



How To Make An Eye Splice

in rope, for bowlines, anchor ropes & lifelines by Tom Holtey

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With this quick and easy method you can make an elegant and effective loop at the end of a rope. This will enable you to make your own **bowlines**, **anchor** ropes and lifelines. (The same kind of bowline found on older Ocean Kayaks.)

This technique will only work with hollow core braided rope. Most polypropylene floating rope is "braided hollow core" and is the best choice for bowlines anchor ropes and lifelines. Nylon hollow core is an excellent choice for a lifeline. Splicing with the method will work on any type of hollow core braided rope.



Hollow core braided polypropylene floating rope is commonly available at marine supply, hardware and big-box stores. It is often yellow in color and often comes packaged in lengths of 50 to 100 feet. You may be able to buy it by the foot, off a

spool, at hardware stores and marinas.

For anchor lines look for rope 3/8 to 1/2 of an inch diameter. For Bowlines look for rope 1/2 to 5/8 of an inch. For lifelines look for rope 5/8 to 3/4 of an inch. Floating poly rope is often the best choice. It will not absorb water and will remain mildew free. Other ropes are certainly OK to use, nylon is much easier on the hands and skin. Nylon will absorb water, dry slow and may harbor mildew.



Sometimes your rope will come with a little plastic tool call a Fid. You can also get much better quality Splicing Fids in many sizes, made of metal or wood, at marine supply stores.



You do not need to use a Fid at all! You can do just fine with some duct tape. In fact I find that duct tape works better than the cheap plastic Fid. We will start with a simple bowline to demonstrate the Eye Splice and then cover anchor lines and lifelines later.

How to make a Bowline & Eye Splice rope

A bowline is a rope that has a small loop on each end, with a brass snap in each loop. A line like this can be custom fitted as a bow or stern line. Instead of a brass snap on one of the ends it can be eye spliced to a grab handle or strap eye on deck.



You may want to melt the ends of the rope to prevent fraying. I find that this is often not necessary with polypro rope, but much more so with nylon. It is a step that can be skipped if you use a "duct tape fid".

Take a bit of duct tape and wrap it in a cone shaped, pointy way around the end of the rope, to make a sort of needle. If you have a Fid simply insert the end of the rope into it. (Cheap plastic Fids may still need a bit of tape to make it stay on.)

Next slip a **brass snap** onto the rope. Slide it about 8 to 12 inches along the rope. Or slip the rope through a grab handle or strap eye on deck if you want a "semi permanent" bowline attached to the kayak.

Hollow core rope is like a Chinese Finger Trap. You may recall those joke-toys that you place your index fingers into, and then try to pull them out. The more you pull the harder it grips. The hollow space inside the rope is a continuous tunnel, from one end to the other. This is the key concept about this type of rope.



Grab a section of rope with both hands and push to center. The rope will get "thicker" and "shorter". You will see the hollow space inside the rope grow. When you do this you will also see the spaces in-between the braids more clearly. You can open a little window into the central tunnel in-between the braids with a finger.

OK, back to the bowline. Open up the rope in the manner described above and insert your Fid (tape or tool) into the tunnel, so it makes a loop around the brass snap. Start working the fid into & along the tunnel to the other end of the rope. It is sort of like threading the drawstring into the waist of a pair of sweat pants, but easier. The loop will start to tighten around the brass snap.

Go as far as you care to, leaving just enough room in the loop for the brass snap to move freely. I find that about 8 to 10 inches of "doubled up" rope will work just fine. The more you "double up" the rope the better it will hold.

Poke the Fid tool out of the rope through the braid and remove it. Tuck the end of the rope back inside. If you use a "Duck Tape Fid" just leave it in there.



Test your work by gripping the brass clip and tugging on the rope. As you place more tension on the rope the tighter it will grip onto the inside section.

Not happy with your results? Simply pull the rope out of the tunnel and start again! You can work and re-work the loop as many time as need to get it just right.



If you want to add an extra level of security you can use your Fid to pass right through the rope, in one side and out the other, as many times as you wish. Kind of like sewing with a needle and thread. Get the "stitches" as close as possible. Finish off the end as described above with at least six inches "inside".



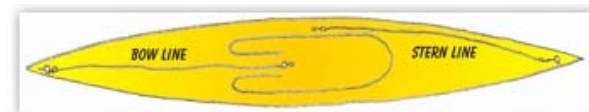
The next step for the bowline is to adjust the length to fit your kayak. I like to make a custom bowline for each kayak because no two kayak models seem to require the same length. (Too much hassle? See the Adjustable Bow Lines at the TopKayaker Shop photo left.)

With the first end of the bowline attached to the bow grab handle bring the other end of the rope to the cockpit where it will be clipped in place at a spot that can be easily reached. (You may need to add a strap eye.) Clip the brass snap to that strap eye and run the rope through the snap. Adjust the length of the rope to fit. Snug is good, but do not make it tight. A bit loose is OK. Be sure to leave enough room to open the hatch on the bow deck if you have one.



Alternatively you can fit your bowline as a stern line. Clip the first end of the bowline to the stern grab handle. Bring it along the right side of the kayak to the gunwale so you can fit it to clip to a backrest strap eye. (Lefties may want to mount it on the left side.)

When you think you have a good fit cut the rope to length, but leave some extra, just in case. You can always make a rope shorter, never longer. Any extra length can be hidden inside the tunnel.



Make your duct tape Fid, or use your real Fid, following the same instructions above. Now you have your own "hand made" bowline.

floating polypro rope. It is nice to have a float even if the other end is attached, as it will be easy to grab if dropped while mooring, docking and towing.

You can "dress up" your bowline with a float if you like. A **brass snap** or two will sink almost any length of

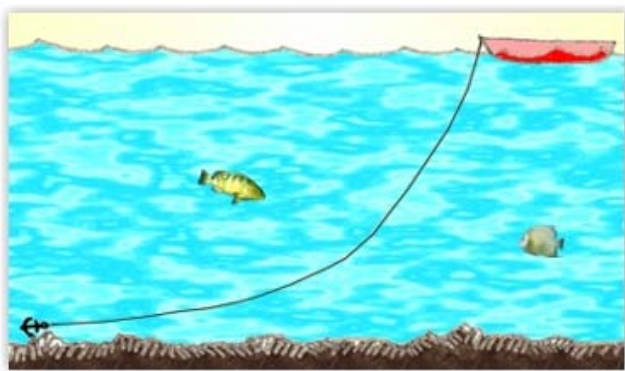


Place the float on the end you can reach from the cockpit. It will also help keep a paddle leash in place. Rope floats can be found while beach combing, at marine and pool supply shops, or made out of pipe insulation or Pool Noodles.

How to make an Anchor Line

You will use the same principle to make an **anchor** line. Get enough rope for good anchorage. Double or triple the depth you will be anchoring in at the least, or use as much as you like. The USCG suggests a ratio of 7' of anchor line to every 1' of water depth for regular ships & boats. I like about 100 feet for anchoring in 30 feet of water, when kayak snorkeling. You can make extra add-on lengths of anchor line (brass snap on one end, ring on the other) if you anchor in a variety of depths.

Anchor lines do not have to be very thick or strong. They only need to be strong enough to handle the current or the wind. The anchor does not have to weigh a ton either. It just has to grip well on the bottom, and the more line you have the more it will pull from the side, thus making for good grip. Pulling straight up on the anchor will reduce grip and that is why you need allot of rope. If you compare a kayak to an ocean liner, at "scale", the anchor line on a kayak would be like string and the anchor like a toy model. A one-pound to three-pound anchor is all you will need. Several kayaks can share the same anchor, clipped by their bowlines, stern to bow, like a train cars.



Place a brass snap at the top of your anchor line using the technique above. I like to add a nice large colorful float about a foot or two from the snap, just in case I drop the rope. (I sometimes will add a loop, knot or brass snap at the 15' foot mark for a safety stop if SCUBA diving.) You can also tie on a wide mouth net bag a stow bag for the whole anchor kit. Load it like you would a white water throw bag.



The other end of the rope attaches to the anchor. Anchors naturally have a loop in them to tie to. Some will have a shackle pin and this can pose a problem. **Shackles** are meant to come off so you can change the line or the anchor and add chain. They can also come off by accident and that is trouble when talking anchors. My suggestion is to take the shackle right off and not use it at all. If you must use the shackle be sure to run a nylon zip-tie or wire through the eye on the pin to secure it. This way it cannot loosen up. You can add a couple feet of chain to the anchor if you like, but I feel that this is unnecessary for kayakers.

You can simply make your eye splice right to the anchor. Over time your rope will wear and tear at this spot. That is OK; just keep your eye on it. You can re-enforce the rope with a few layers of duct tape, thread the rope through a piece of hose, or use a rope thimble. Any way you go,

inspect your line regularly for wear and tear. It can rub on rocks and coral at almost any spot, and that is why I like floating rope.



You can simply clip your anchor line to the bow handle if the front deck is reasonably clear and you are agile enough to reach it. Other wise you can place a ring on the bow handle and let the anchor dangle when not in use. (Best for a small anchor.) Alternatively retrieval line can be set up on a bowline so you can haul the anchor into the cockpit for stowage.

How to make a Lifeline



The lifeline is a unique accessory, common to inflatable kayakers, but quite useful for windy wide-open water. The Life Line keeps you with your kayak. It is simply a length of rope with a large loop on one end and a clip on the other end. The clip attaches to the kayak, somewhere convenient and safe. The loop goes safely over your head and under one arm.

You will about 12 to 16 feet of soft flexible rope, not too thin so it won't cut into you. About 3/4 inch will do. Nylon is a good choice if you can find it. Polypro is OK use, but not as nice.

Make one loop for the **brass snap** and the other loop large, so it can fit easily overhead and under one arm, close to the body, but not so close to make it difficult to take off or put on in a hurry or in panic mode. Add a float if desired or some pipe insulation for padding if desired. (Better quality neoprene rubber pipe insulation is best, but the foam type is OK.)

Now you have a skill that you can use to repair and customize your nautical gear as well as teach others how to Eye Splice.

Resources

See also The TopKayaker Shop for **Bowlines**, **Anchors & Hardware**

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