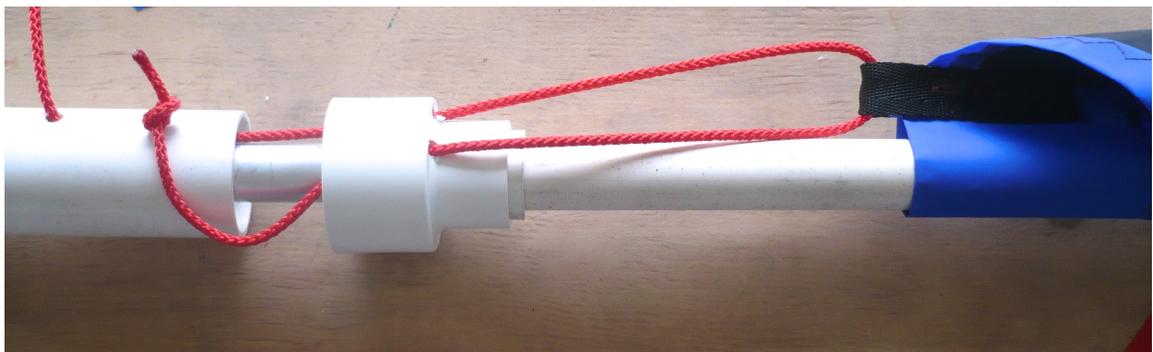


Assembly Instructions Star Kayak Sails kit to a Hobie Mirage drive kayak.

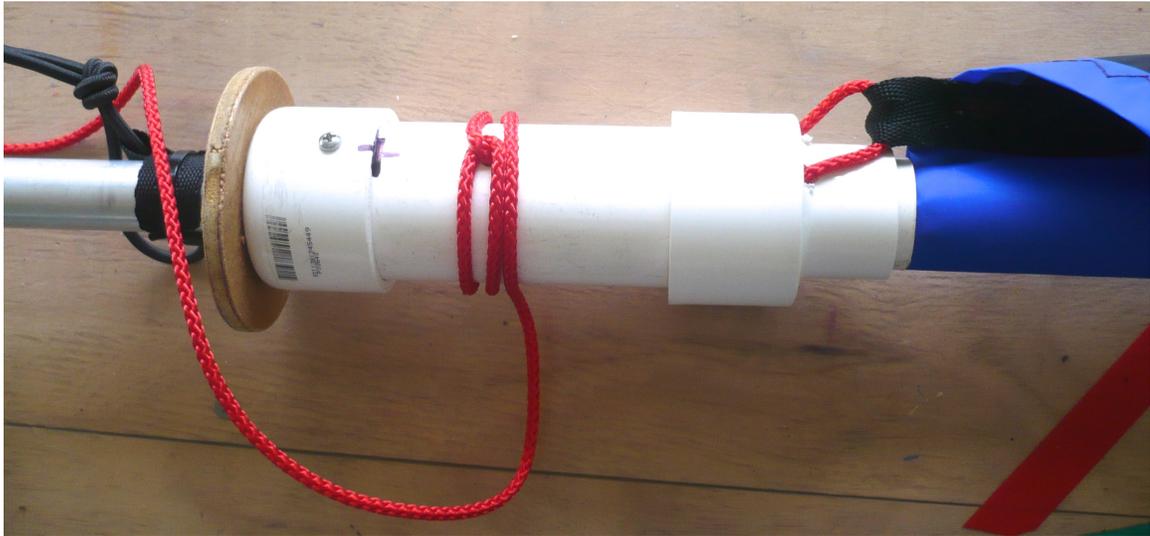
1. Remove packaging lay out contents. Separate the plastic tubes from the aluminium tubes. 3 plastic and 4 aluminium. (Giant Star has an extra short length of plastic tube)
2. Assemble the mast. Use the 2 counter sunk pop(blind) rivets on the junction 1 & 2 and the dome pop rivet on junction 3.
3. Plug the plastic tubes together ensuring they are well engaged. If assembling a Giant Star do not use the short length at the top of the mast.
4. Remove the sail from the carry bag and insert the batten.



5. Push the plastic furling tube all the way up the mast sleeve of the sail. Check to ensure it has gone all the way and the end is seated in the webbing sock at the head (top) of the mast.
6. Insert the mast up the inside of the plastic furling tube. At this stage the application of some dry silicon spray lubricant to the aluminum makes for a smooth furling action and should be done periodically.



7. Pull the furler top off and thread the furling sheet per the photo and push together.



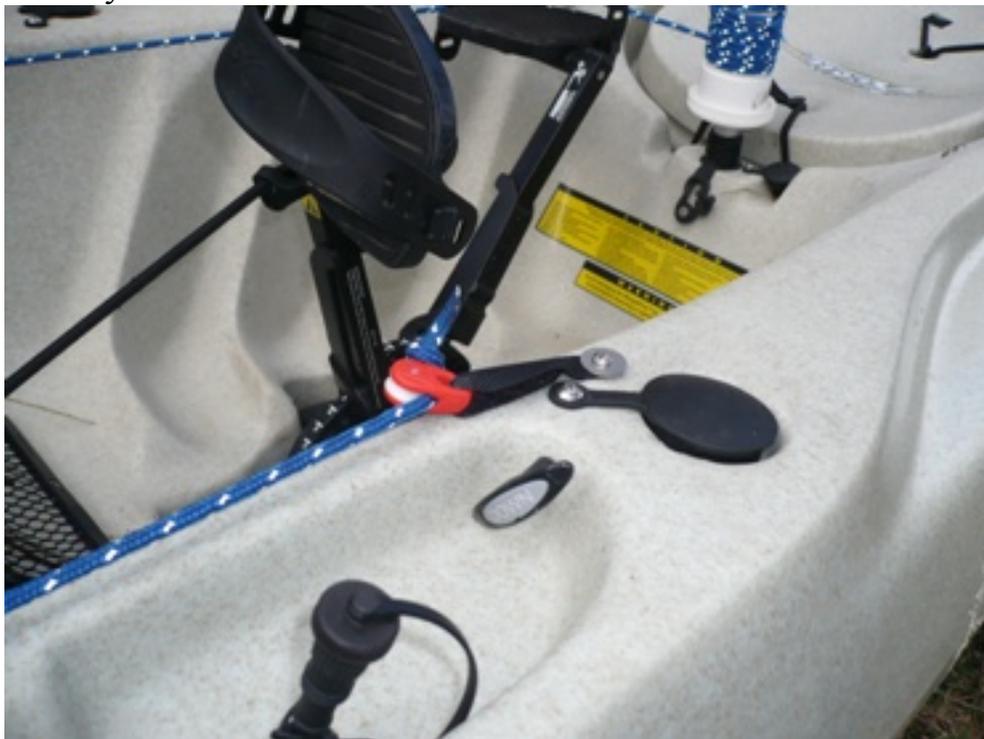
8. Tighten the down haul so the sail is snug and the luff(front of the sail) is snug but not over tight.
9. Plug into the mast mount on the kayak. Attach the bungee at the base of the mast to the bungee hook already on the kayak.



10. Pull out the main sheet pulley and attach to the rear of the kayak.



11. Attach the main sheet front pulley. This requires drilling a small 1.5mm hole and screwing attachment in. Locate this forward of where you decide to attach the starboard cleat.



12. Sit in the kayak and decide where to locate the cleats port and starboard. The starboard one can usually be located adjacent to the cleat for the rudder down lock and the port one mirror image wise.
13. Attach the furling pulley



14. With the main sheet threaded up and the sail open unwind enough furling cord to easily reach the port cleat and then thread up through the pulley.
15. Now place the stainless eyes so as to keep the main sheet and furling cord running down the side of the kayak.
16. Get familiar with furling and unfurling the sail before taking to the water and have your first sails in light winds. You will be surprised how much a light breeze will have you gliding over the water.

Sailing a kayak. Tips and hints on how to get the most from your Starkayaksails.com kit.

Tacking and making your way upwind. Many sailors are not keen on the idea of tacking and working to windward. This I believe is the result of traditional sailing vessels being hard work and the process of tacking is involved and potentially dangerous with heavy booms swinging across the

boat swiping unsuspecting heads. However with kayak sailing especially in mild conditions it is easy and rewarding. No boom on the sail and the combination of peddle or paddle power makes for easy into wind progress.

Rounding up into wind.

This is where bow points into the wind despite your best efforts with the rudder to keep it on track.

Due to the size of the sail and the configuration of the Hobie mirage range you will find a tendency to round up despite having a large sailing rudder. This is pronounced when sailing close to the wind and close hauled. There are a number of contributing factors here. Close hauling will tend to pull the mast back and so move the centre of effort rearwards behind the flippers and so cause it to round up. Also the slower hull speed because of sailing close to the wind will reduce the effectiveness of the rudder.

Solutions: reef in partially and sheet in just enough to tension the sail with out bending the mast back excessively.

Bear off a little - means to turn away from the wind. You will sail further but you may find you will make better progress upwind in a given time.

Peddle gently. With out exerting excessive energy the extra bit of hull speed will maintain rudder power and you will find you can sail very close to the wind in this mode.

If you have trimmable lee boards angle them back a little.

If you are sailing in changeable conditions like squalls etc, keep a good look out on the water and learn to predict heavy gusts coming your way. Reef in early before the gust hits you.

Some common mistakes.

Over sheeting. This means pulling too hard on the main sheet. The angle of attack of the sail is raised excessively and results in more drag than propulsion and in extreme cases stalls the sail. You will tend to drift sideways more than move forewards. The sail is most efficient with as little sheet in as possible while not being so slack the top of the sail is flopping about. The sail will “tell” you what to do. Over sheeted it will feel “kind of bound up” and will be trying to tip the kayak more. Under sheeted and the sail will flop about and lack power.

Glossary

Angle of attack. The angle the airflow has in relation to a wind or sail etc.

Bear off: to turn away from the wind to some extent.

Bow; front end

Clew: the corner of the sail furthest from the mast.

Close hauled. Sail close to the wind – wind more in your face -with the main sheet pulled tight.

Close to the wind: facing the wind direction

Downhaul: the amount the sail is tensioned down the mast. The more down haul the tighter the sail and the less shape it has. Typically stronger winds require more down haul and vice versa for light winds. Not applicable to the Starkayaksail.com system

Foot of the sail: the bottom or lowest part of the sail attached to the mast.

Head of the sail: the top of the sail.

Jibe: turn the bow down wind so the sail changes side.

Plaining: when sufficient speed is obtained the hull rises out of the water and skims on the surface rather than ploughing through and displacing the water

Sheet: the rope that connects the sail to the boat from the clew.

Sheet in: tighten the rope connected to the sail.

Sheet out: slacken the rope connected to the sail.

Starboard: right side of the boat originated from the term “steer board” which was the oar that was lashed to that side of the boat for steering.

Stern: rear end

Port: left side of the boat. The side that was originally tied up to the port as the “steer board” would be in the way if you tied up to that side.

Tack: turn the bow through the wind so the sail changes side.

Center of effort: where the balance of force is coming from the sail.

Reef in: make the sail smaller by partially rolling up the sail.