

BSD INSTALLATION INSTRUCTIONS

Congratulations on the purchase of your new BSD sail rig. We are confident that you will enjoy the added dimension it will bring to your kayak. Our rig is much simpler to install and use than more traditional sail designs yet offers excellent performance. It is well suited for the day sailor as well for longer cruises and provides a safe ,stable alternative to paddling. Please read the following instructions carefully all the way through prior to beginning the installation process. The installation is quite straightforward but it does require careful measurement and alignment.

Caution

Sailing kayaks and other small boats involves certain risks. Weather conditions and boat handling can cause capsize, injury and drowning. We strongly recommend that anyone operating or passengers of any sailing craft have a thorough understanding and practical knowledge of all techniques of good seamanship. Always wear a USCG approved life preserver. We strongly recommend that anyone participating in sailing attend the courses offered in techniques of small boat handling, self rescue ,first aid, and navigation offered by your local Coast Guard Auxiliary.

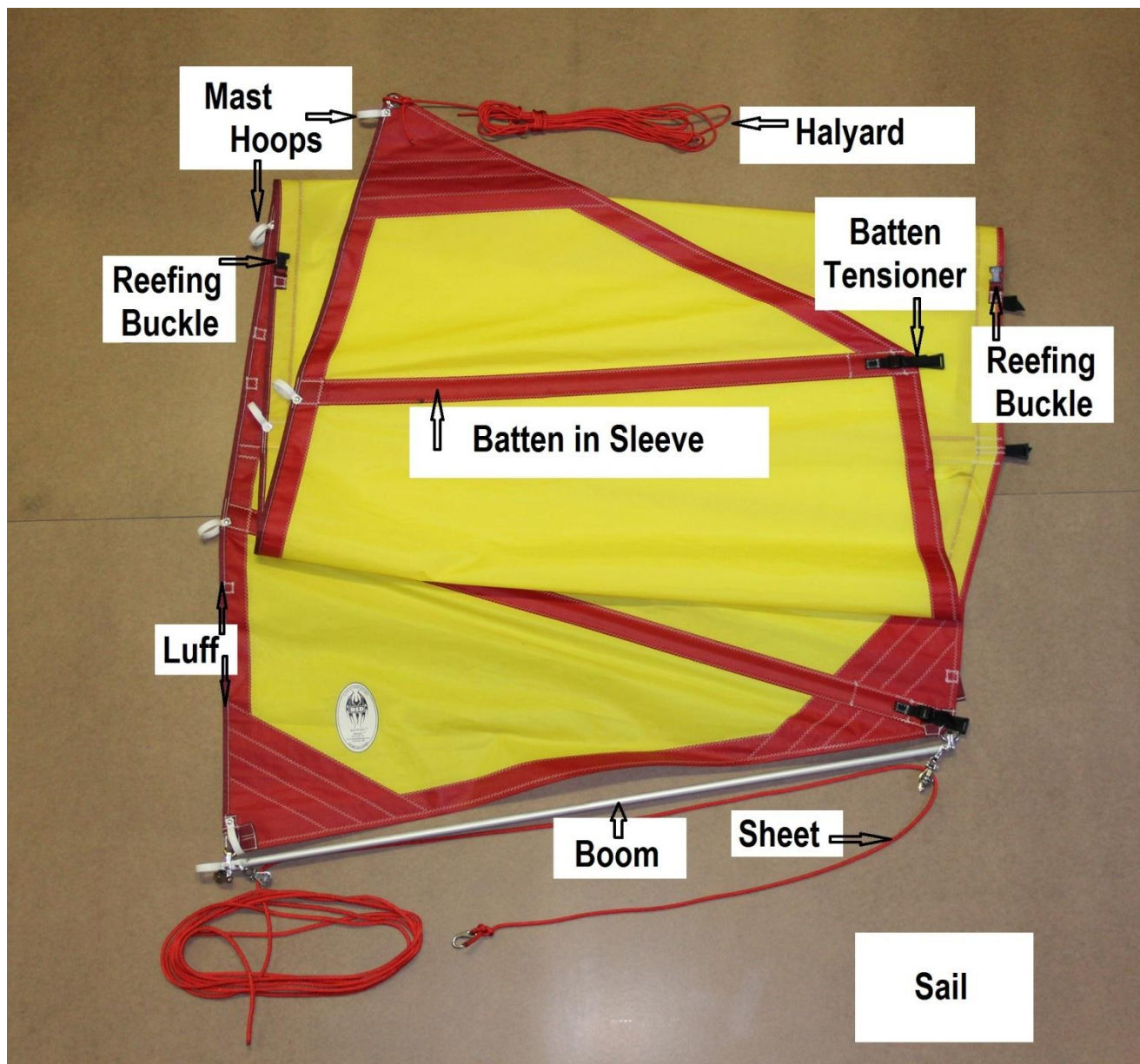
BSD has no control over the conditions in which this product will be used nor do we advocate the use of this product on unsuitable craft or unsafe conditions. Determination of the suitability of craft or conditions is the responsibility of the user or purchaser. In no event shall BSD or our suppliers be liable for incidental or consequential damages beyond the purchase price of the product.

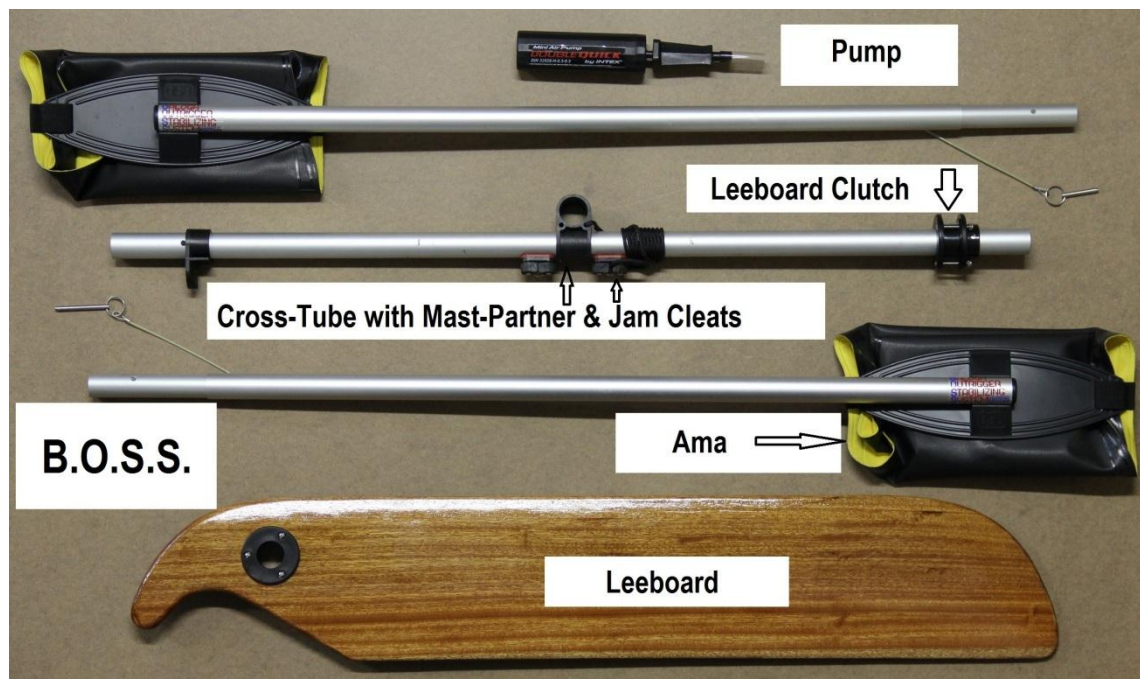
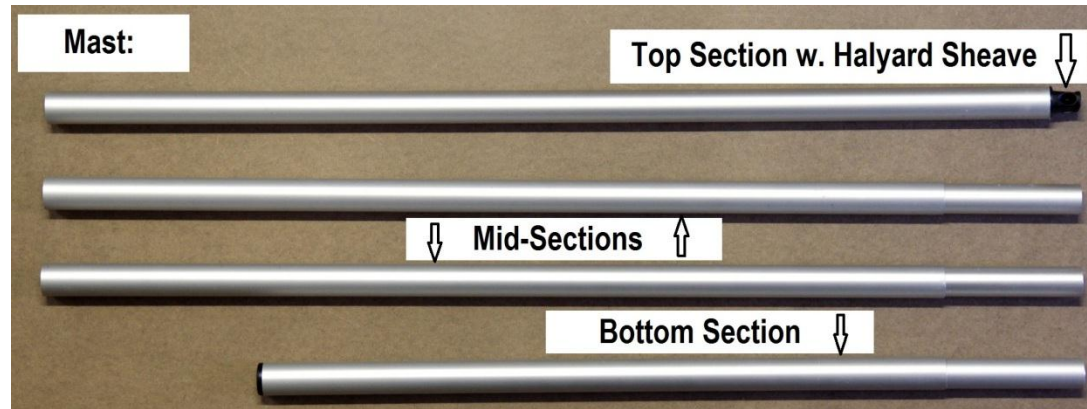


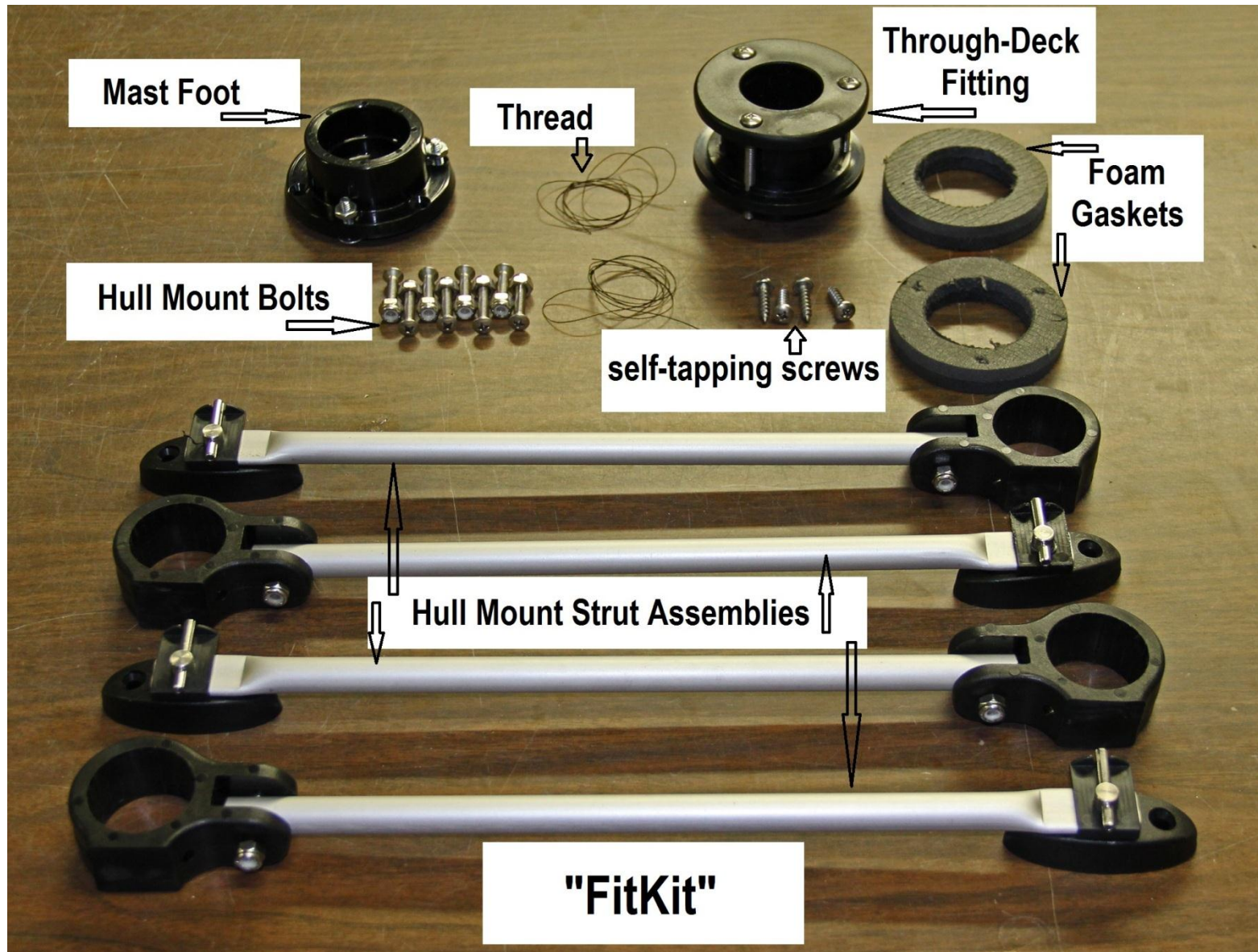
BSD Hardshell FitKit First Time Installation Instructions






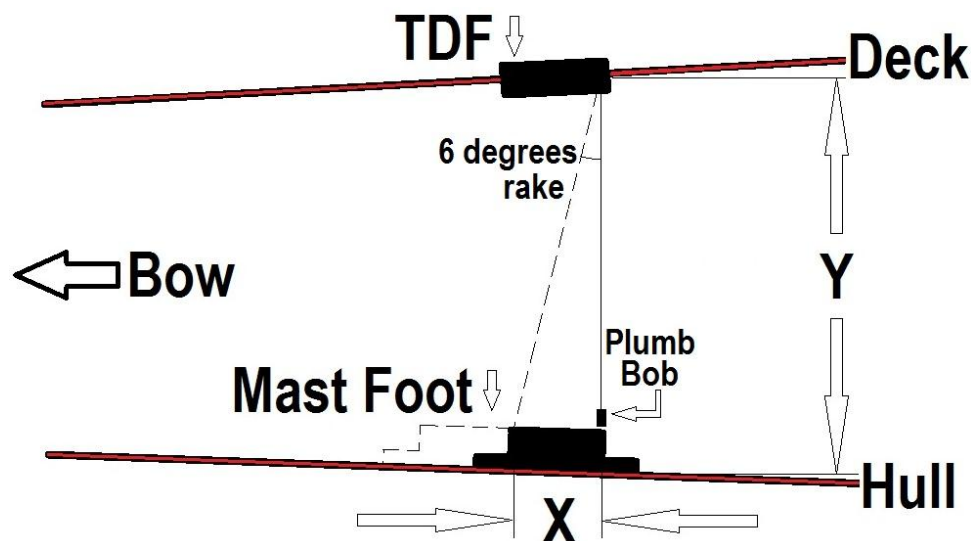
BSD Sailing Rig Components:







	<h3>1. Mast Placement</h3> <p>Locate Through-deck Fitting (TDF) 36"-48" from forward face of backrest. Mark hull for proposed Through-deck Fitting (TDF) location on deck center line. See sidebar.</p>  <p>Through-deck Fitting</p> <p>Mast fitting can be placed anywhere it is convenient for the paddler and will not interfere with kayak functions such as foot pedals, bulkheads, etc</p> <p>Important Note: Move mast fitting to 48" from seat back if you want to paddle with BSD cross tube in place. Sit in your kayak and test this out for best results. Lee Board will be somewhat harder to reach .</p>	
	<p>Extend a line across the boat to the hull-deck seam on each side. Establish two areas in the range of 8.5"-12.5" (21-32 cm) forward and aft of this line on each side. This is roughly where the Hull Mounts will be located. Ensure that there are no obstructions (like foot peg bolts; black arrows) to Hull Mount nuts (white arrows) within this range on the inside and/or outside of the hull. If there are, adjust the mast placement forward or aft accordingly.</p> <p>Cut a 1 7/8 " diameter hole in deck. Insert TDF. Rotate in its hole so that one bolt hole faces aft, and the two remaining holes face forward. Mark bolt hole position, then remove TDF and drill 7/32" (6 mm) holes for the bolts.</p>	



y (")	0	2	4	6	8	10	12	14	16
x (")	0	1/4	3/8	5/8	7/8	1	1 1/4	1 1/2	1 5/8
Mast Rake Table									
y (mm)	0	50	100	150	105	155	305	355	405
x (mm)	0	5	10	15	20	25	30	35	45

2. Mast Foot Placement and Installation

For proper mast rake: Attach TDF with 3 bolts as per # 3 below. Tighten rear bolt more to tip TDF back. Insert lower mast section into TDF and place Mast foot under tubing on floor of kayak. Move 1" forward of plumb and trace around mast foot. Glue in Foot. Let cure 24 hrs. Be sure to use proper adhesive. See sidebar.

Or for the mathematically inclined:

Insert aft facing TDF bolt into its hole in the deck. Hang Plumb Bob (see sidebar) through TDF hole from this bolt and let the nut hang down into the hull. Lay the Mast Foot into the hull directly under the TDF, exactly on the center line of the hull. Adjust until the nut hangs freely, just touching the aft inside edge of the Mast Foot. Measure the vertical distance (Y) between the underside of the deck and the bottom of the hull at this position.

The Mast Rake table shows how far forward (X) the mast foot needs to move to achieve the required 6 degree aft rake of the mast.

Mark position of Mast Foot, extract bottom mast tube, and, using suitable adhesive for your haul material, glue Mast Foot to bottom of hull as per adhesive manufacturer's instructions. Let cure! Proceed to step 3.

Mast "Rake" means mast is allowed to tip back towards stern and helps lift bow while sailing.

"Plumb Bob":

Take one nut and get a piece of thread to fashion a plumb bob by tying the nut to the thread and making a loop on the other.

We recommend West System G- Flex plastic boat repair kit # 655-K. for all hull types. Available at SailYourKayak.com or Marine supply store.

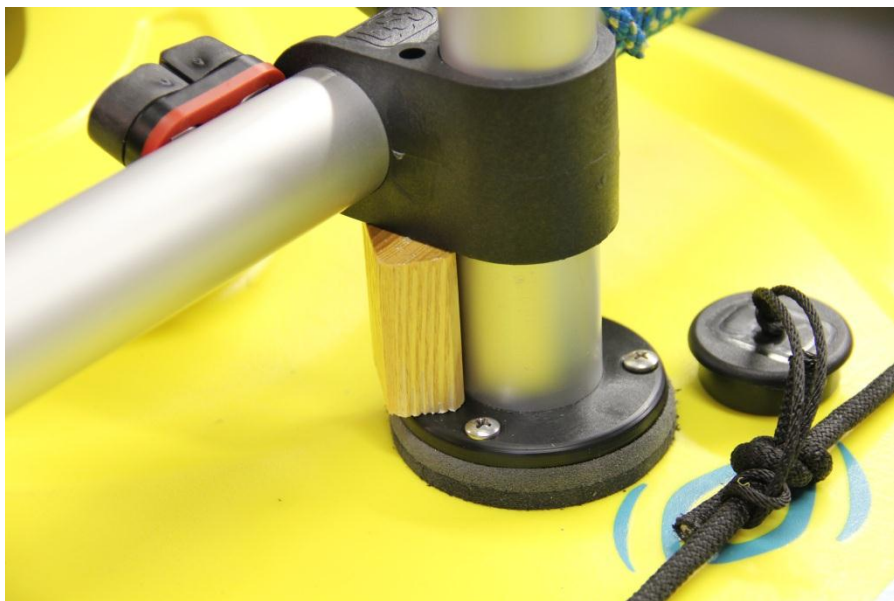
Polyethylene/ AKA Plastic Boats:

Use only West System Plastic Boat Repair Kit (655-K) Follow all instructions including heating the prepped area with a lighter!!!!!!

Available from us at SailYourKayak.com



Mast Foot



aft-facing strut onto the cross-tube, ensuring that the pin faces the hull, until its hinge touches the respective aft strut hinge.

Slide cross-tube upwards on the mast until the bottom of the cross-tube is 15" (40 cm) above the surface on which the boat is resting. Support the Mast Partner vertically at this position.

Re-check that the cross-bar is square to the hull by means of the plumb bobs. Start to determine location of aft Hull Mount pair by swinging one aft strut up until the Hull Mount mates to the hull as closely as possible just below the widest part of the hull (hull-to-deck joint). Check once more that there will not be any obstructions in the way of the Hull Mount bolts. Once again briefly check that the cross-tube remains square to the hull. Mark the location of the forward bolt hole of this Hull Mount. Repeat with other aft strut and Hull Mount. Measure distance from plumb bob marks to Hull Mount bolt hole marks. If the two measurements differ, add and divide by two to obtain the average. Use this average measurement to true up the location of the bolt holes. Drill the holes (7/32" / 5.5 mm drill bit).

Insert the forward bolts and, using the Hull Mounts as a guide, mark the aft hole. Drill the aft holes. Remove the Hull Mounts from the struts and bolt the two aft Hull Mounts to the hull with the keyway in the pin hole pointing up. Re-attach the struts.

With the aft Hull Mounts attached,

If, contrary to the vast majority of cases in our experience, it is not possible to achieve a perfect fit as described above, it is possible to bend the flattened tangs slightly to make the final adjustment.



swing up the forward struts until the Hull Mounts mate with the hull at the widest part (hull-to-deck joint). Check that there will not be any obstructions in the way of the Hull Mount bolts. Mark the aft bolt holes and drill. Insert bolt and mark forward holes on hull and drill. Remove Hull Mounts from struts and bolt to hull.

You now have all four Hull Mounts attached to the hull. Push pins into hull mounts and turn to lock in place. Some fine tuning may be necessary for an easy pin fit.

5. Time to fine tune the hull mount pins.

We do this by sliding the upper strut assembly hinges in or out along cross tube so that the flattened tang at the end of the struts lays flat to the surface of the Hull Mounts. The Hull Mount Pins need to be inserted into their holes in the Hull Mounts exactly at right angles for a good fit.

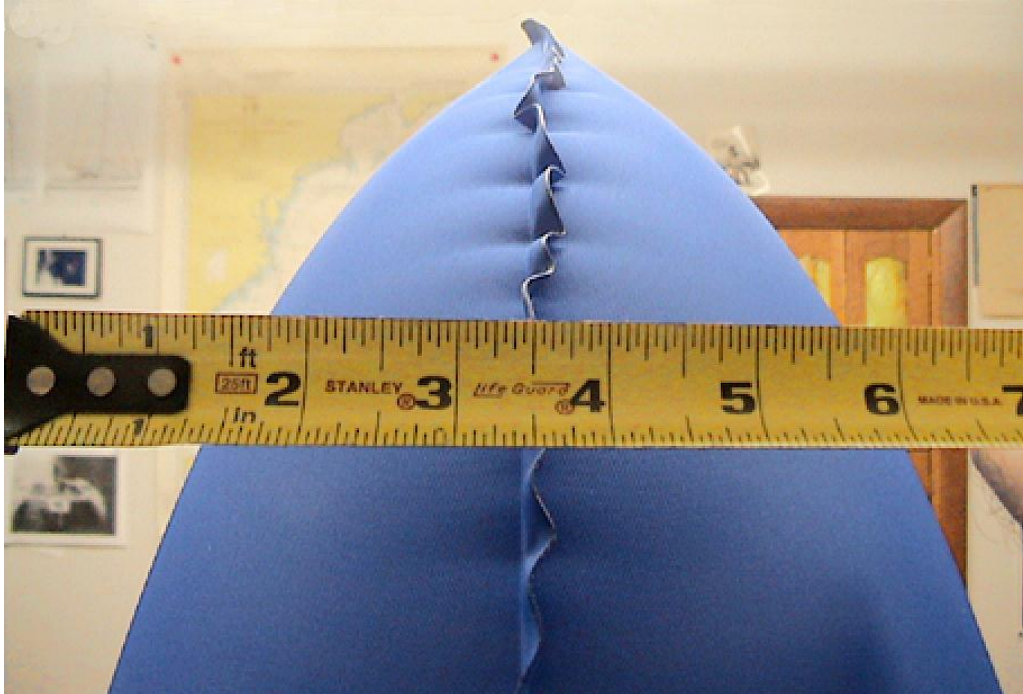
With the lower ends of the Struts happily mated to the Hull Mounts, ensure that the hinge connectors at the upper ends of the struts are equidistant from the Mast Partner for the forward pair, and for the aft pair. Then drill (7/32" / 5.5 mm) through all 4 upper hinges of strut assembly and fasten with screws provided. This will hold top hinge of strut assembly in place on cross tube.

Congratulations, you have installed your cross tube.



- 1) With cross tube attached: Place the lee board over cross tube on starboard side. Insert starboard Ama and fast pin assembly together.
- 2) Now insert port Ama into cross tube and insert fast pin.
- 3) Inflate Amas fully with hand pump provided. Watch this video: <http://www.sailyourkayak.com/SYK-Videos.html>
- 4) Place first section of mast into hull. Thread on all sail hoops starting with the boom. Place halyard line in top mast section and assemble last two mast sections. Hoist sail as in above photo and cleat off halyard to cross tube..
- 5) Use downhaul line on cross tube to induce slight bend in mast by attaching line to spare boom pulley and 2nd cleat on cross tube. Lean on boom with one hand and put all your body weight on boom while pulling downhaul rope.
- 6)) Attach aft sheet clip to stern of boat. (Line used while sailing)
- 7) Get to know , Understand & Use zipper reefing system before sailing. 1st reef @ 15MPH ,2nd @20MPH.

Tips for inflating your BSD Amas:



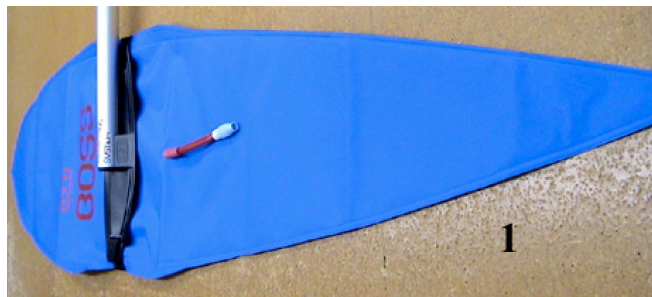
Make sure you pump them up as hard as you can prior to use and check after placement in cool water to add air as needed. You cannot over inflate the Ama with hand pump. But - Do not use a compressor!

See the video page at SailYourKayak.com for an easy way to hear the correct pressure to place in the AMA.

Rinse after use in salt water and always store dry. Protect from sun and let some air out if sitting on beach while not in use.



Sequence for threading a new Ama to your Aka tube



Folding the BSD AMA for storage

CAUTION

Although we use the highest quality materials and reputable manufacturers, it is possible that failure of the ama could occur. The ama relies on air pressure to work properly. Beware of undue chafe on sharp or abrasive objects. It is a good idea to wet the ama and check for air bubbles to indicate leaks before use. As it is possible due to puncture or weld failure for the ama to loose air pressure unexpectedly while in use, never use the BSD rig in conditions that would be considered dangerous if you did not have the BSD sail rig. Be prepared with techniques for safe de rigging or self rescue to handle the boat safely if a failure of the ama should occur. As in all cases involving small boats, safety should be your highest priority. These instructions are not intended to teach the skills for sailing your kayak. They are merely instructions for the installation and assembly of the BSD sailing equipment. There are many good books and courses available for the instruction of the skills of sailing. We strongly suggest that people without experience in the skills and safety procedures required for sailing receive the proper training before using this product. **SAIL SAFE!!!** No equipment made is a substitute for a safe and prudent user! Enjoy sailing with your BSD. We would like to hear from you about your experiences with our products. Please let us know about your satisfaction, problems, or your hints for improving the rig or instructions. We particularly enjoy receiving photos of our rigs on boats and in use. Thank you for your patronage. Call us with installation/suggestions questions 7am – 9pm EST. We also invite you to join the BSD forum and sign up for our newsletter!

Sincerely,

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