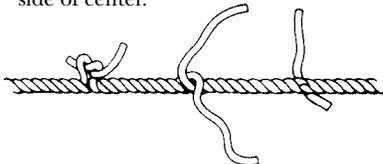


The Long splice is not quite as strong as the Short splice, but it permits a rope to run freely through a block or pulley.

- To make a Long splice, unlay the end of each rope about 14 turns and bring them together so that the main bodies of the ropes fit snugly and the unlaid strands mesh: alternating a strand of one with a strand of the other. Sealing strand-ends of synthetic fiber ropes with a flame or hot knife will prevent their unraveling.



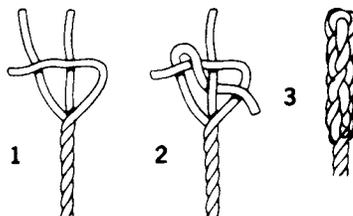
- Starting with any opposite pair, unlay one strand and replace it with its opposite strand from the other rope. Do the same thing with another pair of strands, going in the opposite direction. You now have two long opposing strands in the center, at the original meeting point of the two ropes, and a pair of long and short opposing strands on each side of center.



- Now tie each pair of opposing strands tightly with an overhand knot, tuck each strand twice back into the rope, going against the twist. Roll the splice under your foot or a board, clip protruding strand-ends and your splice is complete.

CAUTION: Do not clip ends too close to the splice.

CROWN SPLICE



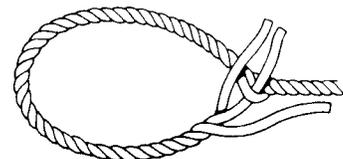
When you want a rope end to be a little larger in diameter than the rope, and have a finished appearance, the Crown Splice is the answer.

- Unlay the end of your rope, (sealing the strand ends of synthetic fiber rope will prevent them from unraveling) and lay the right-hand strand across the other two as illustrated.
- Then tuck the left-hand strand over the first strand, then back over the right-hand strand.
- Pull all strands snug, then tuck them in sequence over and under the strands in the main body of the rope, as in a short splice. Roll the splice under your foot or with a board, and clip protruding ends, not too close to the rope.

CAUTION: Do not clip ends too close to the splice.

EYE SPLICE

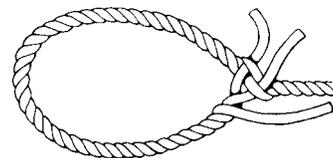
The Eye Splice may be made as a loop of any size or it can be made tight around a metal thimble to prevent chafing of the rope fibers.



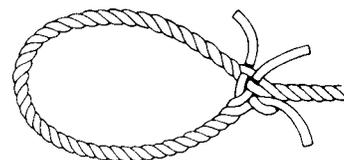
- To begin your Eye Splice unlay the strands for a short distance and double back to form a loop of the desired size, with the unlaid strands laying across the twist of the rope.

Sealing strand-ends of synthetic fiber rope will prevent them from unraveling.

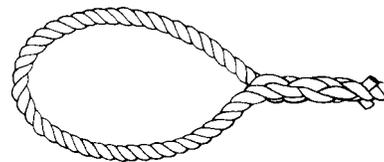
Tuck the center unlaid strand under any one of the strands in the main body of the rope, going against the twist.



- The next unlaid strand going over the strand under which the center unlaid strand is tucked, and is tucked under the next strand in the rope.



- Tuck the last unlaid strand under the remaining strand in the rope, making sure the tuck is against the twist.



- Pull each strand snugly up to the main body of the rope then tuck them, in sequence, over and under the strands in the rope. While it is traditional to use 4 tucks, at least 6 tucks are recommended for synthetic fiber ropes.

Roll the splice under your foot or a board, and trim protruding strand ends, not too closely to rope. Your splice is complete.